ITS Logical Architecture – Volume I

Prepared by:

Architecture Development Team

Iteris, Inc.
Lockheed Martin

Prepared for:

Federal Highway Administration
US Department of Transportation
Washington, D. C. 20590

April 2002

TABLE OF CONTENTS

1. INTRODUCTION, FUNCTIONAL REQUIREMENTS PROCESS 6
1.1 Architecture Strategies and Principles 6
1.2 Document Organization 11
1.2.1 Description of this Volume 12
1.2.2 Description of Volume II and Volume III 12
1.3 Methodology 13
1.3.1 Representation of Functionality 13
1.3.2 Configuration Control 14
1.4 Data Flow Naming Convention For Terminators 14
1.5 Assignment of Size, Frequency, and Scale Attributes 15
1.6 Integration of CASE, Database, Spreadsheet, and Publishing Tools 27
1.7 Roadmap to Logical Architecture Components 28

2. CONTEXT DIAGRAM 29

3. GRAPHICAL DATA FLOW MODEL 31
3.1 Introduction 31
3.2 Data Flow Diagrams 31

4. DATA DRIVEN CONTROL CONCEPTS 135

5. FUNCTIONAL SPECIFICATION, DFD DESCRIPTIONS 136
5.1 DFD: 1 Manage Traffic 137
5.2 DFD: 2 Manage Commercial Vehicles 152
5.3 DFD: 3 Provide Vehicle Monitoring and Control 156
5.4 DFD: 4 Manage Transit 159
5.5 DFD: 5 Manage Emergency Services 170
5.6 DFD: 6 Provide Driver and Traveler Services 173
5.7 DFD: 7 Provide Electronic Payment Services 186
5.8 DFD: 8 Manage Archived Data 191
5.9 DFD: 9 Manage Maintenance and Construction 192

A.0 LIST OF ACRONYMS 198

B.0 HIERARCHY OF DFDS AND PROCESS SPECIFICATIONS 202

C.0 USER SERVICE REQUIREMENTS 214

D.0 DATA TREE 248

FIGURES

Figure 1. Example Data Dictionary Entry for Data to/from Terminators 15
Figure 2. Example Teamwork P-Spec 16
Figure 3. Example Data Dictionary Entry with Sub Elements 17
Figure 4. Context Diagram for ITS 30
Figure 5. Manage ITS (DFD 0) 32
Figure 6. Manage Traffic (DFD 1) 33
Figure 7. Provide Traffic Surveillance (DFD 1.1) 34
Figure 8. Process Sensor Data (DFD 1.1.1) 35
Figure 9. Process and Store Traffic Data (DFD 1.1.2) 36
Figure 10. Display and Output Traffic Data (DFD 1.1.4) 37
Figure 11. Provide Device Control (DFD 1.2) 38
Figure 12. Determine Road and Freeway State (DFD 1.2.2) 39
Figure 13. Output Control Data (DFD 1.2.4) 40
Figure 14. Manage Parking Lot State (DFD 1.2.5) 41
Figure 15. Maintain Static Data for TMC (DFD 1.2.6) 42
Figure 16. Provide Roadside Control Facilities (DFD 1.2.7) 43
Figure 17. Collect and Process Indicator Fault Data (DFD 1.2.8) 44
Figure 18. Manage Incidents (DFD 1.3) 45
Figure 19. Traffic Data Analysis for Incidents (DFD 1.3.1) 46
Figure 20. Review and Manage Incident Data (DFD 1.3.2) 47
Figure 21. Provide Operator Interfaces for Incidents (DFD 1.3.4) 48
Figure 22. Manage Travel Demand (DFD 1.4) 49
Figure 23. Manage Emissions (DFD 1.5) 50
Figure 24. Manage Highway Rail Intersections (DFD 1.6) 51
Figure 25. Manage HRI Vehicle Traffic (DFD 1.6.1) 52
Figure 26. Activate HRI Control Devices (DFD 1.6.1.2) 53
Figure 27. Provide Advisories and Alerts (DFD 1.6.1.4) 54
Figure 28. Provide Advance Warnings (DFD 1.6.1.6) 55
Figure 29. Execute Local Control Strategy (DFD 1.6.1.7) 56
Figure 30. Interact with Rail Operations (DFD 1.6.2) 57
Figure 31. Manage HRI Rail Traffic (DFD 1.6.3) 58
Figure 32. Interact with Vehicle Traffic Management (DFD 1.6.4) 59
Figure 33. Monitor HRI Status (DFD 1.6.5) 60
Figure 34. Manage Commercial Vehicles (DFD 2) 61
Figure 35. Manage Commercial Vehicle Fleet Operations (DFD 2.1) 62
Figure 36. Manage Commercial Vehicle Driver Operations (DFD 2.2) 63
Figure 37. Provide Commercial Vehicle Roadside Facilities (DFD 2.3) 64
Figure 38. Provide Commercial Vehicle Clearance Screening (DFD 2.3.2) 65
Figure 39. Provide Roadside Commercial Vehicle Safety (DFD 2.3.3) 66
Figure 40. Provide Commercial Vehicle Data Collection (DFD 2.4) 67
Figure 41. Administer Commercial Vehicles (DFD 2.5) 68
Figure 42. Manage Border Clearances (DFD 2.5.3) 69
Figure 43. Provide Commercial Vehicle On-board Data (DFD 2.6) 70
Figure 44. Provide Vehicle Monitoring and Control (DFD 3) 71
Figure 45. Monitor Vehicle Status (DFD 3.1) 72
Figure 46. Provide Automatic Vehicle Operation (DFD 3.2) 73
Figure 47. Provide Vehicle Control (DFD 3.2.3) 74
Figure 48. Provide Servo Control (DFD 3.2.3.4) 75
Figure 49. Provide Automatic Emergency Notification (DFD 3.3) 76
Figure 50. Manage Transit (DFD 4) 77
Figure 51. Operate Vehicles and Facilities (DFD 4.1) 78
Figure 52. Determine Transit Vehicle Deviation and Corrections (DFD 4.1.2) 79
Figure 53. Plan and Schedule Transit Services (DFD 4.2) 80
Figure 54. Provider Demand Responsive Transit Services (DFD 4.2.1) 81

Figure 55. Generate Transit Routes and Schedules (DFD 4.2.3) 82
Figure 56. Schedule Transit Vehicle Maintenance (DFD 4.3) 83
Figure 57. Support Security and Coordination (DFD 4.4) 84
Figure 58. Provide Transit Security and Emergency Management (DFD 4.4.1) 85
Figure 59. Generate Transit Driver Schedules (DFD 4.5) 86
Figure 60. Collect Transit Fares in the Vehicle (DFD 4.6) 87
Figure 61. Provide Transit User Roadside Facilities (DFD 4.7) 88
Figure 62. Provide Transit User Roadside Information (DFD 4.7.1) 89
Figure 63. Collect Transit Fares at the Roadside (DFD 4.7.2) 90
Figure 64. Manage Emergency Services (DFD 5) 91
Figure 65. Provide Emergency Services Allocation (DFD 5.1) 92
Figure 66. Manage Emergency Vehicles (DFD 5.3) 93
Figure 67. Provide Law Enforcement Allocation (DFD 5.4) 94
Figure 68. Provide Driver and Traveler Services (DFD 6) 95
Figure 69. Provide Trip Planning Services (DFD 6.1) 96
Figure 70. Provide Information Services (DFD 6.2) 97
Figure 71. Provide Advisory and Broadcast Data (DFD 6.2.1) 98
Figure 72. Provide Traveler Services at Kiosks (DFD 6.3) 99
Figure 73. Manage Ridesharing (DFD 6.4) 100
Figure 74. Manage Yellow Pages Services (DFD 6.5) 101
Figure 75. Provide Guidance and Trip Planning Services (DFD 6.6) 102
Figure 76. Select Vehicle Route (DFD 6.6.2) 103
Figure 77. Provide Driver Personal Services (DFD 6.7) 104
Figure 78. Provide Driver Personal Security (DFD 6.7.1) 105
Figure 79. Provide On-Line Vehicle Guidance (DFD 6.7.2) 106
Figure 80. Provide Vehicle Guidance (DFD 6.7.2.1) 107
Figure 81. Provide Traveler Personal Services (DFD 6.8) 108
Figure 82. Provide On-Line Traveler Guidance (DFD 6.8.1) 109
Figure 83. Provide Traveler Guidance (DFD 6.8.1.1) 110
Figure 84. Provide Traveler Personal Security (DFD 6.8.2) 111
Figure 85. Provide Traveler Services at Personal Devices (DFD 6.8.3) 112
Figure 86. Provide Electronic Payment Services (DFD 7) 113
Figure 87. Provide Electronic Toll Payment (DFD 7.1) 114
Figure 88. Process Electronic Toll Payment (DFD 7.1.1) 115
Figure 89. Provide Electronic Parking Payment (DFD 7.2) 116
Figure 90. Process Electronic Parking Lot Payment (DFD 7.2.1) 117
Figure 91. Provide Electronic Fare Collection (DFD 7.3) 118
Figure 92. Process Electronic Transit Fare Payment (DFD 7.3.1) 119
Figure 93. Carry-Out Centralized Payments Processing (DFD 7.4) 120
Figure 94. Collect Advanced Payments (DFD 7.4.1) 121
Figure 95. Provide Payment Instrument Interfaces (DFD 7.5) 122
Figure 96. Manage Archived Data (DFD 8) 123
Figure 97. Manage Maintenance and Construction (DFD 9) 124
Figure 98. Manage M&C Vehicles (DFD 9.1) 125
Figure 99. Manage Roadway M&C Activities (DFD 9.2) 126
Figure 100. Determine M&C Needs (DFD 9.2.3) 127
Figure 101. Manage Infrastructure Monitoring and Treatment Systems (DFD 9.2.6) 128
Figure 102. Manage Work Zones (DFD 9.3) 129
Figure 103. Control Work Zone Activity (DFD 9.3.1) 130
Figure 104. Manage Work Zone Data (DFD 9.3.2) 131
Figure 105. Manage Vehicle Speed (DFD 9.3.3) 132
Figure 106. Manage WZ Intrusion Warning (DFD 9.3.4) 133
Figure 107. Manage Environmental Information (DFD 9.4) 134

Tables

Table 1. External Parameter Definitions 17
Table 2. Roadmap to Logical Architecture Components 28

1. Introduction, Functional Requirements Process

The Logical Architecture is based on a Computer Aided Systems Engineering (CASE) model of the requirements for the flow of data and control through the various functions included in Intelligent Transportation Systems (ITS). Structured Data Flow Diagrams and Specifications, the components of the "Structured Analysis" approach used to define the Logical Architecture, are presented in this section to illustrate the decomposition of the Department of Transportation User Service Requirements (transportation industry requirements that define the National ITS Architecture, listed in Appendix C of this volume) as well as specific strategic requirements to processes and information flow. The Logical Architecture CASE model depicts transportation systems, such as, Traffic Management, Transit Management, and Emergency Management, as well as the "terminators" that bound these systems. The Logical Architecture includes the input (source) terminators and output (sink) terminators of ITS, but not the information imbedded in these terminators, and defines the information flow into, within, and out of the systems. It is the formal representation of the ITS operational concepts that are described in the Theory of Operations Document.

The Logical Architecture is first illustrated as a single function in a high level "System Context Diagram". This diagram shows the external inputs (sources) and outputs (sinks) between ITS and external terminators. The Context Diagram is then decomposed into the highest level Data Flow Diagram (DFD) that shows the highest level processes in ITS. These processes are then further decomposed into lower and lower levels.

At the lowest level of this decomposition Process Specifications (P-Specs) are written to define the functions necessary to satisfy the User Service Requirements and how the output data flows are constructed from its input data flows. P-Specs are used to represent the sources and sinks of data flows inside ITS.

The Logical Architecture is at the same time being mapped into a Physical Architecture which assigns the logical processes to physical subsystems. This mapping is documented in the Physical Architecture Document.

1.1 Architecture Strategies and Principles

The following summarizes the various strategies and principles that the Architecture Development Team has followed in developing the National ITS Architecture so as best to achieve the goals of ITS and the User Service Requirements.

1. Permit a low entry cost.

   The architecture provides immediate service to all users, regardless of the degree of special instrumentation available to them. It does so by using all the information available from all terminators in order to devise the management strategy, and then disseminate the necessary information to the users through the information channels available to them. The fact that users having access to advanced channels can receive improved service will provide incentives for deployment of ITS instrumentation, but will not totally deny service to those users who do not own such channels. Reduced service will be provided to the latter users through publicly available channels such as DMS (Dynamic Message Signs), RDS (Radio Data Systems), HAR (Highway Advisory Radio) and conventional media.

   The Architecture Development Team is concerned that ITS benefits should be available to large numbers of commercial and private travelers at no cost or a small cost. Some examples of how we have designed this into the architecture are:

a. Commercial Vehicle Operations (CVO) with an ID tag. The architecture allows a commercial vehicle to have only an inexpensive electronic ID-tag in order to participate in the basic electronic clearance at roadside stations.

b. Low/no cost traveler information services. Travelers will benefit from better regional travel information broadcast by commercial AM/FM/Cable operators if these operators use the travel information that is available from local traffic management centers and information service providers via ITS media interfaces.

c. Toll-tag services. The National ITS Architecture supports the current deployment of toll-tags.

2. Provide choices in price/performance for travelers to receive user services.

   The National ITS Architecture provides not just a single implementation of each user service, but in many cases supports a multiplicity of implementations with varying performance and associated costs to the user.

   For example, in the area of route guidance, the architecture supports three distinct modes of operation:

   a. Traveler-based route selection, where all route selection processing equipment as well as the navigable database that route selection is based on is included in equipment located with the traveler (either in their vehicle or in their portable computer). This approach provides a high degree of autonomy in both equipment usage and design.

   b. Traveler-based route selection coupled to infrastructure-based and provided link/queue-times. In this method, the traveler-based route selection system is augmented by data from the infrastructure about current and possibly estimated future (predicted) link transit times and intersection queue delays. Using this type of data, the traveler will be able to use his equipment to compute better routes since his static navigable road database will be augmented with dynamic information about current and predicted congestion conditions.

   c. In-vehicle route guidance coupled to infrastructure based route processing. In this approach the infrastructure (i.e., an ISP) processes the route based upon the traveler route request. The mobile equipment is simplified since it no longer requires a navigable map database, or the processing power to calculate a best route (only the processing power to display the route guidance).

3. Protect traveler privacy.

   In the area of privacy the National ITS Architecture takes into account that travelers have many distinct needs and preferences with respect to privacy and the architecture provides the capability for these needs to be met:

   a. Traveler Choice. The route selection choices above offer a spectrum of options with respect to privacy for the traveler using ITS. The traveler can select routes totally independently of any infrastructure based entity, or they can choose a higher level of service that requires allowing the infrastructure to provide personalized service which requires sending personalized messages to their specific mobile equipment. An ISP has the option to provide "cash" based accounts for travelers that wish to be completely anonymous, even with infrastructure based service.

   b. Architectural Privacy in the Private Domain. The ITS Architecture specifies that when personal or confidential data needs to be stored in the infrastructure (to provide a selected user service), it is stored at an ISP. By limiting personal or confidential information to the records of an ISP, which can be a privately held organization, this information is protected from access by federal or state Freedom of Information Act (FOIA) inquiries.

c. Architectural Information Security. The ITS Architecture allows state-of-the-art processes for message exchange using public key encryption and authentication, assuring that personal or confidential information is protected from unauthorized access.

4. Accommodate increasing levels of system integration.

   The ITS Architecture is designed not only to support the introduction of new technologies, but has been designed to incorporate advances in technology to provide higher levels of system integration and performance. Advanced concepts such as Dynamic Traffic Assignment can be supported by the architecture. Through the coupling of Traffic Control and infrastructure based Route Selection the architecture can, when the technology permits, approach optimum performance.

   By clearly separating the ITS application layer (i.e., the Transportation Layer) and the more commodity communication layer, the National ITS Architecture can rapidly incorporate the frequent advances in communications and computing technology.

5. Assure equity.

   Providing an equitable division of benefits and costs is a key design strategy for the National ITS Architecture Development Team. By splitting the key ITS infrastructure elements between private and public entities, the National ITS Architecture is able to assure equity in expenditures/payments. Public funds are used by public agencies to benefit all travelers equally, and private funds (and fees) are used to supply additional "value add" services to those individuals willing to pay for those services.

6. Promote detailed, open standardization to maximize interoperability and reduce market risk.

   One of the most important requirements of the National ITS Architecture is interoperability -- the ability for the user to obtain user services nationwide with a single set of equipment. To do this the architecture effort must choose limited areas of detailed national standardization to maximize interoperability and market breadth for travelers and manufacturers.

   Certain areas of the architecture should be the focus of only limited standardization where possible to protect existing investments and to allow market forces to come into play.

   The issue of existing investments is particularly important with regard to current public infrastructure investment for TMS (Traffic Management Subsystem) to roadside communications and for TMS and roadside equipment. We have designed the architecture's roadside and TMS subsystems so that current equipment can coexist with most features of the architecture. We have also designed the architecture so that messages from one subsystem to another are not dependent on the particular path that they take, media or protocols.

   In the area of market forces, some portions of ITS are already being deployed and in some of these areas we believe it is most appropriate to let the market forces drive the standards. Dedicated Short Range Communications (DSRC) interfaces are currently hotly contested in the marketplace. (E.g., in the area of toll/id tags, there are competing "standards" from the American Trucking Association (ATA), International Standards Organization (ISO), and California Title 21.) We believe that the market and the participants in these markets will determine the applicable communication standards.

7. Leverage the existing and emerging open infrastructures.

   Communications is key to providing ITS user services to a wide range of users. The National ITS Architecture employs a strategy to maximize use of the existing (and planned future) communications infrastructure. This approach has the following benefits:

a. Minimized capital investment. A national communications infrastructure to support ITS would be costly to deploy if it were only to be used for ITS. The capital formation necessary for this hypothetical ITS only infrastructure could substantially limit or slow the deployment of ITS.

b. Expedited deployment. The ITS Architecture makes use of existing, operational, commercially available wired and wireless data communications services. This does not preclude the continued use of dedicated services where they make sense, such as some public safety, transit, and regional trucking/dispatch services.

c. Elimination of dependence on new spectrum allocations. New spectrum requirements dependent on FCC approval could delay and add considerable risk to the ITS evolutionary deployment.

8. Facilitate profitability for private industry to accelerate early deployment.

   New travel information technologies will require capital investments to deploy. The private sector is best prepared to rapidly form capital and efficiently deploy advanced technologies where a profit model can be identified.

   The Information Service Provider (ISP) concept in the National ITS Architecture allows for a multiplicity of vendors (public or private) to compete for the traveler's business. Travelers will benefit from a competitive environment of many ISPs that will supply choices of service levels, privacy levels, and cost levels.

   a. Enable opportunities for advertising. In addition to ITS services for sale, any ISP will be able to use the interfaces defined by the National ITS Architecture to communicate advertising to their traveling customers. The purpose of this feature is to enable an additional revenue stream to an ISP to subsidize the cost of providing infrastructure based traveler services. The amount that travelers will be willing to pay for ITS services is still unknown. By subsidizing the cost of the services with advertising, the number of travelers who will have access to personalized ITS services will increase.

   b. Combine with the sale of other services. Cellular data services are anticipated to be used for supplying a range of information services to mobile users (e.g., e-mail, news services). By combining ITS services and these other commercially viable services, the ITS user community is broadened. The revenue to an ISP providing other services will subsidize the cost of supplying ITS services.

9. Maintain an open architecture, unbiased towards any particular products.

   Use of open standards is a priority of the architecture. All subsystems in the architecture will support a range of existing or anticipated product offerings from an unlimited range of hardware or service providers.

   Exceptions to this approach were made in the case of DSRC where the markets are currently dominated by a small number of offerings which use proprietary communication interface standards. The Architecture encourages this community to eventually migrate to open standards to the mutual benefit of all participants.

10. Avoid new public agency liabilities.

    Liability is managed differently by public and private entities. Private entities have several alternative mechanisms for managing liability (e.g., insurance, legal disclaimers of liability) that are not available or as readily available to public agencies. As a result, public agency officials (e.g., at a TMS) may be reluctant to take on new liability associated services, especially pertaining to vehicle

control. Alternative provision of user services by an ISP is an architectural feature arising from this strategy.

One of the areas of public liability that is under study is in the Automated Highway System (AHS) services. The level of infrastructure involvement, and the liabilities associated with this are currently under study in other FHWA efforts. In the current architecture we have chosen to implement a form of AHS which minimizes (but does not preclude) the infrastructure component. This is consistent with the view of AHS as an evolution from the Advanced Vehicle Safety User Services. In this way, new safety liabilities continue to reside primarily with private companies (that manufacture the equipment or offer the services) that are best prepared to manage the new liabilities.

11. Encourage public-private infrastructure cooperation.

    By carefully allocating processes to public and potentially private subsystems, the National ITS Architecture has been designed to encourage mutually beneficial cooperation between public and private institutions through exchange of surveillance and predictive model data.

    Examples of this are:

    a. TMSs providing surveillance data to ISPs which will allow the ISPs to compute better routes for their clients.

    b. The ISPs providing (anonymous) probe data to the TMSs so that their surveillance of non-instrumented roadways is enhanced and thus their ability to manage traffic for all travelers is enhanced.

    c. Similarly, TMSs can access traffic data stored at neighboring TMSs over the data network.

12. Enhance traveler safety.

    The ITS Architecture Development Team believes that enhancing traveler safety is a key requirement for the architecture. There are many ways in which the National ITS Architecture will enhance safety. Some of these are:

    a. Reduce emergency response time. Early safety analysis leads us to believe that any reduction in time between the occurrence of an accident with injuries and the arrival of medical help has a substantial impact on survivability. In the high-end state architecture, the routes of emergency vehicles will be selected by the infrastructure, and those routes will be communicated to the TMS Traffic Management service package for preemption signal service for the emergency vehicles (with minimal disruption to the rest of the transportation network). In addition, rapid data based deployment of emergency response vehicles via the Emergency Management Subsystem will provide help to incidents faster, and will enhance traveler safety as a direct consequence.

    b. Augment 9-1-1. The Architecture Development Team has developed an interface between the Emergency Management Subsystem (EM) function and the existing 9-1-1 services. This will enable rapid coordination between existing telecommunication public safety interfaces, emergency fleet management, and traffic control.

    c. Reduce congestion. By using available and future demand management tools that the architecture makes available to local public agencies, congestion can be reduced and controlled, thus reducing the number of transitions from free-flow to stop-and-go traffic conditions. These transitions have been identified in our preliminary safety analysis as a cause of traffic accidents as well as a source of excess pollution.

d. Fail-safe infrastructure architecture. The National ITS Architecture has not allocated any new life threatening functions to the infrastructure. Vehicle control (for collision avoidance) remains primarily within the vehicle subsystem (and in the case of platoon operation and AHS related functions, is based on communication directly between adjacent vehicles). In the event of a total infrastructure failure, signals would fall back to local sensor based signal control or fixed time plans, exactly as they do today. Only in the case of intersection collision avoidance are safety critical surveillance processes allocated to the infrastructure.

13. Provide locally determined demand management capabilities for congestion and pollution management.

    For ITS to be desirable in some areas and in some time frames it must be able to address demand management (in addition to supply management). The architecture gives local agencies (and ultimately elected officials) enormous latitude to decide how limited transportation resources are to be allocated.

    The Architecture Development Team has designed the architecture so that any particular form of demand management is optional, and a local decision is required to deploy.

    a. Congestion Pricing. The National ITS Architecture can support DSRC based pricing on any link in the transportation infrastructure. The architecture can support the long term predictive models upon which congestion pricing decisions can be made.

    b. Vehicle Class Preferences. The National ITS Architecture supports DSRCs associated with vehicle classes, and vehicle classes can be verified by roadside sensors. Thus roads can be restricted to specific classes of vehicles by time-of-day or day-of-week and lanes and signals can give preferential service to different classes of vehicles.

       This mechanism would allow the exclusion of classes of vehicles from links or areas (e.g., commercial or public-transport vehicle only areas or vice-verse). This is basically the same mechanism used at the National ITS Architecture Roadside subsystem deployed for toll operation.

    c. Extensions of Ramp Metering and Mainline Metering. Ramp metering and mainline metering, both supported in the National ITS Architecture, have been shown to be effective methods for maintaining free flow of traffic on otherwise congested highways. The National ITS Architecture can be used to extend the "metering" paradigm to all links, and allow the route selection process to suggest alternate routes or trip start times.

1.2 Document Organization

The document is comprised of three volumes. This volume, Volume I, describes the Logical Architecture through DFDs and narrative overviews of each process (DFD and P-Specs). Volume I also includes several appendices: Appendix A, contains a listing of acronyms, Appendix B, a hierarchical listing of DFDs and process specifications, Appendix C contains a listing of all of the User Service Requirements for reference purposes, Appendix D, a hierarchical listing of all the data flows and their components.

The other two volumes are intended as references for technical users of the Architecture. Volume II of the Logical Architecture Document provides a complete printed set of the Teamwork Structured Analysis model P-Specs while Volume III provides the complete Data Dictionary model. The Reference Volumes provide primarily technical details and are not necessary for a general understanding of the National ITS Architecture.

1.2.1 Description of this Volume

Section 1 is an introduction and contains background information that is intended to allow the reader to understand the Architecture in its context. This includes a discussion of strategic principles and of methodologies.

Section 1.1 addresses the strategy and principles behind the development of the logical architecture.

Section 1.3 addresses the methodology that has been refined to automate the design of a combined Logical and Physical Architecture, as well as automating most of the related architecture data loading analysis.

Section 1.4 describes the convention followed in defining the names of the data flows appearing on the Context Diagram and all DFDs.

Section 1.5 describes the way in which size, frequency, and scale attributes have been assigned to both P-Specs and Data Flows. These are illustrated by examples of both a P-Spec and a Data Dictionary Entry data flow taken from the Teamwork model.

Section 1.6 discusses the way in which the CASE, spreadsheet, publishing, and e-mail tools used by the Team have been integrated.

Section 1.7 provides a roadmap to finding information on the components of the Logical Architecture, indicating where to go in the various architecture documents for the information.

Section 2 contains the Context Diagram and its description, and also describes the purpose and types of Terminators found in the Context Diagram.

Section 3 contains all the DFDs in the National ITS Architecture. Narrative descriptions of their content and purpose are found later in Section 5. Note that the lowest level DFDs are each described by a P-Spec which are described in Volume II.

Section 4 presents the rationale for data-driven control and, following the guidelines of Hatley-Pirbhai, why explicit control flows do not appear in this architectural model.

Section 5 provides a explanation of the functional specifications and descriptions of the DFDs of the logical architecture.

Appendix A contains a list of acronyms used in the logical architecture.

Appendix B contains a hierarchical listing of the processes of the logical architecture.

Appendix C contains the User Service Requirements upon which the National ITS Architecture is based.

Appendix D contains a Data Tree that lists the data flows and their subflows.

1.2.2 Description of Volume II and Volume III

These two parts of the Logical Architecture document are basic reference volumes. The Logical Architecture Reference Volumes contain detailed reference material from the Teamwork CASE model.

Volume II: Process Specifications provides the actual P-Specs for each lowest level specification. Contained in each P-Spec are the inputs, body (functional requirements), and the output.

Volume III: Data Dictionary is the complete Logical Architecture Data Dictionary. It contains the definitions of all the data flows developed in the structured decomposition process. Each data flow is

hierarchically composed of other data flows and/or primitive data flows (primitive data flows may not be decomposed further). Another form of the Data Dictionary is appended to this document (Appendix D). It provides only DDE names (no description or sizing assumptions) but it is organized to show each and every component and sub-component of each DDE. It provides a "rabbit trail" for tracing high level flows down to their most primitive elements, a task that is tedious at best in the normal Data Dictionary format.

The data flow sizes and frequencies between P-Specs, terminators (and stores) are parametrically defined in the P-Specs and in the Data Dictionary. The CASE model thus includes "extensions" that describe physical attributes of the data flows, which when combined with various parametric assumptions about the environment in which ITS will be used, allows quantitative estimation of message sizes (in 8-bit bytes) and frequencies (in messages/second).

Since a key requirement of the decomposition is to allocate the User Service Requirements to the Architecture, we have also mapped the user requirements to the Logical Architecture Process(es) which satisfy each requirement. This is found in the trace tables in the Logical Architecture Database, and is accessible from the hypertext version of the architecture on the CD-ROM.

1.3 Methodology

1.3.1 Representation of Functionality

The National ITS Architecture is developed using a Structured Analysis methodology. This approach was originally set forth by Tom DeMarco and later enhanced to include real-time extensions by a host of other authors. The main source of methodology used in analysis and development of the logical and physical architecture by the National ITS Architecture Development Team has been based on the work of Hatley/Pirbhai (Hatley, D., and Pirbhai, I., "Strategies for Real-Time System Specification", Dorset House, 1988.). Every attempt has been made to utilize the methodology as stated.

The Hatley/Pirbhai method of logical architecture analysis uses Data Flow Diagrams (DFDs) to show the flow of data between the functional elements that make up the architecture. There are three types of functional elements used in this approach:

- Terminators provide the sources and sinks for external information that flows to and from the Architecture. Terminators are represented in boxes and appear on the top level Context Diagram.
- Data stores are internal placeholders for data and may appear on any DFD. A data store represents "data at rest" in ITS. They are shown on the Data Flow Diagrams where data repositories are required to support data aggregation or archival services.
- Thirdly, P-Specs are provided as structured English descriptions that describe the way in which data is transformed from input information into desired outputs. In this Architecture, the P-Specs have also been "starved", that is, their input and output data flows represent all those to and from that process. There are no spurious or missing flows. This is essential to the goal of an open architecture: that modules designed and produced by different manufacturers will interoperate and interface seamlessly.

On a DFD, anything other than a store or data flow is shown as a circular object or bubble. A bubble may be a P-Spec or may be further decomposed into a lower level DFD. Bubbles that are decomposed into lower level DFDs are identified by the notation "(dfd)" inside the bubble after the title. If no "(dfd)" is present then the bubble is a P-Spec.

To develop and document the ITS Logical Architecture, the Architecture Development Team chose the CASE tool Teamwork, initially distributed by Cadre Software Inc., and distributed today (2002) by Computer Associates, Inc.. This tool is discussed in more detail in section 1.6 on page 27.

1.3.2 Configuration Control

Strict configuration control throughout the Architecture development process and beyond is an absolute requirement of the Architecture Development Team. This long term strategy is essential to ensure that the Architecture implementation and deployment will be open and support seamless integration and interoperability across geographical locations. It also allows systems deployed by different manufacturers using parts of this documentation as a design guide to interface and work together as intended. This requirement dictates that the DFDs and Data Dictionary Entries (DDEs) shown in this document are automatically accessible to the Team's publishing system directly from the CASE database. In this way, as changes are made to the Architecture model, they can be applied to a new version of the architecture database, the checking tools available in the CASE tool can be applied to assure consistency, and quality documentation can be accurately generated.

1.4 Data Flow Naming Convention For Terminators

As stated earlier, terminators are systems that are external to ITS but interact with ITS. The data flows that allow this interaction to occur are shown on the System Context Diagram. To easily identify these data flows the Team has adopted a naming convention to easily identify these data flows that originate or terminate at the external systems.

Data flows titled "To_*TerminatorName*" indicate a data flow that terminates external to ITS and data flows titled "From_*TerminatorName"* indicate a flow that originates from outside ITS. Because the data flows between terminators and the System Context Diagram are generally made up of several different information flows (or compound data flow messages) that will split into data flows at lower levels, an additional convention has been adopted for the immediate constituents of these flows:

txx-data_name and fxx-data_name - this is the convention for data flows that are elements of messages that flow to and from a terminator. The data_name text string is a free form expression to describe the particular data flow. The software used in developing the National ITS Architecture does not allow spaces in the data flow name. Therefore the underscore character is used to improve readability.

Note that the prefix of these data flows begins with a lowercase "t" or "f", and that "xx" consists of one or more letters that indicate a unique abbreviation for the terminator name. The actual selection of names can be seen in the Data Dictionary Entry (DDE, i.e., a data flow name) for any individual terminator message. For example, the entry from the Data Dictionary in Figure 1 demonstrates both of the aforementioned naming conventions. Note that each of the components of From_Travelers may be decomposed further through entries in the data dictionary.

Figure 1. Example Data Dictionary Entry for Data to/from Terminators

```
From_Traveler (data flow) =
        ft-extra_trip_data
        + ft-guidance_data
        + ft-guidance_map_update_request
        + ft-guidance_request
        + ft-guidance_route_accepted
        + ft-remote_emergency_request
        + ft-personal_emergency_request
        + ft-personal_extra_trip_data
        + ft-personal_map_display_update_request
        + ft-personal_trip_planning_requests
        + ft-trip_planning_requests
```

When consulting the Logical Architecture database or hypertext on the web site, the reader should be aware that the Teamwork hyphen character "-" has been replaced with the underscore "_" to avoid conflicts in the Excel analysis models used for data loading estimates. This substitution is also apparent in the Data Dictionary and P-Spec descriptions found in Volumes II and III of this document. The reader should assume that fx-*data_flow_name* is identical to *fx_data_flow_name* throughout the documentation. The same holds true for tx-*data_flow_name* and *tx_data_flow_name* .

1.5 Assignment of Size, Frequency, and Scale Attributes

While initially creating the National ITS Architecture, a function called data loading analysis was done. This was used to check the amount of data being passed over the various communications paths. In order to support the data loading analysis, a method was developed to identify a size and frequency for each data message in the architecture. This has been implemented by adding attributes to the P-Specs and to the DDEs that identify either a size or frequency with each flow. An example of the P-Spec content and format within Teamwork is illustrated in figure 2. All of the P-Specs from Teamwork are presented in Volume II of this document.

Estimated frequency attributes are documented within the P-Specs as it is the process itself that controls the rate at which data will be produced. The data flows into and out of the P-Spec are listed first in the INPUT/OUTPUT section. They are followed by the data transformation process, which is described in "will" language. This is used to reflect firm requirements and is itemized to aid testability. The User Service Requirements served by the P-Spec are then listed to justify its existence and are used to construct the trace tables in the Logical Architecture Database.

The Dynamic Attributes expressions that follow apply to all "data_out" types that are listed in the INPUT/OUTPUT Flows section. They are used to estimate data loading and to identify potential performance issues. Most of these expressions are dependent on external (to the CASE model) variables or other CASE model flows (e.g., P-Spec inputs). External variables are represented by a set of defined Parameters. Other flows are referenced by their CASE model flow name.

Figure 2. Example Teamwork P-Spec

```
NAME:
7.2.5

TITLE:
Detect Vehicle for Parking Lot Payment

INPUT/OUTPUT:

vehicle_parking_lot_characteristic_data : data_out
From_Vehicle_Characteristics : data_in

BODY:
Overview: This process shall be responsible for producing a vehicle's characteristics from data
received by sensors located at or near the parking lot entry and exit lanes. The data shall be sent
by the process to another process in a form suitable for use in calculating the parking lot charge
for the vehicle. The process shall ensure that the data includes such things as vehicle size,
type, identifiable features , etc.

Data Flows: All input data flows are unsolicited and all output flows are solicited.

Functional Requirements: This process shall meet the following functional requirements:
(a) continuously monitor for receipt of the input flows listed above;
(b) when the inputs are received, generate the outputs identified above.
-----------------------
REQUIREMENTS ATTRIBUTES:
USR = 3.0;
USR = 3.1;
USR = 3.1.3;
USR = 3.1.3.1;
USR = 3.1.3.3;

------------------
DYNAMIC ATTRIBUTES:
vehicle_parking_lot_characteristic_data = 12/(60)*PARKING_LANES;
```

In the Data Dictionary, every data flow has a "SIZE" extended attribute. For primitive elements this represents the size of this specific data flow or data flow component. It may be expressed as a constant integer quantity (e.g., "SIZE = 6"), or as an expression involving external parameters (e.g., "SIZE = 6 * {CVO_VEHS}").

Non-primitive elements (compound flows) are usually sized simply as the sum of their primitive constituents. In that case, the size expression will be "SIZE=0" and the actual size will be computed externally to the CASE model. Note that the "SIZE=0" statement does not mean the size is zero; it is used as a flag to the parsing program, telling it to use the formal definition above to compute the size. Not all non-primitive flow sizes can be computed from their formal definition and these will also have size expressions other than 0. When such a size expression exists within a DDE for a compound flow, it takes precedence over any other size computation based solely on its constituents. The typical Teamwork CASE model DDE below is an example of such a case. In Volume III of this document the entire Teamwork model Data Dictionary is provided.

Figure 3. Example Data Dictionary Entry with Sub Elements

```
crossing_data_for_highways (data flow) =
* This data flow is used within the Manage Traffic function. It contains data received
from a multimodal crossings on highways about when they are going to close and for how
long. The data flow consists of the following data items each of which is defined in
its own DDE:*

crossing_list
+ 1{crossing_close_time
   + crossing_close_duration}list_size.

--------
SIZING ATTRIBUTES

SIZE=crossing_list+HIGHWAY_CROSSINGS{crossing_close_time+crossing_close_duration};
```

Both size and frequency attributes can be expressed algebraically as functions of external "parameters", other flows, and assumptions. These expressions are evaluated (i.e., converted to numeric values) in the Data Loading Analysis process. A more complete discussion of this methodology is presented in the Communications Analysis document.

The variety of external assumption "parameters" that are used in the algebraic functions from which the data flow sizes and frequencies are determined is large. The current list of defined parameters is presented in Table 1. Parameters identified as type "Dependent" are determined as a function of those identified as type "Independent". This has been done in an attempt to keep the multitude of assumptions as "consistent" as possible by minimizing the number of independent assumptions. Values for independent parameters are estimated or assumed using statistical, demographic historical, etc. data. These parameters are estimated separately for the various scenarios (e.g., Urban 5 year, rural 20 year, etc.). This use of parameters within the CASE model allows the logical architecture to remain reasonably independent of the myriad external non-architectural assumptions and scenario dependencies.

Table 1. External Parameter Definitions

Name	Description	Basis	Type
ACT_ERMS_VEHS	The total number of emergency services vehicles that are active for any particular emergency call. This will be a proportion of the total number of emergency services vehicles (ERMS_VEHS). Note that it is assumed that they will all be capable of utilizing ITS functions.	0.1 * ERMS_VEHS	Dependent
ADJACENT_TMS	The average number of adjacent or cooperating Traffic Management Centers that a TMS within the ITS area under study will communicate with on a regular basis.	Unsubstantiated assumption	Independent
AHS_MILES	The total number of ITS roadway miles being operated under some form of AHS system.	Unsubstantiated assumption	Independent
AHS_SAMPLE_RATE	An arbitrary sample rate constant used to facilitate data loading estimates for AHS operations.	1 / DAY	Dependent
AHS_SEGMENT_LENGTH	The average length on an AHS segment.	Unsubstantiated assumption	Independent
AHS_TRIPS_per_DAY	The assumed average number of trips each AHS capable vehicle will make each day.	Unsubstantiated assumption	Independent
AHS_VEHS	The total number of vehicles that are utilizing AHS functions to obtain dynamic in-vehicle route guidance. Based on an assumed market penetration (MPAHS) and the general vehicle population.	MPAHS * VEHS	Dependent
AIR_RATE	The proportion of ITS traveler interactions that involve AIR as an alternative transportation mode.	Unsubstantiated assumption	Independent
AUTOINFRA	The assumed autonomous versus infrastructure based route guidance.	Unsubstantiated assumption	Independent

Name	Description	Basis	Type
AUTONOMOUS_TRAVS	The total number of travelers that are utilizing autonomous route guidance. Based on an assumed ratio (AUTOINFRA) and the number of guided travelers (ITS_GUIDED_TRAVS).	AUTOINFRA * ITS_GUIDED_TRAVS	Dependent
BROADCAST_ITEMS	The number of broadcast data items typically contained in a specific ITS advisory broadcast.	Siemens estimate.	Independent
CAMERA_DENSITY	The ratio of intersections equipped with cameras (i.e., the percentage of intersections instrumented).		Independent
COM_VEHS	The total number of commercial vehicles operable within the ITS area under study.	Unsubstantiated assumption	Independent
CONTROLLERS_PER_HIGHWAY_CORRIDOR	The average number of traffic controllers per highway corridor within the jurisdiction being studied.	Unsubstantiated assumption	Independent
CONTROLLERS_PER_ROAD_CORRIDOR	The average number of traffic controllers per road corridor within the jurisdiction being studied.	Unsubstantiated assumption	Independent
CORRIDORS	The total number of traffic corridors.	HIGHWAY_CORRIDORS + ROAD_CORRIDORS	Dependent
CROSSINGS	The total number of multimodal HIGHWAY_CROSSINGS and ROAD_CROSSINGS	HIGHWAY_CROSSINGS + ROAD_CROSSINGS	Dependent
CVC_SAMPLE_RATE	An arbitrary sample rate constant used to facilitate data loading estimates for CVC operations.	1 / DAY	Dependent
CVI_RATE	The rate at which an average Commercial vehicle Inspector actually performs inspections, expressed as Inspections per second. The numbers shown represent an average inspection time of approximately 30 minutes, to include preparation, rest periods, paperwork, etc.	Unsubstantiated assumption	Independent
CVO_BDR_PER_ROUTE	A typical number of border crossings on a typical CVO route through the ITS area under study.	Unsubstantiated assumption	Independent
CVO_BORDERS	The typical number of CVO border crossing facilities in the ITS area under study. It is based on the assumed number of Border Crossings per route (CVO_BDR_PER_ROUTE) and the number of routes "executed" (CVO_TRIPS_PER_DAY_PER_VEH).	CVO_BDR_PER_ROUTE * CVO_TRIPS_PER_DAY_PER_VEH	Dependent
CVO_DVR	The total number of Commercial Vehicle Drivers who also act as their own Fleet Managers. This will be a proportion of the number of Commercial Vehicles (CVO_VEHS). It is assumed that all of the vehicles belonging to these owner drivers will be equipped to utilize ITS functions.	0.5 * CVO_VEHS	Dependent
CVO_FAC	The total number of Commercial Vehicle Roadside facilities that are operating in the ITS area under study.	Unsubstantiated assumption	Independent
CVO_FAC_PER_ROUTE	The average number of CVO facilities on a typical CVO route. Dependent on the assumed total number of facilities (CVO_FAC) and the relative number of segments in a typical route (NUM_SEGS/ROADWAY_SEGS).	(NUM_SEGS / ROADWAY_SEGS) * CVO_FAC	Dependent
CVO_FAULT_RATE	The assumed rate at which commercial vehicles fail roadside inspections for all reasons to include safety, permits, driver credentials etc.	Unsubstantiated assumption	Independent
CVO_INSP	The total number of Commercial Vehicle Inspectors who can have simultaneous direct access to ITS at any one time in the ITS area under study. This will be dependent on the number of Commercial Vehicle Roadside facilities (CVO_FAC).	2.5 * CVO_FAC	Dependent
CVO_MAN	The total number of Commercial Vehicle Fleet Managers who can have simultaneous direct access to ITS at any one time. This will be less than the actual number of such Managers employed within the ITS area if they are working shifts, and/or other staff such as supervisors, etc., are also employed.	Unsubstantiated assumption	Independent
CVO_TRIPS_PER_DAY_PER_VEH	The assumed number of discrete trips a typical CVO vehicle makes in a 24 hour period.	Unsubstantiated assumption	Independent
CVO_VEHS	The total number of commercial vehicles operable within the ITS area under study.		Independent

Name	Description	Basis	Type
DAILY_TRAINS	The average number of trains operating through the ITS area under study in a 24 hour period.	Unsubstantiated assumption	Independent
DAY	Constant used in rate calculations, 24 hours	24 * HOUR	Dependent
DYNAMIC_TRAVS	The total number of travelers that are utilizing autonomous route guidance. Based on an assumed ratio (AUTOINFRA) and the number of guided travelers (ITS_GUIDED_TRAVS).	(1 - AUTOINFRA) * ITS_GUIDED_TRAVS	Dependent
EP_MONITOR_DENSITY	The expected number of environmental pollution monitoring points (i.e., roadside transponders) normalized to intersections.	Unsubstantiated assumption	Independent
ERMS_CALL_RATE	The daily rate at which EMS departments receive calls as a function of total population. The numbers for the Urban environment are based on a study of fire department EMS calls in 1994, reported by the Journal of Emergency Medical Services. The numbers shown are all based on the 'average' value of a 1994 study of 7 urban areas and are normalized to "per unit population" basis.	Statistical study	Independent
ERMS_CALLS	The rate, in calls per second, at which EMS calls are received over an average 24 hour period.	ERMS_CALL_RATE * (POPULATION) / DAY	Dependent
ERMS_ROUTE_LENGTH	The average length of an emergency vehicle route, in miles.	Unsubstantiated assumption	Independent
ERMS_VEHS	The total number of emergency services vehicles available for operation in the ITS area under study. This takes no account of whether the vehicles are active or not.	Unsubstantiated assumption	Independent
EVENT_RATE	The daily rate at which special events are scheduled which require ITS notifications.	Unsubstantiated assumption	Independent
FERRY_RATE	The proportion of ITS traveler interactions that involve FERRY operations as an alternative transportation mode.	Unsubstantiated assumption	Independent
GRADE_CROSSINGS	The number of active grade crossings within the ITS area under study.	FRA Data Report	Independent
GW_SIZE	Size of a green wave expressed as a number of route segments.	ERMS_ROUTE_LENGTH / LINK_LENGTH	Dependent
HIGHWAY_CORRIDORS	The total number of primary highway traffic corridors under ITS strategic planning and control within the jurisdiction being studied.	Unsubstantiated assumption	Independent
HIGHWAY_CROSSING_CONTROLLERS	The total number of multimodal highway crossing controllers in traffic corridors.	HIGHWAY_CORRIDORS * CONTROLLERS_PER_HIGHWAY_CORRIDOR	Dependent
HIGHWAY_CROSSINGS	The total number of controlled or monitored multimodal crossings of roads within the ITS environment under study. Based on data available for "typical" urban, interurban and rural areas.	Unsubstantiated assumption	Independent
HIGHWAY_INDICATORS	Total number of indicators (dynamic message signs and multimodal crossing signals) along freeways controlled/monitored within the ITS area under study. Assumed to be proportional to the total freeway mileage.	HIGHWAY_MILES / 10	Dependent
HIGHWAY_LINKS	The total number of navigable freeway links within the ITS area under study.	HIGHWAY_MILES/LINK_LENGTH	Dependent
HIGHWAY_MILES	Total freeway (limited access) mileage in the ITS area under study.	Unsubstantiated assumption	Independent
HIGHWAY_SIGN_CONTROLLERS	The total number of highway sign controllers, assumed to be proportional to the number of highway signs.	6 * HIGHWAY_SIGNS	Dependent
HIGHWAY_SIGN_PLANS	The number of distinct plans used for highway sign activation.	Siemens ROM	Independent
HIGHWAY_SIGN_SEQUENCES	The number of distinct sequences used for highway sign activation.	Siemens ROM	Independent
HIGHWAY_SIGNS	Total number of dynamic message signs along freeways controlled/monitored within the ITS area under study. Assumed to be proportional to the total number of freeway ramps.	RAMPS / 4	Dependent
HOUR	Constant used in rate calculations, 60 minutes.	60 * MINUTE	Dependent

Name	Description	Basis	Type
HOV_LANES	The total number of high-occupancy links being controlled/monitored within the ITS area under study. Based on the total number of its freeway links.	0.05 * HIGHWAY_LINKS	Dependent
HRI_EVENTS_PER_DAY	An HRI event is one train encountering one grade crossing. The number of HRI events that occur in a 24 hour period is estimated as a function of the number of trains (DAILY_TRAINS), the number of active grade crossings (GRADE_CROSSINGS) and the number of rail corridors through the ITS area under study (RAIL_ROUTES).	DAILY_TRAINS * GRADE_CROSSINGS / RAIL_CORRIDORS	Dependent
HRI_INCIDENT_RATE	The statistical rate at which incidents occur normalized to the number of trains crossing highways or roads.	FRA '95 Bulletin	Independent
HRI_INCIDENTS	The average number of HRI incidents expected in a single 24 hour period within the ITS area under study.	HRI_INCIDENT_RATE * GRADE_CROSSINGS	Dependent
HRI_MAINT_PER_DAY	An estimated number of maintenance events, based on a percentage of the number of active grade crossings within the ITS system under study.	0.001 * GRADE_CROSSINGS	Dependent
IMAGE_LARGE	A large (or high resolution) image, typically used for automated surveillance (as opposed to human visual) processes. Roughly equivalent to a 256 color (or gray scale) image of 1024 X 1024 picture elements (pels).	Engineering estimate.	Independent
IMAGE_SMALL	A small (or low resolution) image, typically used for visual identification (as opposed to automatic) purposes. Roughly equivalent to a 256 color (or gray scale) image of 640 X 480 picture elements (pels).	Engineering estimate.	Independent
INCIDENT_RATE	An assumed average incidents per vehicle in a day, normalized to general vehicle population (VEHS).	Unsubstantiated assumption	Independent
INCIDENTS	The average number of incidents in a 24 hour period, based on the incident rate (INCIDENT_RATE) and general vehicle population (VEHS).	INCIDENT_RATE * VEHS	Dependent
INDICATORS	Total number of indicators (intersection controllers, pedestrian controllers, dynamic message signs and multimodal crossings) controlled/monitored within the ITS area under study. Assumed to be proportional to the number of intersections.	HIGHWAY_INDICATORS + ROAD_INDICATORS	Dependent
INT_CONTROLLERS	The total number of roadway intersection controllers in traffic corridors.	CORRIDORS * INTER-SECTIONS_PER_CORRIDOR	Dependent
INTERSECTIONS	The total number of controlled or monitored intersections within the ITS environment under study. Based on data available for "typical" urban, interurban, and rural areas.		Independent
INTERSECTIONS_PER_CORRIDOR	The average number of roadway intersections per corridor within the jurisdiction being studied.	Unsubstantiated assumption	Independent
ITS_CVO_TRIPS_PER_DAY	Number of ITS guided commercial vehicle trips that occur in a single day.	MPCV * CVO_VEHS * CVO_TRIPS_PER_DAY_PER_VEH	Dependent
ITS_CVO_VEHS	The total number of commercial vehicles within the ITS area under study that are equipped to utilize ITS functions.	MPCV * COM_VEHS	Dependent
ITS_GUIDED_TRAVS	The total number of travelers who can utilize ITS personal traveler guidance functions. This will be a proportion of the number of travelers who can simultaneously utilize ITS functions (ITS_TRAVS).	0.3 * ITS_TRAVS	Dependent
ITS_GUIDED_VEHS	The total number of vehicles that are utilizing ITS functions to obtain dynamic in-vehicle route guidance. This is a subset of the subset of all types of vehicles equipped to utilize ITS functions (ACT_ERMS_VEHS, ITS_CVO_VEHS, ITS_PVT_VEHS, ITS_PTRANSIT_VEHS, ITS_TRANSIT_VEHS)	ACT_ERMS_VEHS + 0.9 * ITS_CVO_VEHS + 0.25 * ITS_PVT_VEHS + 0.8 * ITS_PTRANSIT_VEHS + 0.2 * ITS_TRANSIT_VEHS	Dependent
ITS_PTRANSIT_TRAVS	The total number of travelers who are utilizing ITS functions to obtain information on flexible transit services and (possibly) make reservation for one of those services. This is a proportion of the total number of travelers who can utilize ITS functions (ITS_TRAVS).	MPPTT*ITS_TRAVS	Dependent

Name	Description	Basis	Type
ITS_PTRANSIT_VEHS	The total number of Paratransit vehicles operating within the ITS area under study that are equipped to utilize ITS functions. This will be a proportion of the total number of Paratransit vehicles (PTRANSIT_VEHS).	0.9 * PTRANSIT_VEHS	Dependent
ITS_PVT_VEHS	The total number of private vehicles within the ITS area under study that are equipped to utilize ITS functions.	MPPV * PVT_VEHS	Dependent
ITS_RS_TRAVS	The total number of travelers who are utilizing ITS functions to obtain Ridematching information and (possibly) make Ridematching reservations. This is a proportion of the total number of travelers who can utilize ITS functions (ITS_TRAVS).	0.1 * ITS_TRAVS	Dependent
ITS_TRANSIT_USERS	The total number of transit users operating within the ITS area under study that utilize ITS functions. This will be a proportion of the total number of transit users (TRANSIT_USERS).	MPTU * TRANSIT_USERS	Dependent
ITS_TRANSIT_VEHS	The total number of transit vehicles operating within the ITS area under study that are equipped to utilize ITS functions. This will be a proportion of the total number of transit vehicles (TRANSIT_VEHS).	MPTV * TRANSIT_VEHS	Dependent
ITS_TRAVS	The total number of travelers who can simultaneously utilize ITS functions. This is a proportion of the total population (POPULATION).	MPTR * POPULATION	Dependent
ITS_VEHICLES	The total number of vehicles within the ITS area under study that are equipped to utilize ITS functions.	ACT_ERMS_VEHS + ITS_CVO_VEHS + ITS_PVT_VEHS + ITS_PTRANSIT_VEHS + ITS_TRANSIT_VEHS	Dependent
JPEG	Images are assumed to be compressed for the purposes of estimating data flow sizes. Still images are assumed to be compressed using the Joint Photographic Experts Group (JPEG) methodology. The algorithms defined by this industry group can generally achieve compression ratios between 10:1 and 160:1. This parameter establishes the ratio assumed in this analysis.	JPEG	Independent
KIOSK_EMERGENCIES	Number of emergency calls per second being transmitted from ITS Kiosks. This is assumed to be proportional to the number of ITS travelers (ITS_TRAVS), the expected rate of emergency calls within the general population (ERMS_CALL_RATE), and the market penetration of ITS Travelers using Kiosks (MPKIOSK).	MPKIOSK * ERMS_CALL_RATE * ITS_TRAVS	Dependent
KIOSKS	Estimated number of traveler information Kiosks.	Unsubstantiated assumption	Independent
LANE_FLOW_RATE	Average traffic flow rate (Vehicles/second) on a single traffic lane. Based on a 24 hour period, this value should be adjusted as required to quantify time-of-day and incident specifics.	Unsubstantiated assumption	Independent
LAST_PMODEL_UPDATE	This parameter is defined to provide a record of when this table was last updated. It is the Excel time serial corresponding to the last time this table was updated by PMODEL.XLS.	NOW()	Dependent
LINK_LENGTH	The average length, in miles, of a navigable route link, for the ITS area under study. This parameter is quantified for roadway links. Pedestrian travelers may require shorter links.		Independent
LINKS	The total number of navigable links within the ITS area under study.	ROAD_LINKS + HIGHWAY_LINKS	Dependent
LOCAL_DATA	The typical number of data items containing advisory data that will be relevant to the local area surrounding a particular vehicle. This parameter is used to "filter" the advisory data list for data loading analysis.	Engineering Estimate	Independent
MAX_ADJ_PLANNED_EVENTS	The subset of maximum number of planned events for a 24 hour period that will impact traffic conditions in another area.	0.2 * MAX_ PLANNED_EVENTS	Dependent

Name	Description	Basis	Type
MAX_ADV_CHARGES	The maximum number of advanced charges, assumed to be 1% of the general ITS population, i.e. it is proportional to the general market penetration of ITS (MP).	0.01 * MP * POPULATION	Dependent
MAX_ADV_FARES	The maximum number of advanced fares, assumed to be 1% of the general ITS population, i.e. it is proportional to the general market penetration of ITS (MP).	0.01 * MP * POPULATION	Dependent
MAX_ADV_TOLLS	The maximum number of advanced tolls, assumed to be 1% of the general ITS population, i.e. it is proportional to the general market penetration of ITS (MP).	0.01 * MP * POPULATION	Dependent
MAX_AHS_CHECKS	The maximum number of AHS check-in/check-out facilities.	AHS_MILES / AHS_SEGMENT_LENGTH	Dependent
MAX_AHS_SEGS	The maximum allowable number of segments into which a valid AHS route may be divided. This is an arbitrary assumption and is highly dependent on system design constraints.	Unsubstantiated assumption	Independent
MAX_BAD_PAYERS	The expected number of travelers who are known to the ITS system as bad credit risks, assumed to be a percentage of all ITS_TRAVELERS.	0.0001 * ITS_TRAVS	Dependent
MAX_CUR_INCIDENTS	The maximum number of incidents for a 24 hour period.	INCIDENTS	Dependent
MAX_HIGHWAY_SEGS	The typical number of segments into which a valid freeway route is divided. This is an arbitrary assumption and is highly dependent on system design constraints.	Unsubstantiated assumption	Independent
MAX_LINKS	The maximum allowable number of segments into which a valid route may be divided.	MAX_SEGS	Dependent
MAX_PARKING_SENSORS	The maximum number of parking lot sensors, assumed to be proportional to the number of PARKING_LOTS.	10 * PARKING_LOTS	Dependent
MAX_PARKING_DMS	The maximum number of parking dynamic message signs, assumed to be proportional to the number of PARKING_LOTS.	4 * PARKING_LOTS	Dependent
MAX_PLANNED_EVENTS	The maximum number of planned events for a 24 hour period.	INCIDENTS	Dependent
MAX_ROAD_SEGS	The typical number of segments into which a valid route over surface streets is divided. This is an arbitrary assumption and is highly dependent on system design constraints.	Unsubstantiated assumption	Independent
MAX_SEG_WPS	The maximum allowable number of waypoints which a valid segment may utilize. This is an arbitrary assumption and is highly dependent on system design constraints.	Unsubstantiated assumption	Independent
MAX_SEGS	The total number of navigable links within the ITS area under study.	LINKS	Dependent
MAX_SENSORS	The maximum number of ITS sensors, assumed to be proportional to the number of intersections in the ITS area under study.	10 * INTERSECTIONS	Dependent
MAX_STRATEGIES	The maximum number of traffic management strategies that can be specified for use in a single day.	Siemens estimate	Independent
MEDIA_OPS	The number of Media terminators who can have simultaneous direct access to the TMC at any one time. This will be less than the actual number of Media terminators who actually access the ITS if they are working shifts.	Unsubstantiated assumption	Independent
MILES	Total freeway and street mileage under ITS influence.	HIGHWAY_MILES + ROAD_MILES	Dependent
MINUTE	Constant used in rate calculations, 60 seconds	60	Dependent
MONTH	Constant used in rate calculations, 1/12 of a year	YEAR / 12	Dependent
MP	Market penetration assumption for ITS capabilities. It is used where a specific market penetration (e.g. MP_CVO) is not available or appropriate.	Unsubstantiated assumption	Independent
MPAHS	The assumed AHS Market Penetration, i.e. the percentage of vehicles that are equipped to operate on AHS lanes.	Unsubstantiated assumption	Independent

Name	Description	Basis	Type
MPCV	The assumed Commercial Vehicle Market Penetration, i.e. the percentage of commercial vehicles that are equipped to utilize ITS functions.	Unsubstantiated assumption	Independent
MPEG	Images are assumed to be compressed for the purposes of estimating data flow sizes. Full motion images are assumed to be compressed using the Motion Pictures Experts Group (MPEG) methodology. This parameter establishes the ratio assumed in this analysis.	MPEG	Independent
MPKIOSK	The market penetration of ITS Travelers using Kiosks.	Unsubstantiated assumption	Independent
MPPDA	The market penetration of ITS Travelers using PDA devices.	Unsubstantiated assumption	Independent
MPPTT	The assumed Paratransit Traveler Market Penetration, i.e. the percentage of travelers that utilize paratransit operations.	Unsubstantiated assumption	Independent
MPPV	The assumed Private Vehicle Market Penetration, i.e. the percentage of private vehicles that are equipped to utilize ITS functions.	Unsubstantiated assumption	Independent
MPSP	Market penetration factor for smart probe equipped vehicles. This parameter is tied to the Marker penetration for private vehicles (MPPV).	0.01 * MPPV	Dependent
MPTR	The assumed Traveler Market Penetration, i.e. the percentage of travelers that will utilize ITS functions.	Unsubstantiated assumption	Independent
MPTU	The assumed Transit User Market Penetration, i.e. the percentage of transit users that utilize ITS functions.	Unsubstantiated assumption	Independent
MPTV	The assumed Transit Vehicle Market Penetration, i.e. the percentage of transit vehicles that are equipped to utilize ITS functions.	Unsubstantiated assumption	Independent
NUM_CVO_RECORDS	The estimated number of records in the average CVO roadside database. It is based on an estimate of the total number of vehicles legally enrolled to operate in the ITS area under study. This will include all enrolled vehicles registered in the jurisdiction AND extra-jurisdictional enrolled vehicles that have paid apportioned fees and taxes.	MPCV*CVO_VEHS	Dependent
NUM_PLANNED_EVENTS	The planned number of events in a 24 hour period.	INCIDENTS	Dependent
NUM_SEGS	The number of individual route segments included in an average route.	Unsubstantiated assumption	Independent
NUM_TRANSIT_ROUTES	The average total number of transit routes included within the ITS environment being analyzed. Does not include transit routes of "other TMS" environments. This is an assumption of a "typical" value derived from demographic data of U.S, urban, interurban, and rural areas.		Independent
NUM_TRANSIT_SERVICES	The maximum number of vehicle schedules for a typical transit route. This is determined by the TRANSIT_ WAIT_TIME, i.e. an average wait time of 60 minutes requires 24 TRANSIT_SERVICES per 24 hour period.	24 * 60 / TRANSIT_WAIT_TIME	Dependent
OTHER_SEGS	The total number of navigable non-vehicular segments within the ITS area under study.	0.1 * ROAD_LINKS	Dependent
PARATRANSIT_USERS	The number of paratransit users, assumed to be a percentage of the total transit user population.	0.05 * TRANSIT_USERS	Dependent
PARKING_LANES	The maximum number of parking lot payment lanes that are operating at a single parking lot in the ITS area under study. It is assumed that these lanes will only be used by vehicles that are equipped to utilize ITS functions. Any that are not equipped in this way will be flagged as violators.	Unsubstantiated assumption	Independent
PARKING_LOT_PROVIDERS	The average number of independent parking service providers in the ITS area under study.	PARKING_PROVIDER_RATE * POPULATION	Dependent
PARKING_LOTS	The average total number of parking lots that are being operated by a single parking lot service provider in the ITS area under study.	PARKING_LOTS_PER_ PROVIDER * PARKING_LOT_PROVIDERS	Dependent

Name	Description	Basis	Type
PARKING_LOTS_PER_PROVIDER	The average total number of parking lots that are being operated by a single parking lot service provider in the ITS area under study.	Unsubstantiated assumption	Independent
PARKING_PROVIDER_RATE	Number of independent parking providers, normalized to general vehicle population (VEHS).	Unsubstantiated assumption	Independent
PARKING_SAMPLE_RATE	An arbitrary sample rate constant used to facilitate data loading estimates for parking lot operations.	1 / DAY	Dependent
PARKING_SPACE_RATE	Number of independent parking spaces, normalized to general vehicle population (VEHS).	Unsubstantiated assumption	Independent
PARKING_SPACES	The total average number of parking spaces available in the ITS area under study.	PARKING_SPACE_RATE * VEHS	Dependent
PED_CONTROLLERS	The total number of pedestrian activated signal controllers within the ITS area under study. This is dependent on the total number of intersections.	0.1 * INTERSECTIONS	Dependent
PEDESTRIAN_SIGNAL_CONTROLLERS	The total number of pedestrian activated signal controllers within the ITS area under study. This is dependent on the total number of intersections.	0.1 * INTERSECTIONS	Dependent
PEDESTRIANS	The total number of controlled or monitored pedestrian crossings that are not also intersections within the ITS environment under study. Based on data available for "typical" urban, interurban, and rural areas.	Unsubstantiated assumption	Independent
PERSONAL_EMERGENCIES	Number of emergency calls per second being transmitted from Personal Data Assistant (PDA) type devices. This is assumed to be proportional to the number of ITS travelers (ITS_TRAVS), the expected rate of emergency calls within the general population (ERMS_CALL_RATE) and the market penetration of ITS Travelers using PDAs (MPPDA).	MPPDA * ERMS_CALL_RATE * ITS_TRAVS	Dependent
POLLUTION_POINTS	The expected number of environmental pollution monitoring points (i.e. roadside transponders). This number is assumed to be proportional to the number of intersections (INTERSECTIONS) in the area under study, and to an installed rate (EP_MONITOR_DENSITY).	EP_MONITOR_DENSITY * INTERSECTIONS	Dependent
POPULATION	The total population of the ITS environment under study.		Independent
PTRANSIT_VEHS	The total number of Paratransit vehicles operating within the ITS area under study. A Paratransit vehicle is one that is used to carry one or passengers on a non-scheduled transit service that may not follow a fixed route.	Unsubstantiated assumption	Independent
PVT_VEHS	The total number of vehicles excluding commercial and transit vehicles, operable within the ITS area under study.		Independent
RAIL_CORRIDORS	The average number of routes over which DAILY_TRAINS are distributed within the ITS area under study.	Unsubstantiated assumption	Independent
RAIL_RATE	The proportion of ITS traveler interactions that involve heavy or light RAIL as an alternative transportation mode.	Unsubstantiated assumption	Independent
RAMP_CONTROLLERS	The total number of ramp controllers, based on the number of ramps, within the ITS area under study.	2 * RAMPS	Dependent
RAMPS	The total number of controlled or monitored highway access ramps within the ITS environment under study. Based on data available for "typical" urban, interurban, and rural areas.	Unsubstantiated assumption	Independent
ROAD_ADAPTIVE_PLANS	The maximum number of indicator adaptive data (adaptive plans) that are available from the Manage Traffic Function.	Siemens Estimate	Independent
ROAD_CORRIDORS	The total number of primary road traffic corridors under ITS strategic planning and control within the jurisdiction being studied.	Unsubstantiated assumption	Independent
ROAD_CROSSING_CONTROLLERS	The total number of multimodal road crossing controllers in traffic corridors.	ROAD_CORRIDORS * CONTROLLERS_PER_ROAD_CORRIDOR	Dependent

Name	Description	Basis	Type
ROAD_CROSSINGS	The total number of controlled or monitored multimodal crossings of roads within the ITS environment under study. Based on data available for "typical" urban, interurban, and rural areas.	Unsubstantiated assumption	Independent
ROAD_FIXED_PLANS	The maximum number of fixed time indicator control sequences (fixed time plans) that are available from the Manage Traffic Function.	Siemens Estimate	Independent
ROAD_INDICATORS	Total number of indicators (intersection controllers, pedestrian controllers, dynamic message signs and multimodal crossings) along roads controlled/monitored within the ITS area under study. Assumed to be proportional to the number of intersections.	4 * INTERSECTIONS	Dependent
ROAD_LINKS	The total number of navigable surface street links within the ITS area under study.	ROAD_MILES / LINK_LENGTH	Dependent
ROAD_MILES	The total mileage of ITS usable roads and streets (as distinct from highways) within the area under analysis.		Independent
ROAD_SIGN_CONTROLLERS	The total number of road sign controllers, assumed to be proportional to the number of road signs.	6 * ROAD_SIGNS	Dependent
ROAD_SIGNS	Total number of dynamic message signs along roads controlled/monitored within the ITS area under study. Assumed to be proportional to the number of intersections.	INTERSECTIONS / 10	Dependent
ROADWAY_SEGS	The total number of navigable route segments within the ITS area under study.	LINKS	Dependent
ROUTE_SEGS	The typical number of segments into which a valid route is divided. This is an arbitrary assumption and is highly dependent on system algorithm designs and assumptions.	Unsubstantiated assumption	Independent
SIGNS	The total number of HIGHWAY_SIGNS and ROAD_SIGNS.	HIGHWAY_SIGNS + ROAD_SIGNS	Dependent
SMART_PROBE_RATE	The rate at which Smart Probe vehicles report to roadside smart probe beacons. This assumption sets this parameter proportional to the number of smart probe vehicles (VEH_SMART_PROBES) and an average vehicle flow rate (LANE_FLOW_RATE).	VEH_SMART_PROBES * LANE_FLOW_RATE	Dependent
TAG_DEFECT_RATE	The assumed average rate at which tags will be rejected by ITS equipment INCLUDING bad credit, stolen tags, and system failures.	Unsubstantiated assumption	Independent
TOLL_LANES	The maximum number of toll lanes that are operating at an average toll plaza in the ITS area under study. It is assumed that these lanes will only be used by vehicles that are equipped to utilize ITS functions. Any that are not equipped in this way will be flagged as violators.	Unsubstantiated assumption	Independent
TOLL_MILES	The total number of ITS roadway miles being operated under some form of toll system. Based on available data for typical urban, interurban, and rural areas.		Independent
TOLL_PLAZAS	The total number of toll collection points within the ITS area under study. Based on available data for typical urban, interurban, and rural areas.		Independent
TOLL_SAMPLE_RATE	An arbitrary sample rate constant used to facilitate data loading estimates for toll road operations.	1/DAY	Dependent
TOLL_SEGS	Total number of Toll Segments within the ITS area under study. A Toll Segment is associated with the roadway between Toll Plazas and may consist of one or more Links. A Toll segment may be one or more Route segments, and vice versa.	TOLL_PLAZAS	Dependent
TRAFFIC_COORDINATION_RULES	The number of road-freeway coordination rules that are available from the Manage Traffic Function. These rules define the actions in the other system (Freeway or Surface street) needed when a particular road fixed time, adaptive, or freeway sign plan is not in control.	Siemens Estimate	Independent

Name	Description	Basis	Type
TRAFFIC_OPS	The number of Traffic Operations Personnel who can have simultaneous direct access to the TMC at any one time. This will be less than the actual number of Traffic Operations Personnel employed at the TMC if they are working shifts, and/or other staff such as supervisors, traffic planners, etc., who are also employed.	Unsubstantiated assumption	Independent
TRAFFIC_VIDEO_CAMERAS	The total number of traffic video cameras operating in the ITS area under study, assumed to be proportional (CAMERA_DENSITY) to the number of intersections (INTERSECTIONS).	CAMERA_DENSITY * INTERSECTIONS	Dependent
TRANSIT_DEVS	The total number of transit vehicles that are running late, i.e. deviating from their routes and/or schedules at any particular moment within the ITS area under study. This will be proportional to the total number of transit vehicles currently running under deviated schedules (TRANSIT_VEH_DEVS) and the number of stops on their routes (TRANSIT_STOPS).	0.5 * TRANSIT_VEH_DEVS * TRANSIT_STOPS	Dependent
TRANSIT_DRIVERS	The total number of transit drivers available to operate the transit vehicles within the ITS area under study.	Unsubstantiated assumption	Independent
TRANSIT_FLEETS	The total number of transit fleets operating in the ITS area under study. The fleets may be operating the same type of service, e.g. buses, or differing types, e.g. one for buses, another for light rail (trams).	Unsubstantiated assumption	Independent
TRANSIT_ROUTE_SEGS	The average (typical) number of route segments in a typical (average) transit route.	TRANSIT_STOPS / NUM_TRANSIT_ROUTES	Dependent
TRANSIT_SAMPLE_RATE	An arbitrary sample rate constant used to facilitate data loading estimates for transit operations.	1 / DAY	Dependent
TRANSIT_SEGS	The average (typical) number of route segments in a typical (average) transit route.	TRANSIT_STOPS / NUM_TRANSIT_ROUTES	Dependent
TRANSIT_STOPS	The total number of transit stops on all transit routes within the ITS area under study. It is assumed that as a minimum, they are all capable of receiving and displaying data about the next services due to arrive at the stop.	Unsubstantiated assumption	Independent
TRANSIT_TECH_ACTS	Transit Technician Activities, assumed to be proportional to the number of TRANSIT_VEHS.	2 * TRANSIT_VEHS	Dependent
TRANSIT_TECH_WR	The average number of transit vehicles that one transit maintenance technician can service in an hour.	Unsubstantiated assumption	Independent
TRANSIT_TECHS	The total number of transit service technicians available to maintain the transit fleet within the ITS area under study. This number is assumed to be proportional to the size of the transit system as measured by the number of TRANSIT_VEHS.	TRANSIT_VEHS / 50	Dependent
TRANSIT_USAGE_RATE	Number of transit users, normalized to total population (POPULATION).	Unsubstantiated assumption	Independent
TRANSIT_USERS	The average number of travelers in the general population (POPULATION) using transit facilities on a daily basis.	TRANSIT_USAGE_RATE * POPULATION	Dependent
TRANSIT_USERS_PER_ROUTE	The number of transit users served by an average transit route, in a 24 hour period. Based on the number of transit users (TRANSIT_USERS) and the number of routes (NUM_TRANSIT_ROUTES).	TRANSIT_USERS / NUM_TRANSIT_ROUTES	Dependent
TRANSIT_USERS_PER_STOP	The number of transit users at an average transit stop, in a 24 hour period. Based on the assumed number of transit users (TRANSIT_USERS) and the number of stops (TRANSIT_STOPS).	TRANSIT_USERS / TRANSIT_STOPS	Dependent
TRANSIT_VEH_DEVS	The total number of transit vehicles that are running late, i.e. deviating from their routes and/or schedules at any particular moment within the ITS area under study. This will be proportional to the total number of transit vehicles (TRANSIT_VEHS).	0.1 * TRANSIT_VEHS	Dependent
TRANSIT_VEHS	The total number of transit vehicles available for operation within the ITS area under study. A transit vehicle is a special type of vehicle that is designed and equipped to carry a number of passengers on a scheduled route.	Unsubstantiated assumption	Independent

Name	Description	Basis	Type
TRANSIT_WAIT_TIME	The average waiting time between regularly scheduled transit vehicles.	Engineering estimate of an acceptable average for each environment.	Independent
TUNNELS	An arbitrary assumption about the number of tunnel segments being managed by the ITS system under study.	Assumption	Independent
VEH_PROBE_SITES	The number of smart probe capable beacons in the ITS area under study. This assumption is directly tied to the assumption of the number of DMS signs (ROAD_SIGNS).	ROAD_SIGNS	Dependent
VEH_SMART_PROBES	The total number of ITS equipped vehicles with Smart Probe reporting capability.	MPSP * ITS_VEHICLES	Dependent
VEHICLE_SIGN_OUTPUT_DENSITY	The expected number of in-vehicle signage transmission points (i.e. roadside transponders) per intersection.	Unsubstantiated assumption	Independent
VEHICLE_SIGN_OUTPUTS	The expected number of in-vehicle signage transmission points (i.e. roadside transponders). This number is assumed to be proportional to the number of intersections (INTERSECTIONS) and to the rate of implementation (VEHICLE_SIGN_OUTPUT_DENSITY).	VEHICLE_SIGN_OUTPUT_DENSITY * INTERSECTIONS	Dependent
VEHS	The assumed total number of vehicles in the ITS area under study, based on the general population of the same area.	0.63 * POPULATION	Dependent
WEEK	Constant used in rate calculations, 7 days	7 * DAY	Dependent
YEAR	Constant used in rate calculations, 365.24 days	365.24 * DAY	Dependent
YP_GLOBAL_ITEMS	The typical number of items of "yellow pages" type of information that will be available from throughout the geographic and/or jurisdictional area served by the ITS under study.	Engineering estimate.	Independent
YP_LOCAL_ITEMS	The typical number of items of "yellow pages" type of information that will be available in the local area of a particular vehicle.	Engineering estimate.	Independent

1.6 Integration of CASE, Database, Spreadsheet, and Publishing Tools

To develop and document the ITS Logical Architecture, The Architecture Development Team has chosen the CASE tool Teamwork. This choice of CASE tool was made for several reasons including:

1. It supports full implementation of a complex requirements model.
2. It supports many analysts working on components of the same model simultaneously.
3. It is easily integrated into a distributed computing environment so that the model database is accessible from remote sites using the team's networks and the Internet, and system management including automatic backup is provided by a central service organization.
4. It can be integrated with other tools including the Interleaf publishing system.
5. We have been able to extend the basic Logical Architecture model supported by Cadre (now Computer Associates) to a full Logical/Physical Architecture model using extended attributes in the P-Specs and Data Dictionary entries, and custom software to generate the resultant Physical Architecture flows and data loading analysis.

The CASE tool is able to generate an ASCII encoded representation of the model in CASE Data Interchange Format (CDIF), which we are able to process using a variety of software tools.

These include COTS applications such as Microsoft Access, Excel, and Word, as well as developed code (in various languages). All of these tools were specifically customized to support this application.

Together, they generate the tables from which we do the concurrent Physical and Logical Architecture development. This collection of tables is contained in a set of interlocked Access databases:

LOGICAL.MDB — Contains the extracted Teamwork model data in relational table form. This database includes queries to resolve the source/destination of all the data flows that pass between P-Specs and Terminators. The resulting table of from/to flows is the basis for data loading analysis and Physical Architecture interface specification. This database also holds the Parameter definition tables.

PHYSICAL.MDB — This is the Physical Architecture counterpart to logical.mdb and contains the tables that define how logical entities (processes, flows) are mapped into physical entities (Subsystems, Equipment Packages, Architectural Flows).

MARKET.MDB — This database includes the Market Package information that was taken from the Physical Architecture database coupled with new tables that reflect the most recent market package analysis.

1.7 Roadmap to Logical Architecture Components

The Logical Architecture, Physical Architecture, and Market Packages Documents provide a complete description of the ITS National Architecture which is internally consistent. Using the sections and Appendices of these documents, the reader can navigate from the highest to the lowest levels of detail in the architecture. The following table identifies how to locate key information about the components of the Logical Architecture.

Table 2. Roadmap to Logical Architecture Components

Information	Where to find it.
User Service Requirements	LA Volume I, Appendix C.
Data Flow Diagrams	LA Volume I, Section 3 contains graphical DFDs. LA Volume I, Section 5 contains the complete descriptions of the DFDs. LA Volume I, Appendix B has a hierarchical listing of the DFDs and P-Specs.
Process Specifications	LA Volume II has the complete P-Spec descriptions including input/output flows, User Service Requirements satisfied by each P-Spec and the dynamics of each output dataflow.
Data flow definitions	LA Volume III contains Data Dictionary. LA Volume I, Appendix D has a summary hierarchical listing of the dataflows.
Market Package definitions	Market Packages Document.
LA=Logical Architecture Document; PA= Physical Architecture Document	

2. Context Diagram

The ITS Logical Architecture Context Diagram, shown in Figure 4, provides a precise definition of the ITS Architecture boundary. It is made up of the ITS functional process and the complete set of terminators.

Terminators define the boundary of the National ITS Architecture and provide external system interfaces to the processes and functions that support all of the User Service Requirements. The interfaces between terminators and the processes within the National ITS Architecture are defined, but no functional requirements are allocated to terminators. The descriptions of each terminator used in the Architecture may be found in the Physical Architecture Document. These terminators and their descriptions were selected to provide the most rigorous, yet flexible, system boundary acceptable within the constraints of the ITS requirements.

Types of Terminator:

Each of the terminators represents an external entity that communicates data to, or receives data from ITS functional processes. The terminators have been grouped into four types: Human, Systems, Environment, and Other Subsystems.

Human Terminators. These terminators represent the operators and users of ITS systems. The operators of ITS systems include personnel at ITS Center subsystems and Roadside subsystems as well as Drivers of various fleet vehicles (e.g. Transit Driver). Users of ITS systems include Drivers and Travelers who interact with ITS subsystems.

System Terminators. These represent the non-ITS Center systems (e.g., Media and Financial Institution), Roadside equipment (e.g. Wayside Equipment), and Vehicle equipment (e.g., an AM radio- which is considered to be part of the Basic Vehicle terminator) that ITS will interact with.

Environment Terminators. These represent the inputs that cause ITS sensors to create outputs. Examples are traffic (which cause traffic sensors to generate outputs) and environment (which causes environmental sensors to create outputs).

Other Subsystem Terminators. This is a representation that the architecture development team has adopted to indicate the interactions between multiple, similar subsystems, for example, vehicle-to-vehicle messages and Traffic Management Subsystem (TMS)-to-Traffic Management Subsystem messages. Considering the latter case of a TMS to TMS interface as an example, the logical architecture has a single set of processes describing surveillance, device control, etc. In order to describe the interface that covers the sharing of surveillance information from one TMS to another TMS, the logical architecture has data flows going to and from a process in the Manage Traffic portion of the logical architecture to the Other TM terminator.

The above definitions encompass all of the terminators defined for the architecture. This method of classification helps with understanding the type of information that flows to and from each terminator.

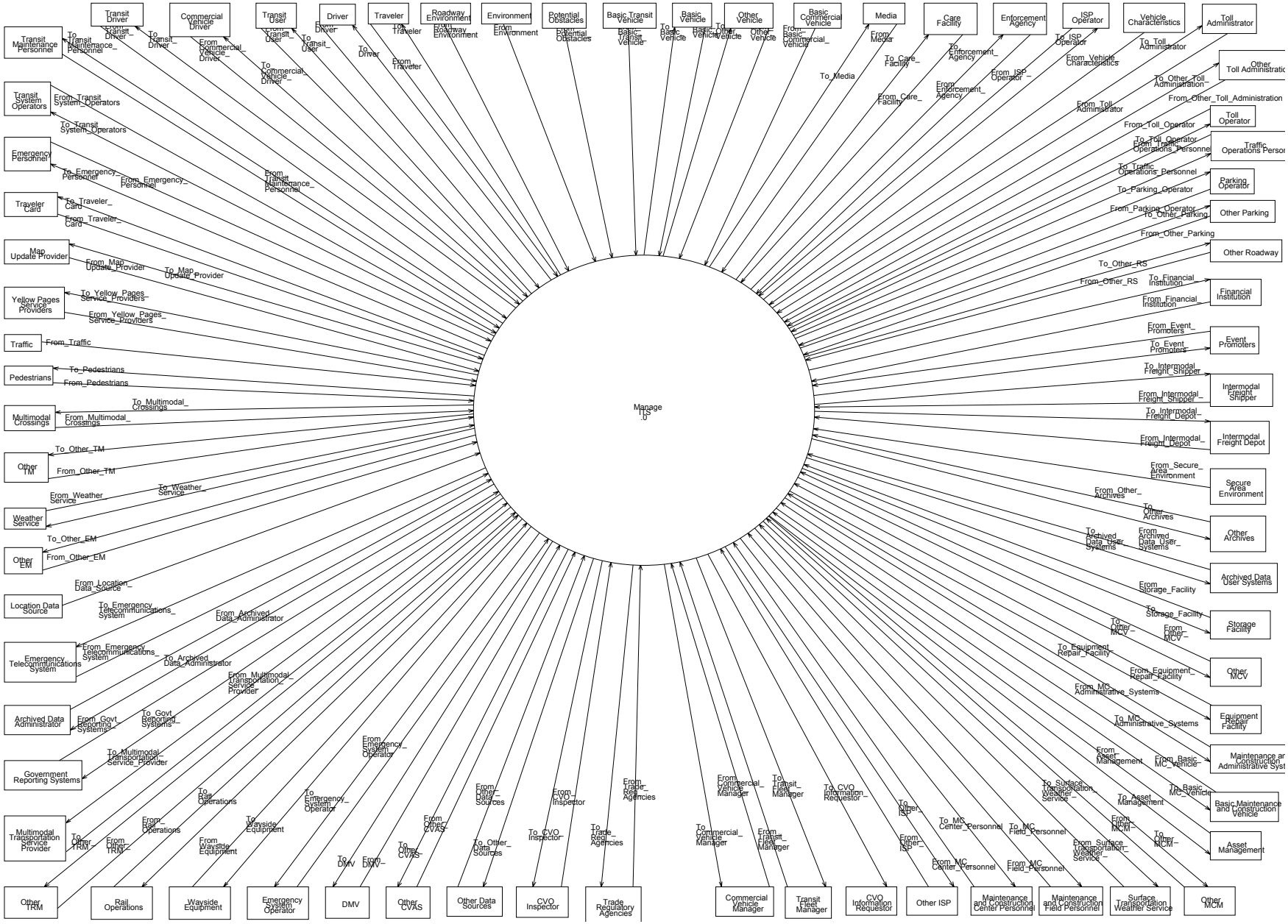


Figure 4. Context Diagram for ITS

3. Graphical Data Flow Model

3.1 Introduction

This section contains a complete set of Data Flow Diagrams (DFDs) for the ITS Logical Architecture. They are taken from the Logical Architecture model produced by the CASE tool (Teamwork) used by the Architecture Development Team.

3.2 Data Flow Diagrams

These diagrams include all of the data flows, data stores, and processes contained within the Logical Architecture. Some of the diagrams, because of their complexity may be hard to view on this document format. An alternative is to use the hypertext version of the architecture contained on CD-ROM or on the architecture development team web site, http://www.iteris.com/itsarch. The diagrams are contained in the hypertext and are available for downloading and insertion into drawing package software or word processor.

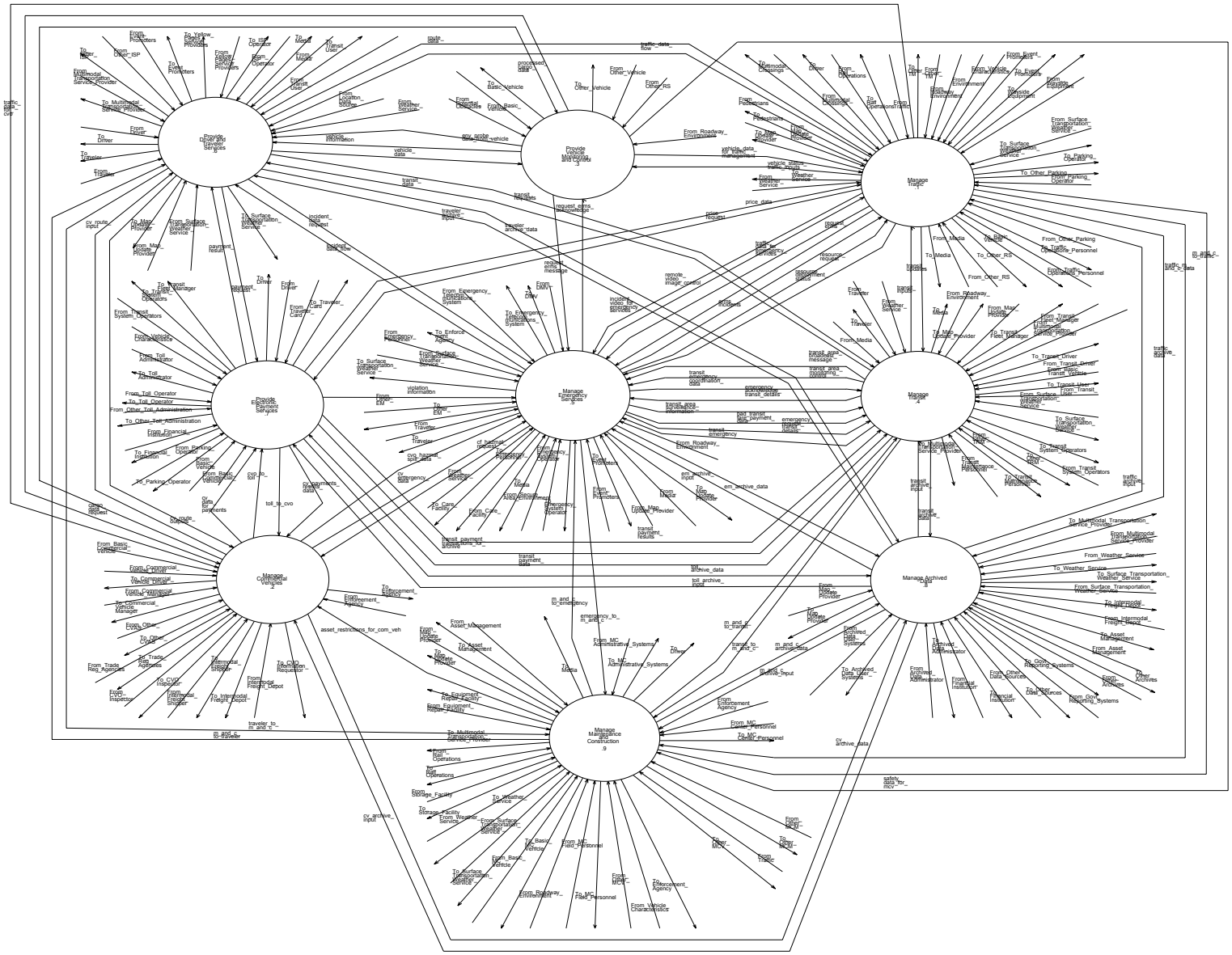


Figure 5. Manage ITS (DFD 0)

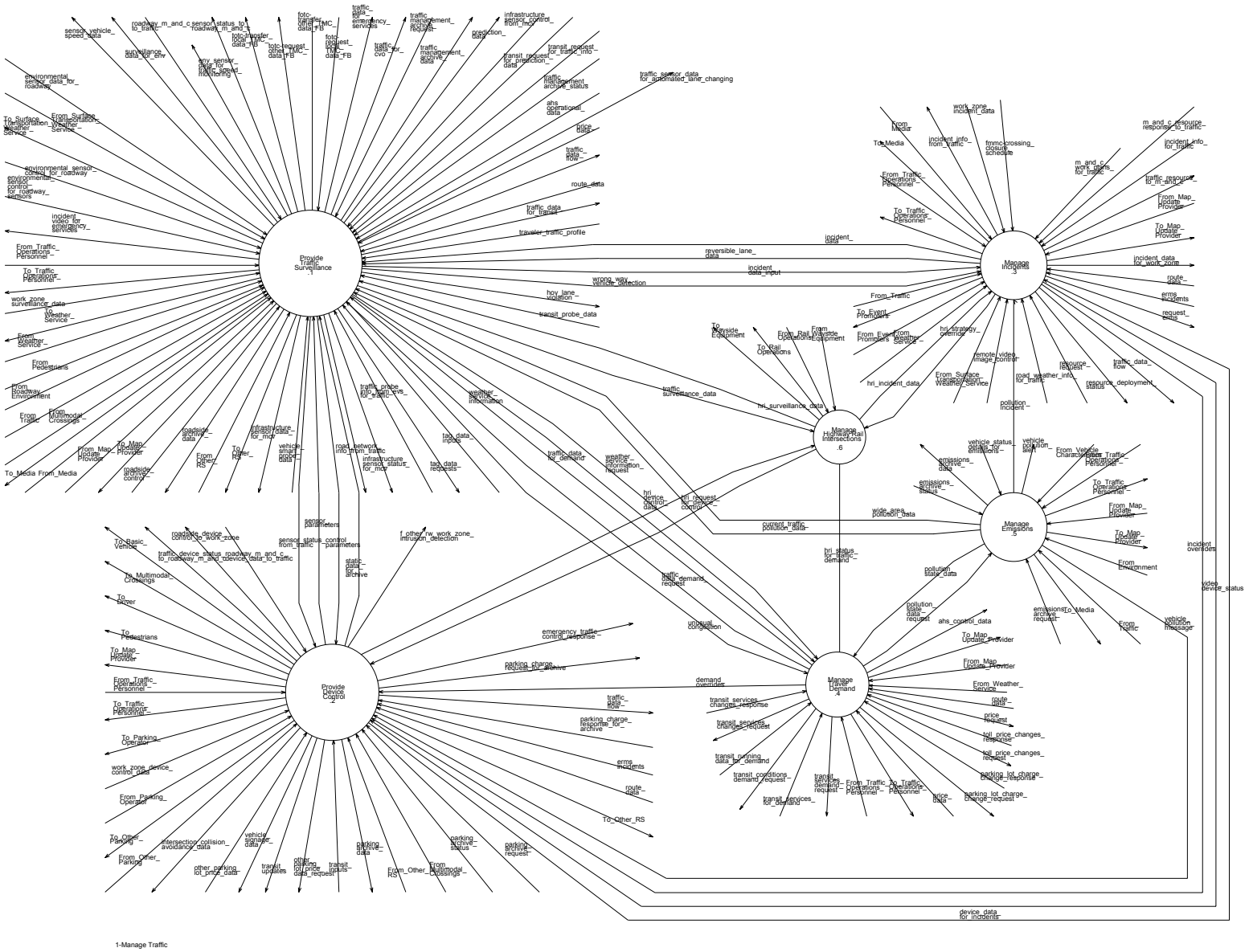


Figure 6. Manage Traffic (DFD 1)

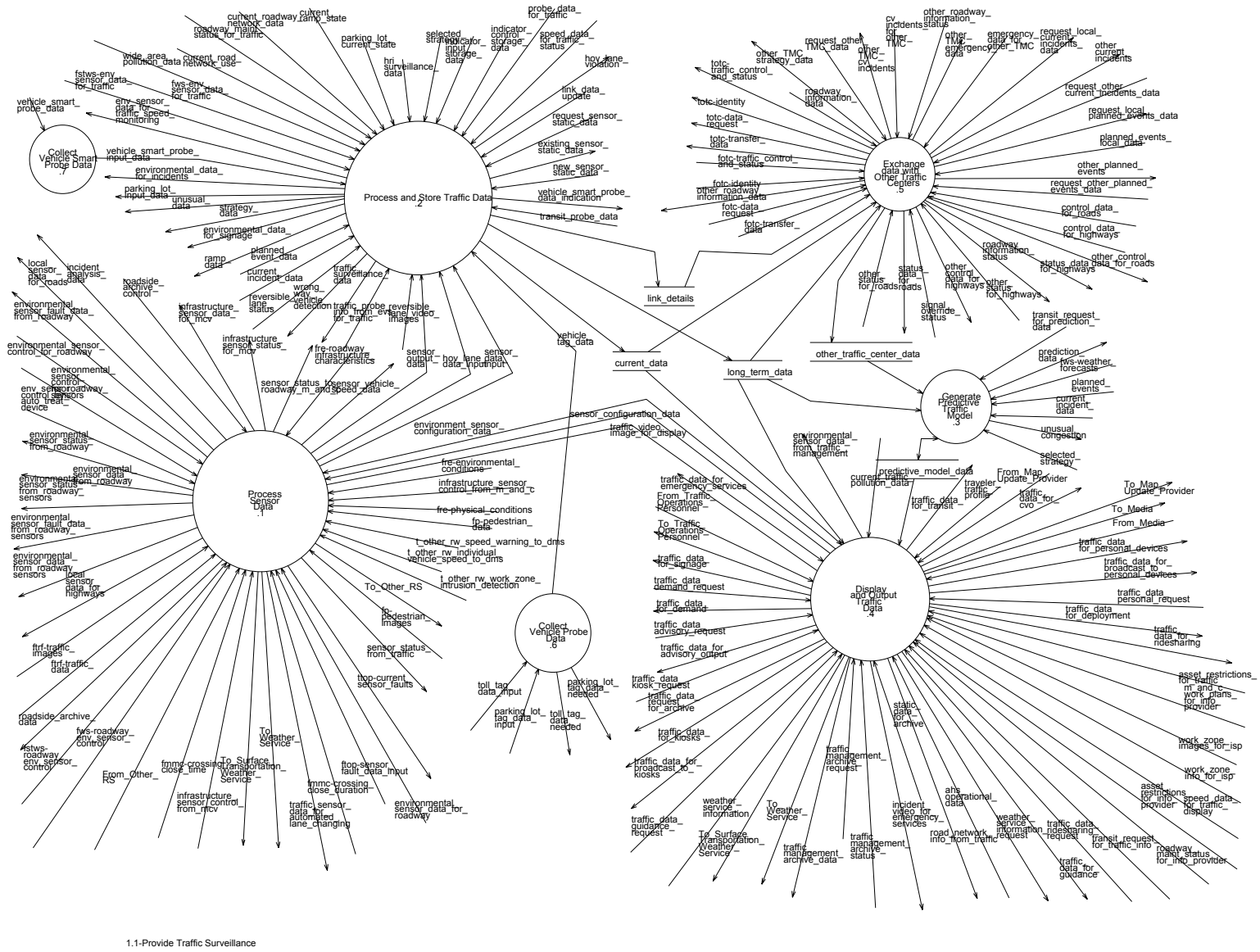


Figure 7. Provide Traffic Surveillance (DFD 1.1)

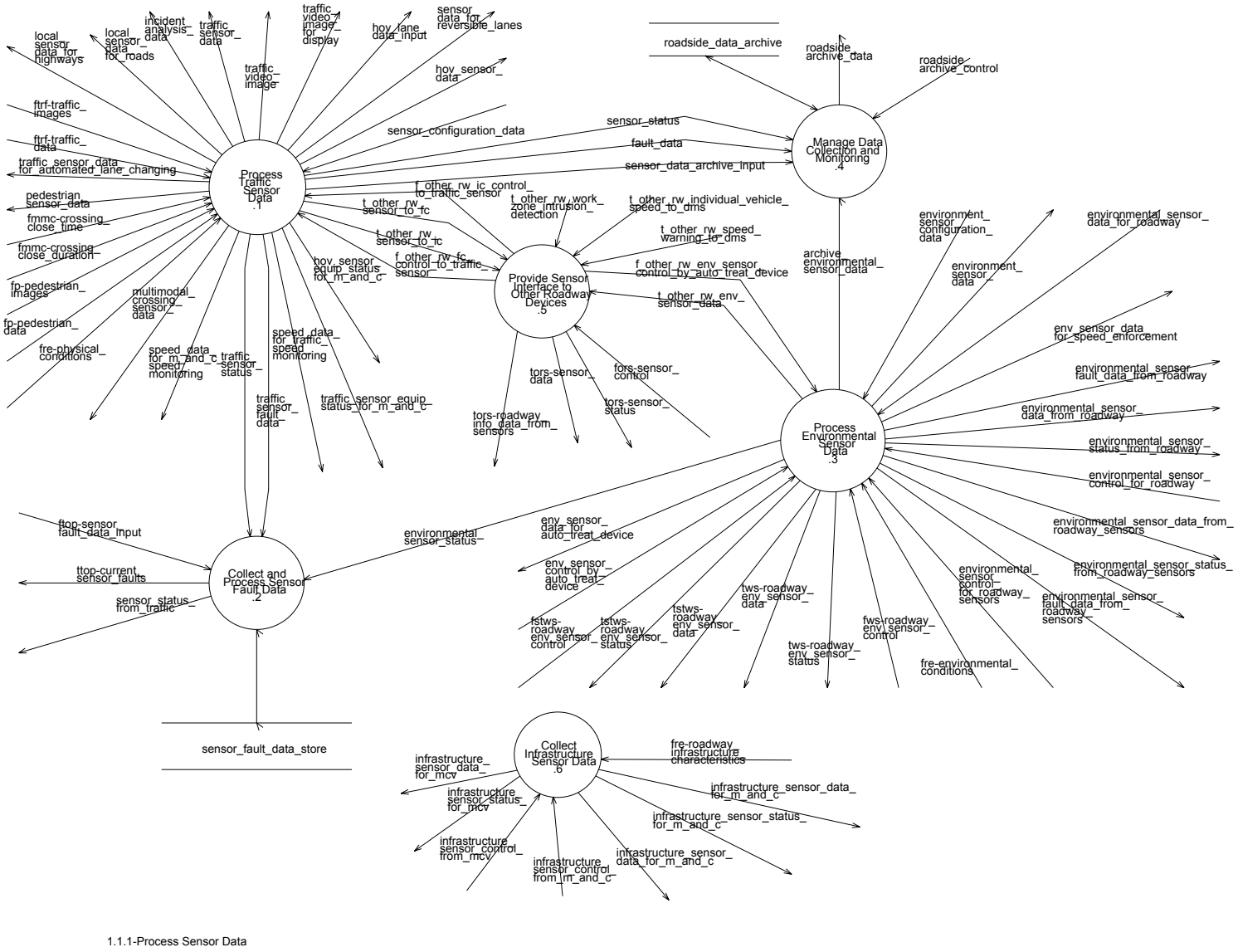
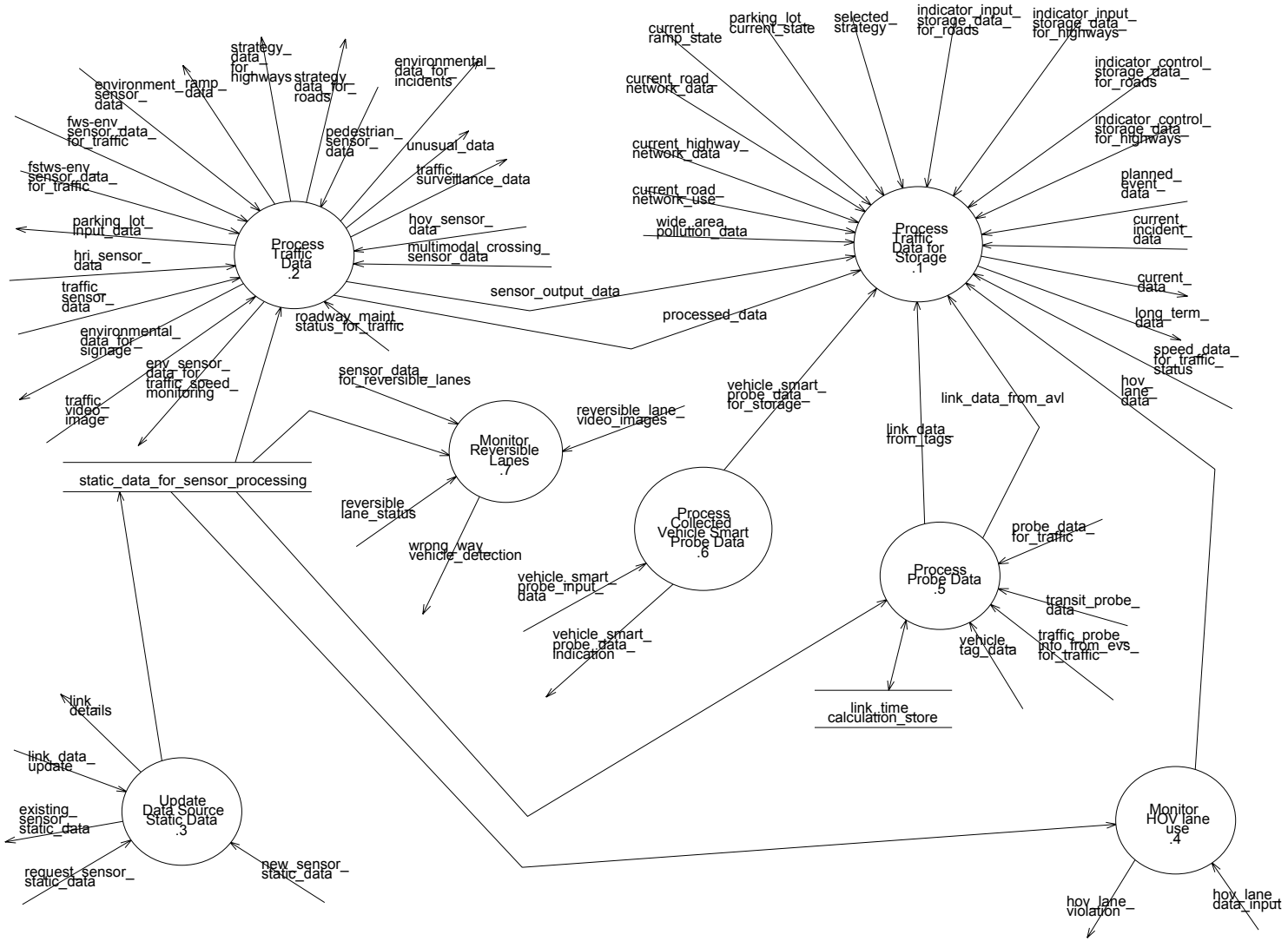


Figure 8. Process Sensor Data (DFD 1.1.1)



1.1.2-Process and Store Traffic Data

Figure 9. Process and Store Traffic Data (DFD 1.1.2)

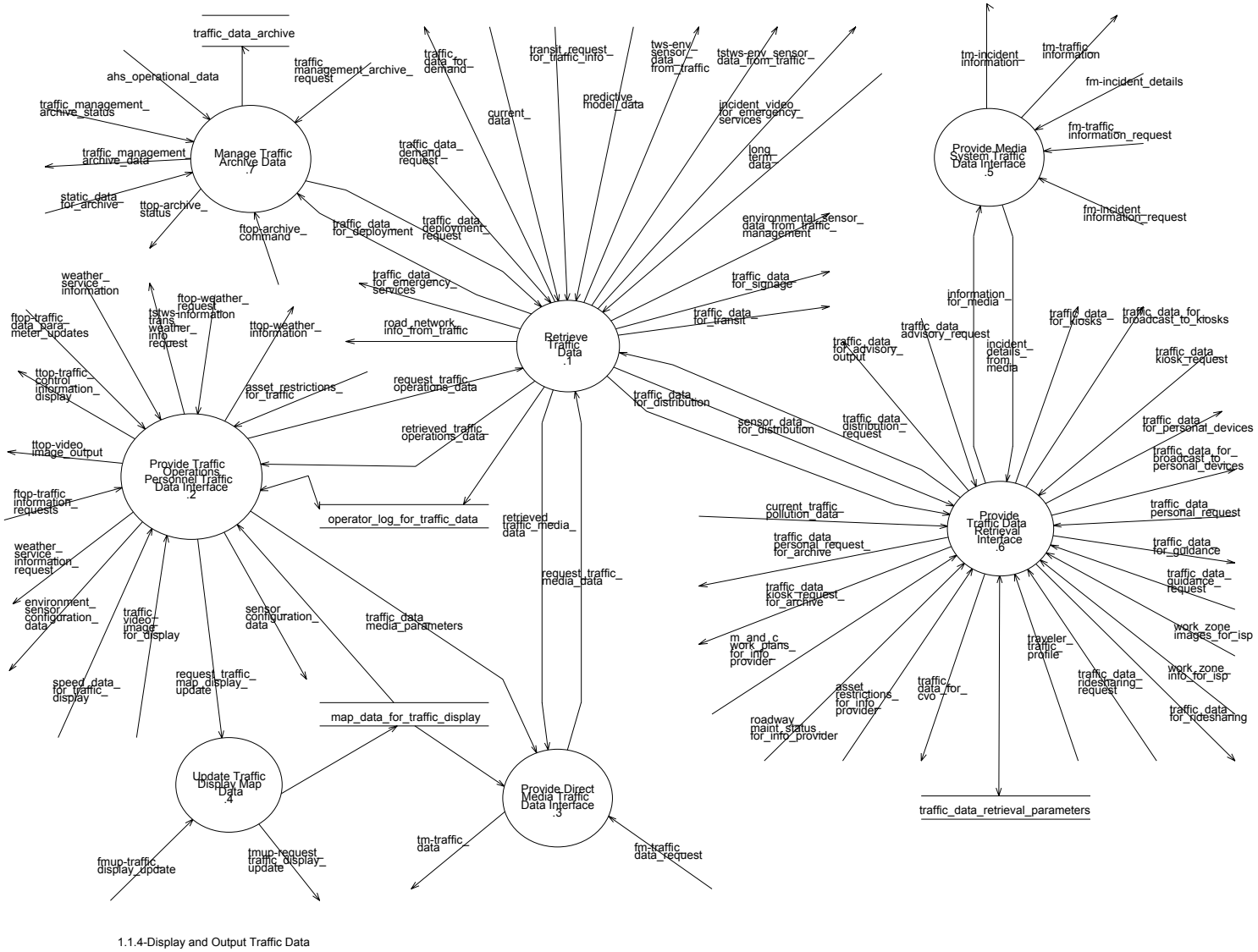


Figure 10. Display and Output Traffic Data (DFD 1.1.4)

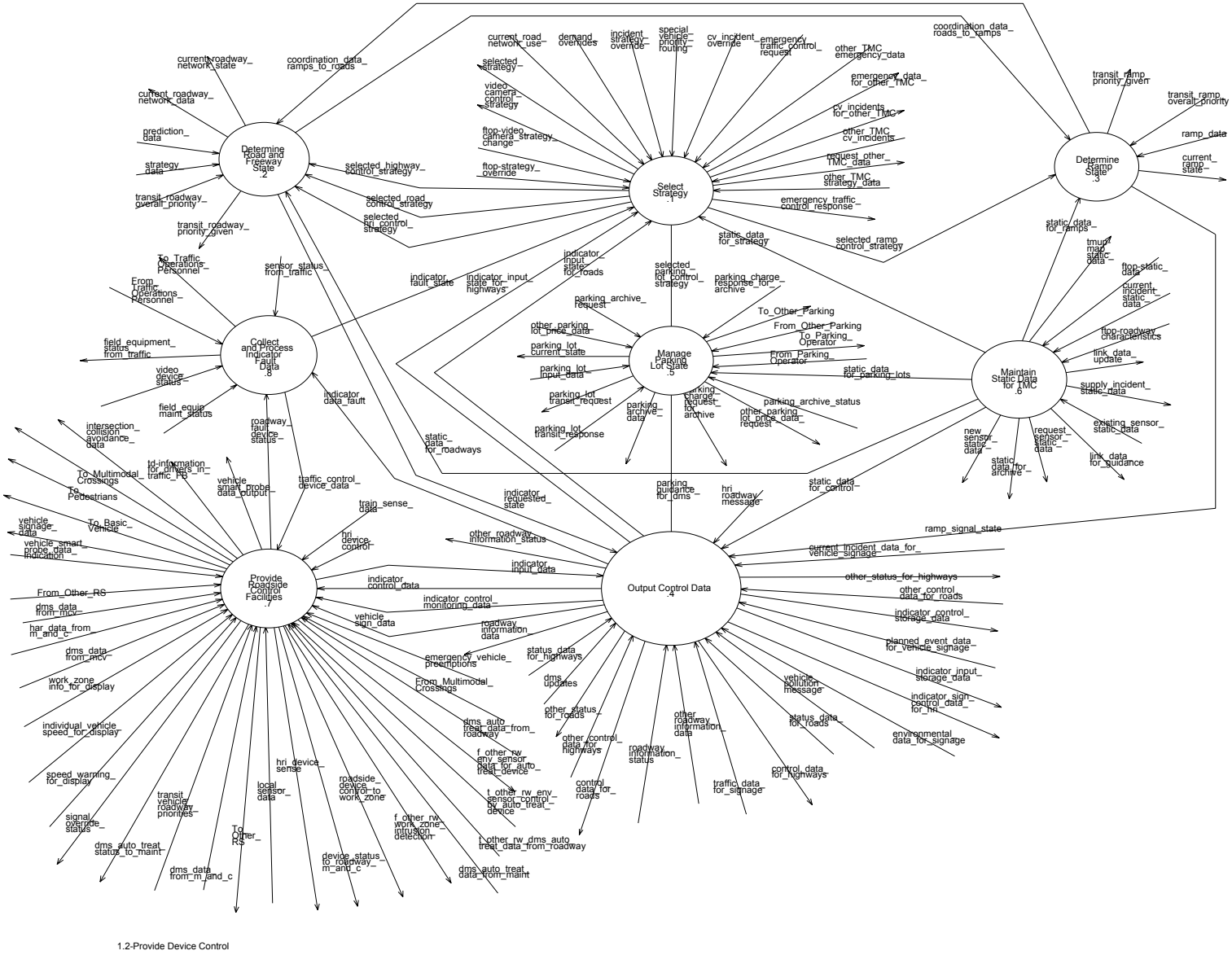


Figure 11. Provide Device Control (DFD 1.2)

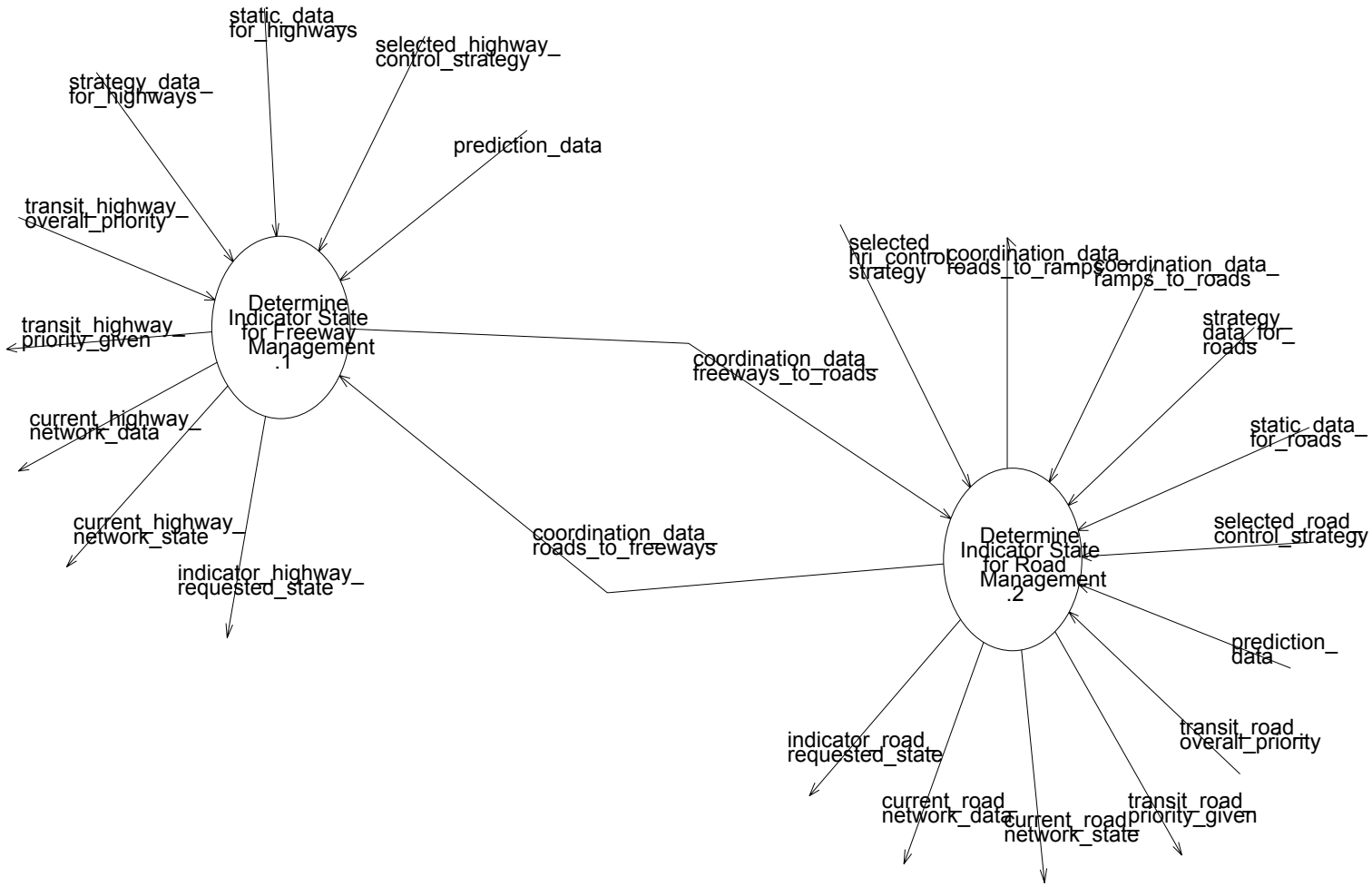


Figure 12. Determine Road and Freeway State (DFD 1.2.2)

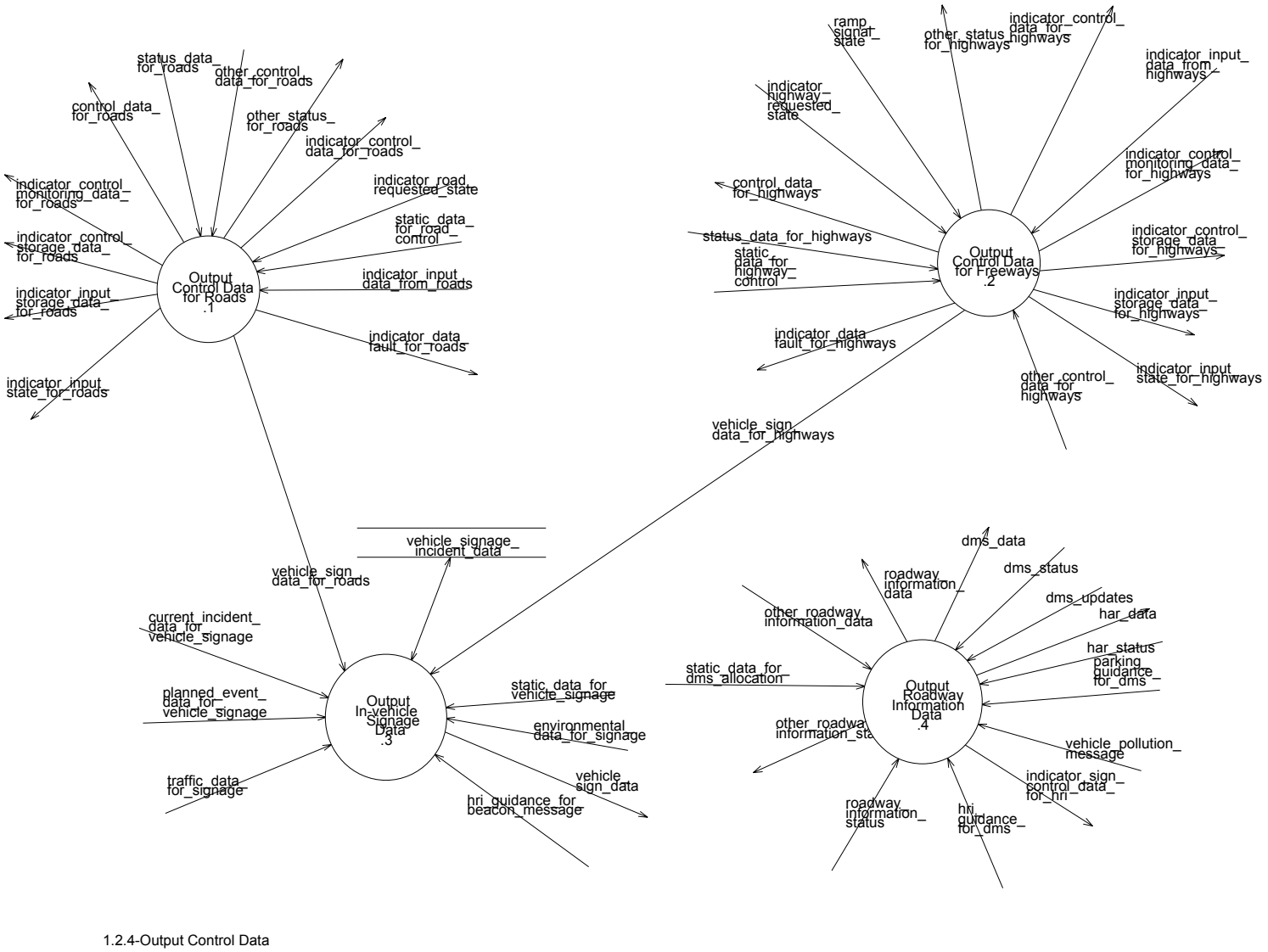


Figure 13. Output Control Data (DFD 1.2.4)

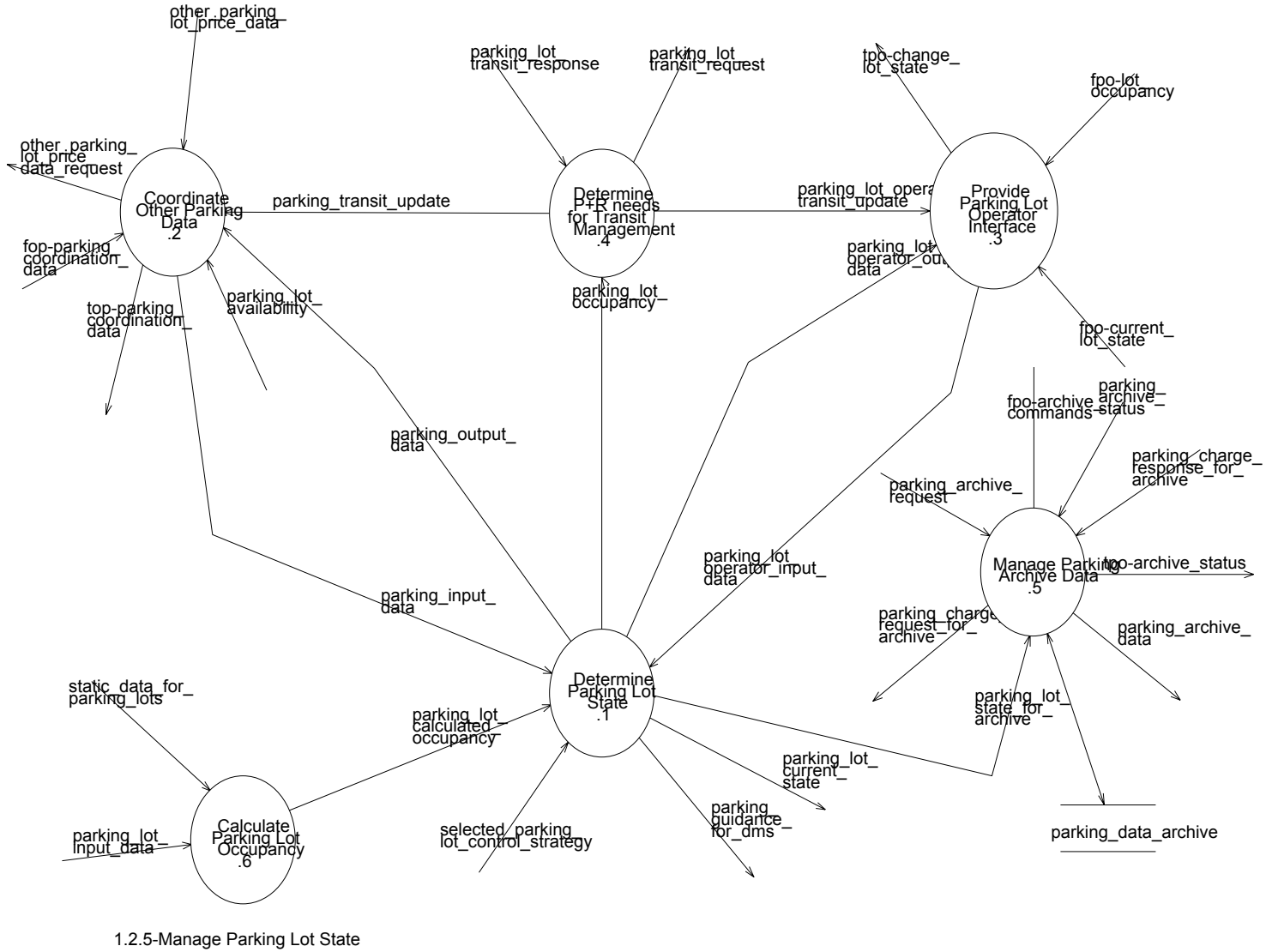


Figure 14. Manage Parking Lot State (DFD 1.2.5)

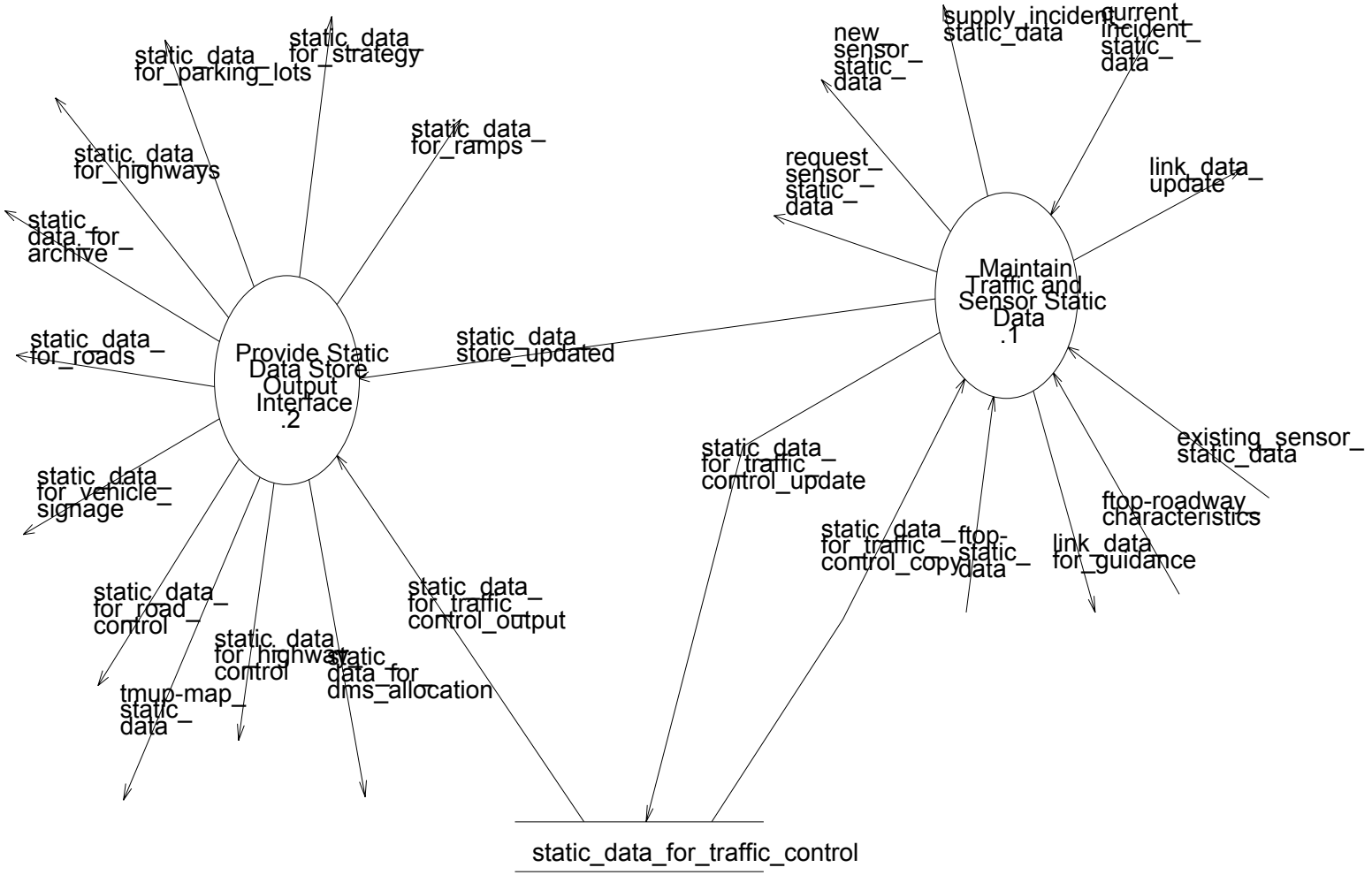


Figure 15. Maintain Static Data for TMC (DFD 1.2.6)

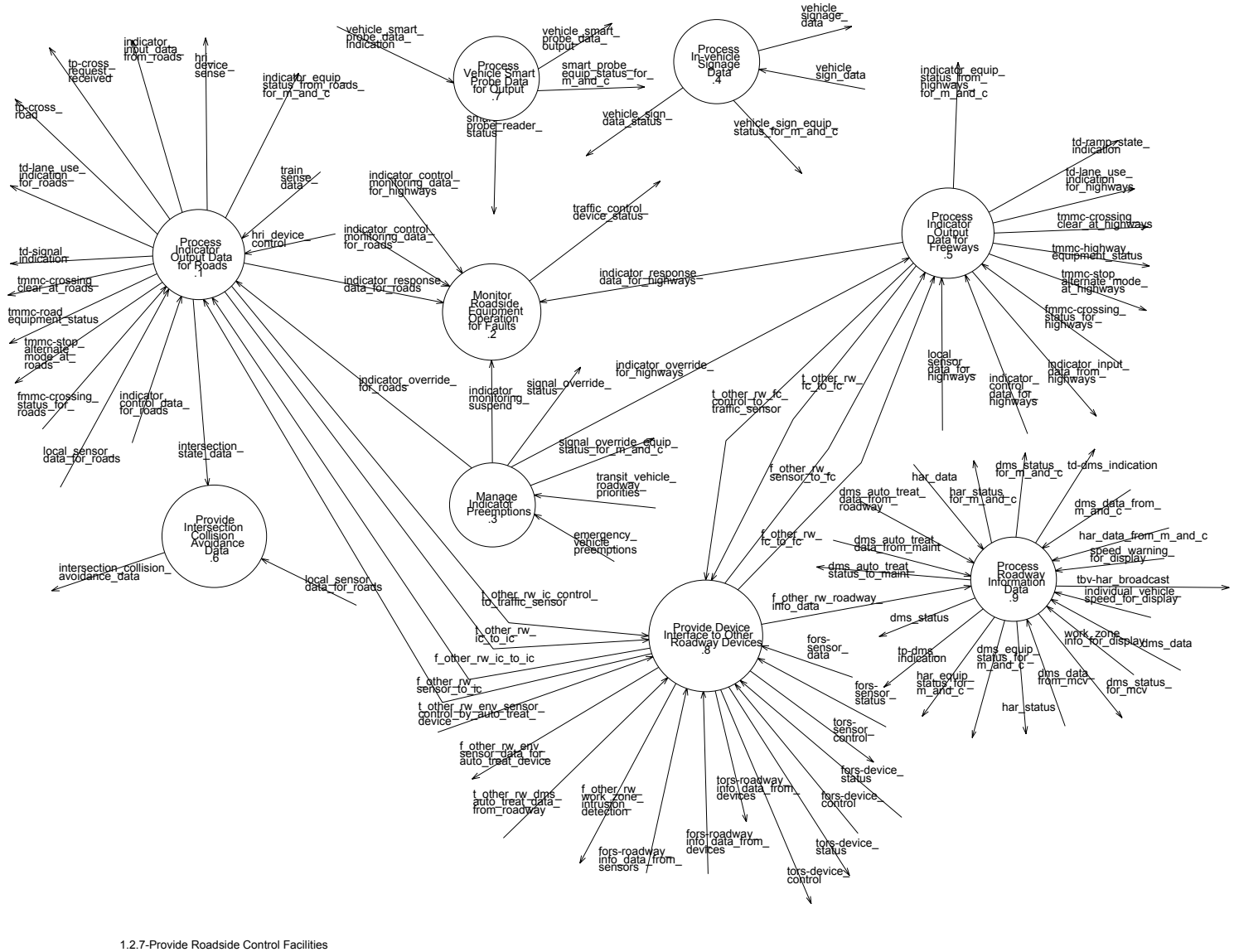


Figure 16. Provide Roadside Control Facilities (DFD 1.2.7)

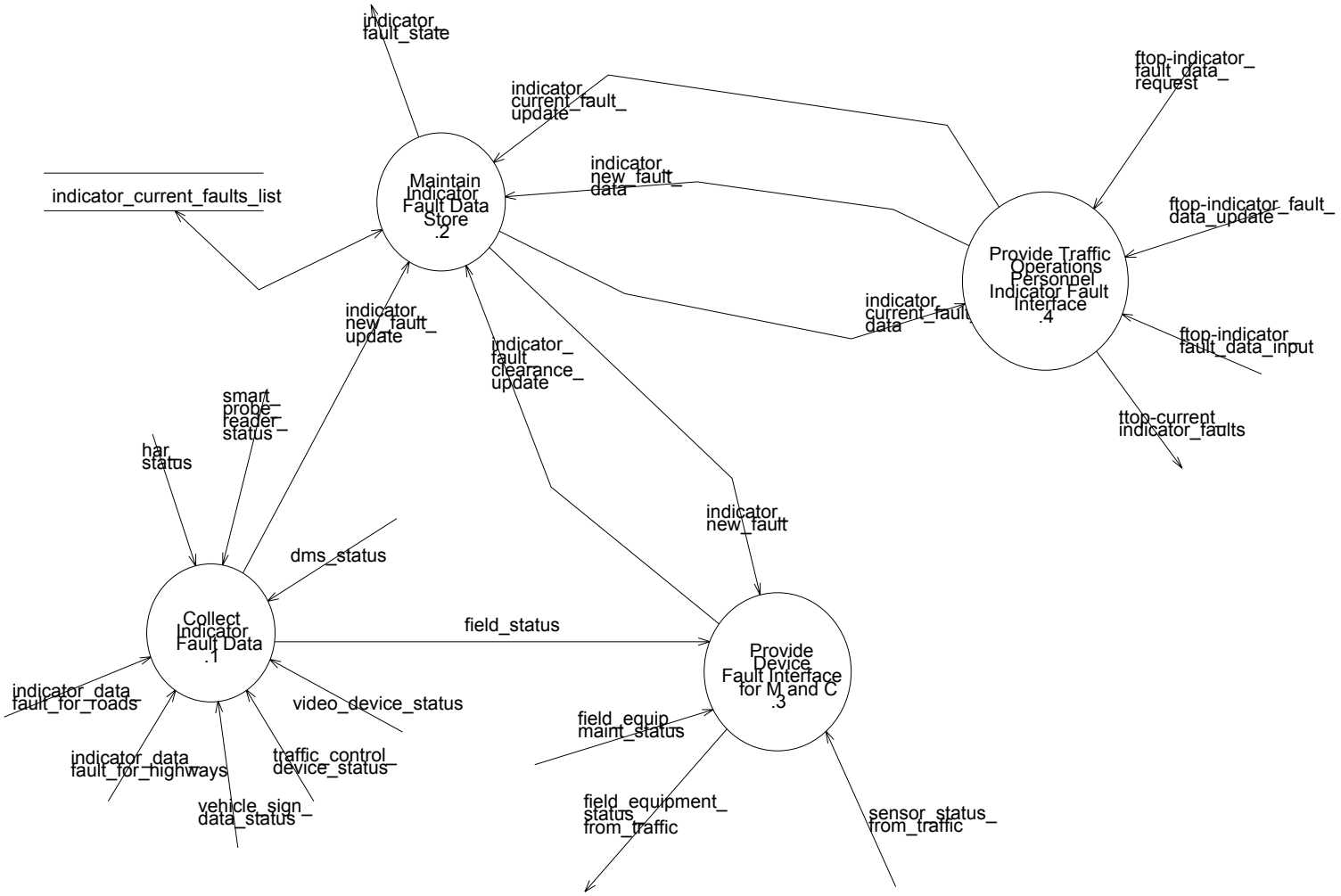


Figure 17. Collect and Process Indicator Fault Data (DFD 1.2.8)

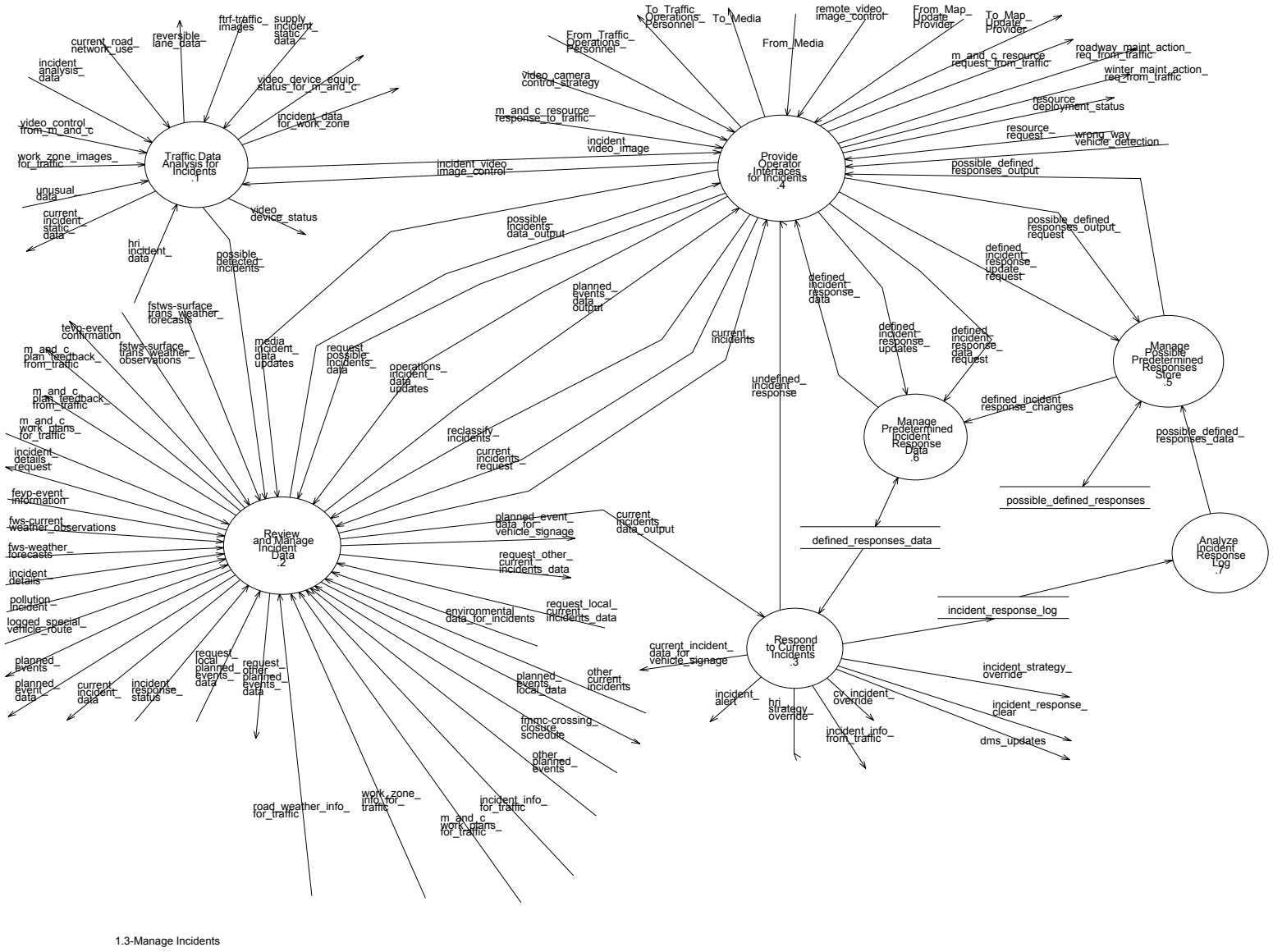
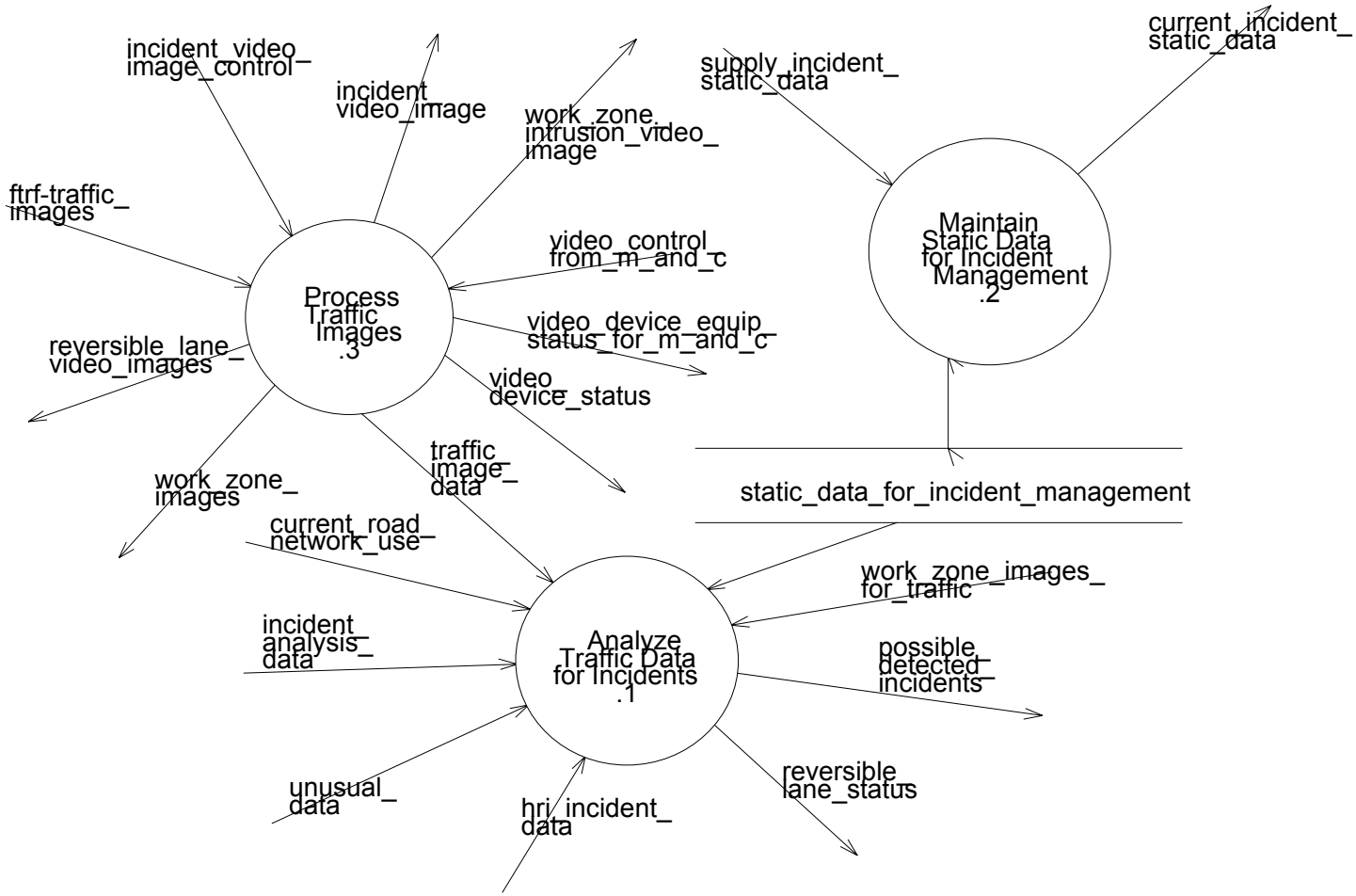


Figure 18. Manage Incidents (DFD 1.3)



1.3.1-Traffic Data Analysis for Incidents

Figure 19. Traffic Data Analysis for Incidents (DFD 1.3.1)

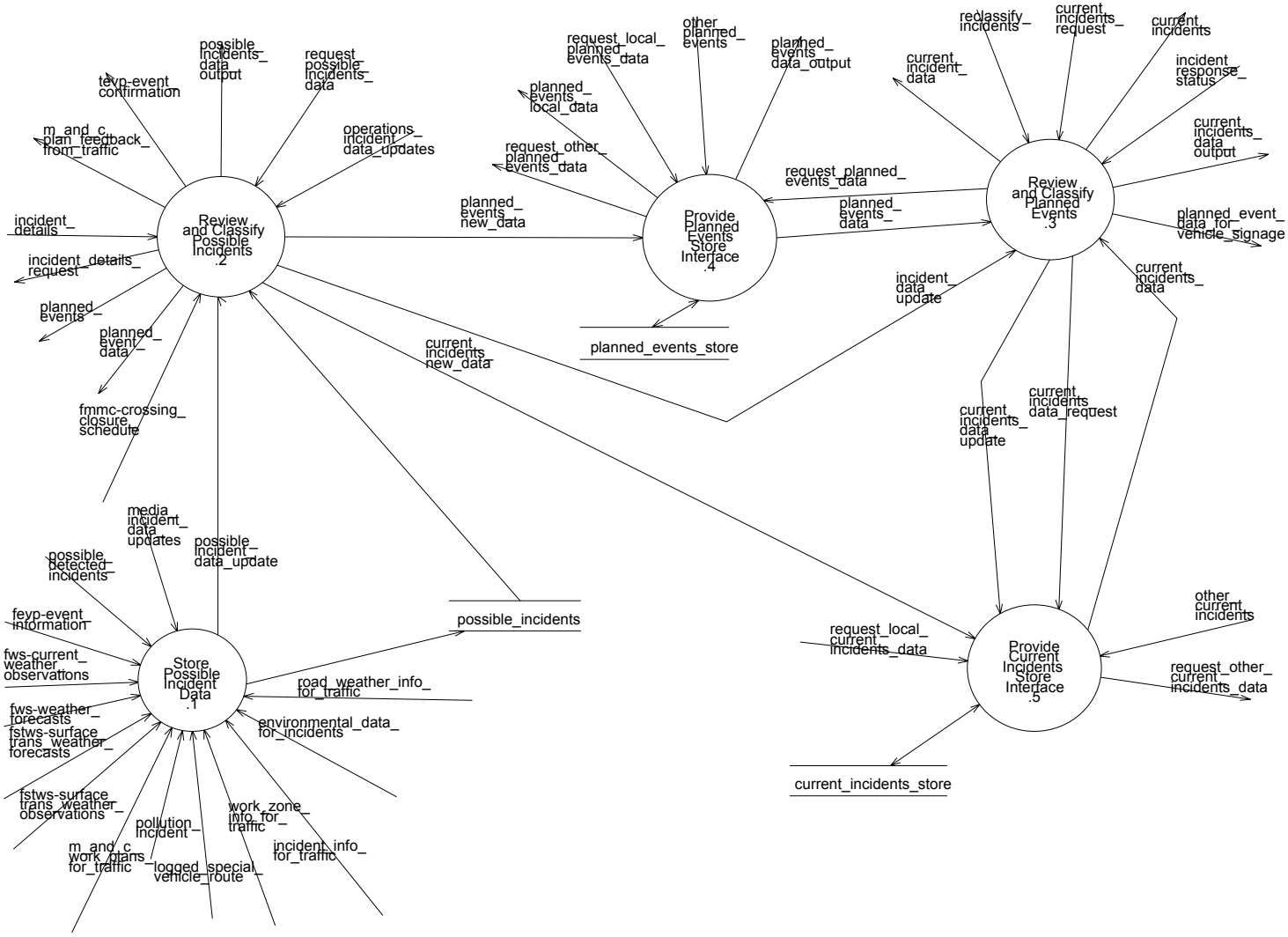


Figure 20. Review and Manage Incident Data (DFD 1.3.2)

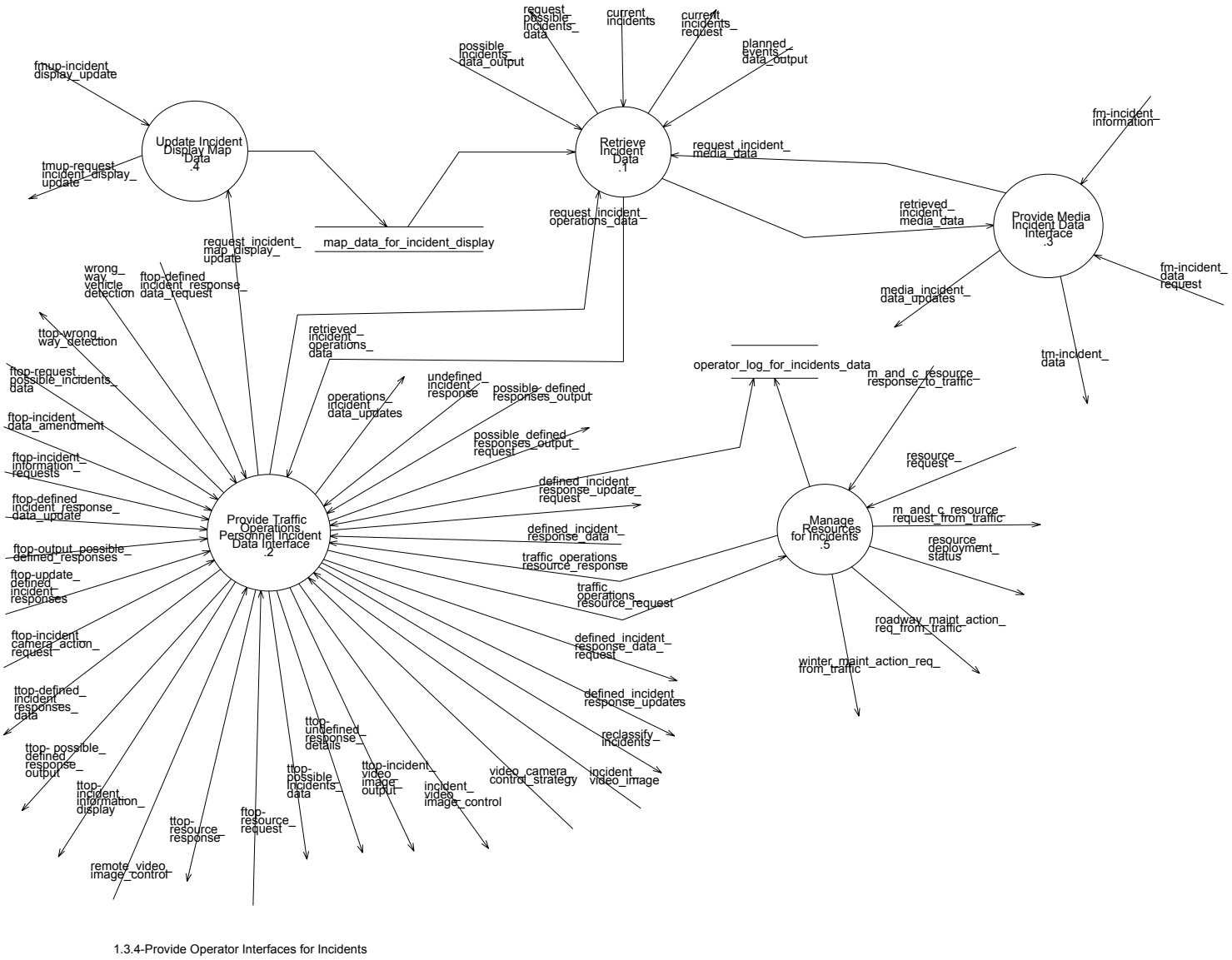
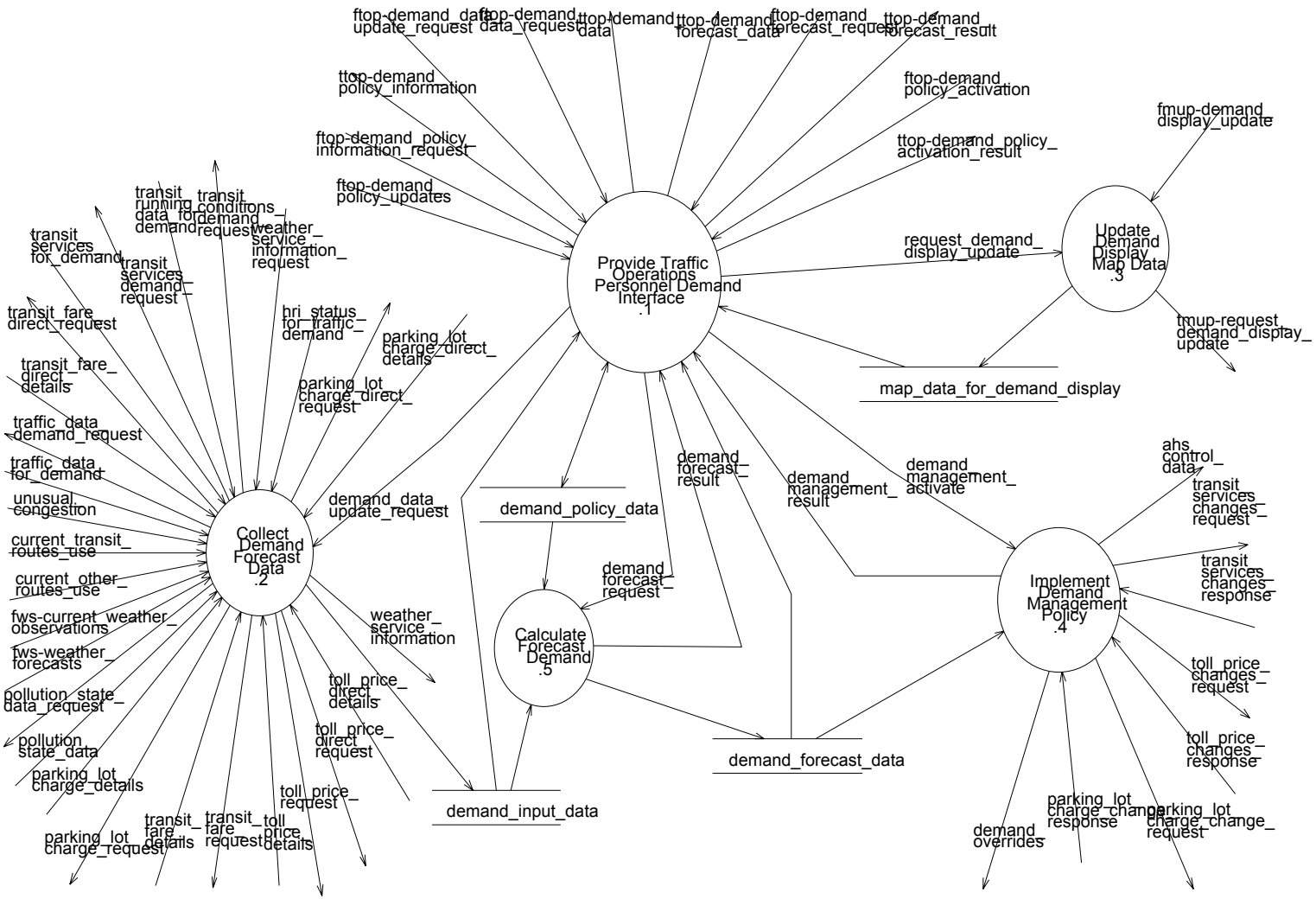


Figure 21. Provide Operator Interfaces for Incidents (DFD 1.3.4)



1.4-Manage Travel Demand

Figure 22. Manage Travel Demand (DFD 1.4)

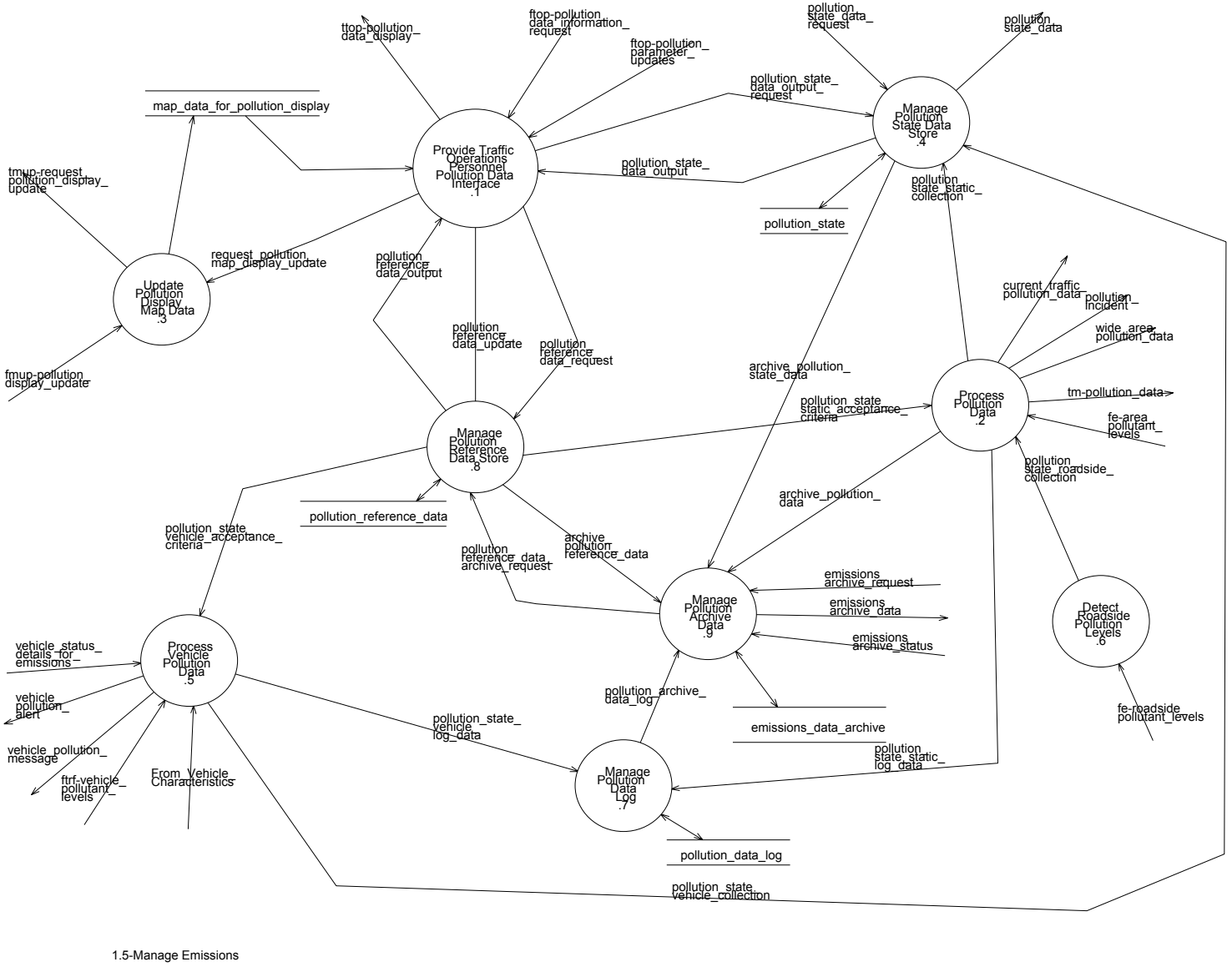


Figure 23. Manage Emissions (DFD 1.5)

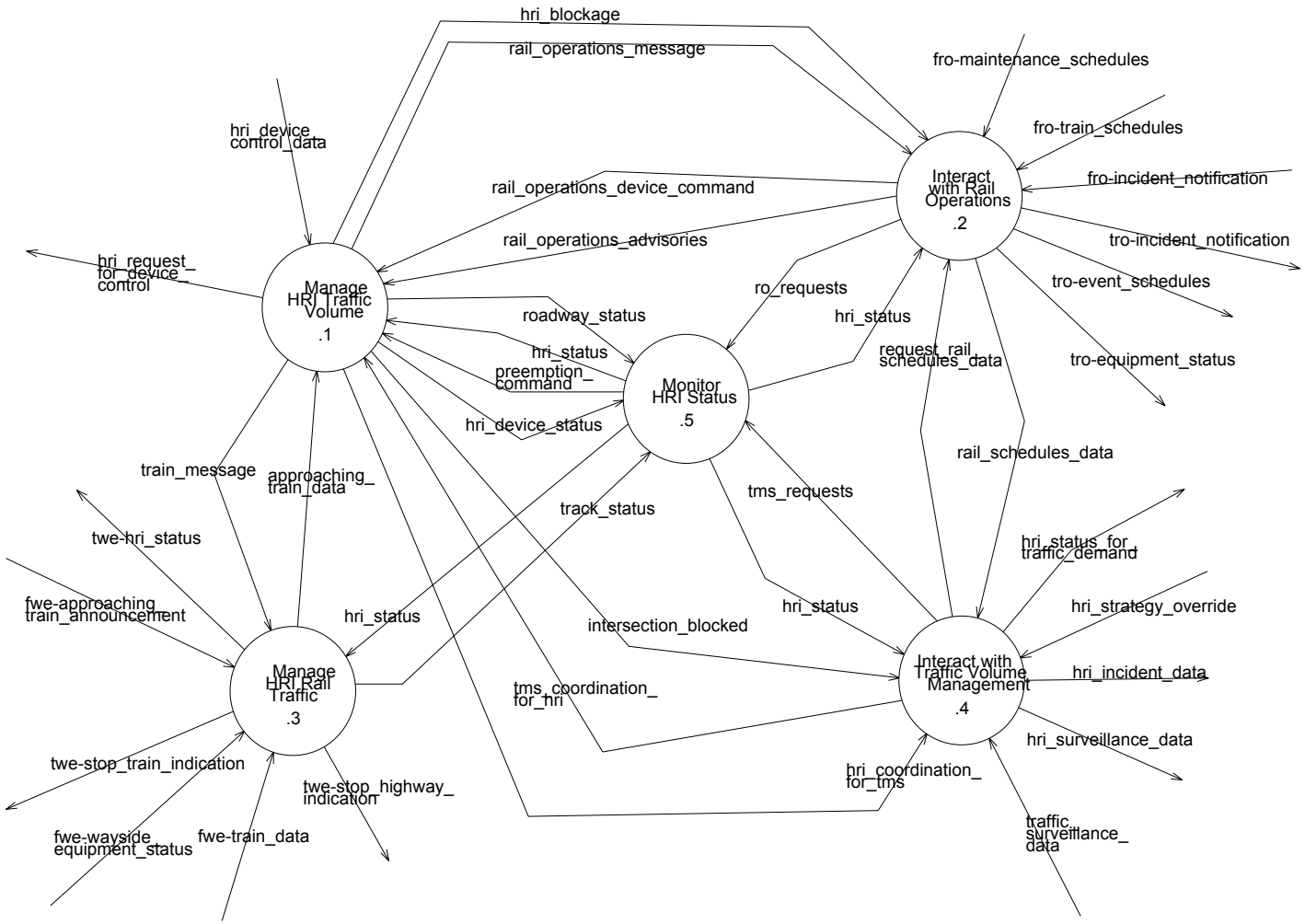
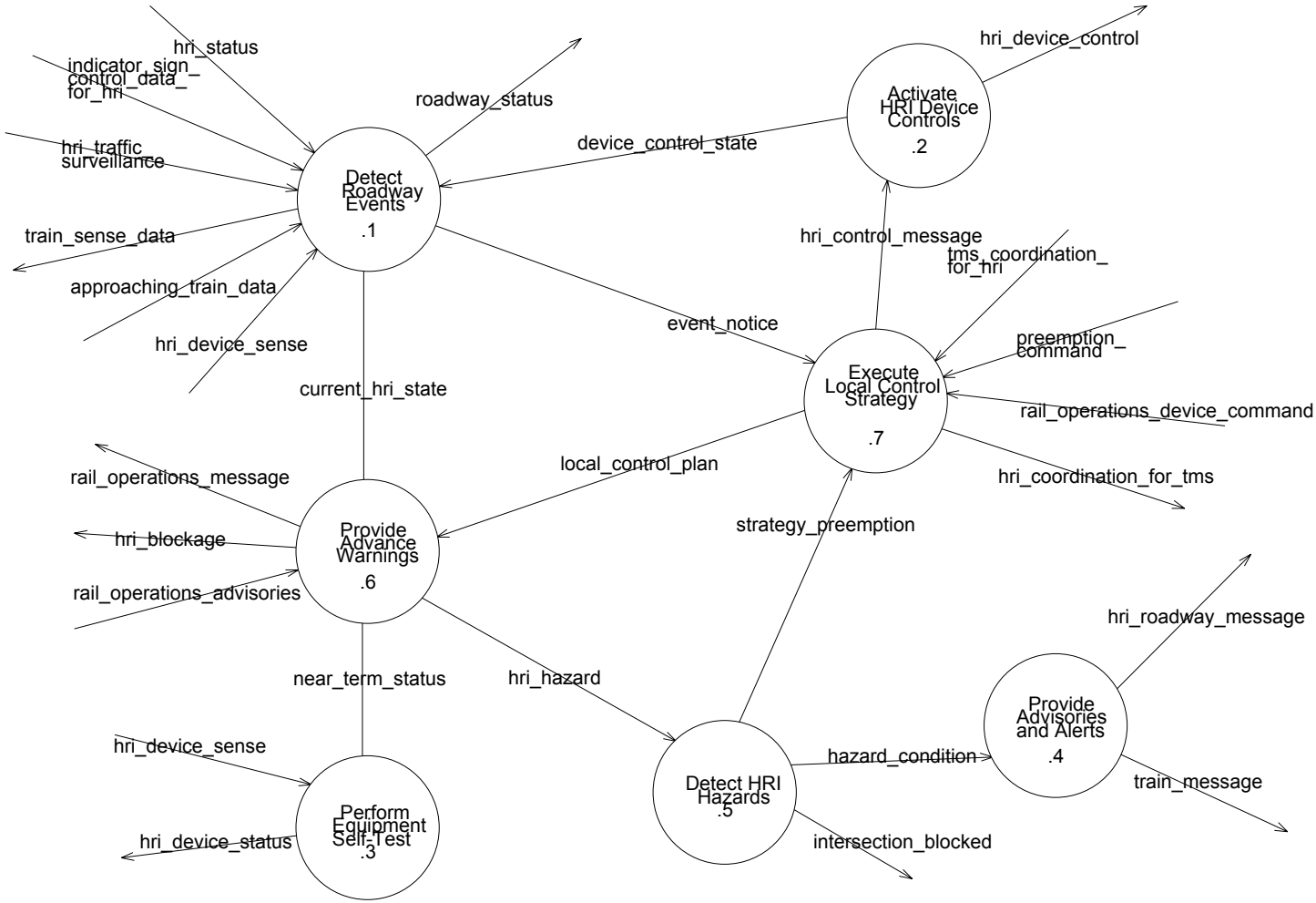


Figure 24. Manage Highway Rail Intersections (DFD 1.6)



1.6.1-Manage HRI Traffic Volume

Figure 25. Manage HRI Vehicle Traffic (DFD 1.6.1)

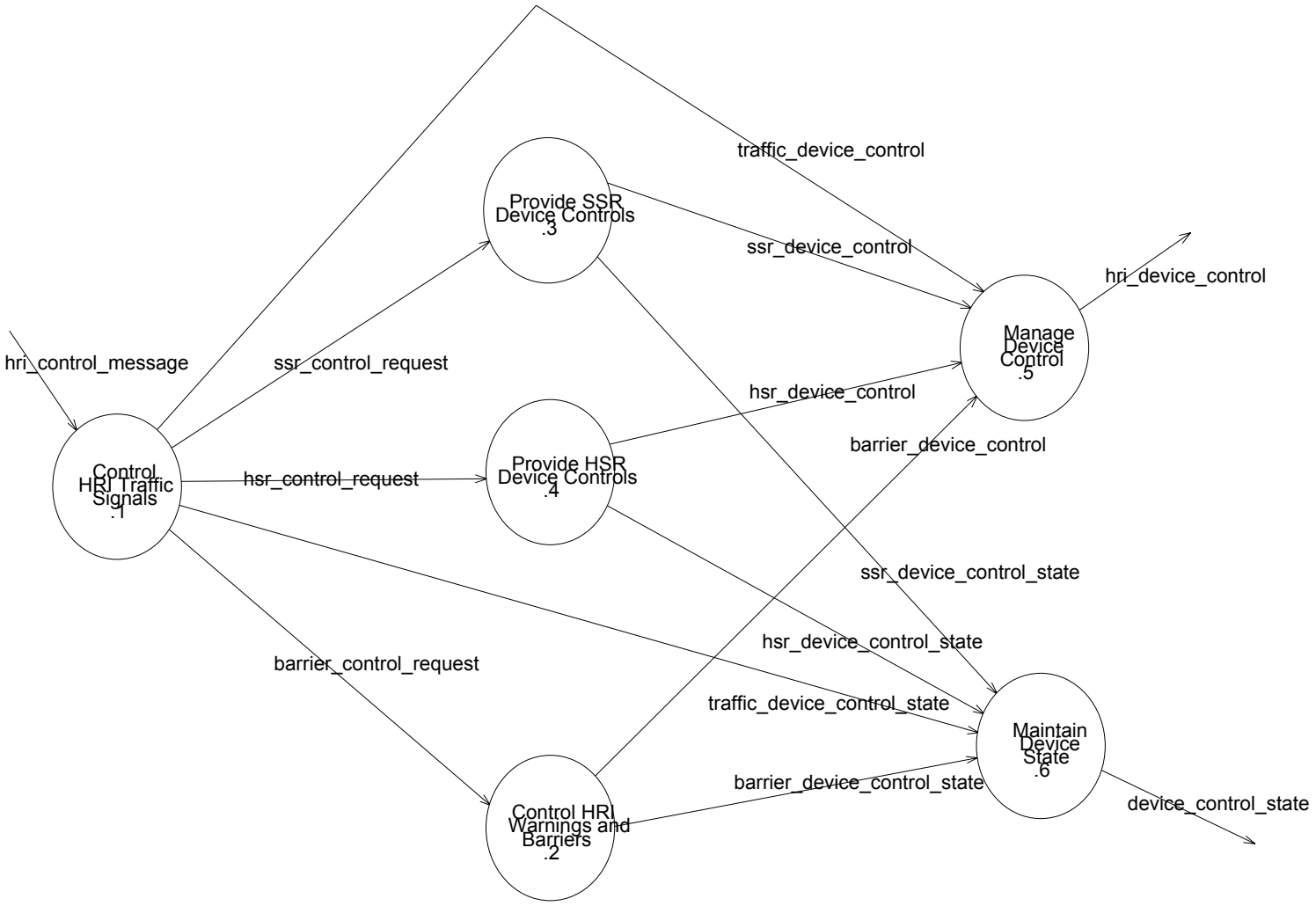


Figure 26. Activate HRI Control Devices (DFD 1.6.1.2)

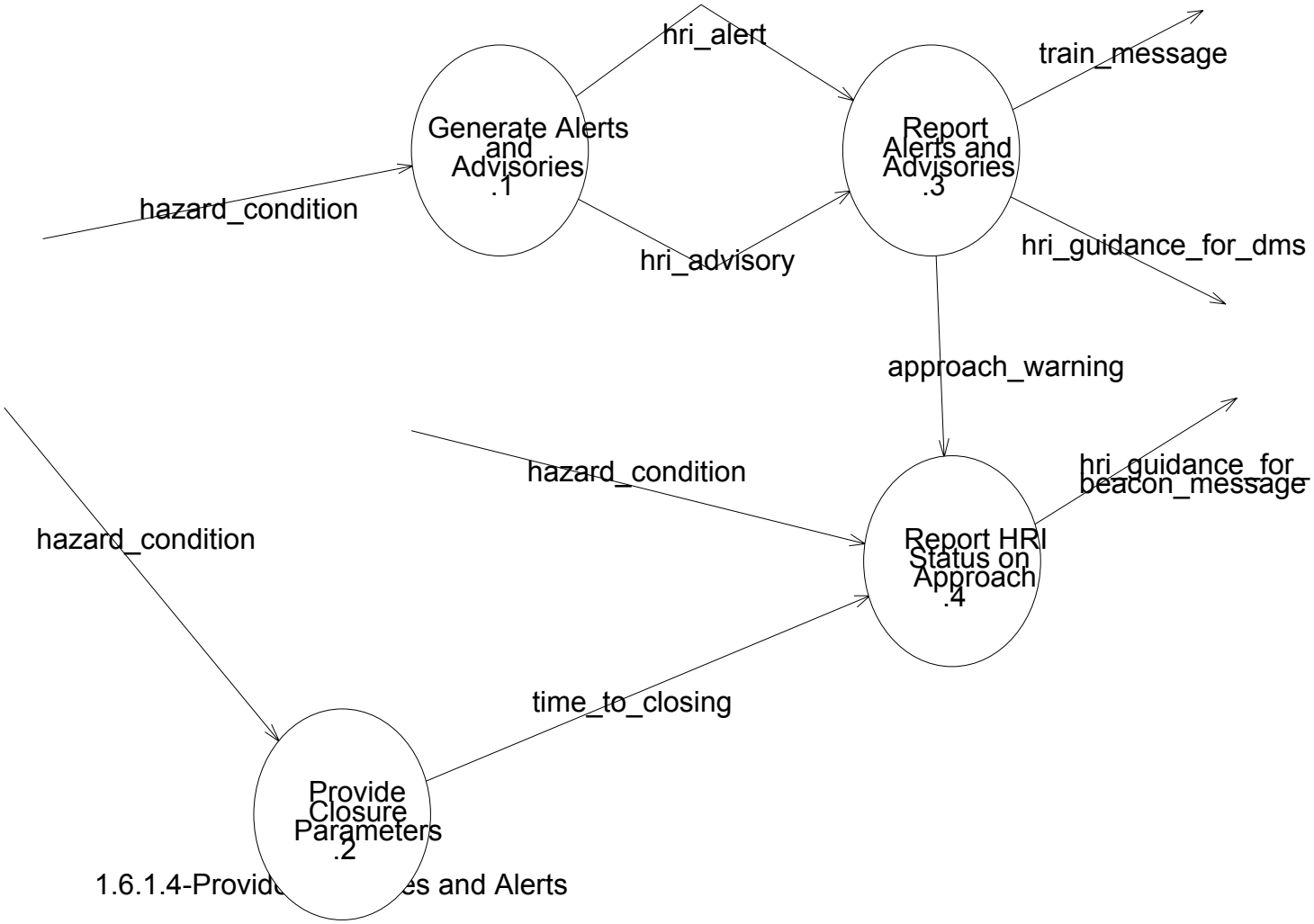


Figure 27. Provide Advisories and Alerts (DFD 1.6.1.4)

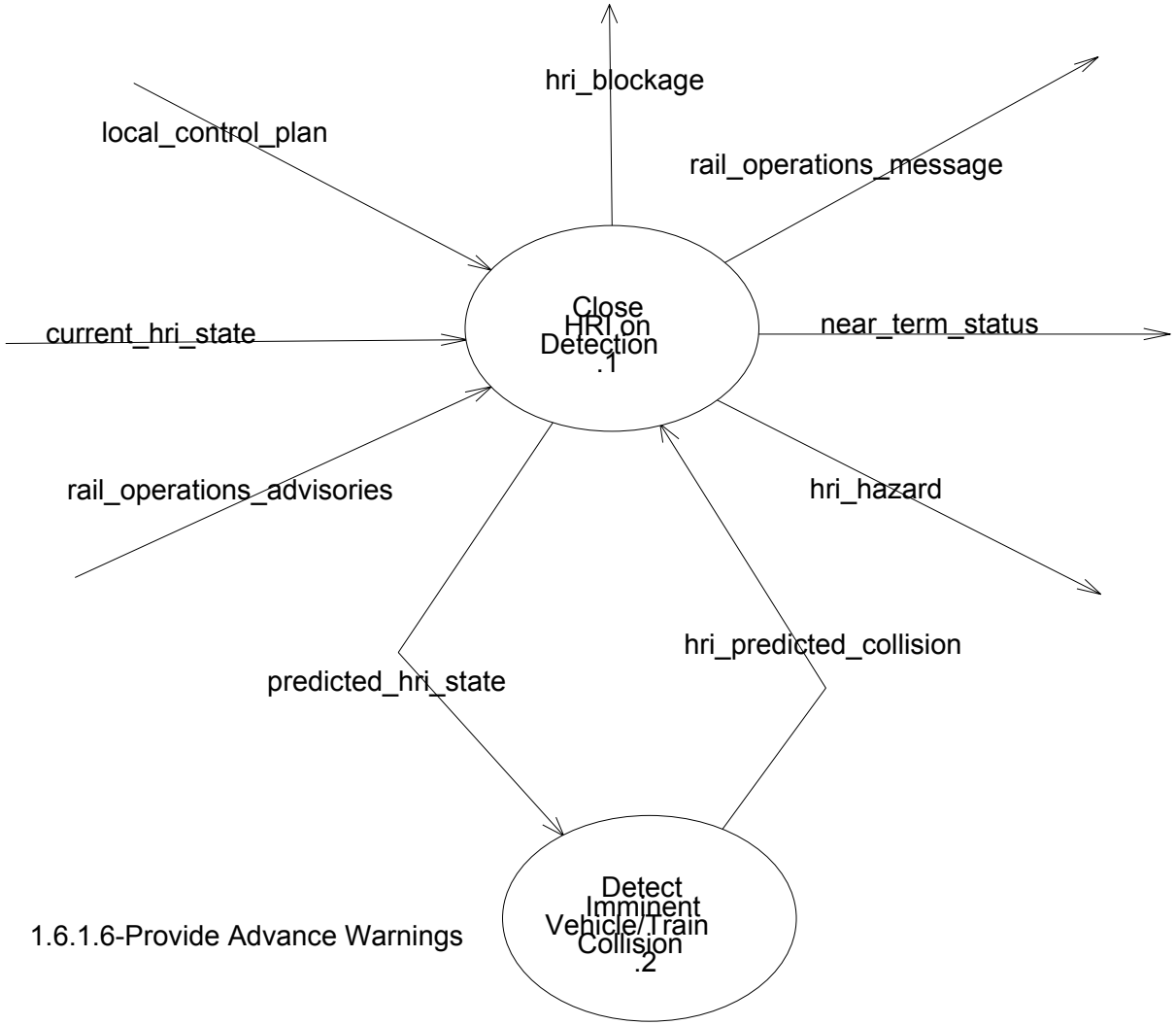


Figure 28. Provide Advance Warnings (DFD 1.6.1.6)

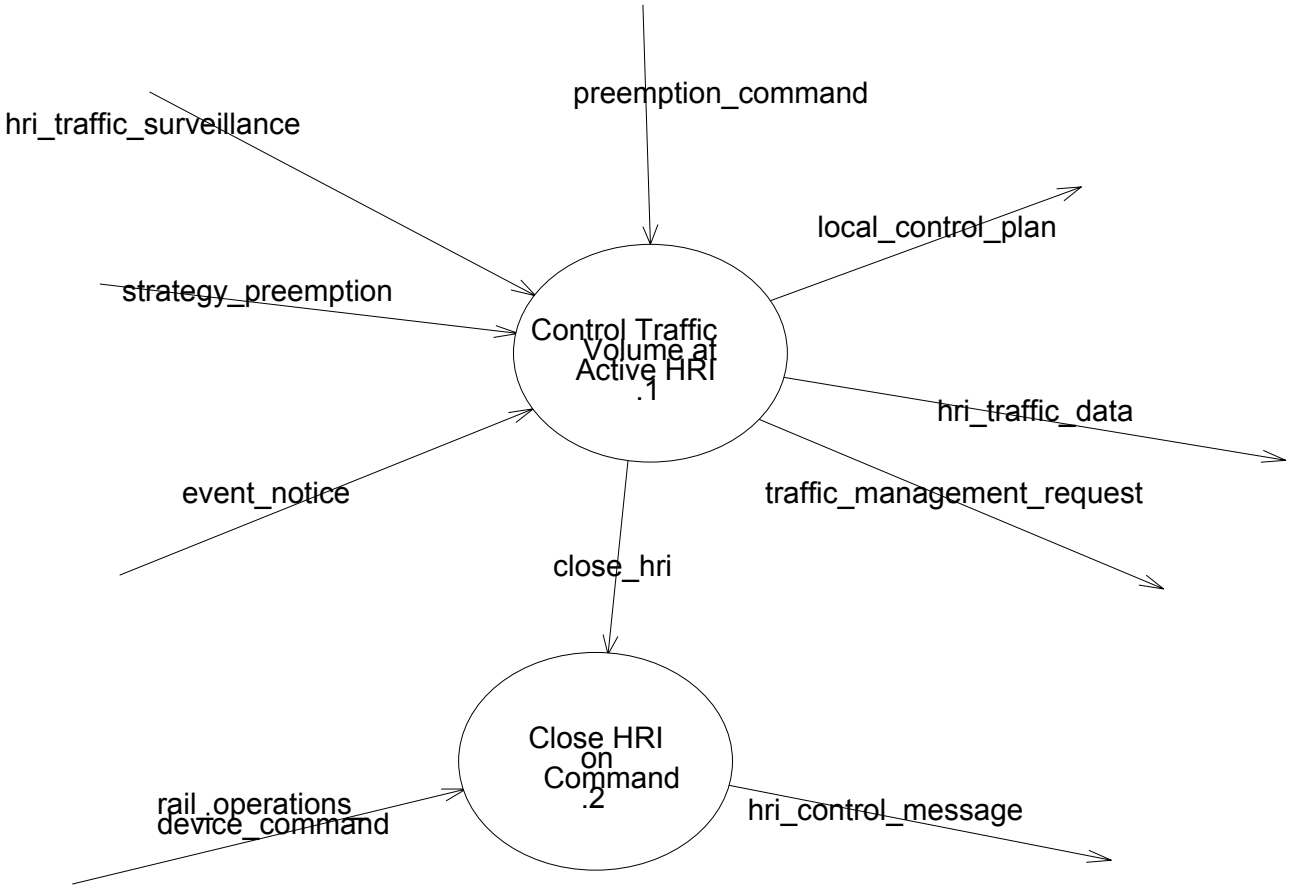


Figure 29. Execute Local Control Strategy (DFD 1.6.1.7)

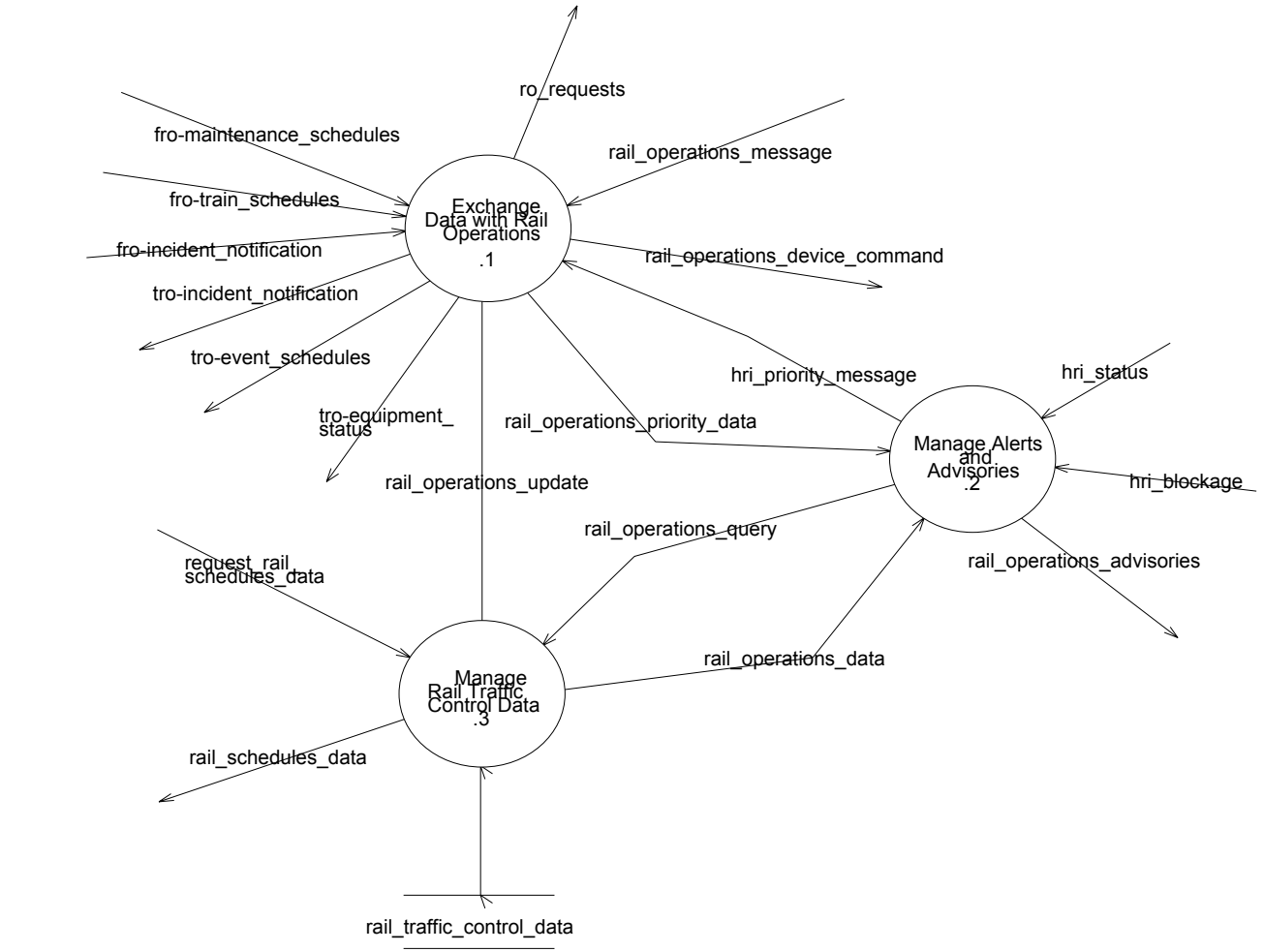
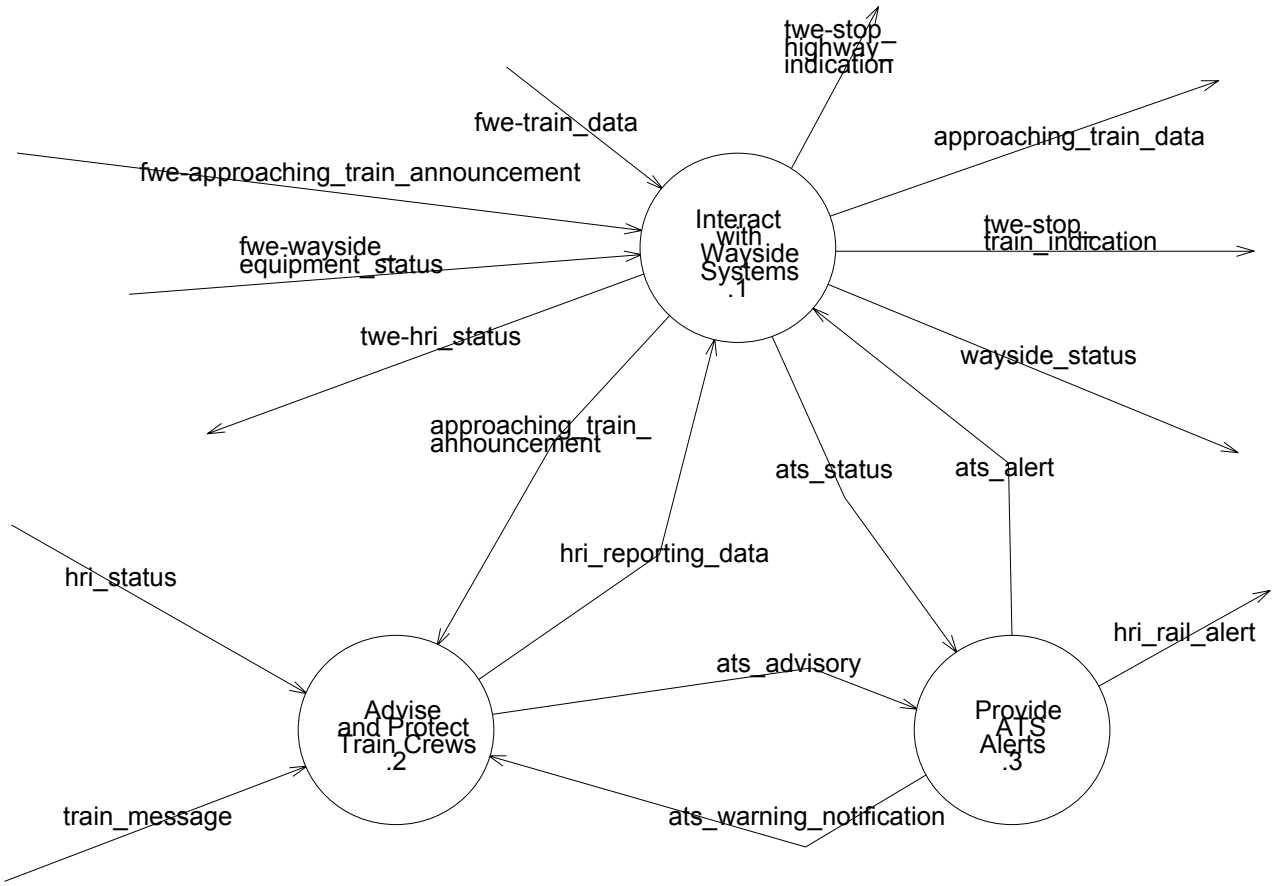
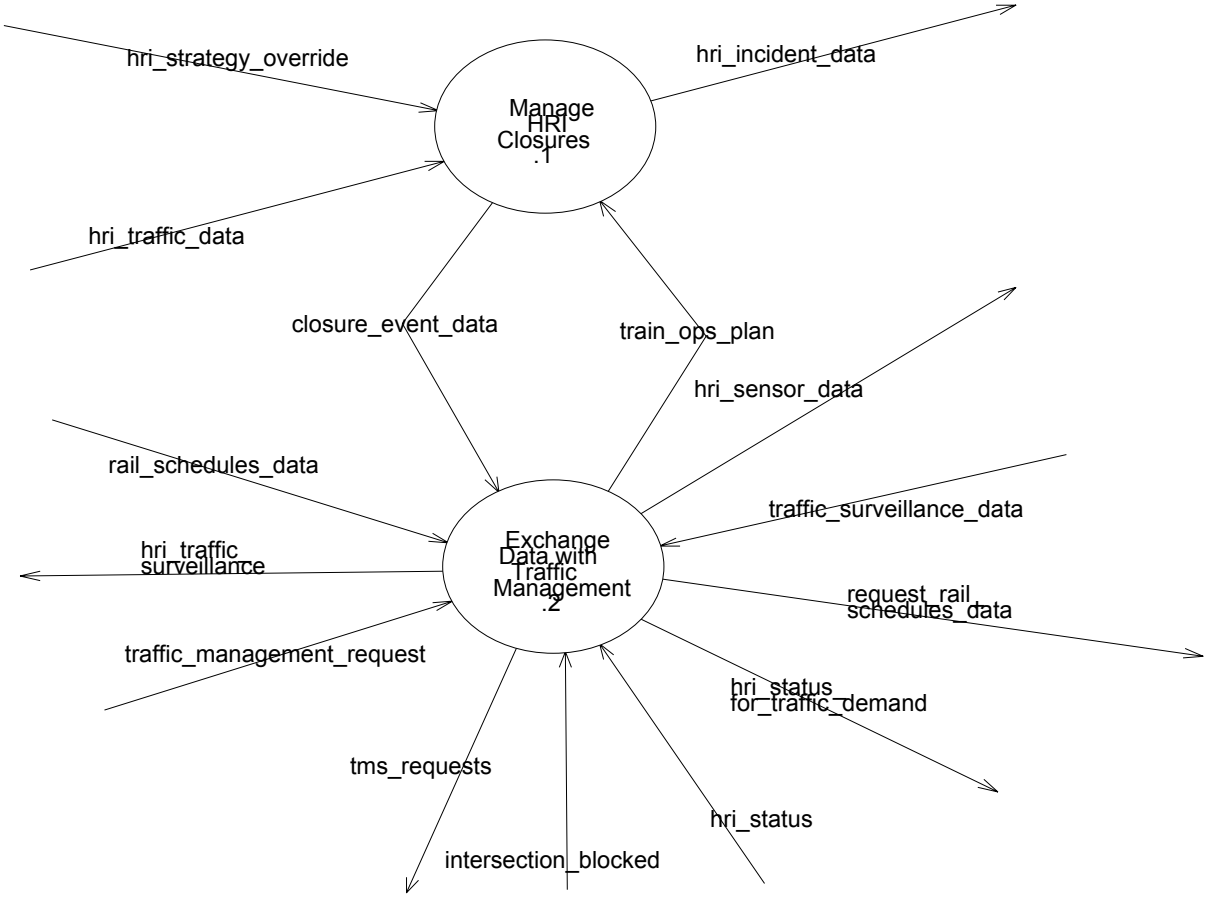


Figure 30. Interact with Rail Operations (DFD 1.6.2)



1.6.3-Manage HRI Rail Traffic

Figure 31. Manage HRI Rail Traffic (DFD 1.6.3)



1.6.4-Interact with Traffic Volume Management

Figure 32. Interact with Vehicle Traffic Management (DFD 1.6.4)

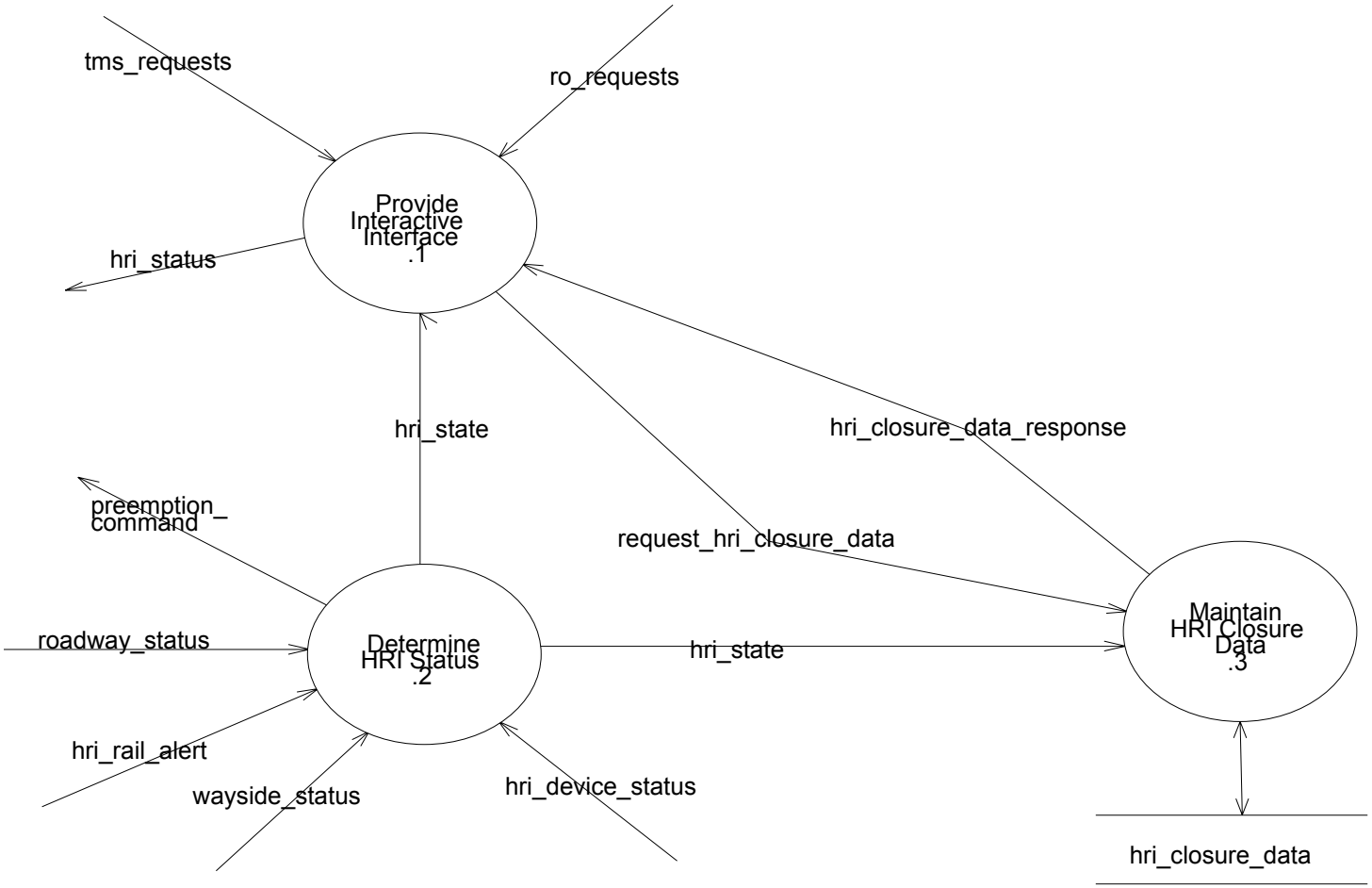


Figure 33. Monitor HRI Status (DFD 1.6.5)

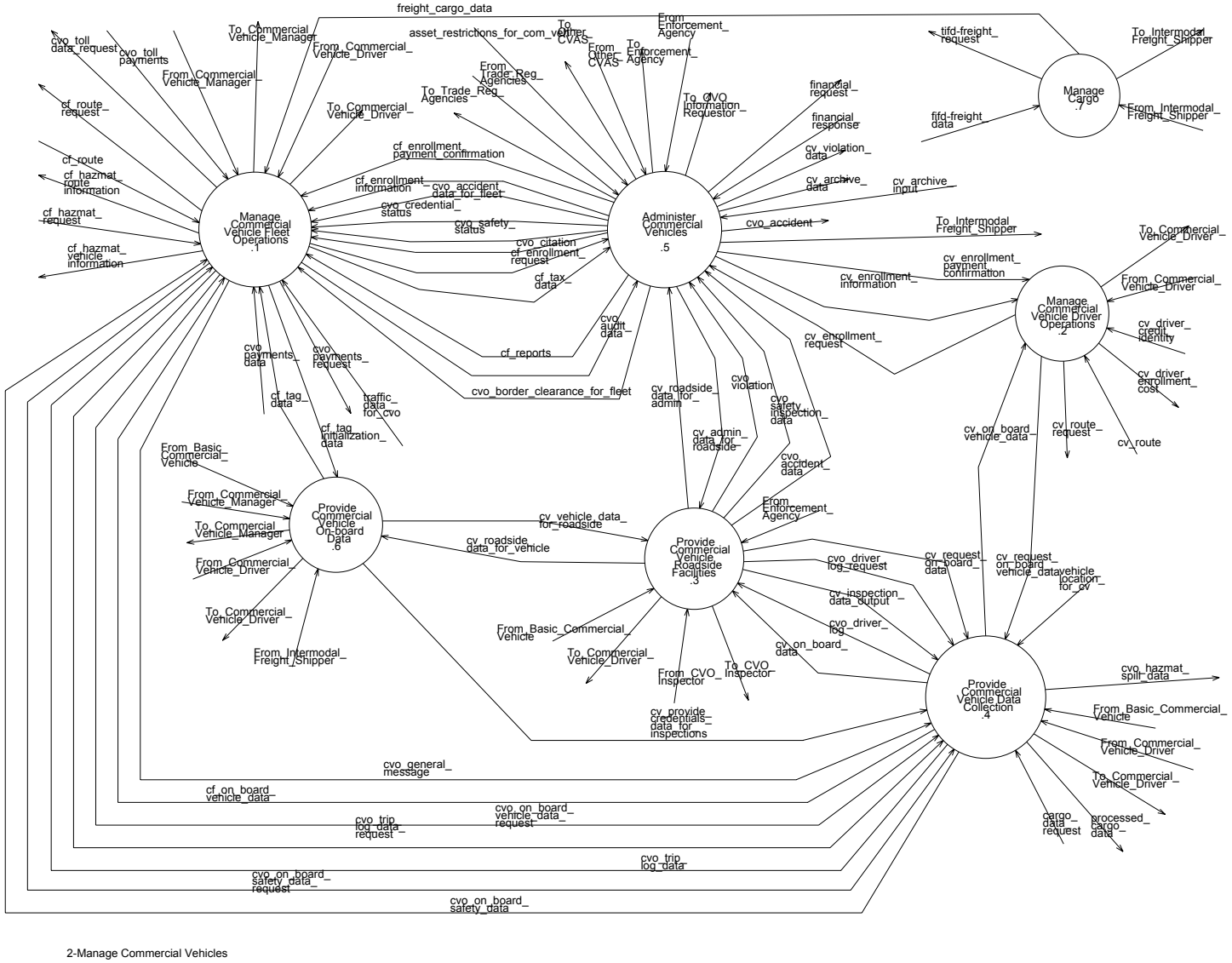


Figure 34. Manage Commercial Vehicles (DFD 2)

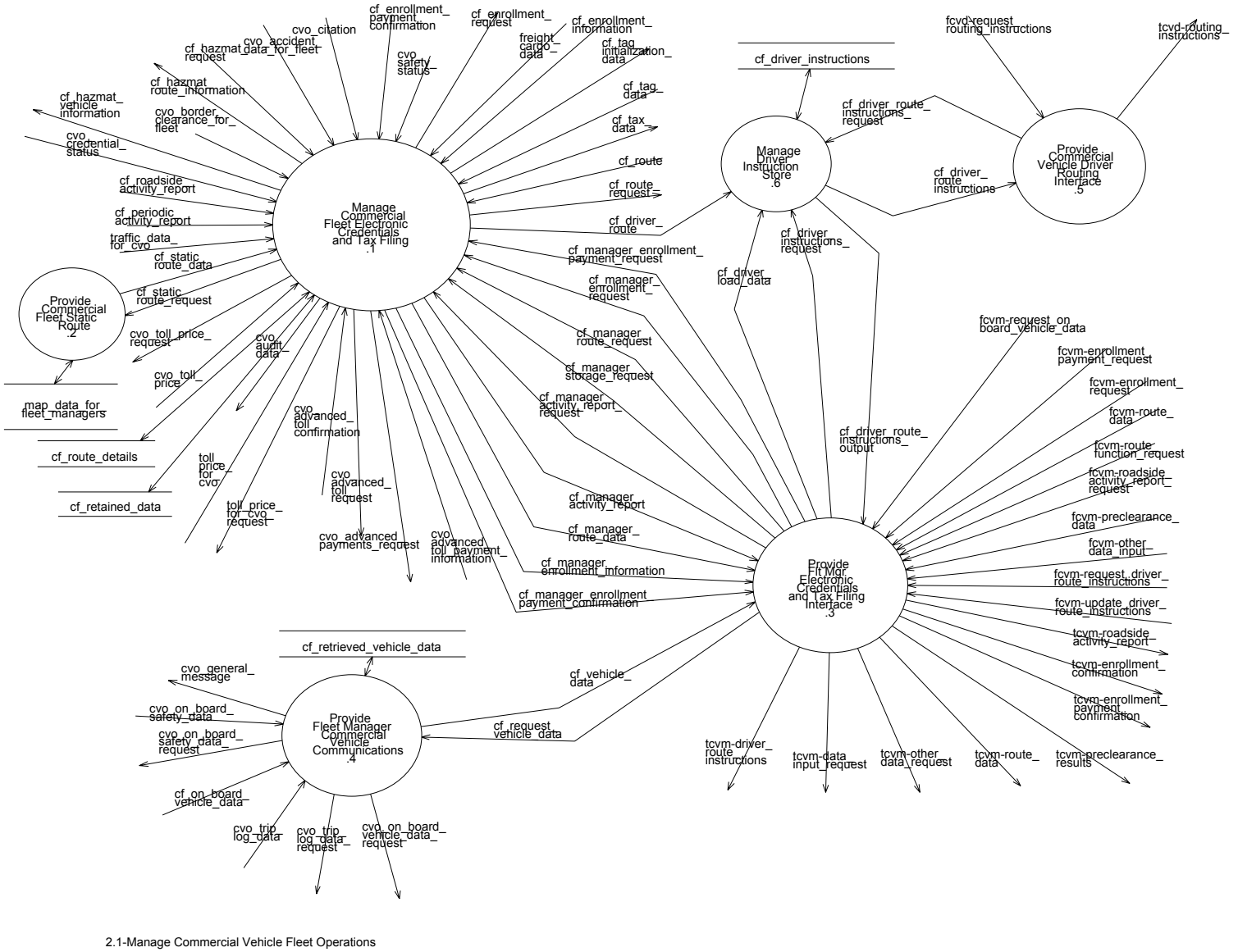


Figure 35. Manage Commercial Vehicle Fleet Operations (DFD 2.1)

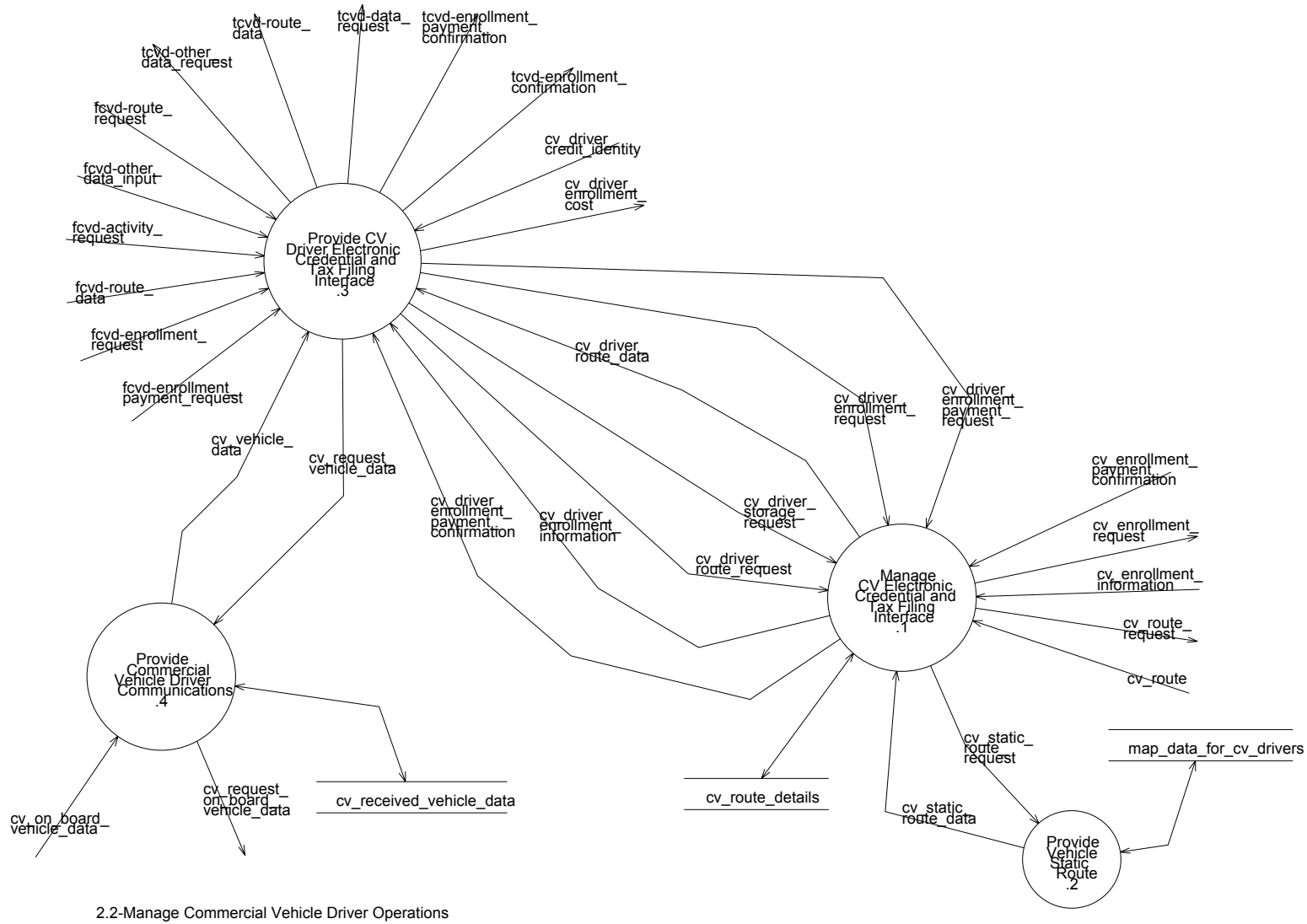


Figure 36. Manage Commercial Vehicle Driver Operations (DFD 2.2)

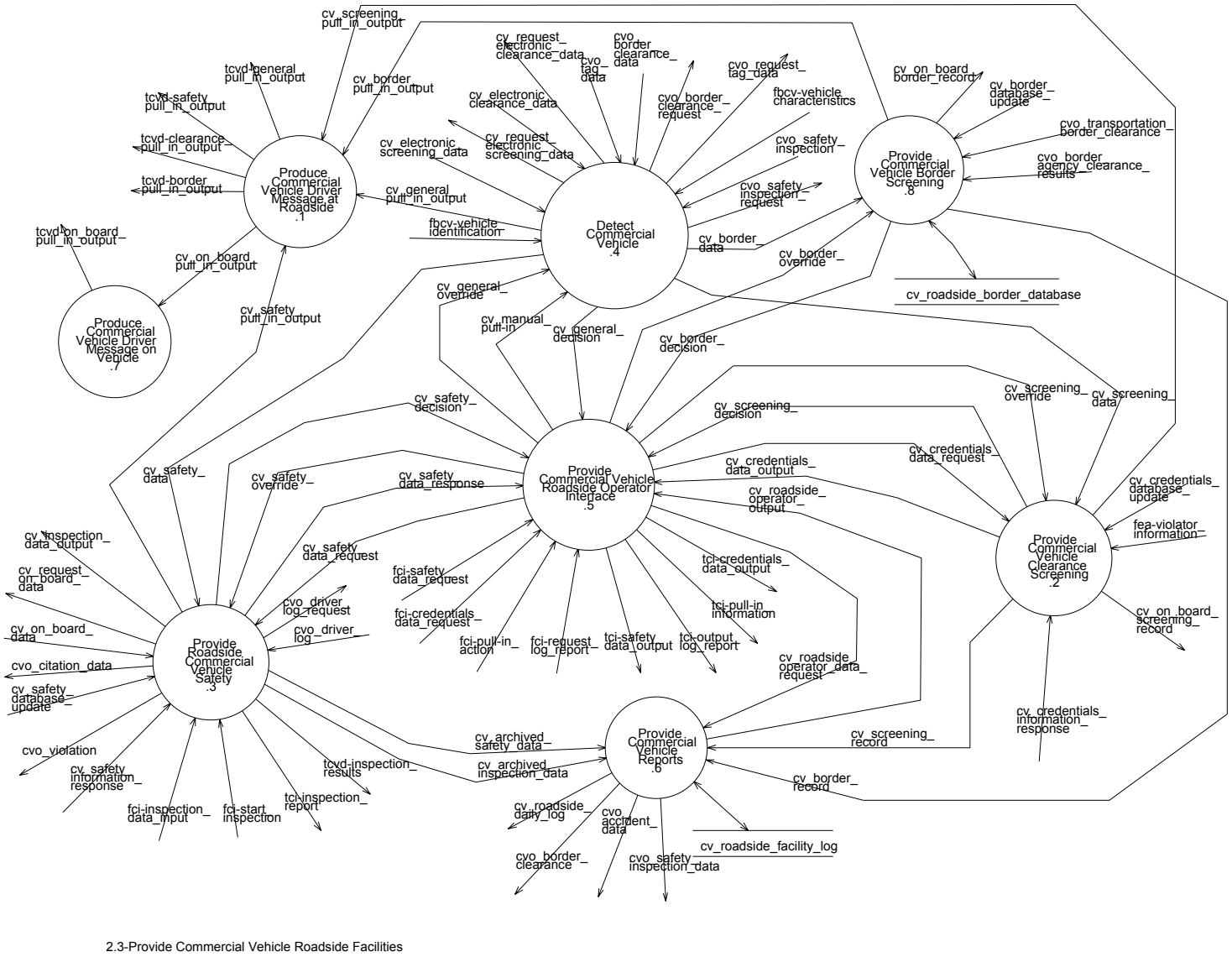


Figure 37. Provide Commercial Vehicle Roadside Facilities (DFD 2.3)

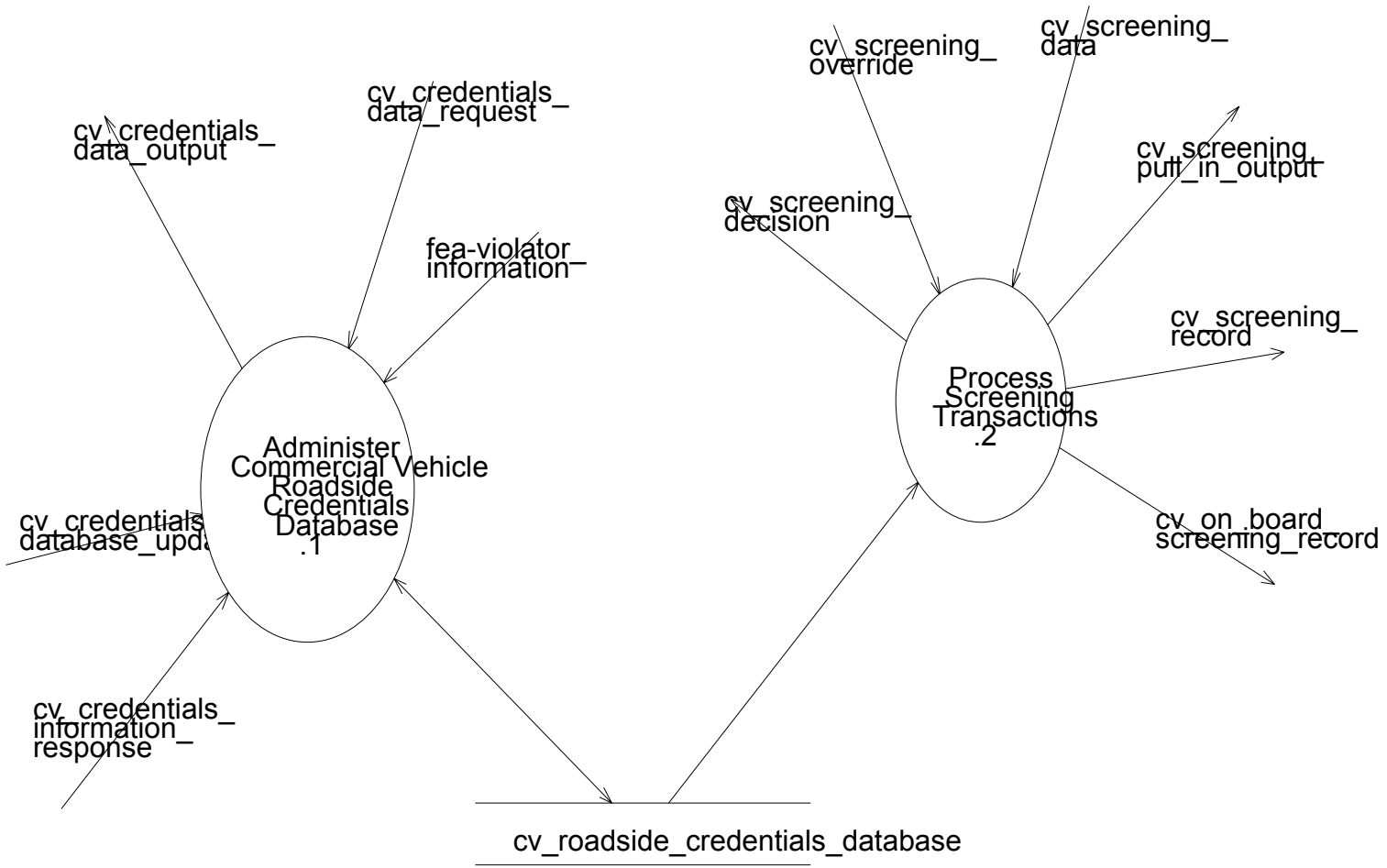


Figure 38. Provide Commercial Vehicle Clearance Screening (DFD 2.3.2)

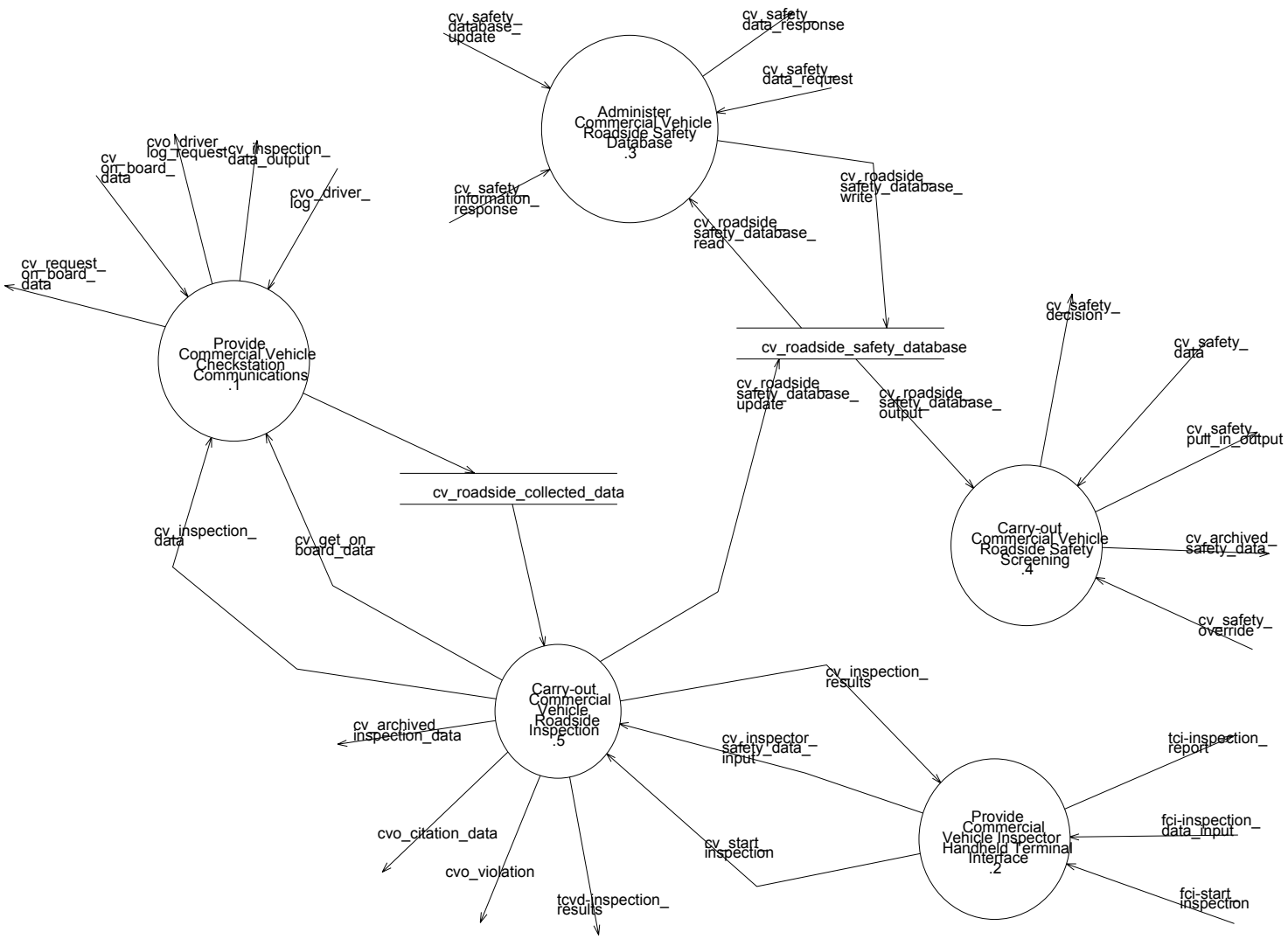


Figure 39. Provide Roadside Commercial Vehicle Safety (DFD 2.3.3)

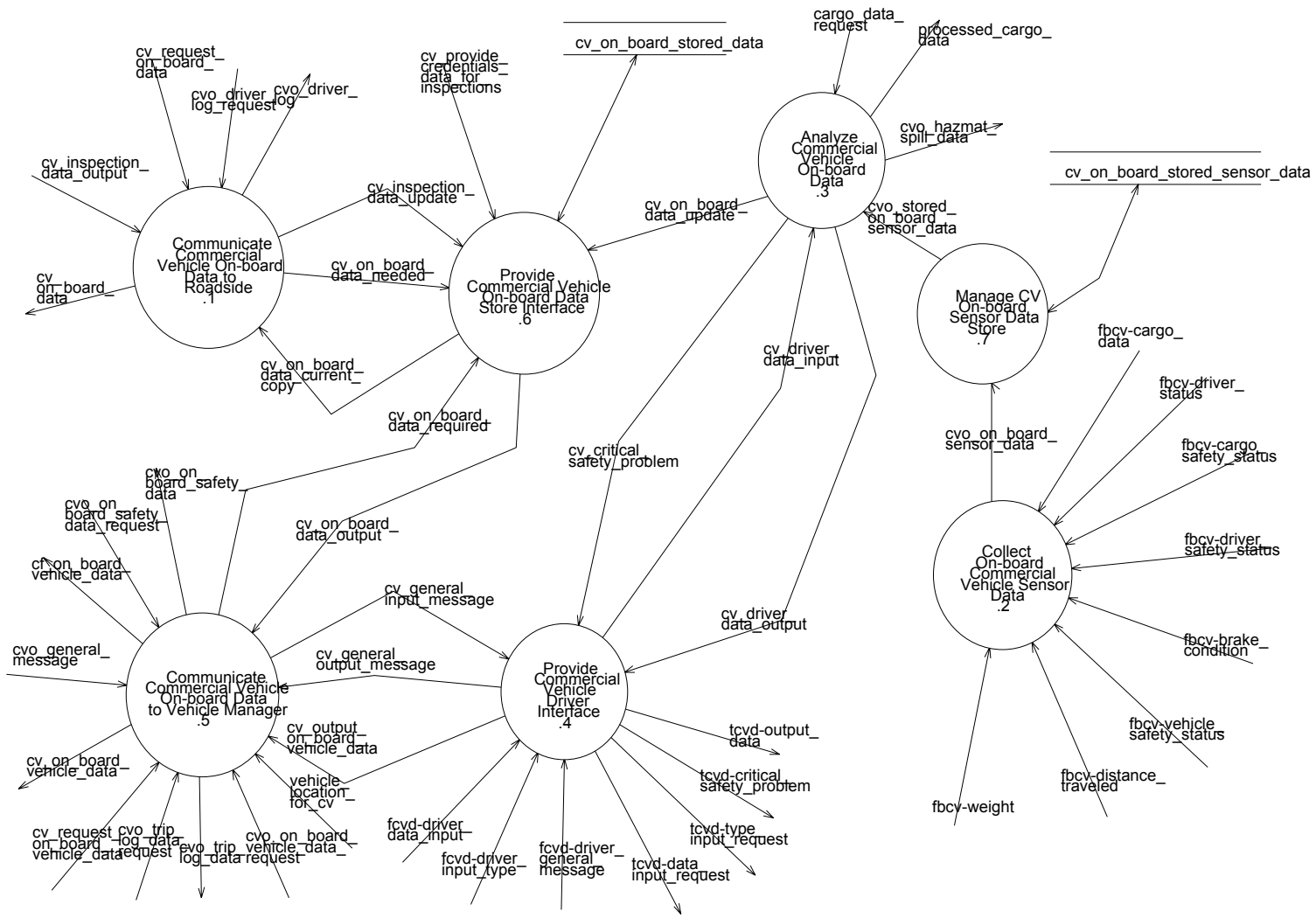


Figure 40. Provide Commercial Vehicle Data Collection (DFD 2.4)

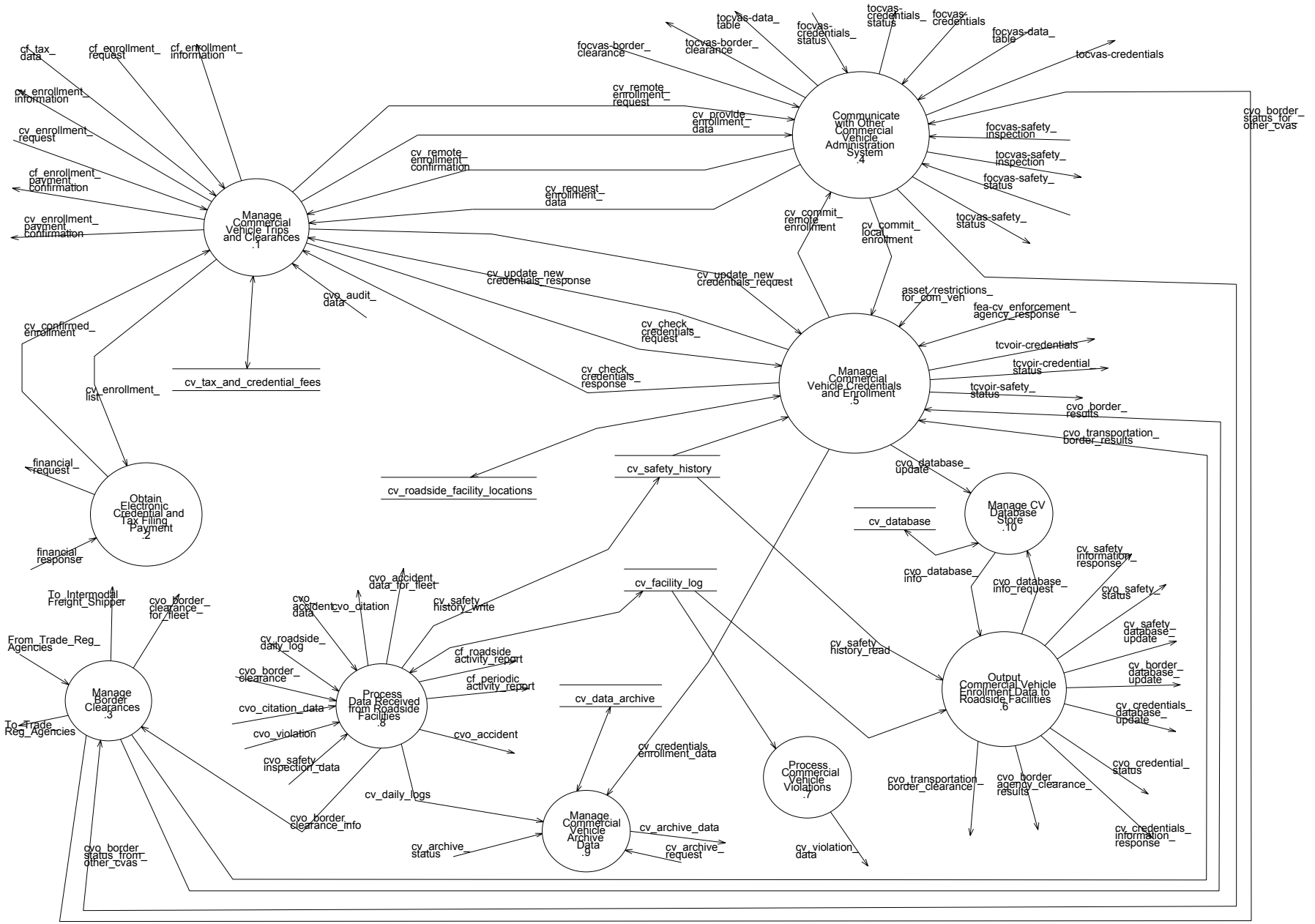


Figure 41. Administer Commercial Vehicles (DFD 2.5)

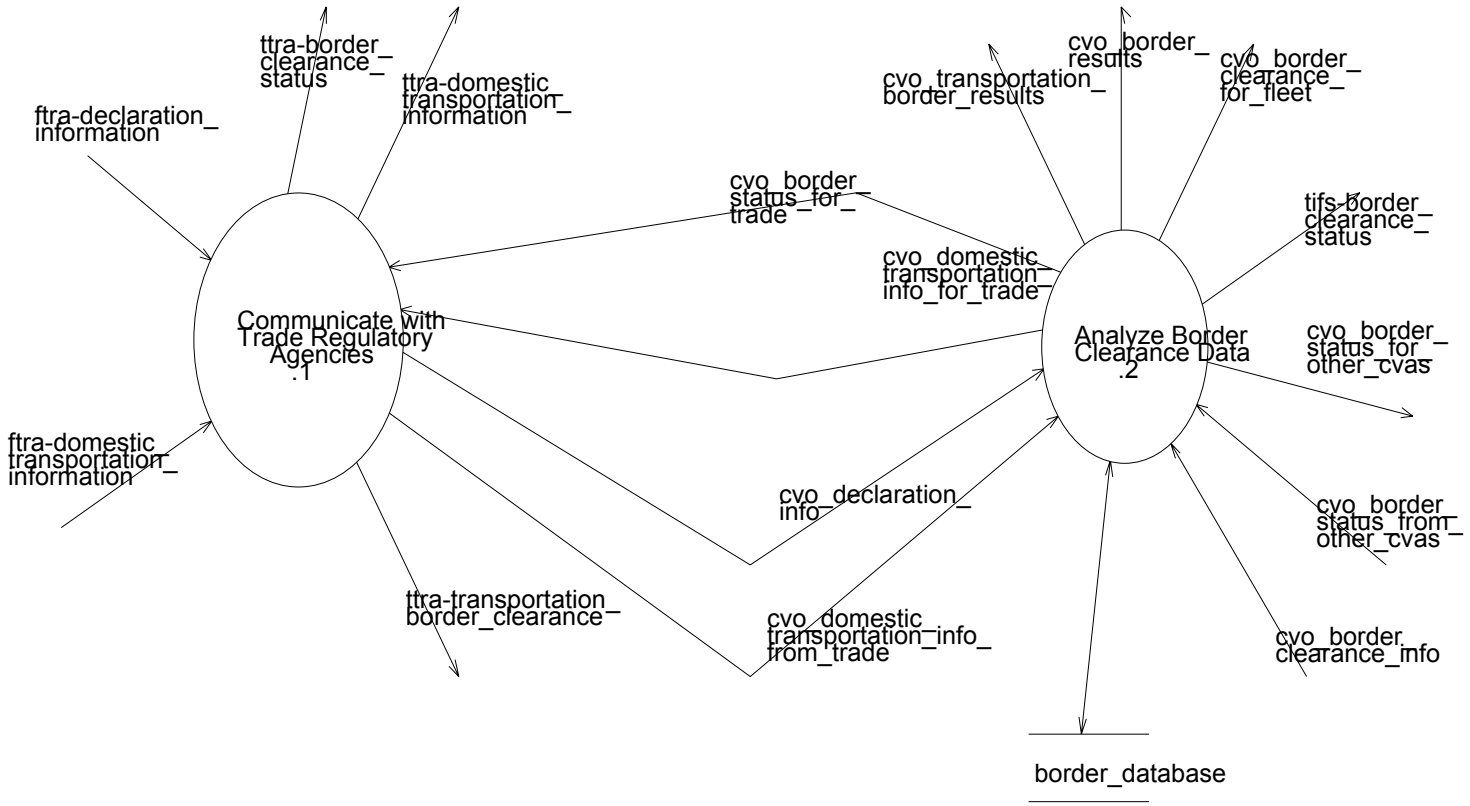


Figure 42. Manage Border Clearances (DFD 2.5.3)

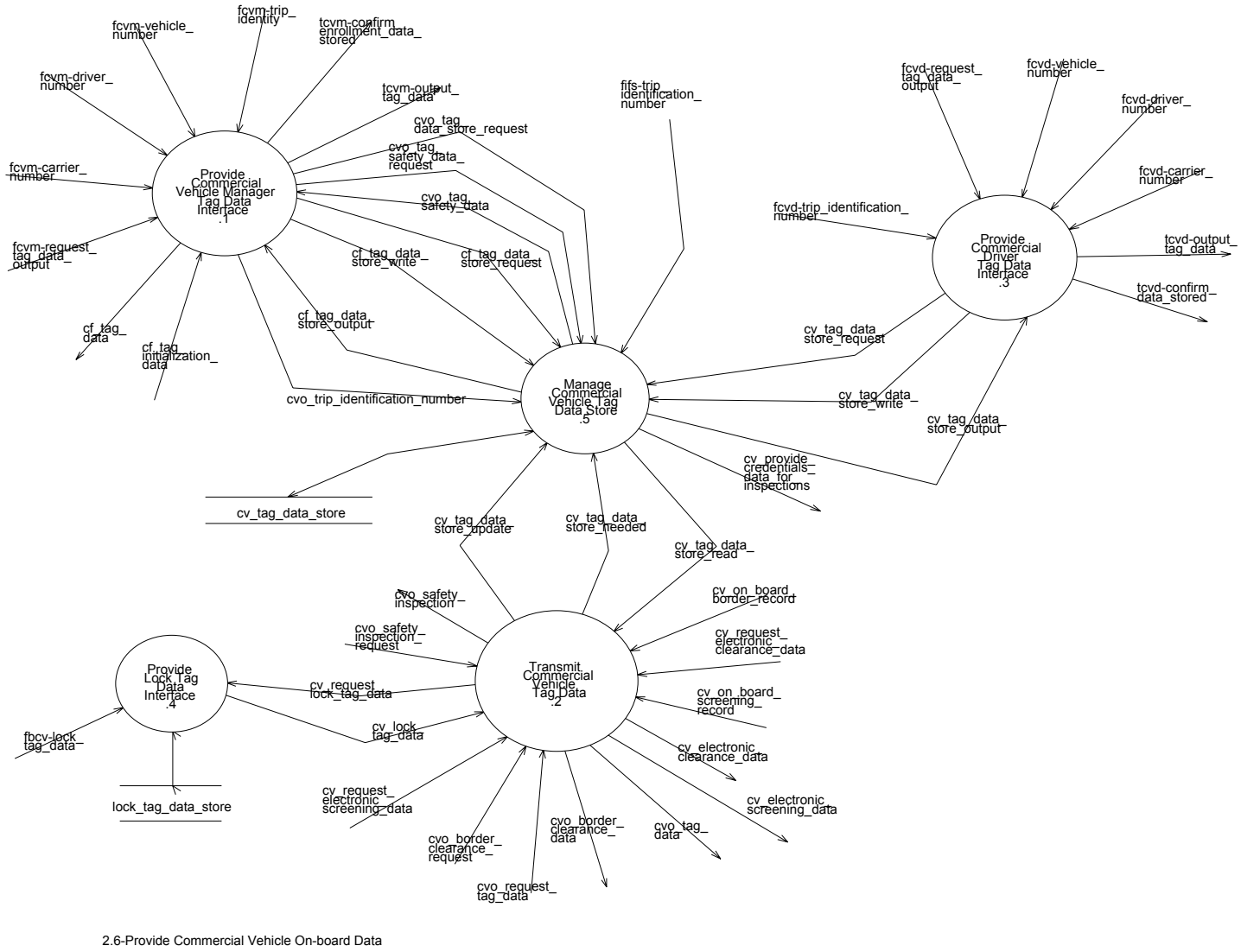


Figure 43. Provide Commercial Vehicle On-board Data (DFD 2.6)

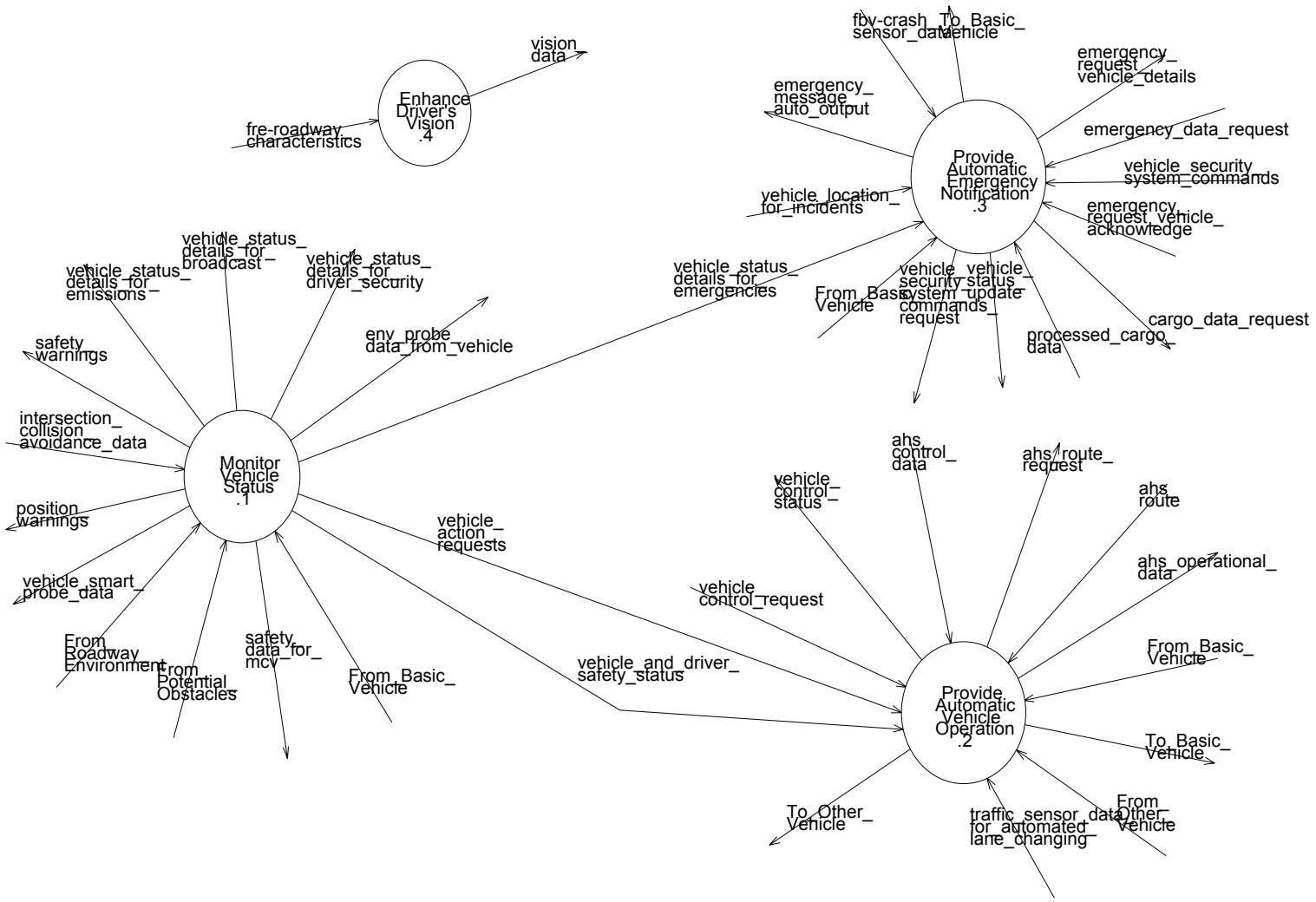


Figure 44. Provide Vehicle Monitoring and Control (DFD 3)

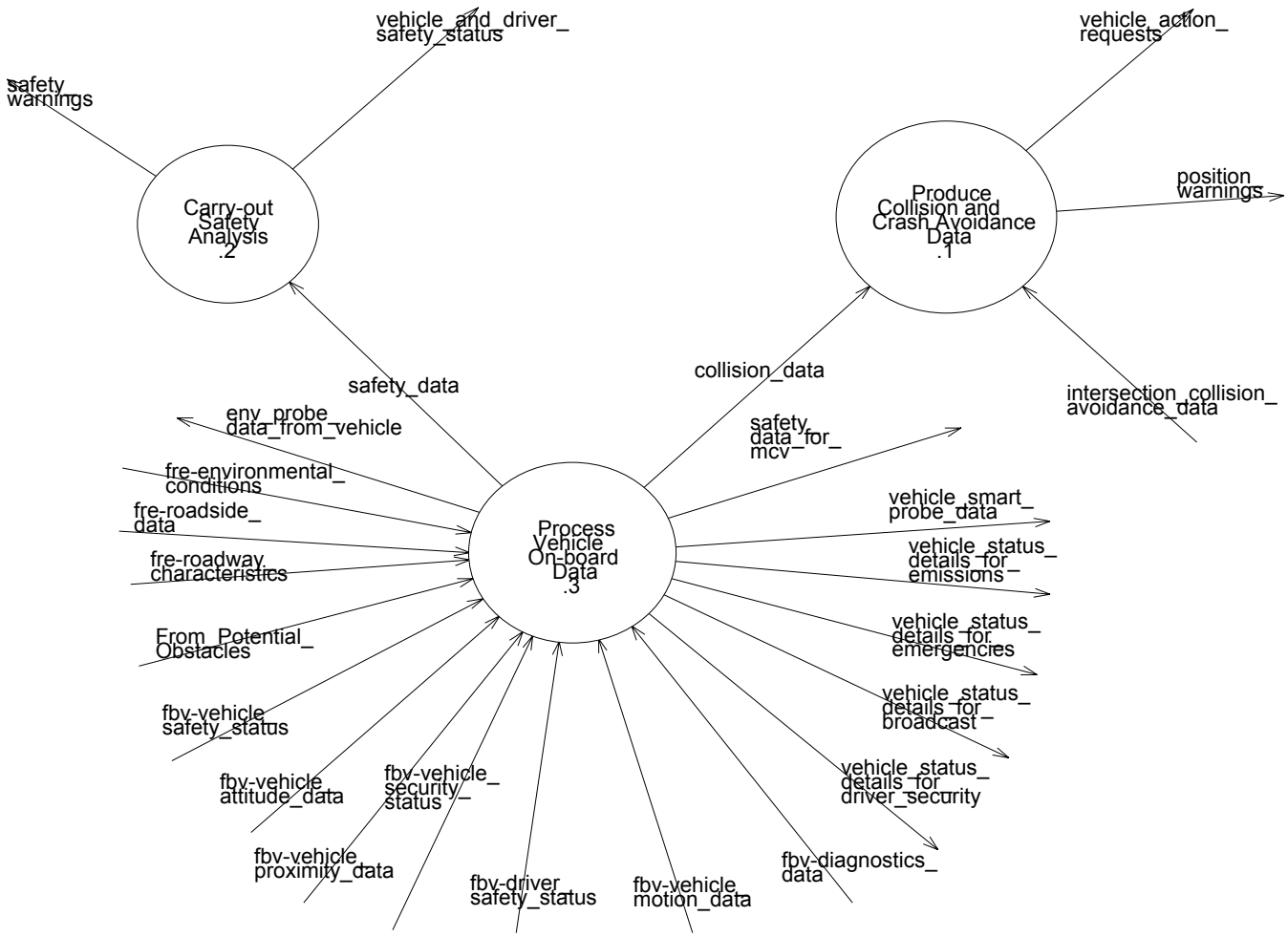


Figure 45. Monitor Vehicle Status (DFD 3.1)

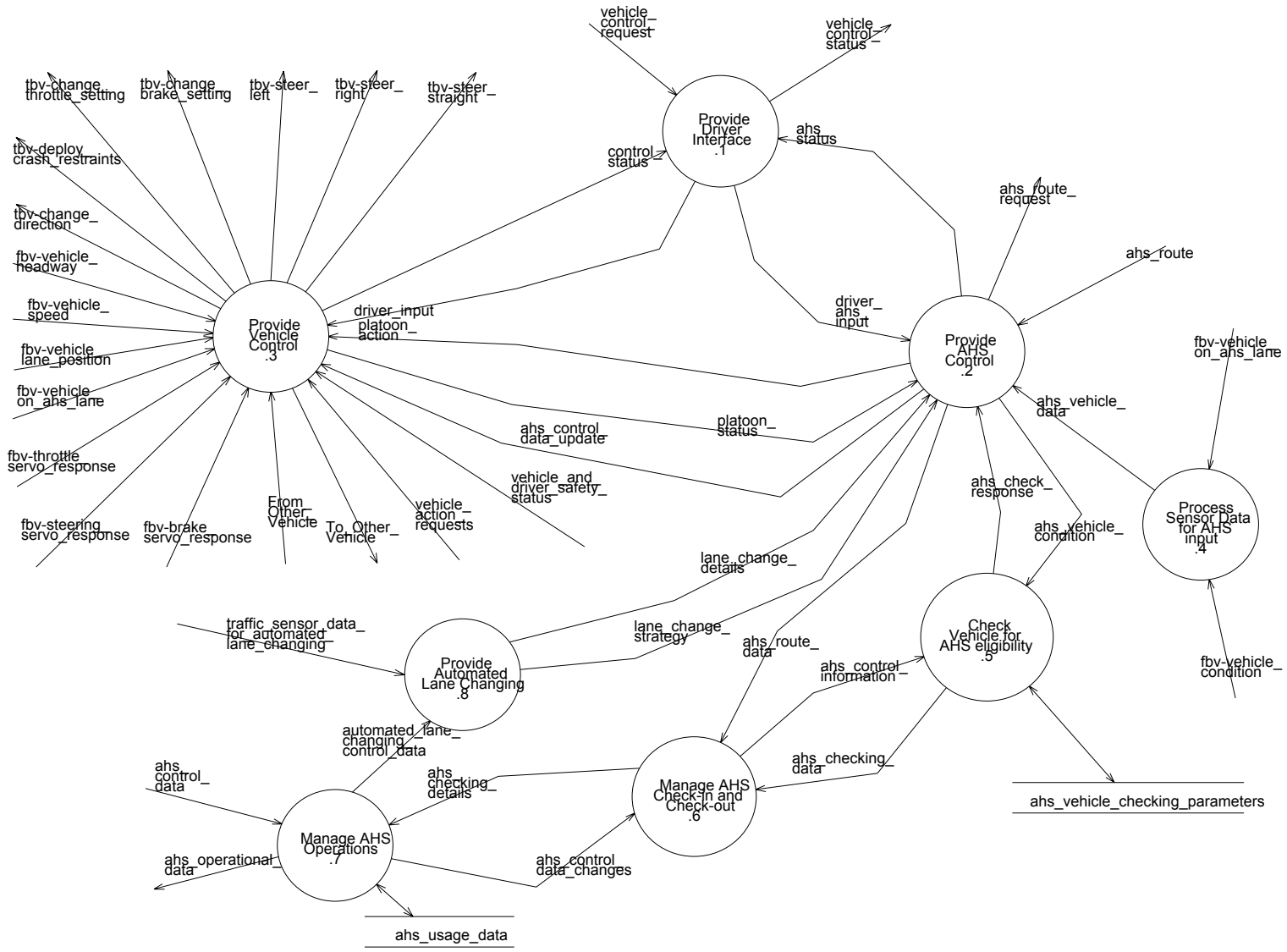


Figure 46. Provide Automatic Vehicle Operation (DFD 3.2)

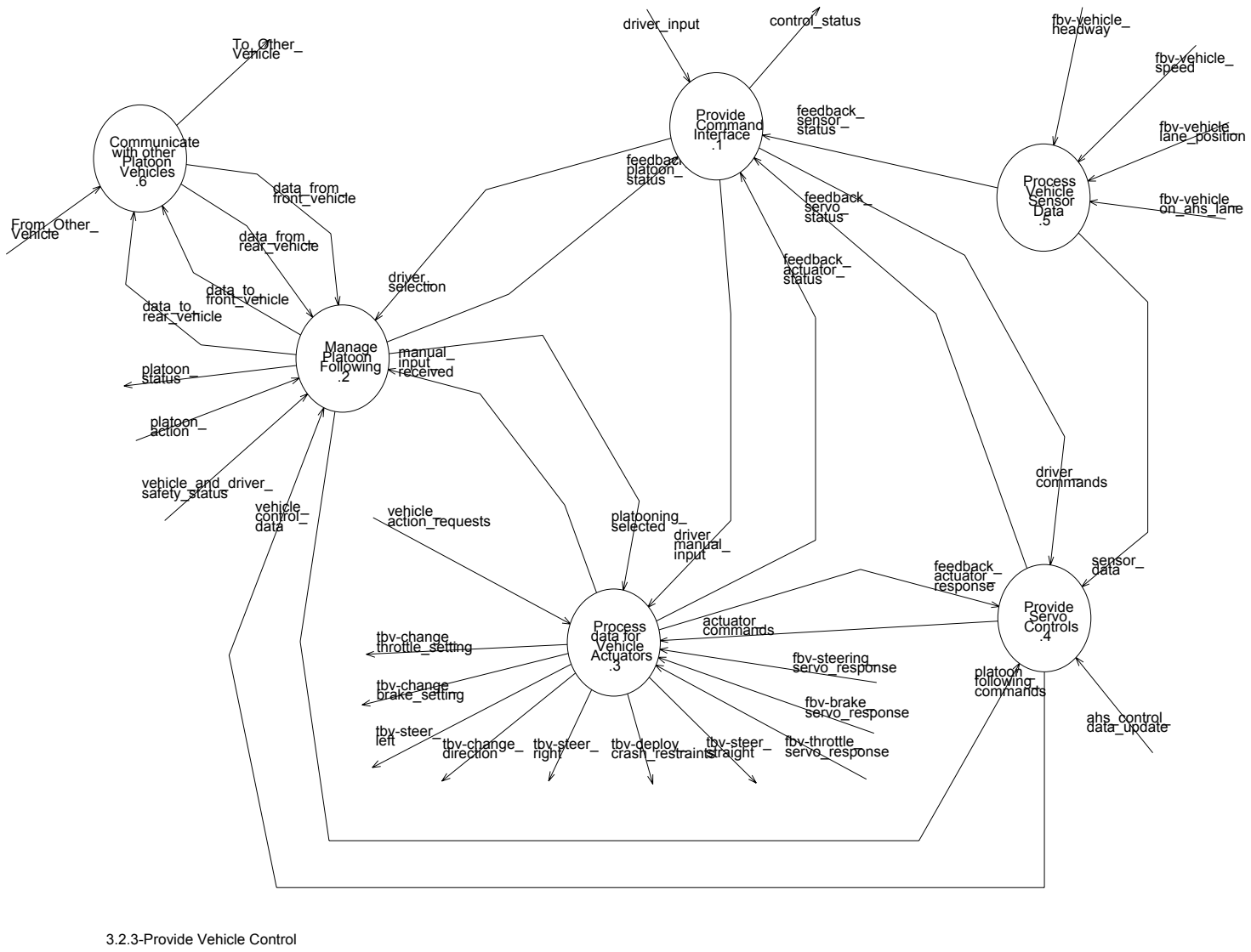


Figure 47. Provide Vehicle Control (DFD 3.2.3)

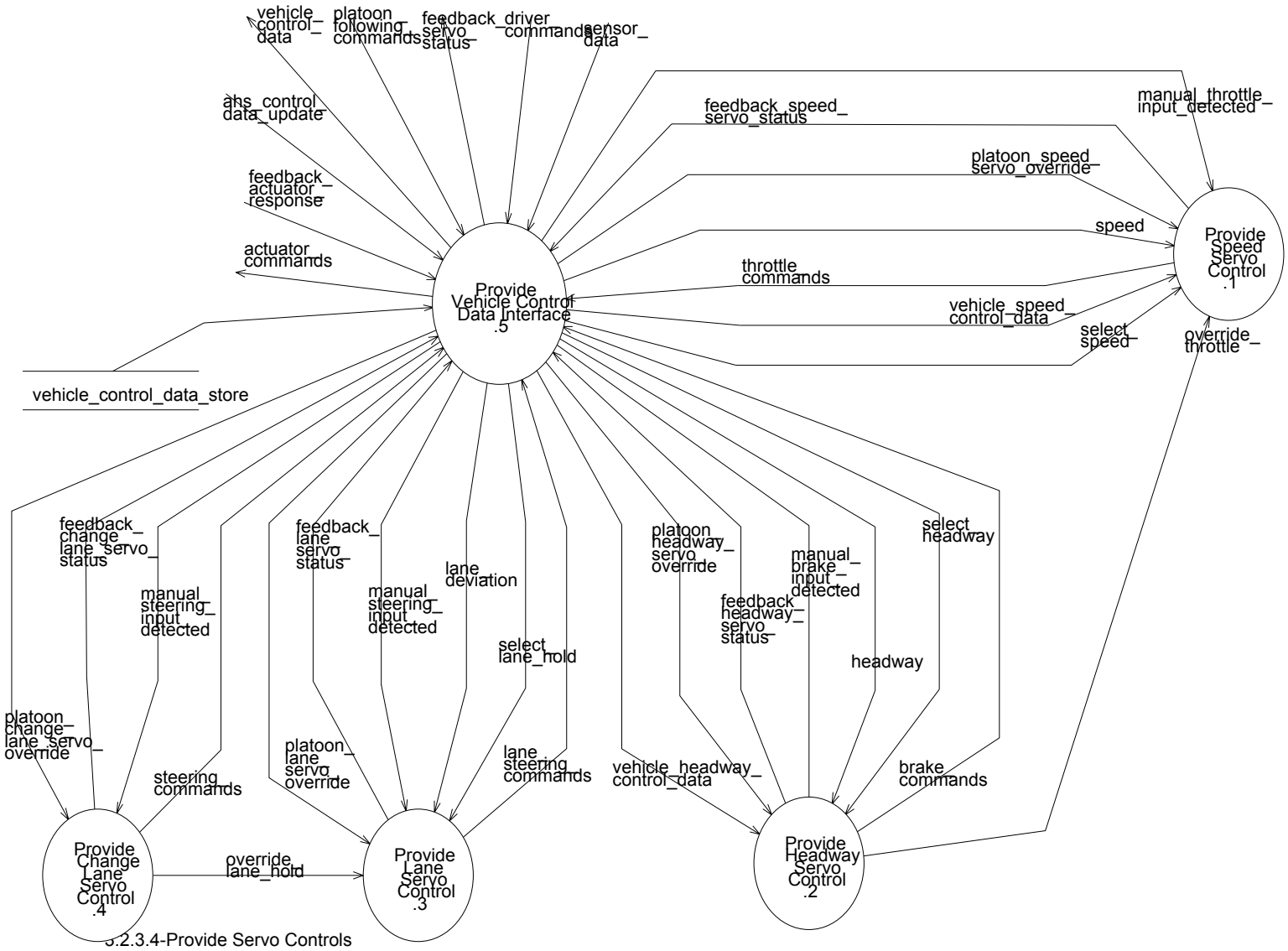


Figure 48. Provide Servo Control (DFD 3.2.3.4)

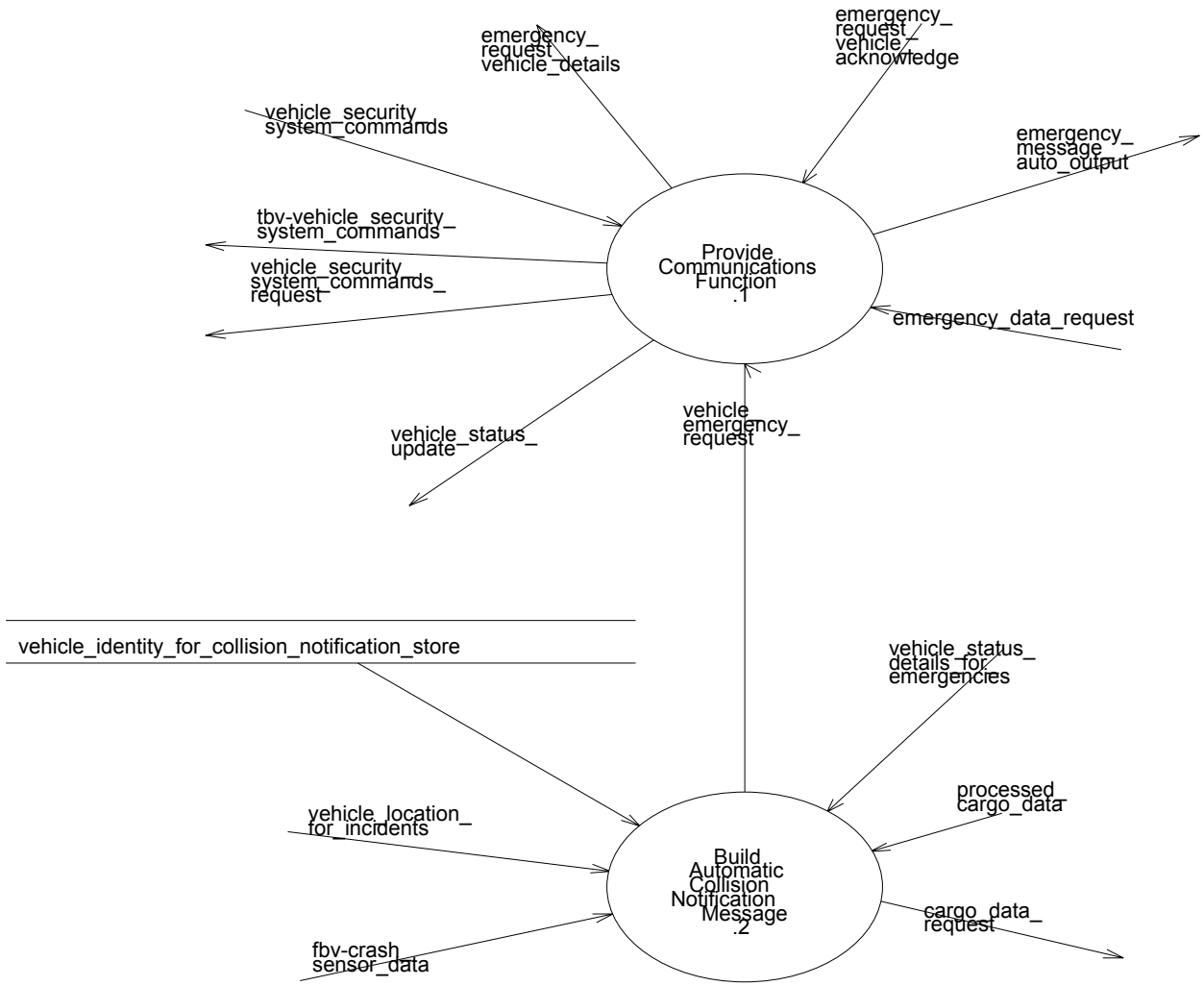


Figure 49. Provide Automatic Emergency Notification (DFD 3.3)

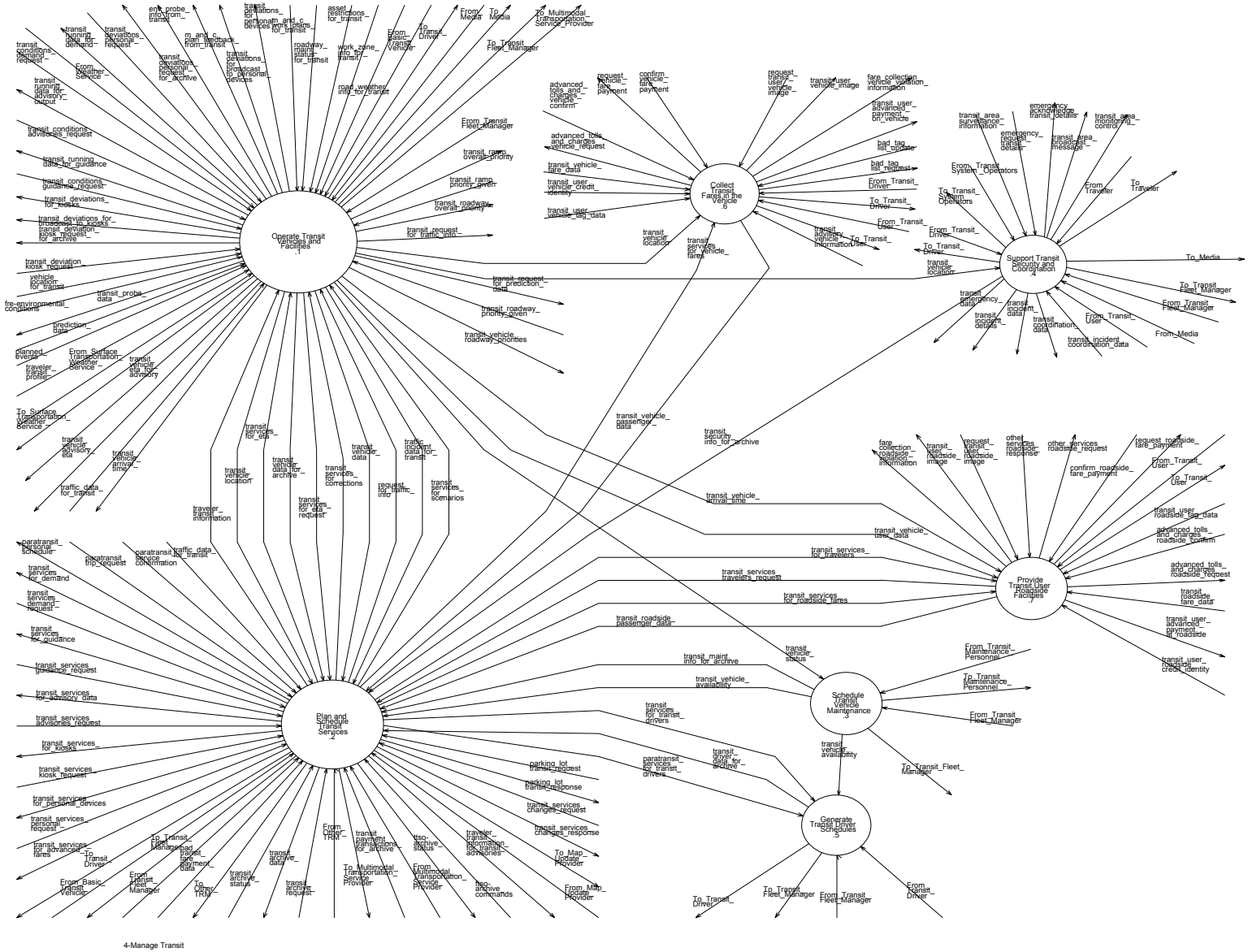


Figure 50. Manage Transit (DFD 4)

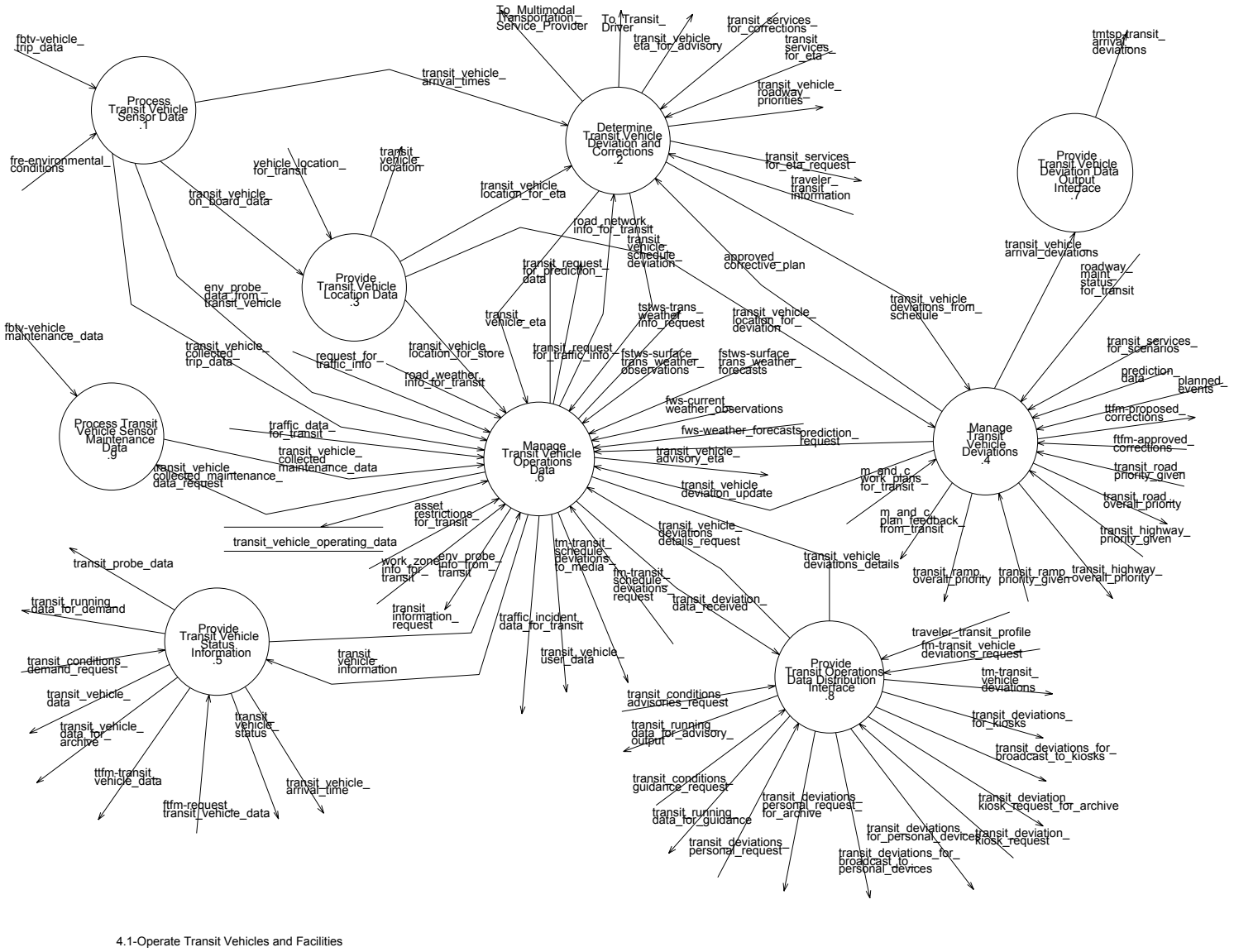
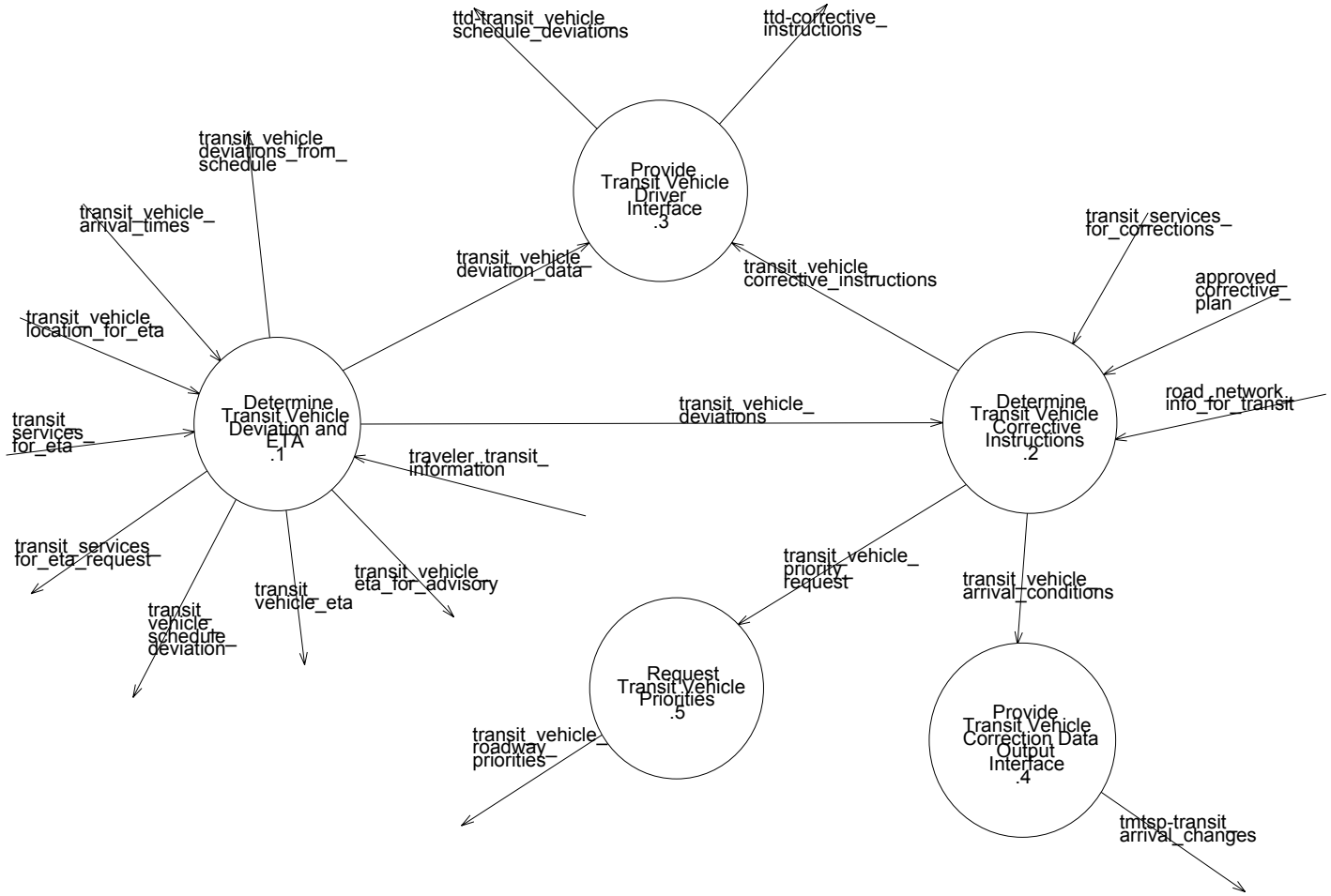


Figure 51. Operate Vehicles and Facilities (DFD 4.1)



4.1.2-Determine Transit Vehicle Deviation and Corrections

Figure 52. Determine Transit Vehicle Deviation and Corrections (DFD 4.1.2)

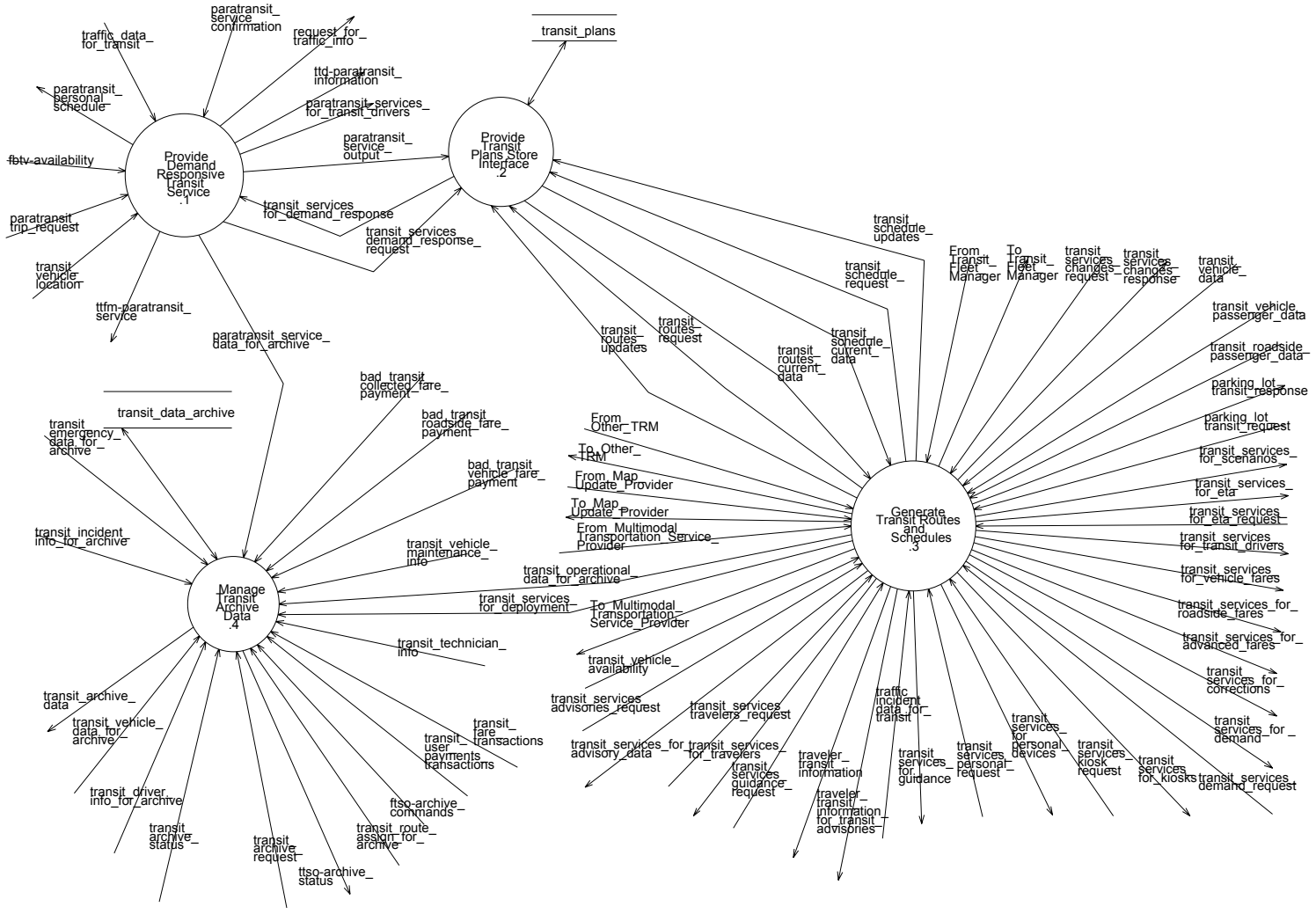


Figure 53. Plan and Schedule Transit Services (DFD 4.2)

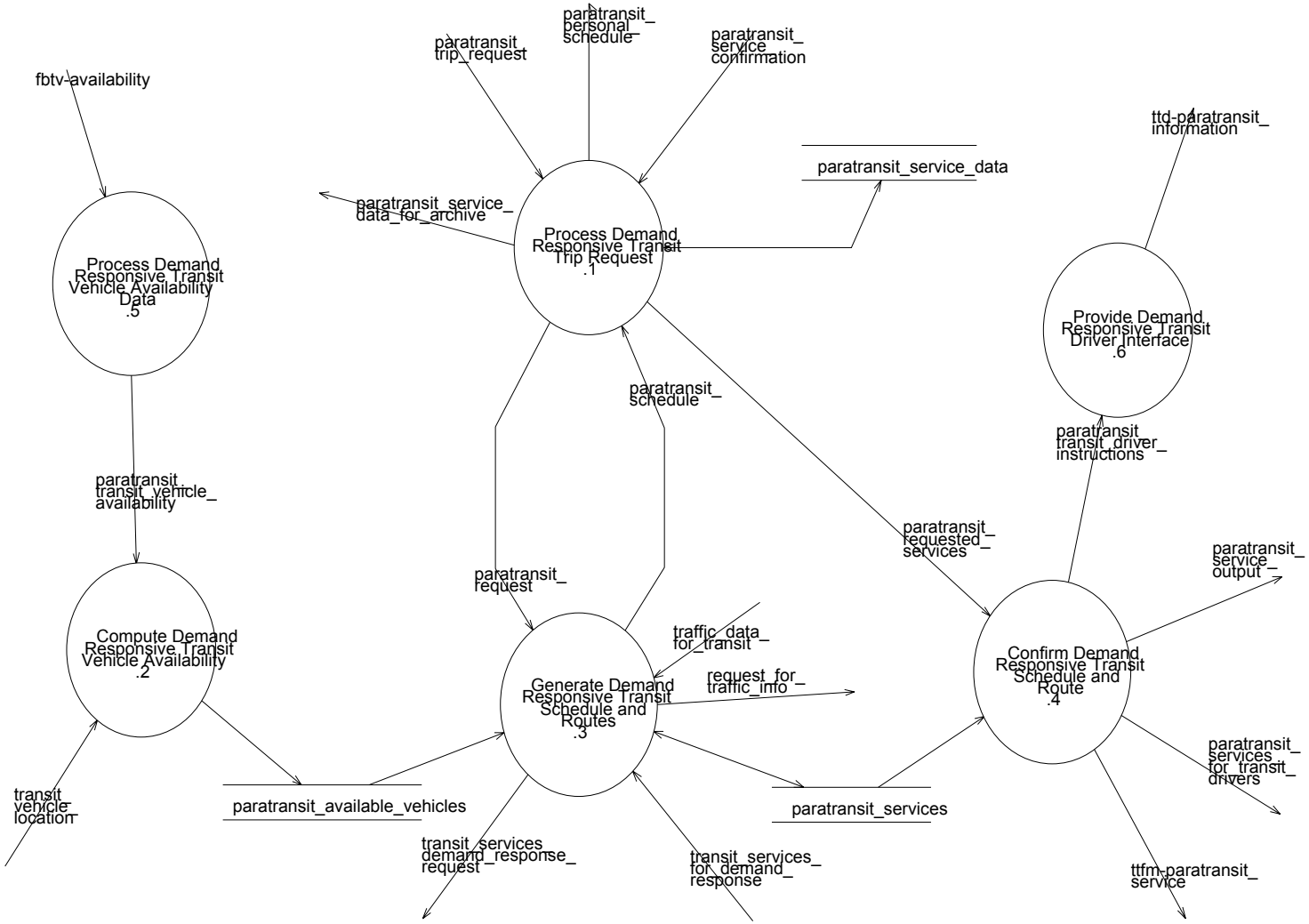


Figure 54. Provider Demand Responsive Transit Services (DFD 4.2.1)

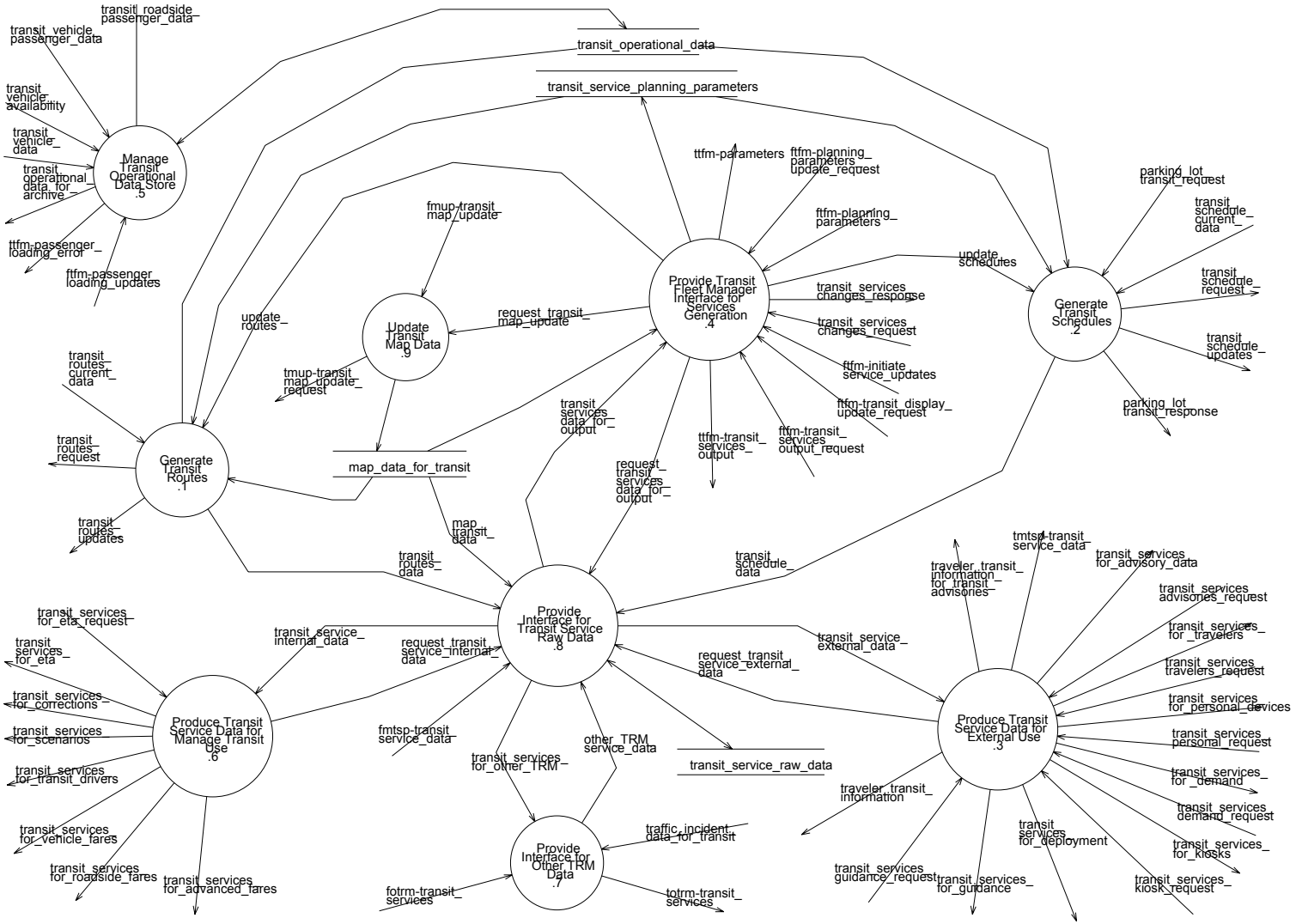


Figure 55. Generate Transit Routes and Schedules (DFD 4.2.3)

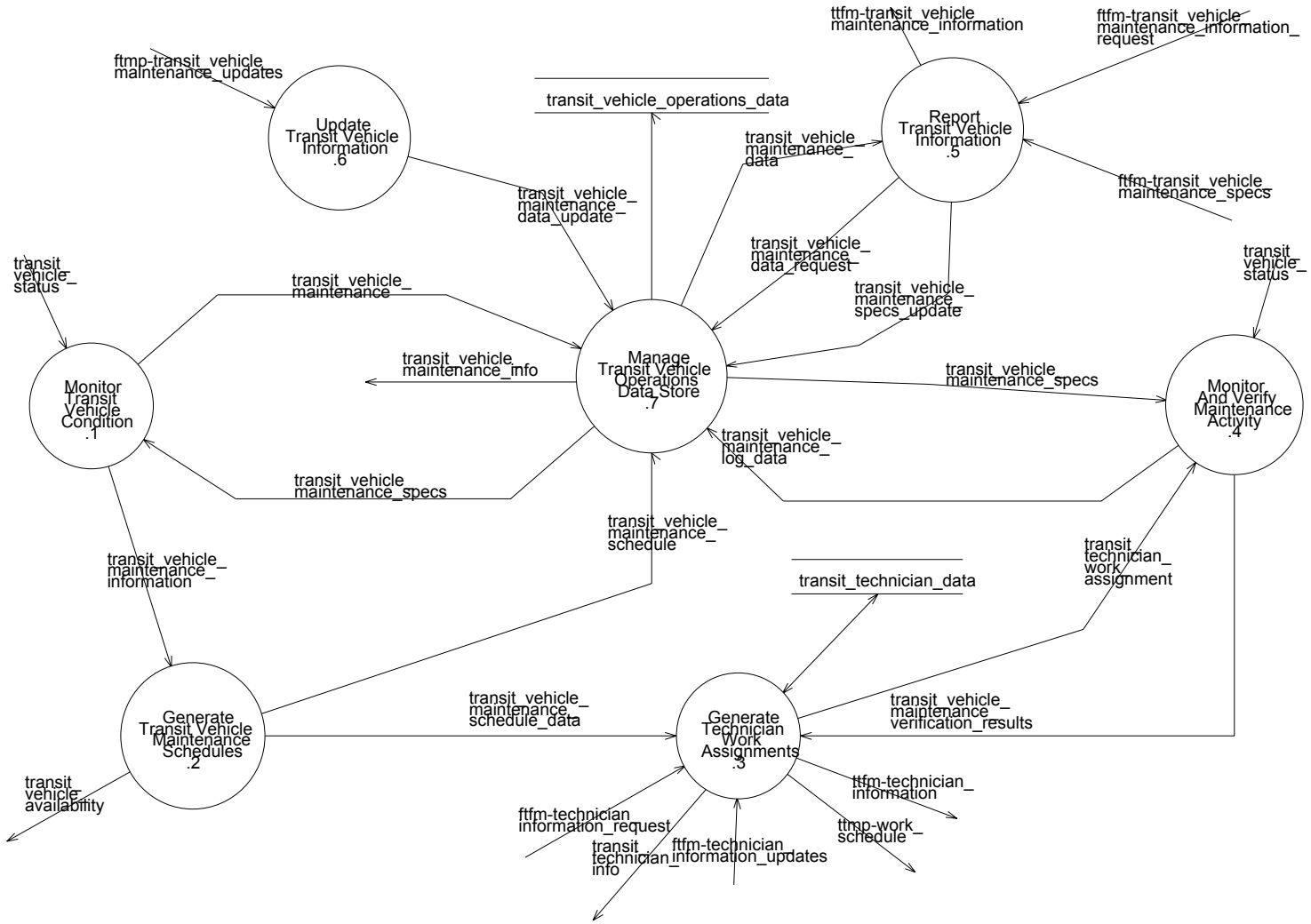


Figure 56. Schedule Transit Vehicle Maintenance (DFD 4.3)

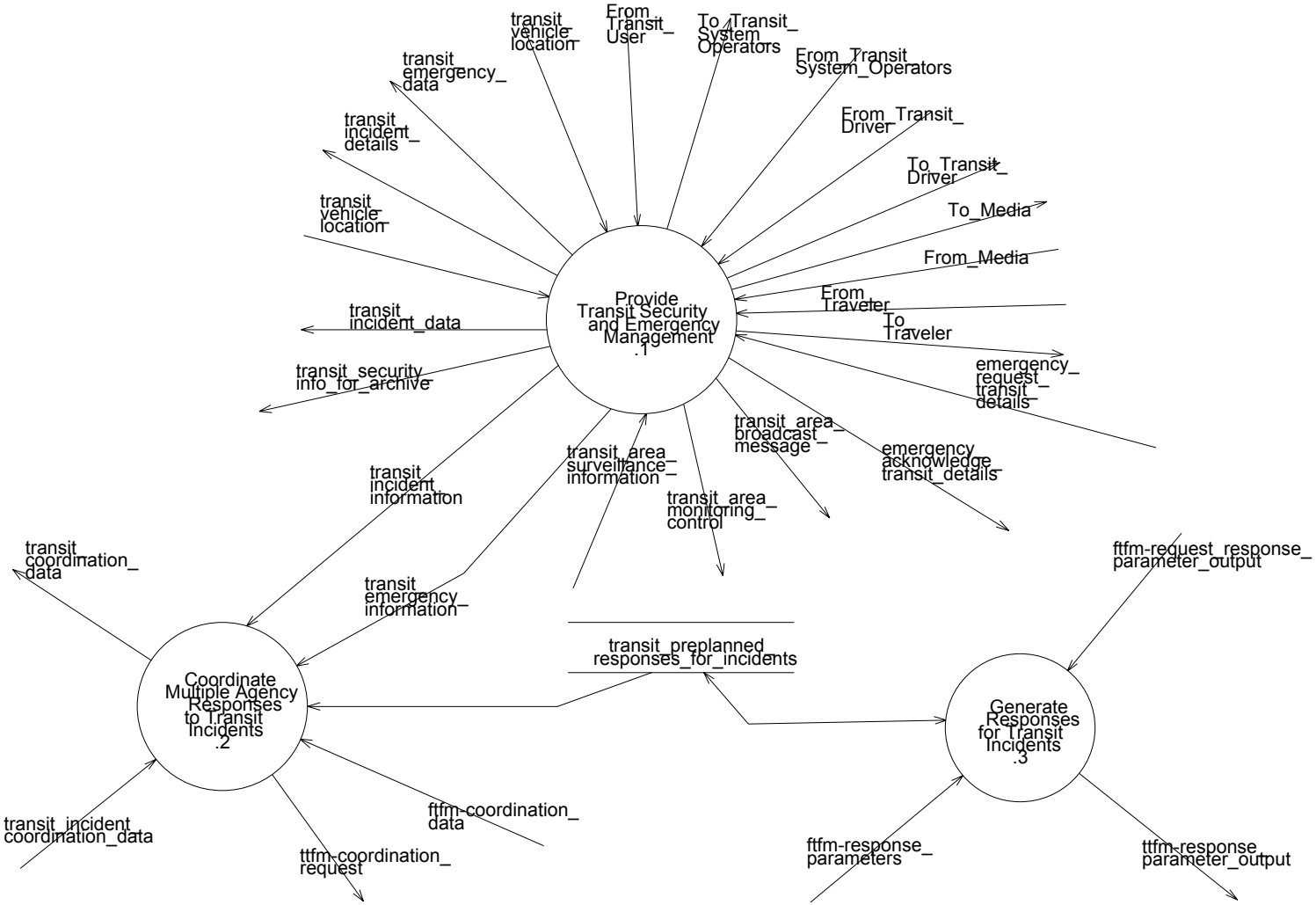


Figure 57. Support Security and Coordination (DFD 4.4)

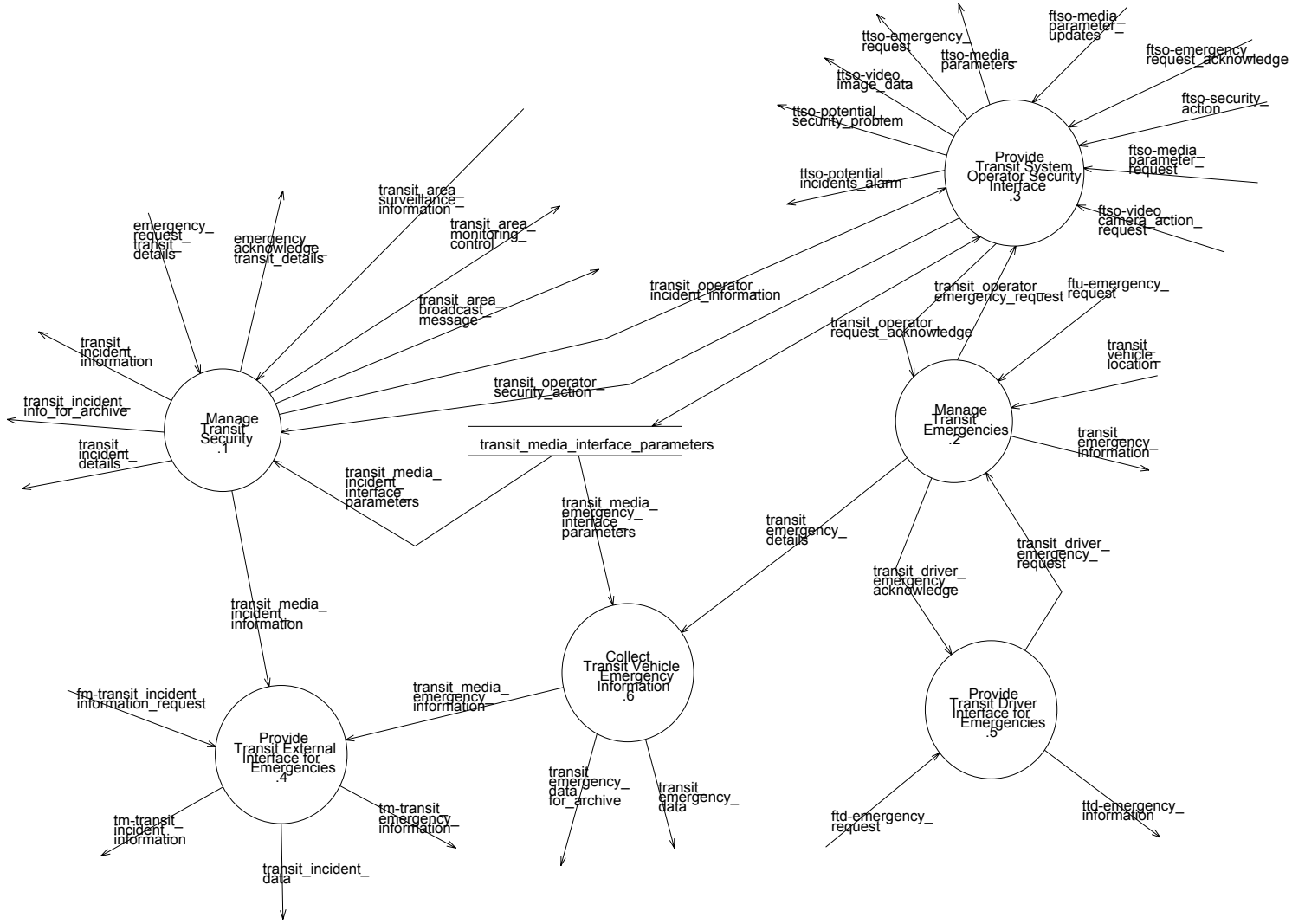


Figure 58. Provide Transit Security and Emergency Management (DFD 4.4.1)

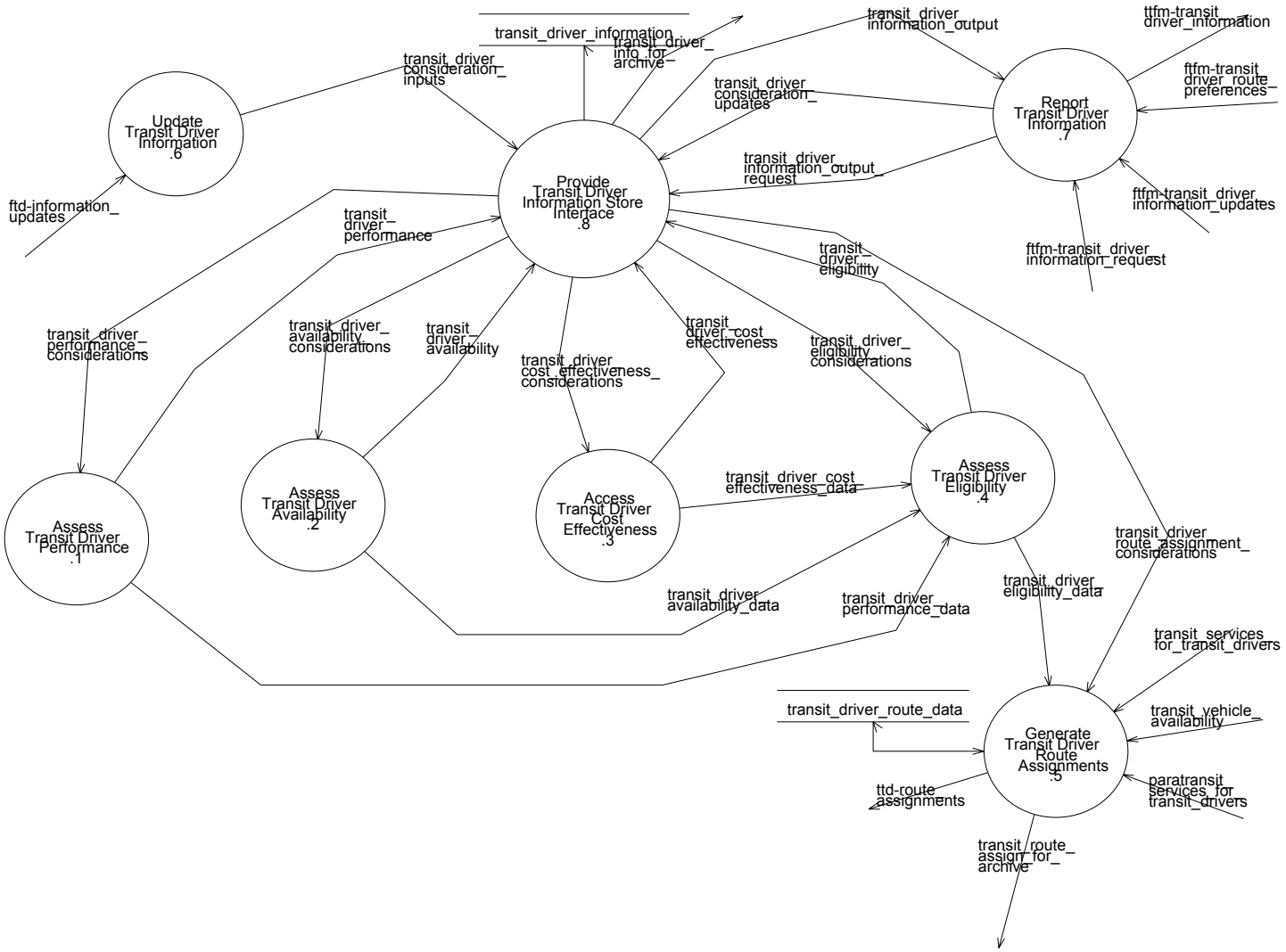


Figure 59. Generate Transit Driver Schedules (DFD 4.5)

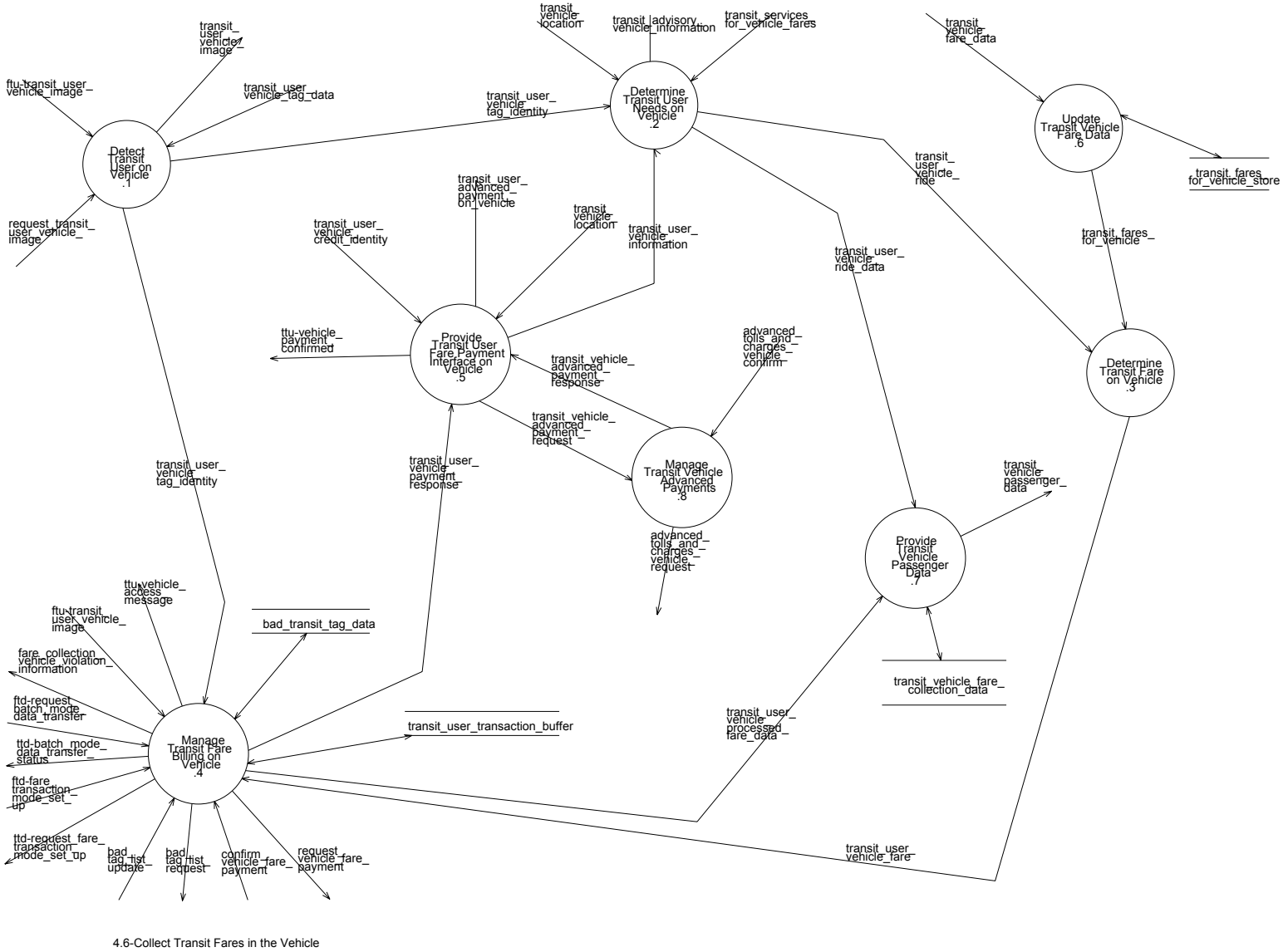
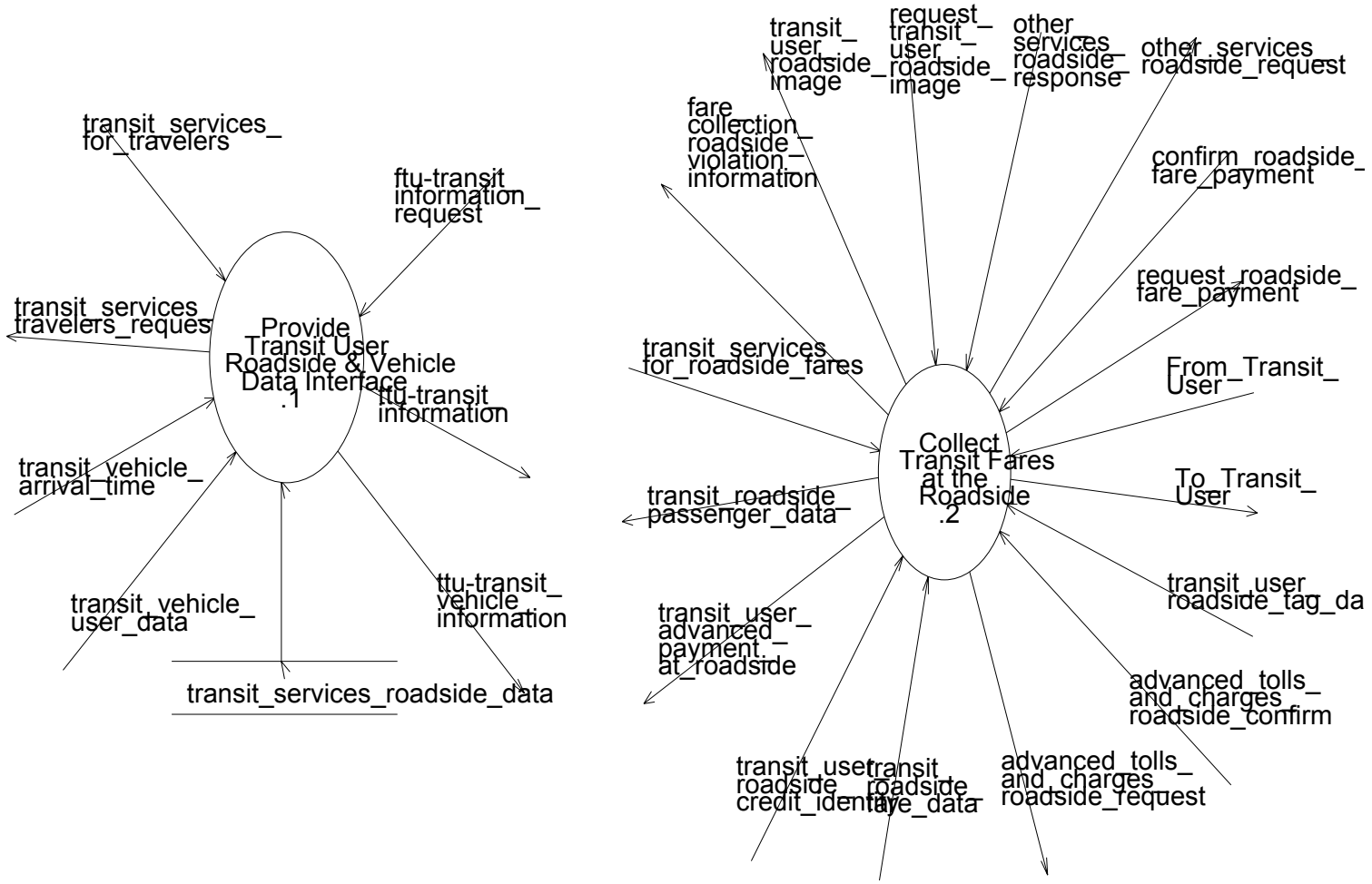


Figure 60. Collect Transit Fares in the Vehicle (DFD 4.6)



4.7-Provide Transit User Roadside Facilities

Figure 61. Provide Transit User Roadside Facilities (DFD 4.7)

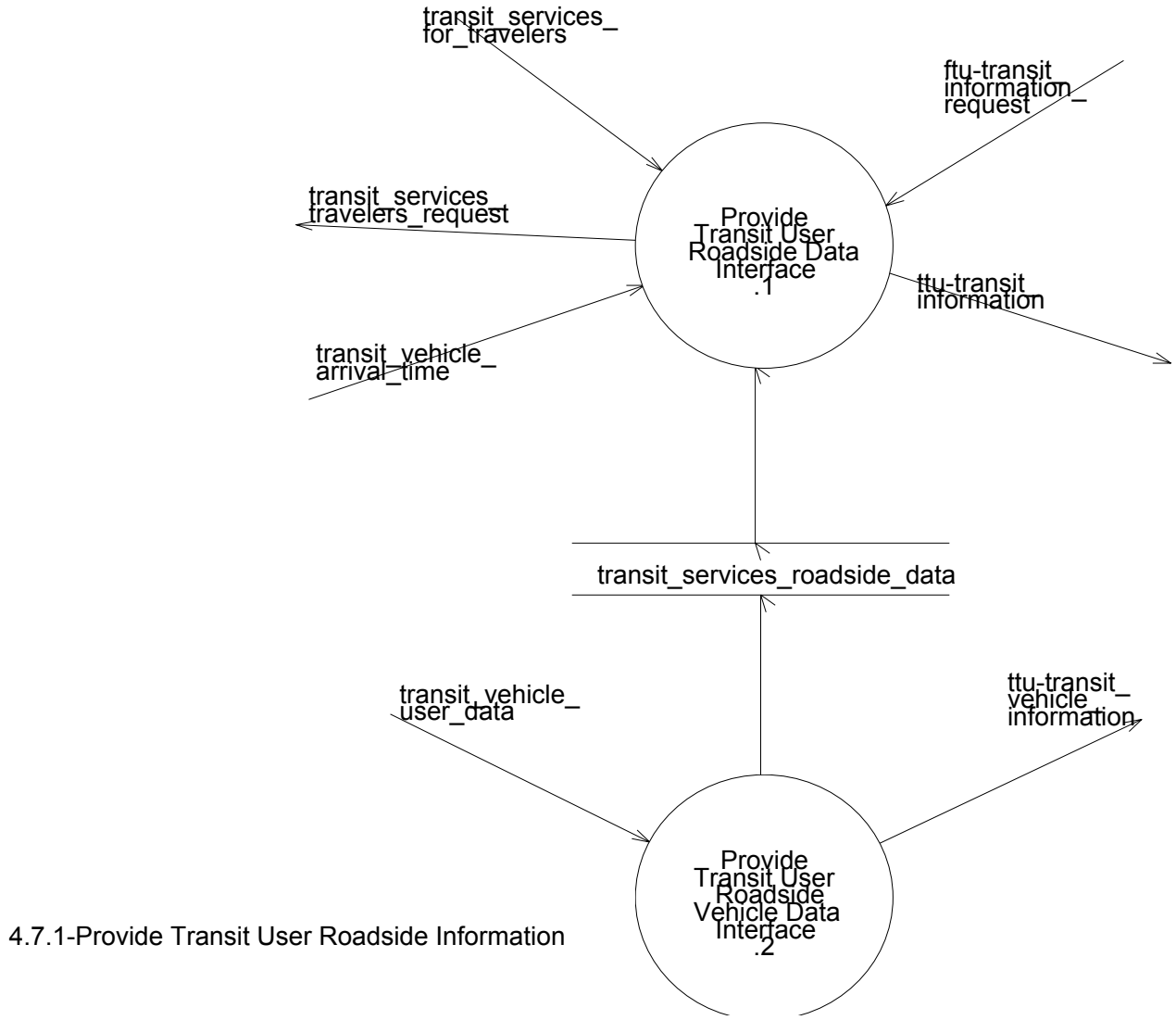


Figure 62. Provide Transit User Roadside Information (DFD 4.7.1)

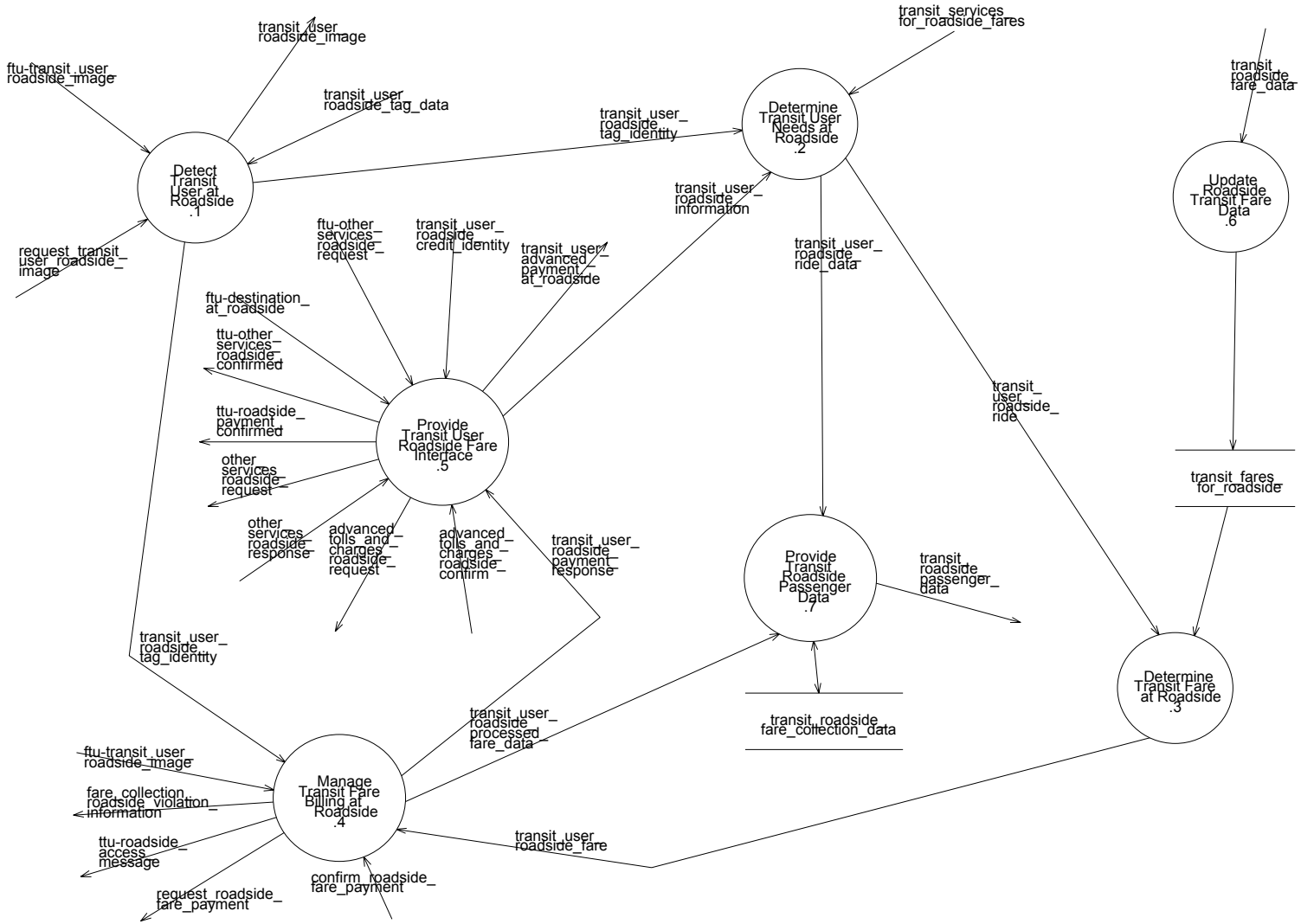


Figure 63. Collect Transit Fares at the Roadside (DFD 4.7.2)

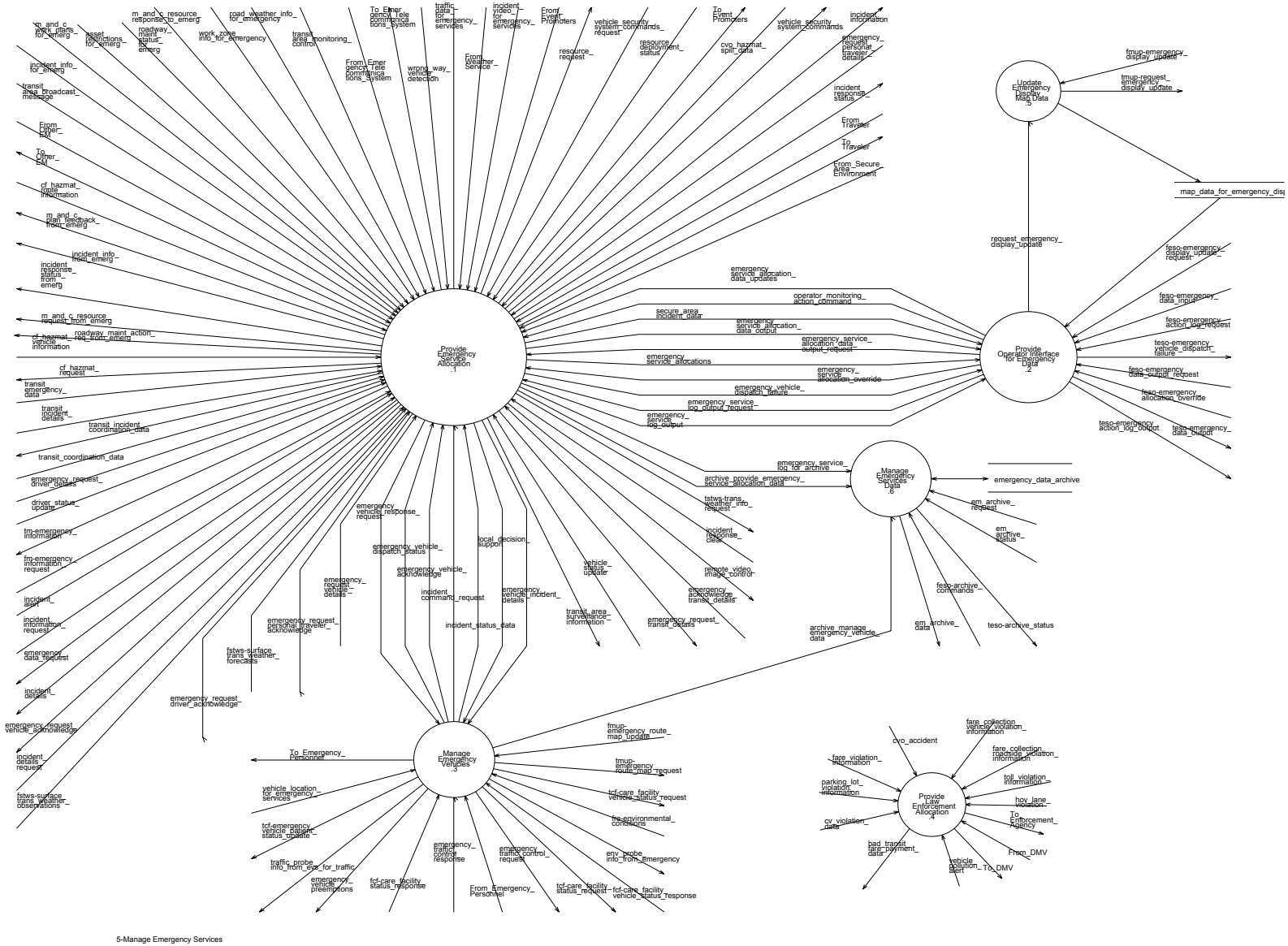
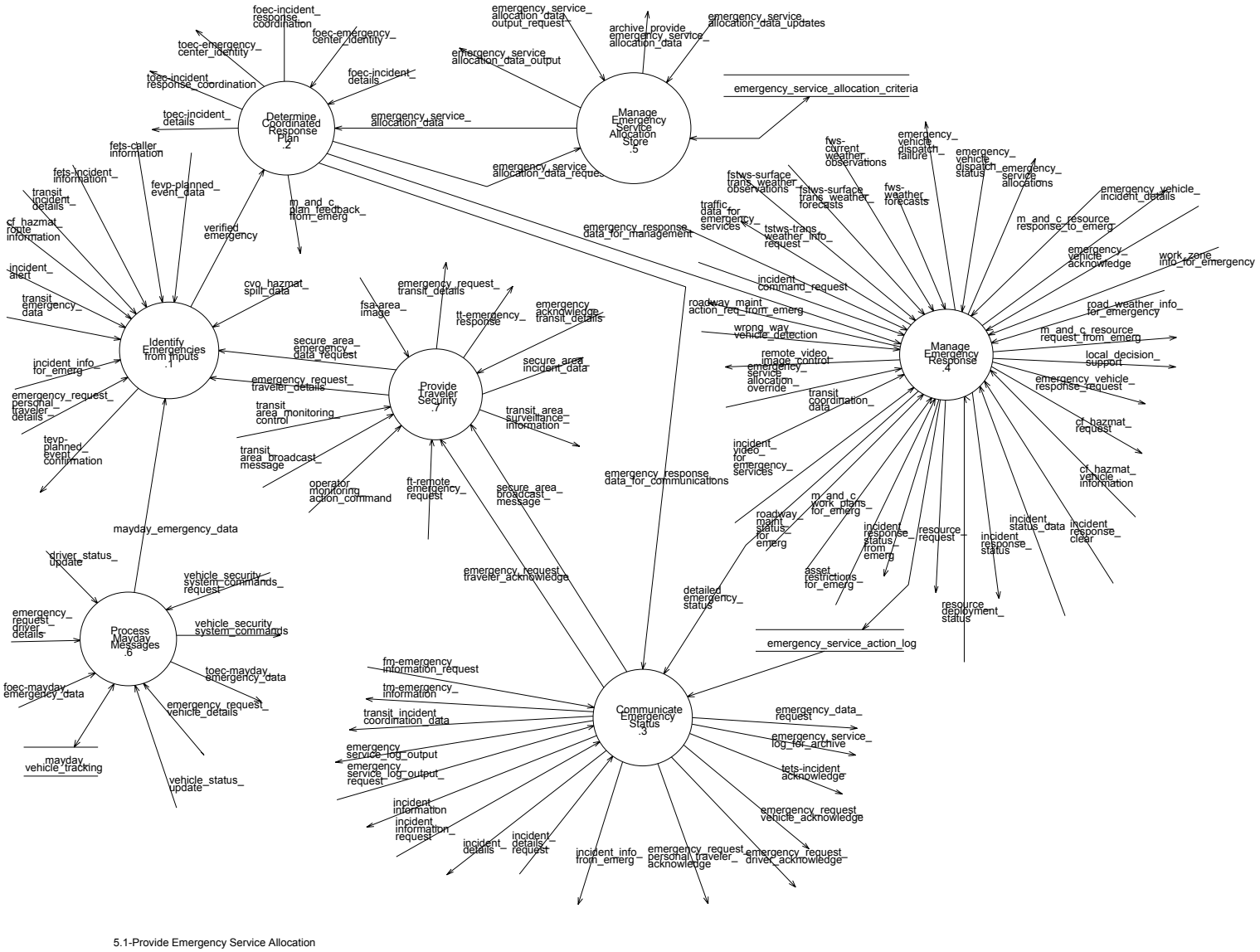


Figure 64. Manage Emergency Services (DFD 5)



5.1-Provide Emergency Service Allocation

Figure 65. Provide Emergency Services Allocation (DFD 5.1)

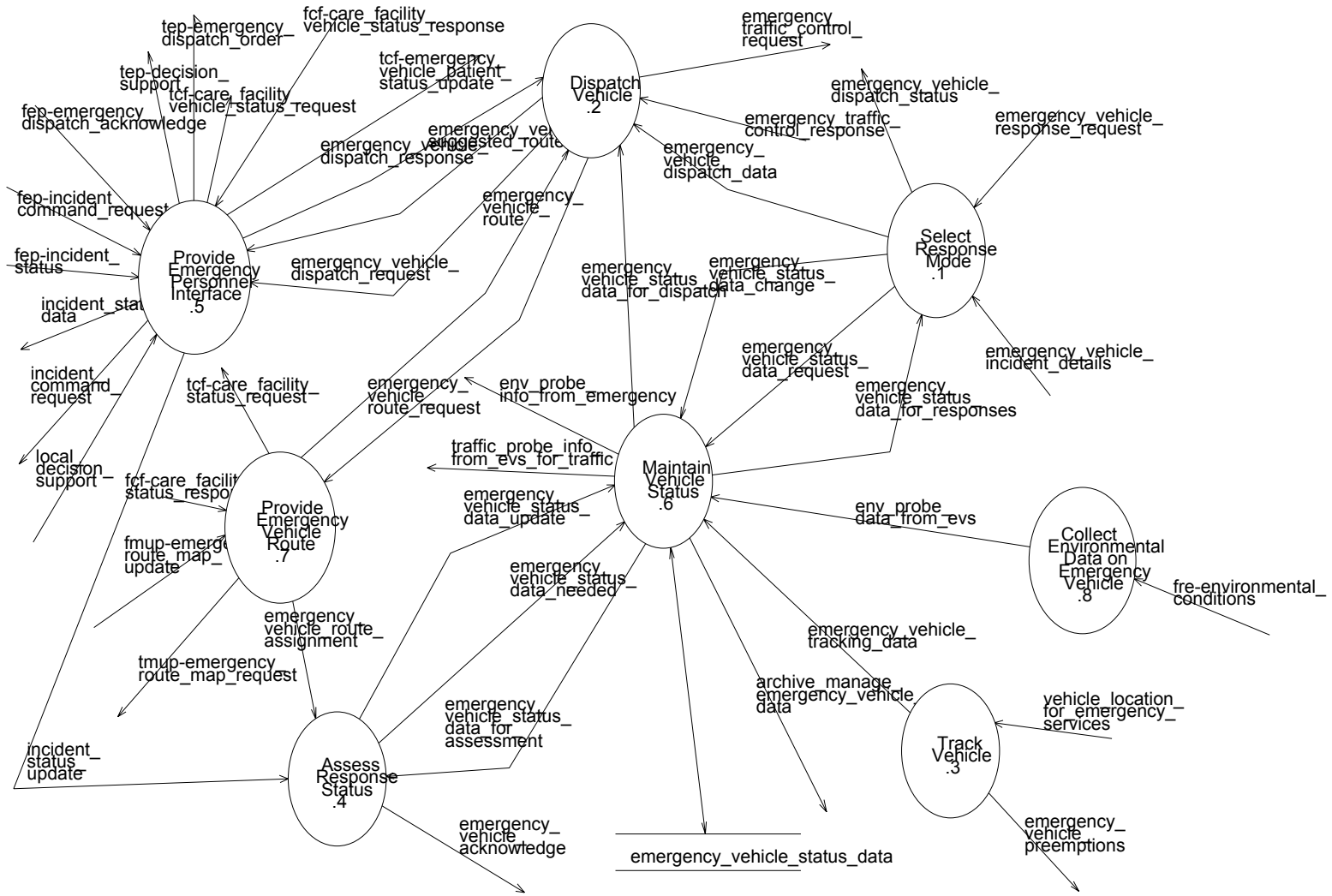


Figure 66. Manage Emergency Vehicles (DFD 5.3)

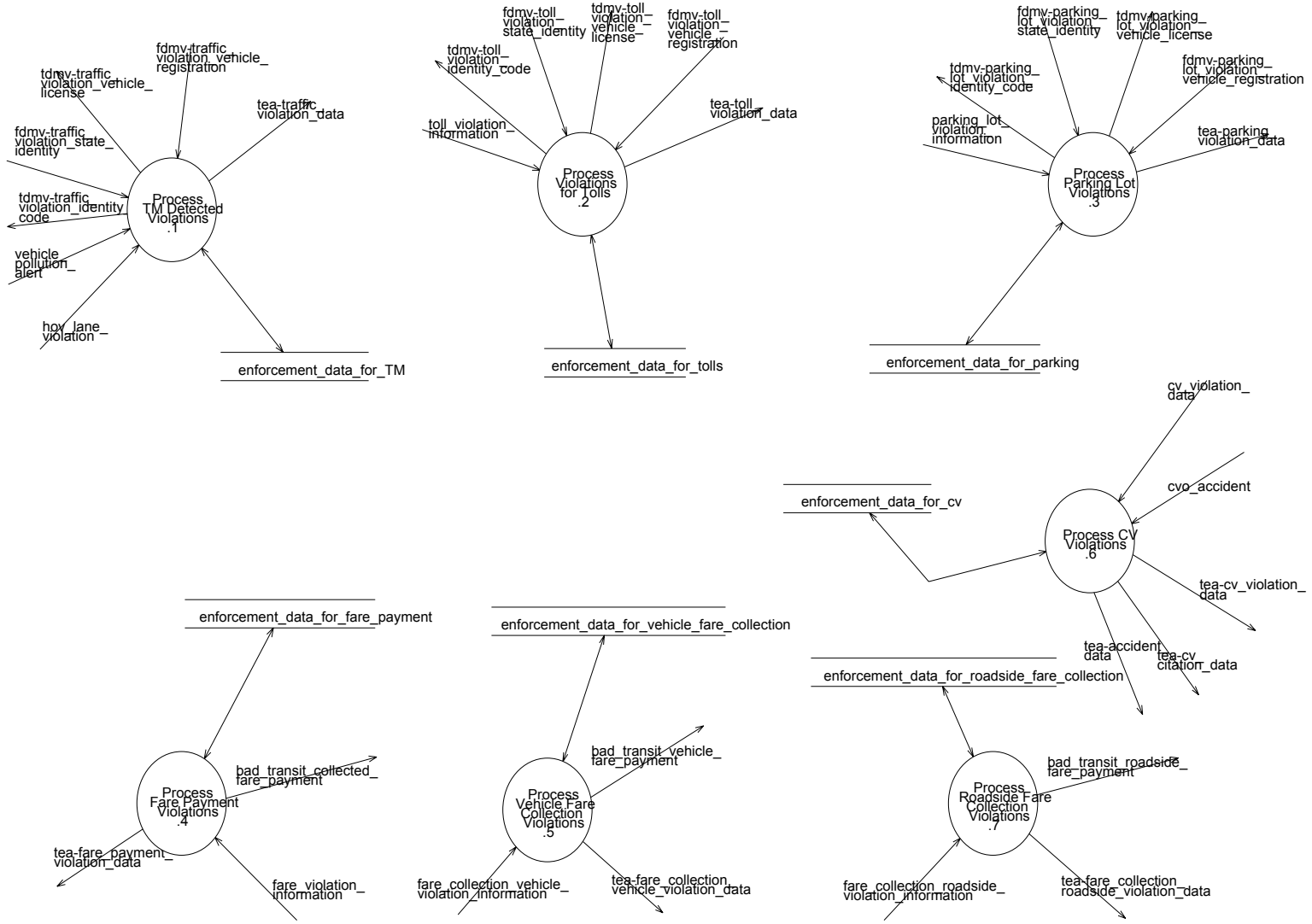


Figure 67. Provide Law Enforcement Allocation (DFD 5.4)

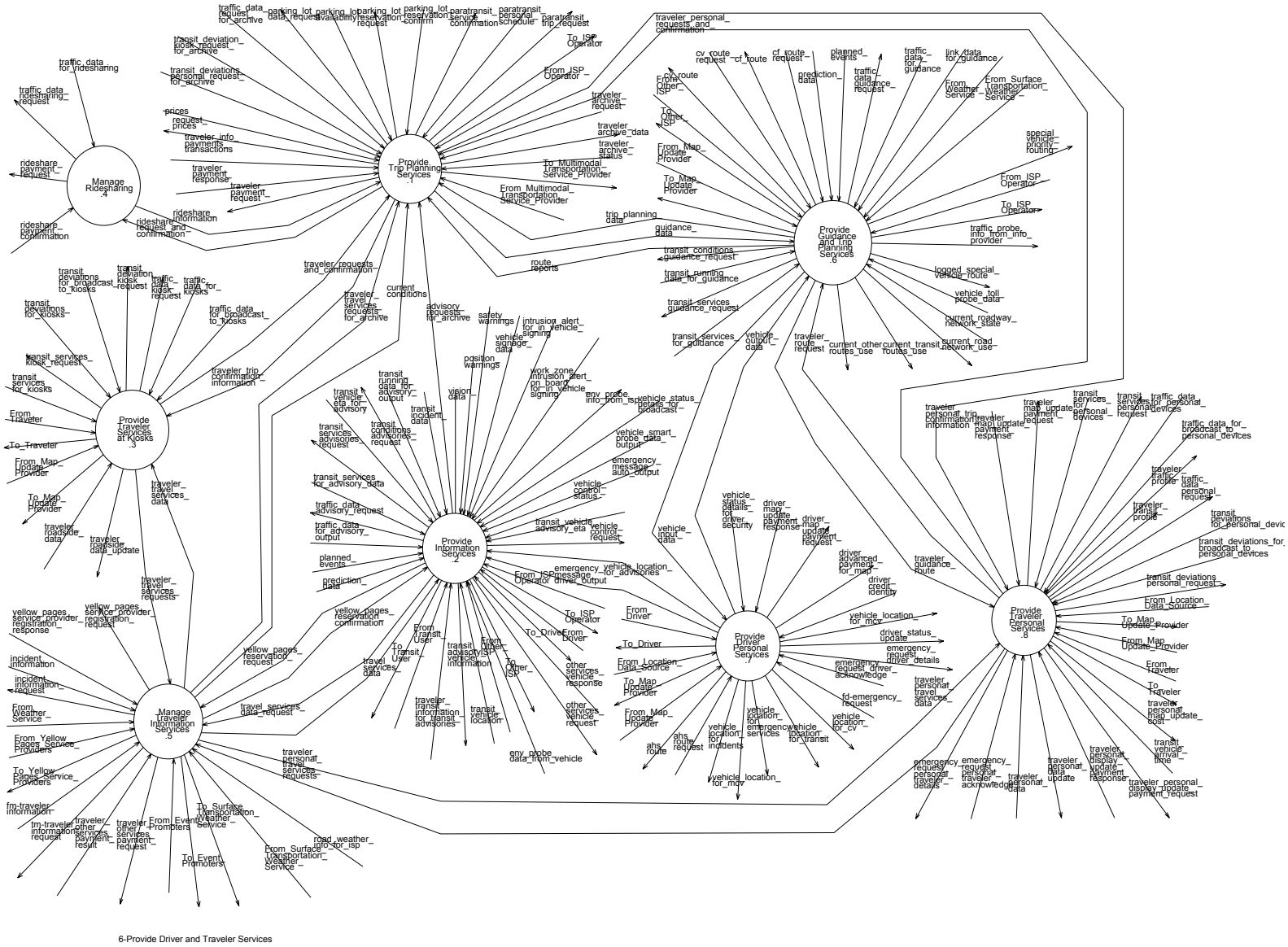


Figure 68. Provide Driver and Traveler Services (DFD 6)

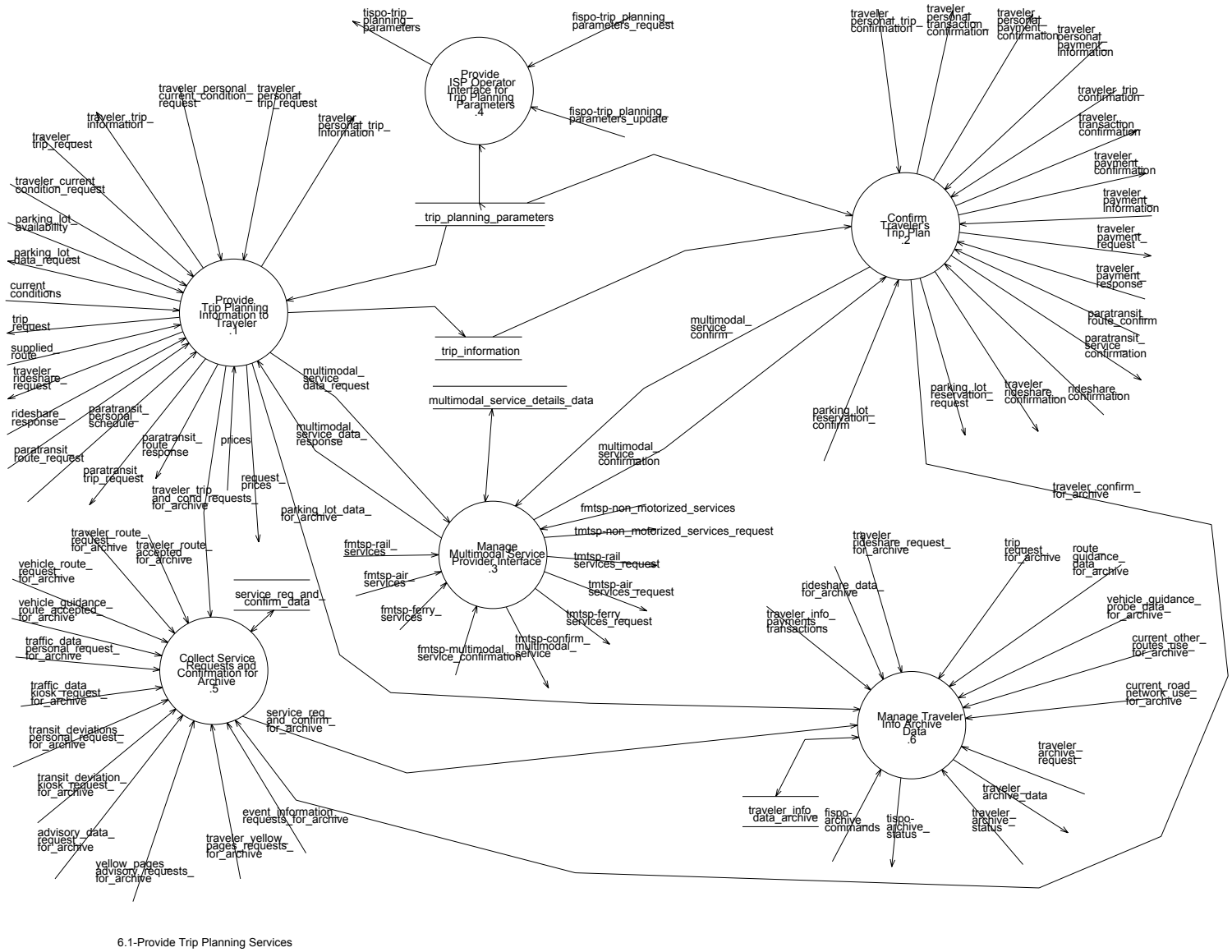


Figure 69. Provide Trip Planning Services (DFD 6.1)

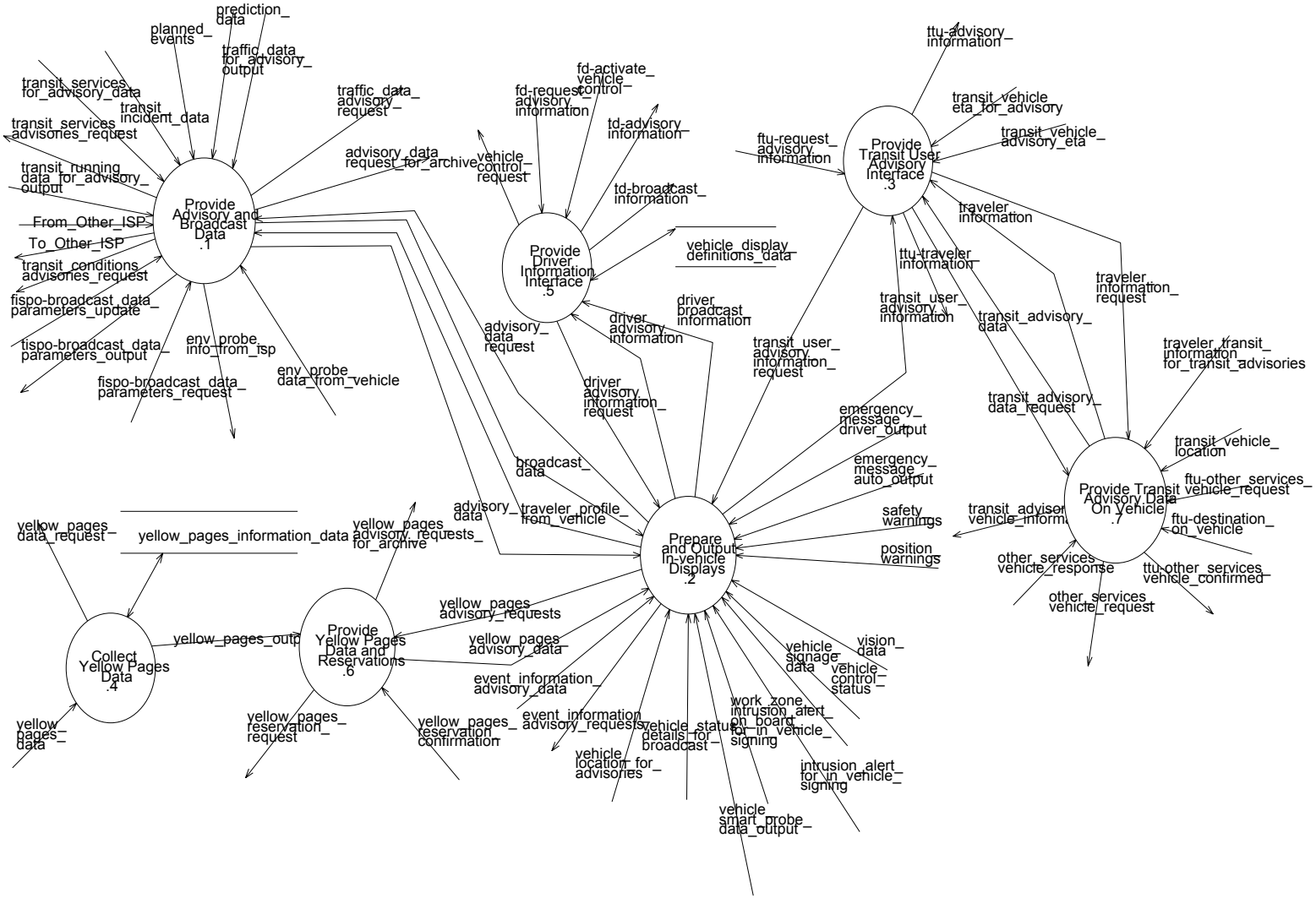
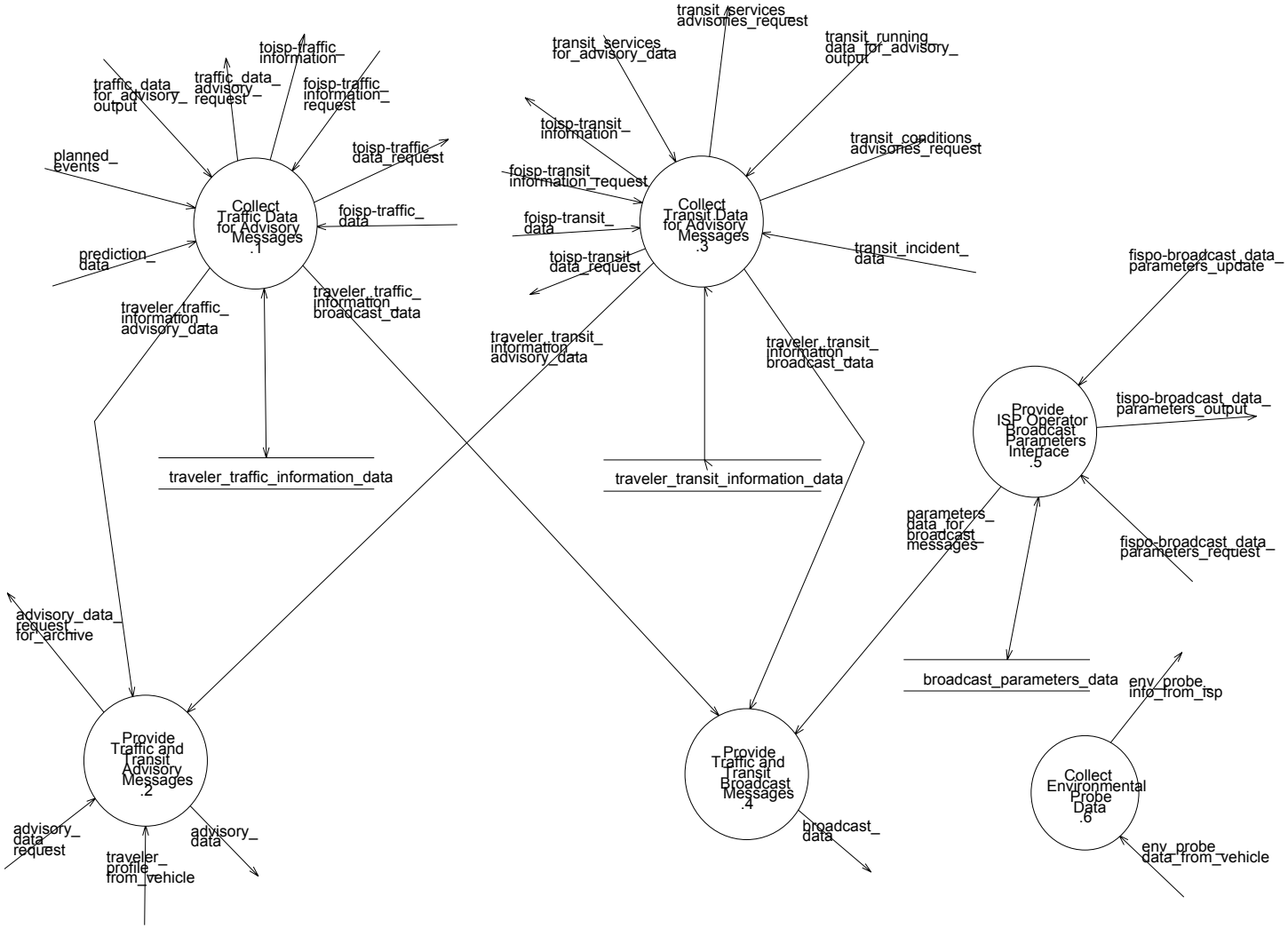


Figure 70. Provide Information Services (DFD 6.2)



6.2.1-Provide Advisory and Broadcast Data

Figure 71. Provide Advisory and Broadcast Data (DFD 6.2.1)

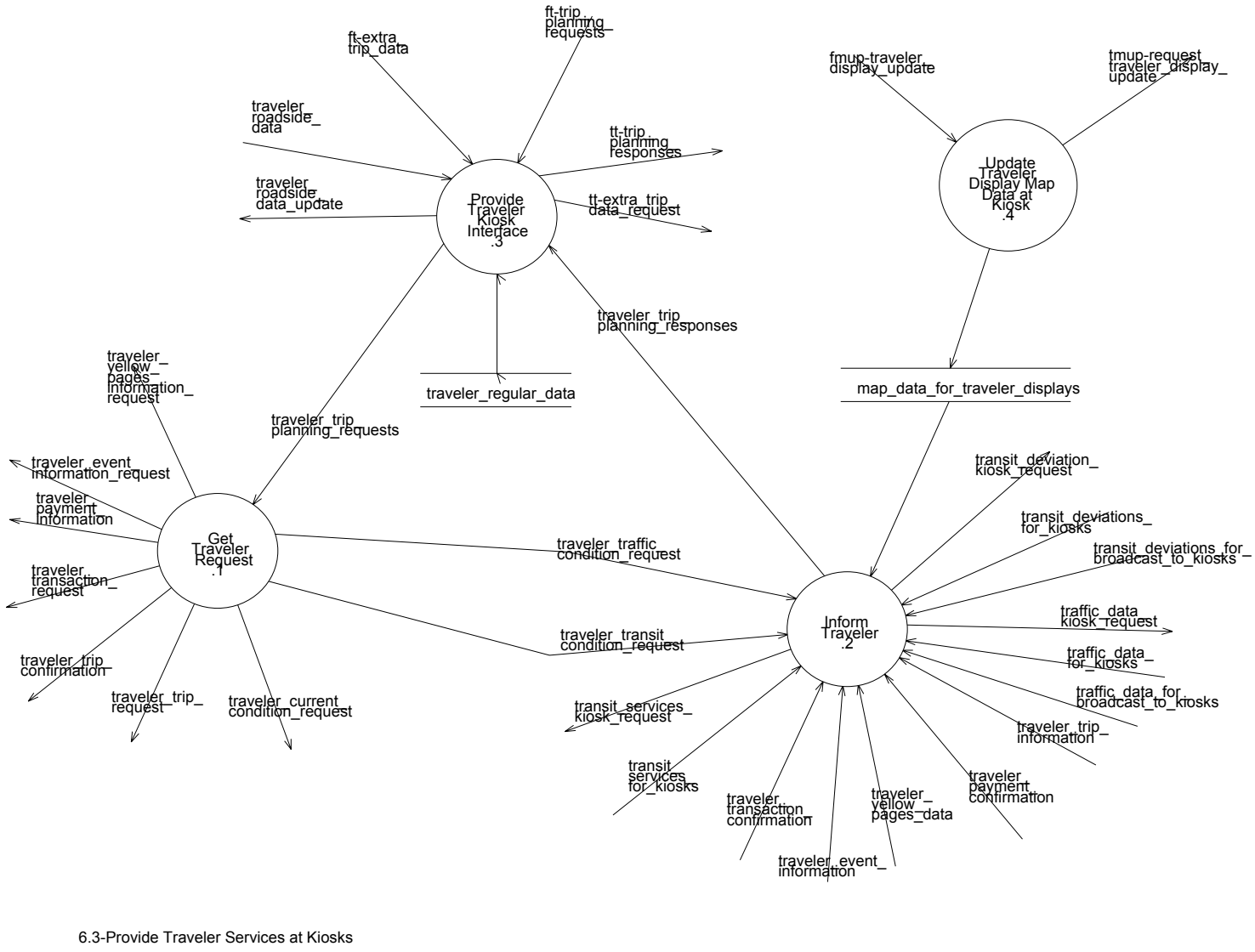


Figure 72. Provide Traveler Services at Kiosks (DFD 6.3)

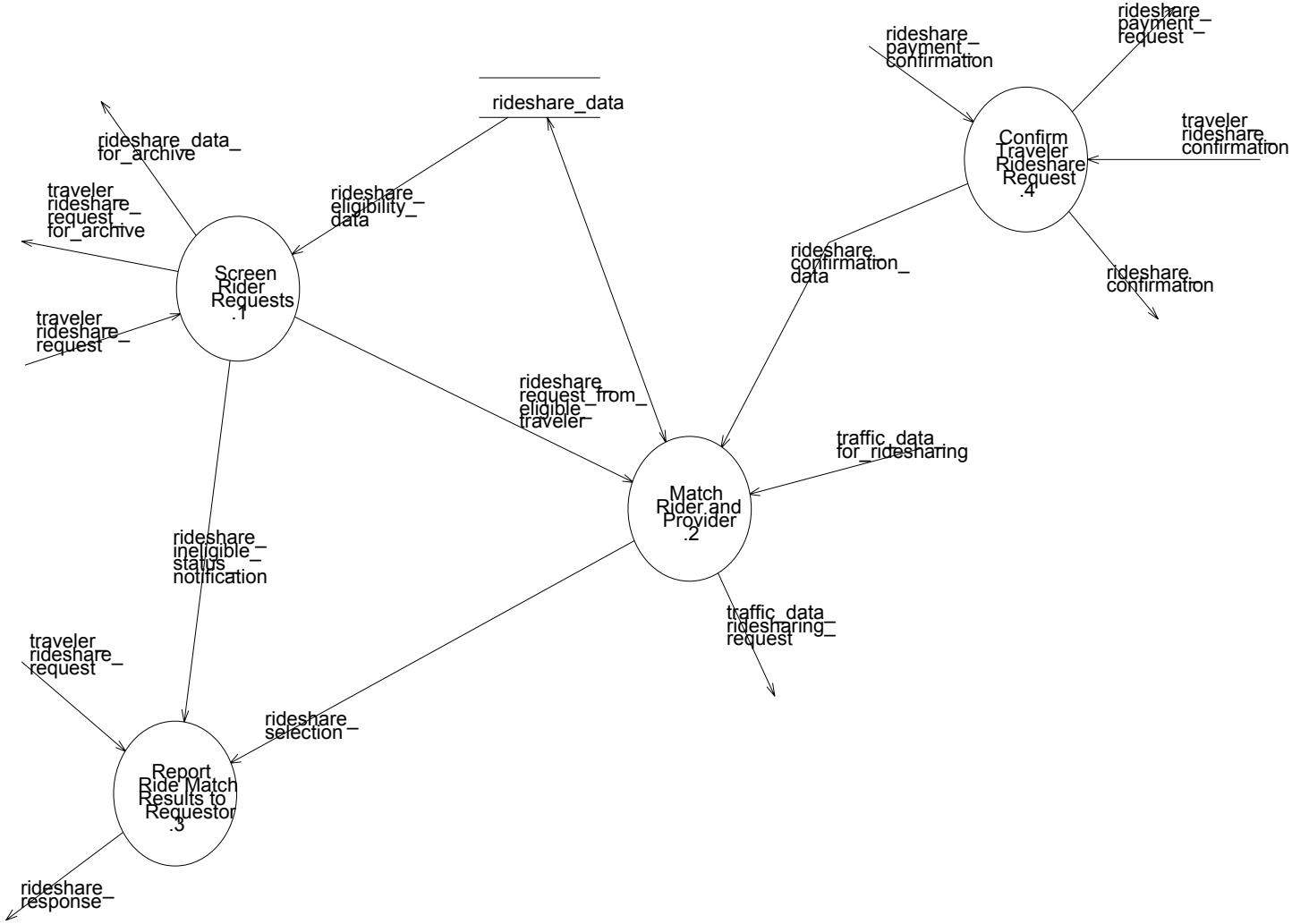


Figure 73. Manage Ridesharing (DFD 6.4)

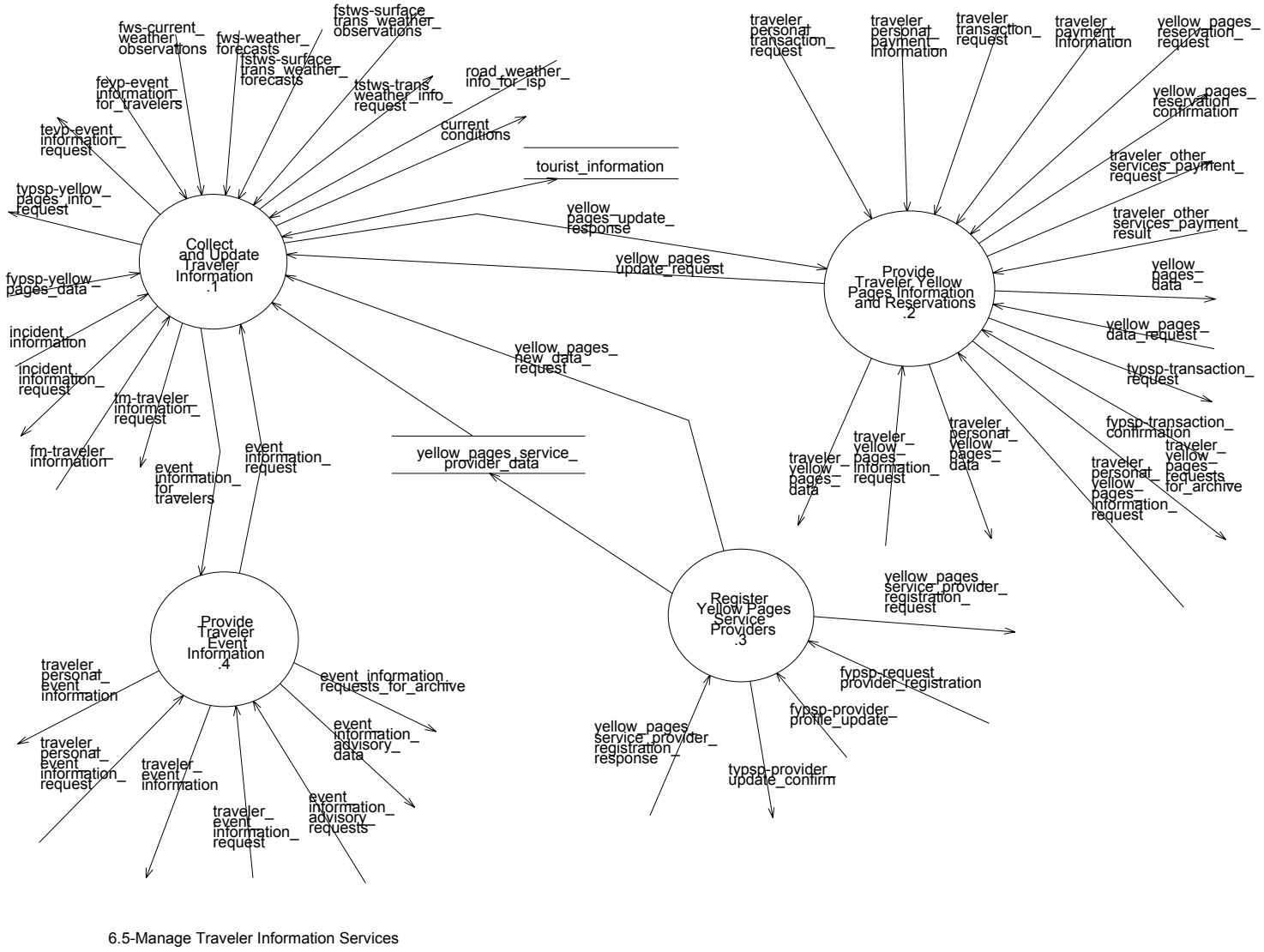


Figure 74. Manage Yellow Pages Services (DFD 6.5)

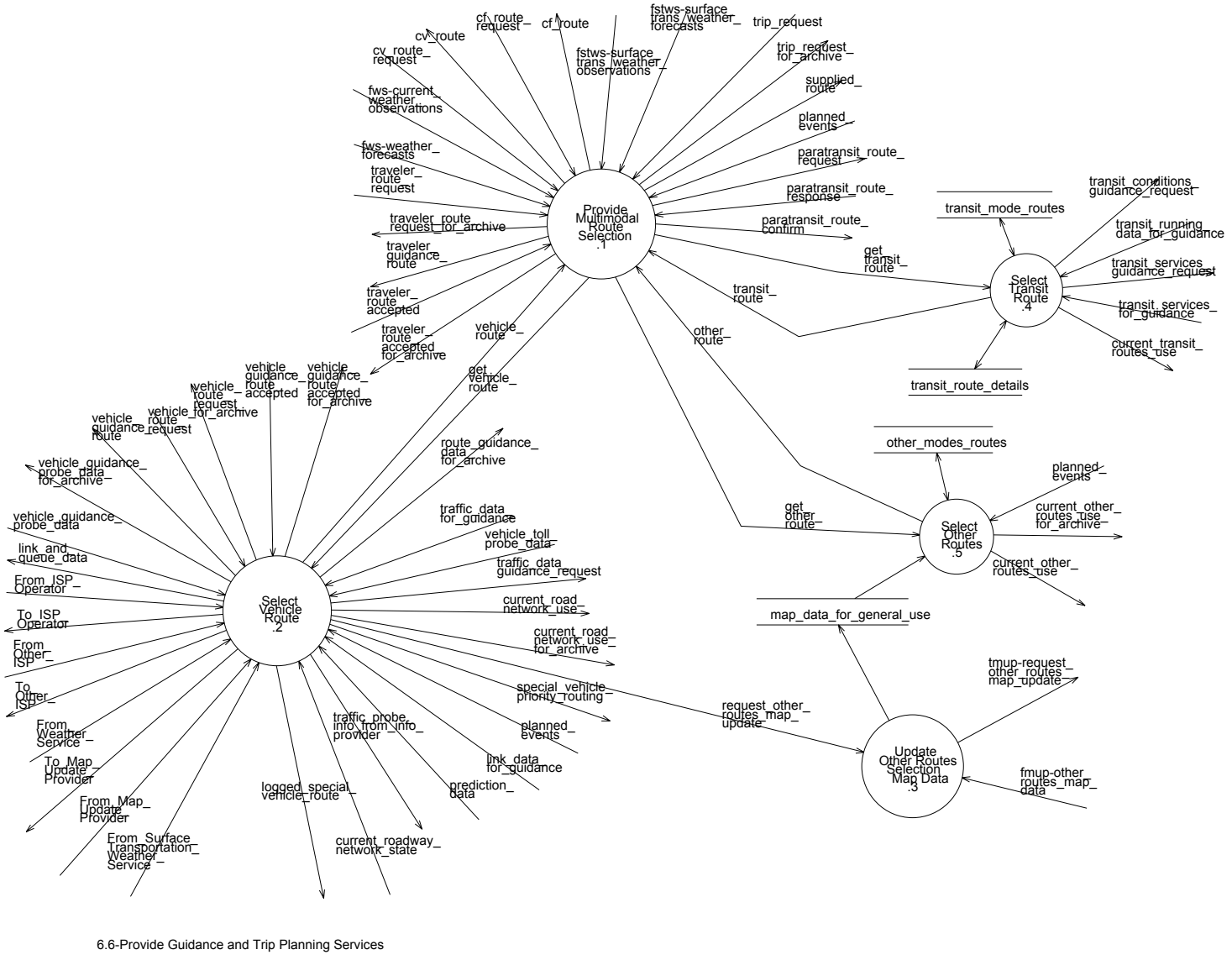


Figure 75. Provide Guidance and Trip Planning Services (DFD 6.6)

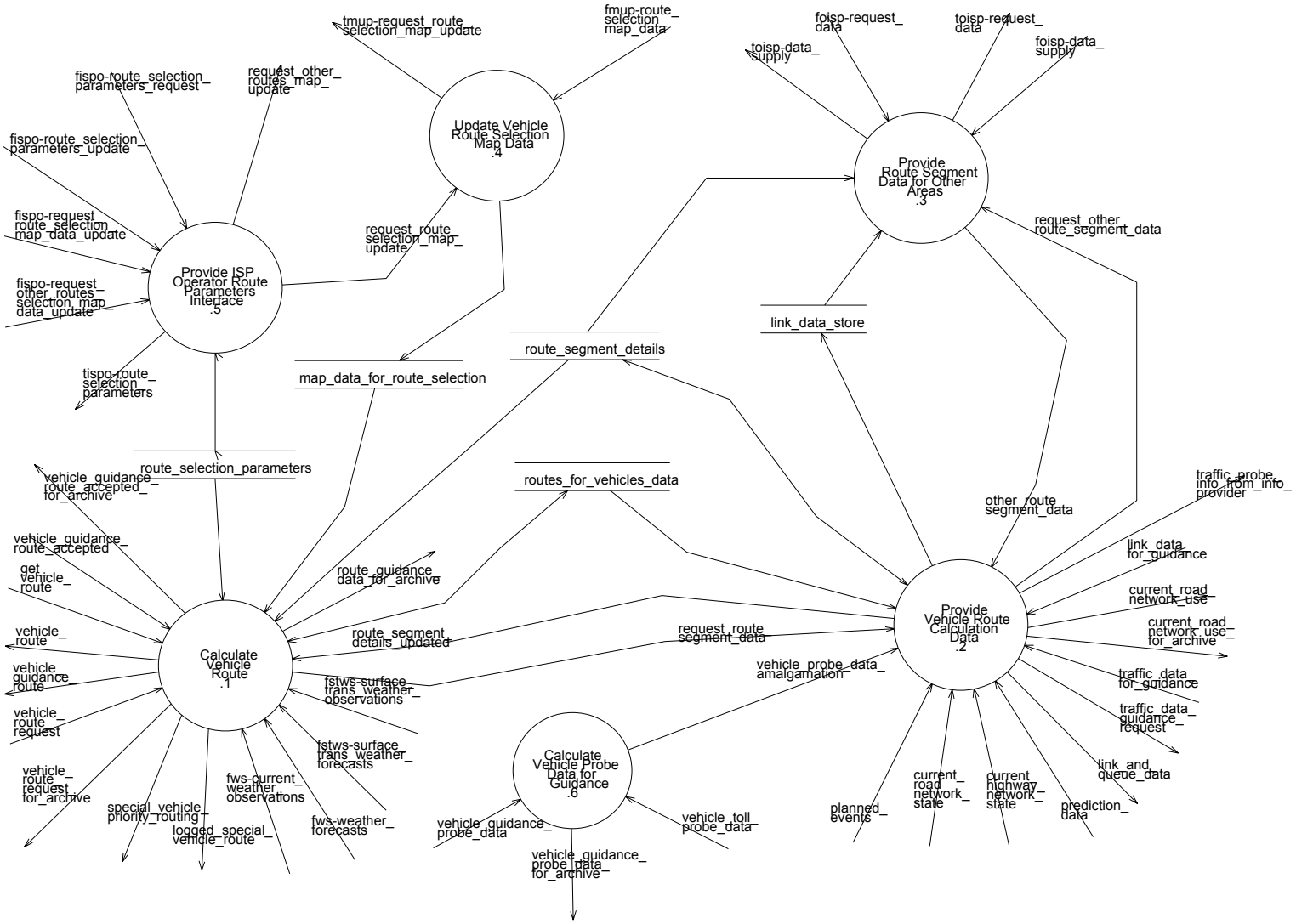


Figure 76. Select Vehicle Route (DFD 6.6.2)

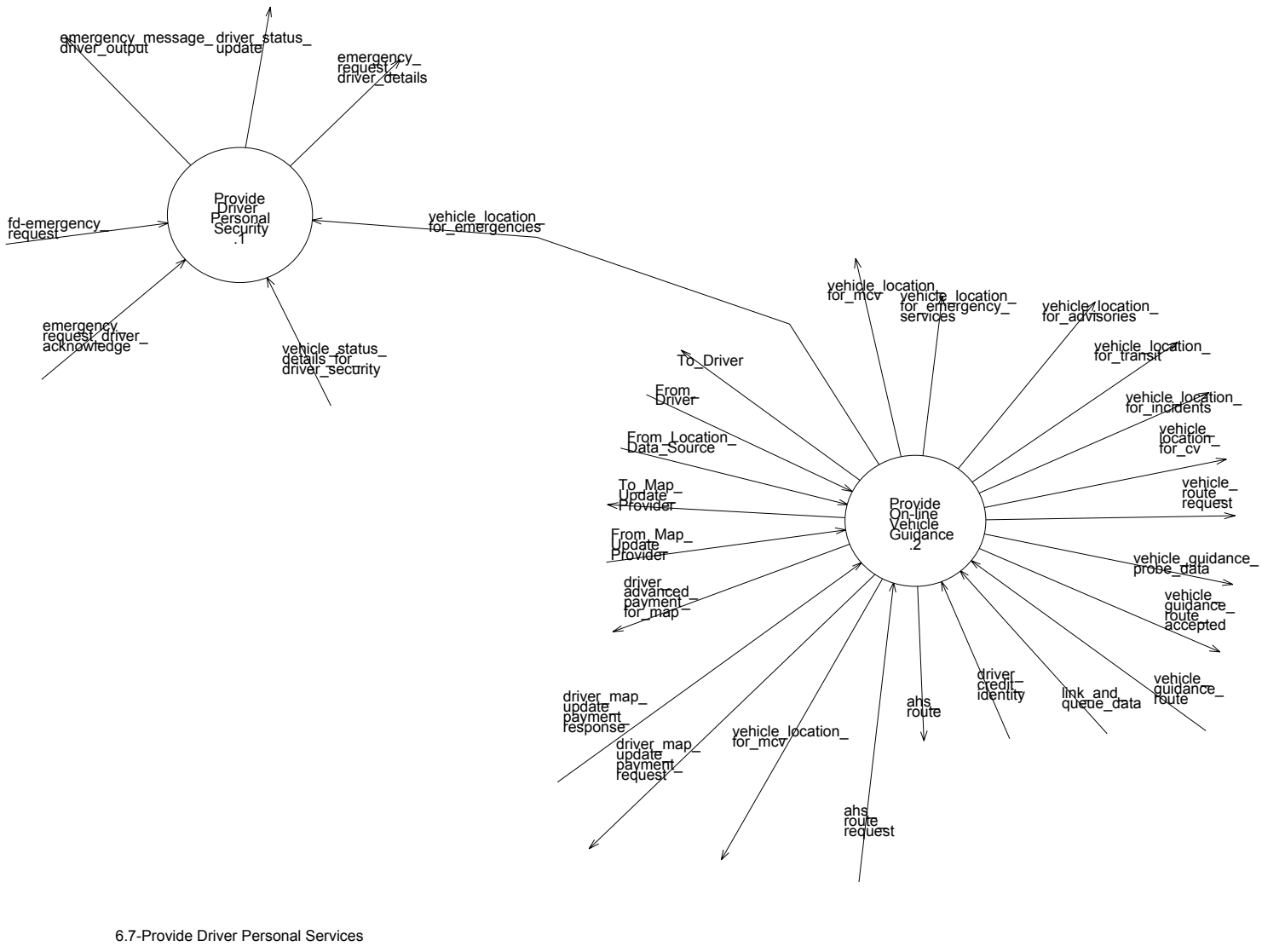
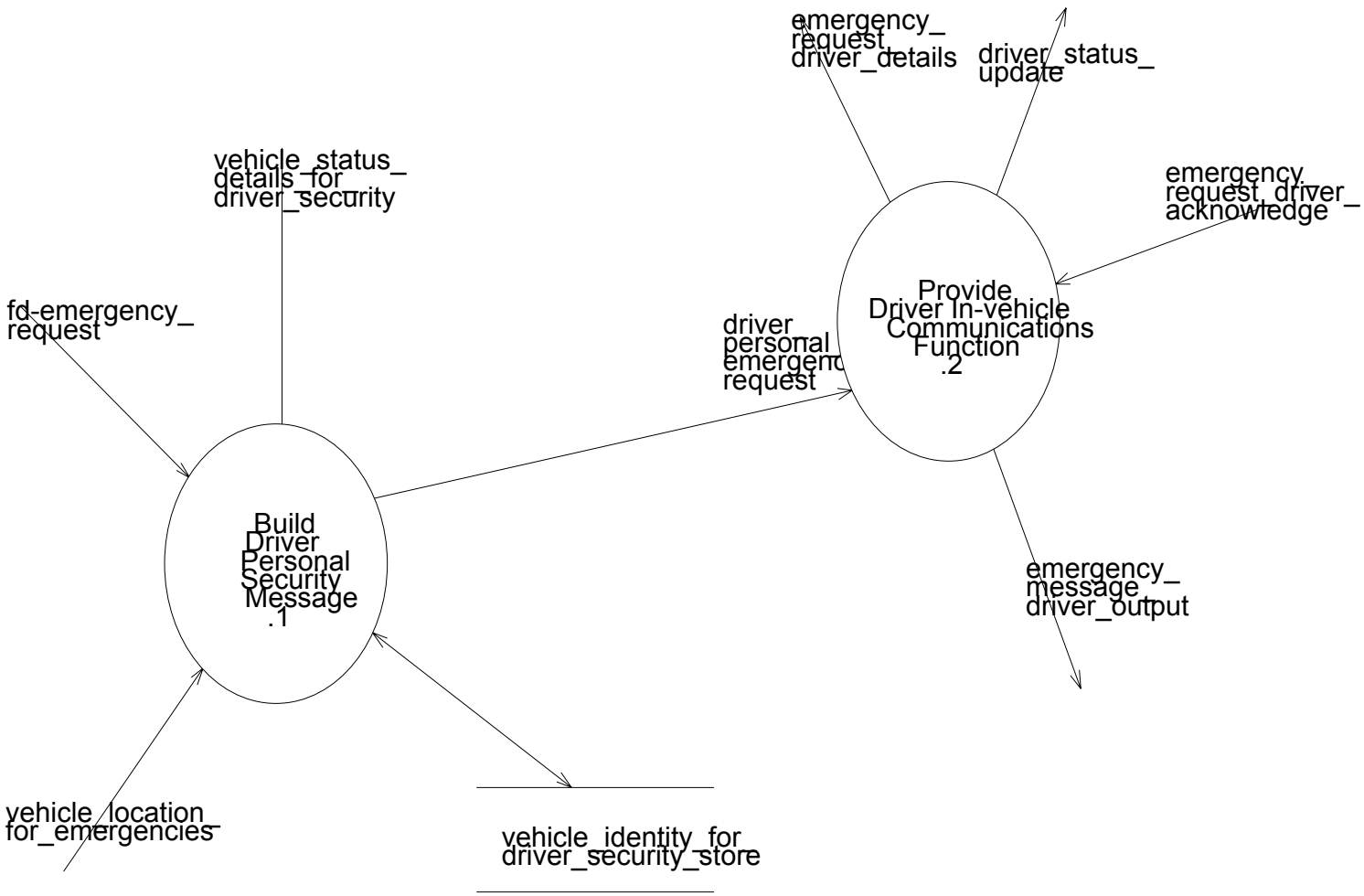


Figure 77. Provide Driver Personal Services (DFD 6.7)



6.7.1-Provide Driver Personal Security

Figure 78. Provide Driver Personal Security (DFD 6.7.1)

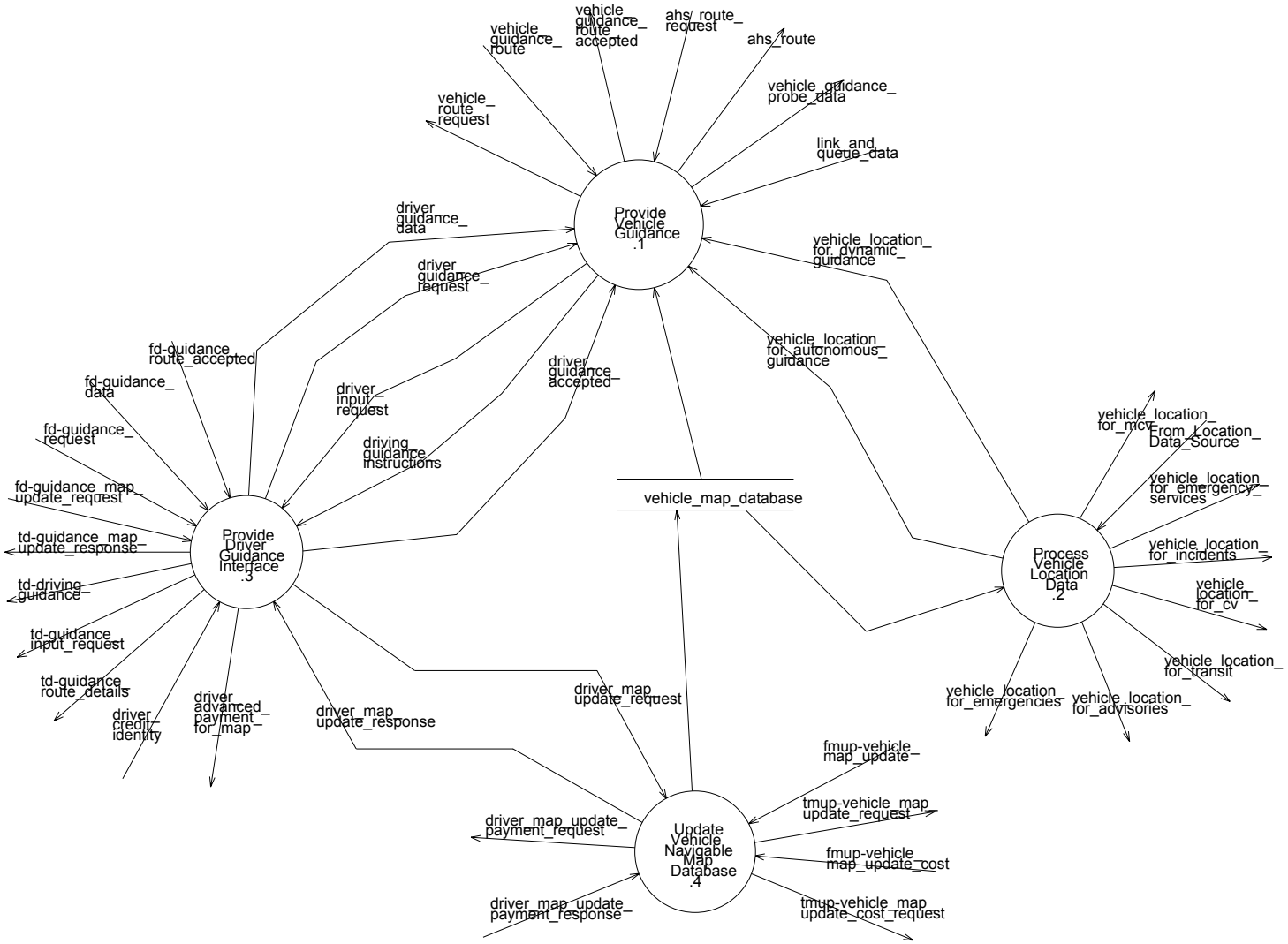


Figure 79. Provide On-Line Vehicle Guidance (DFD 6.7.2)

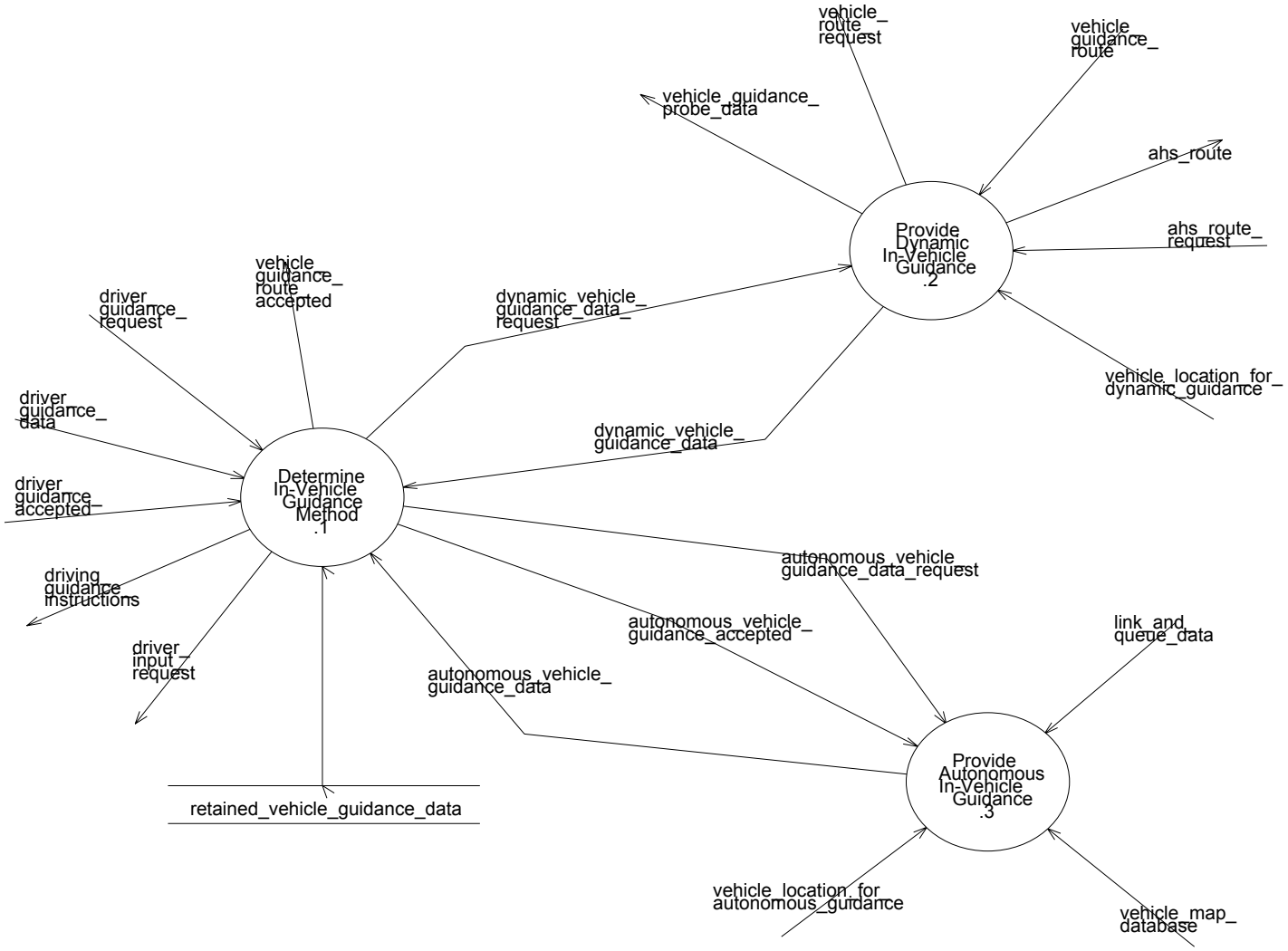


Figure 80. Provide Vehicle Guidance (DFD 6.7.2.1)

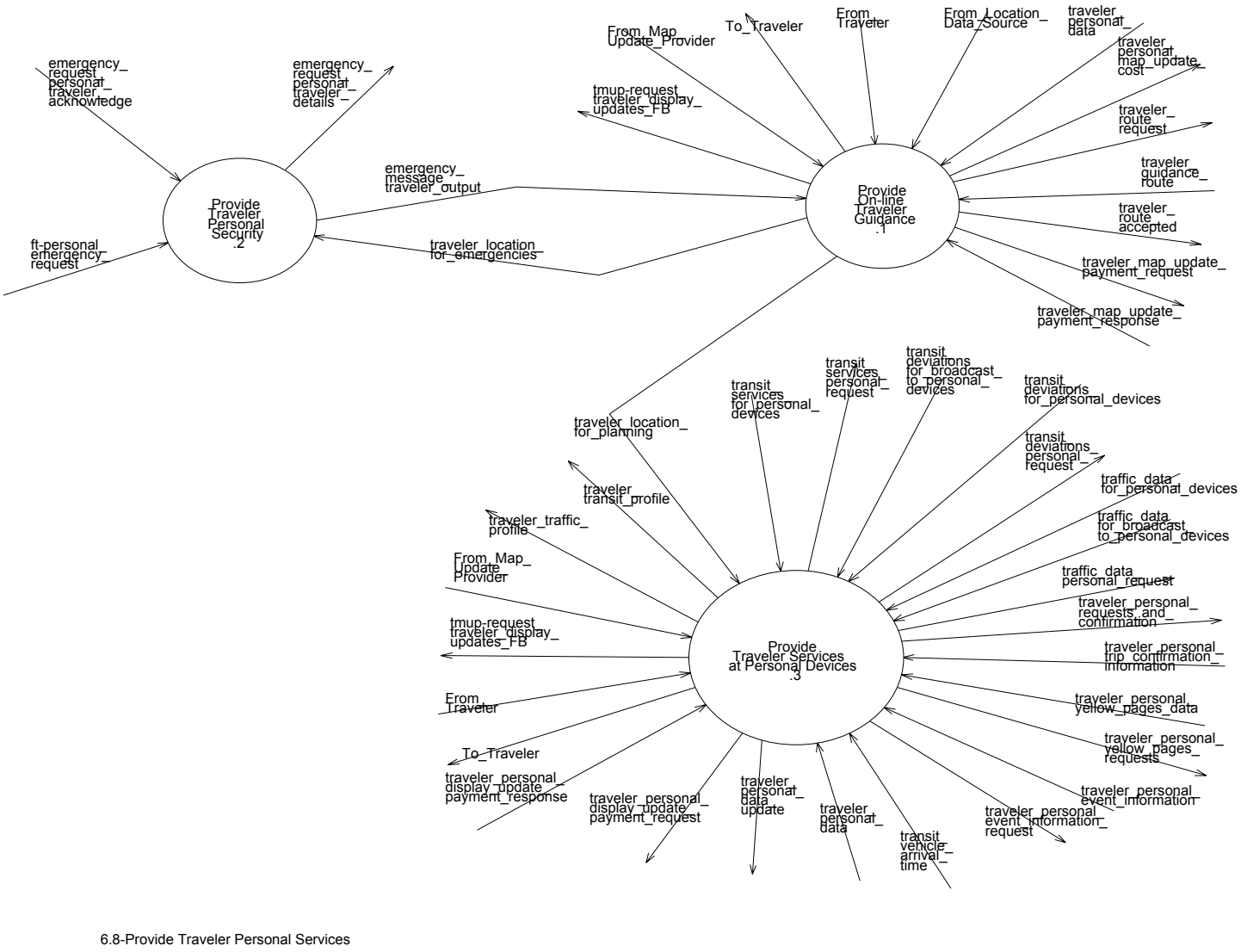


Figure 81. Provide Traveler Personal Services (DFD 6.8)

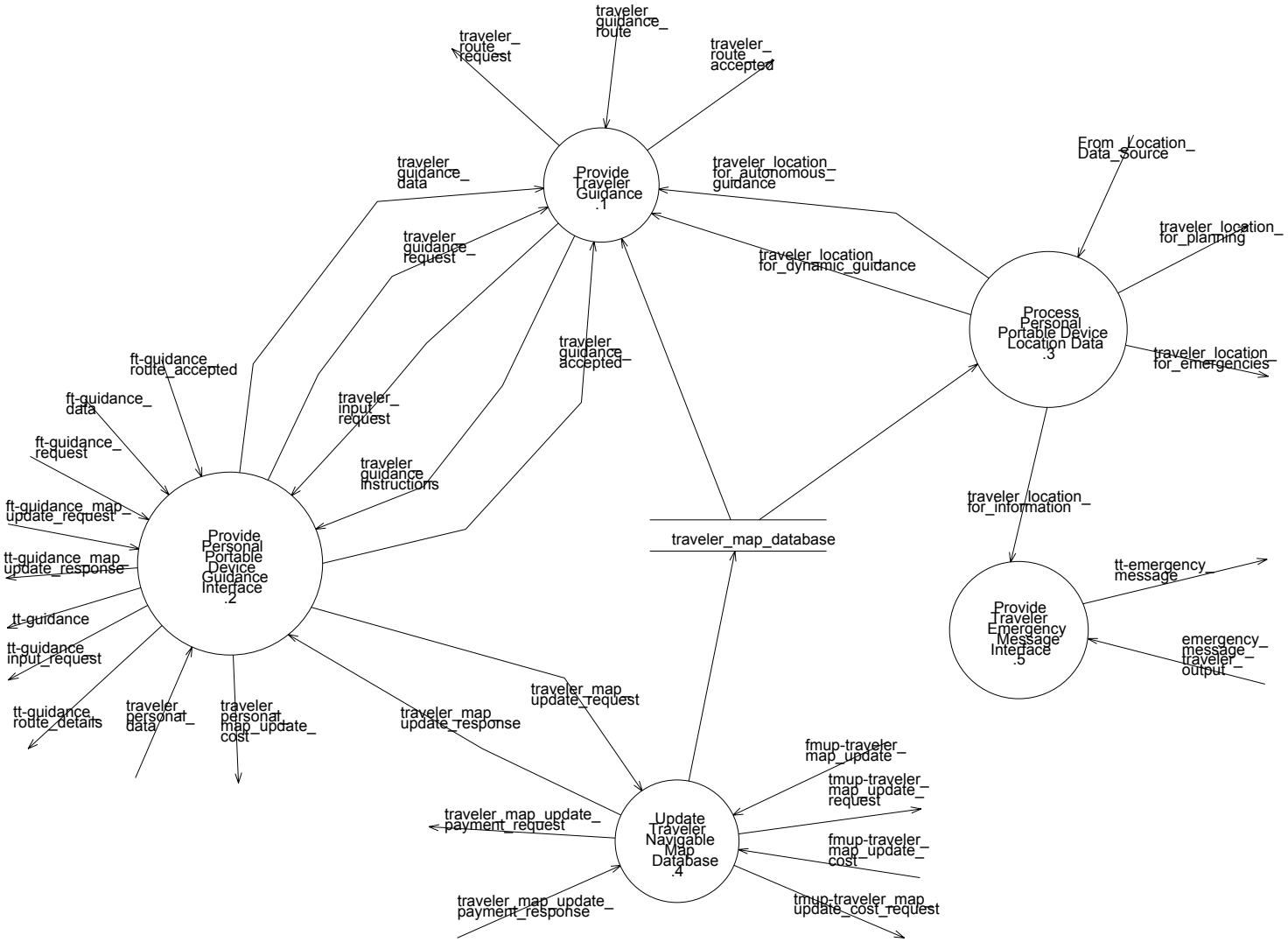


Figure 82. Provide On-Line Traveler Guidance (DFD 6.8.1)

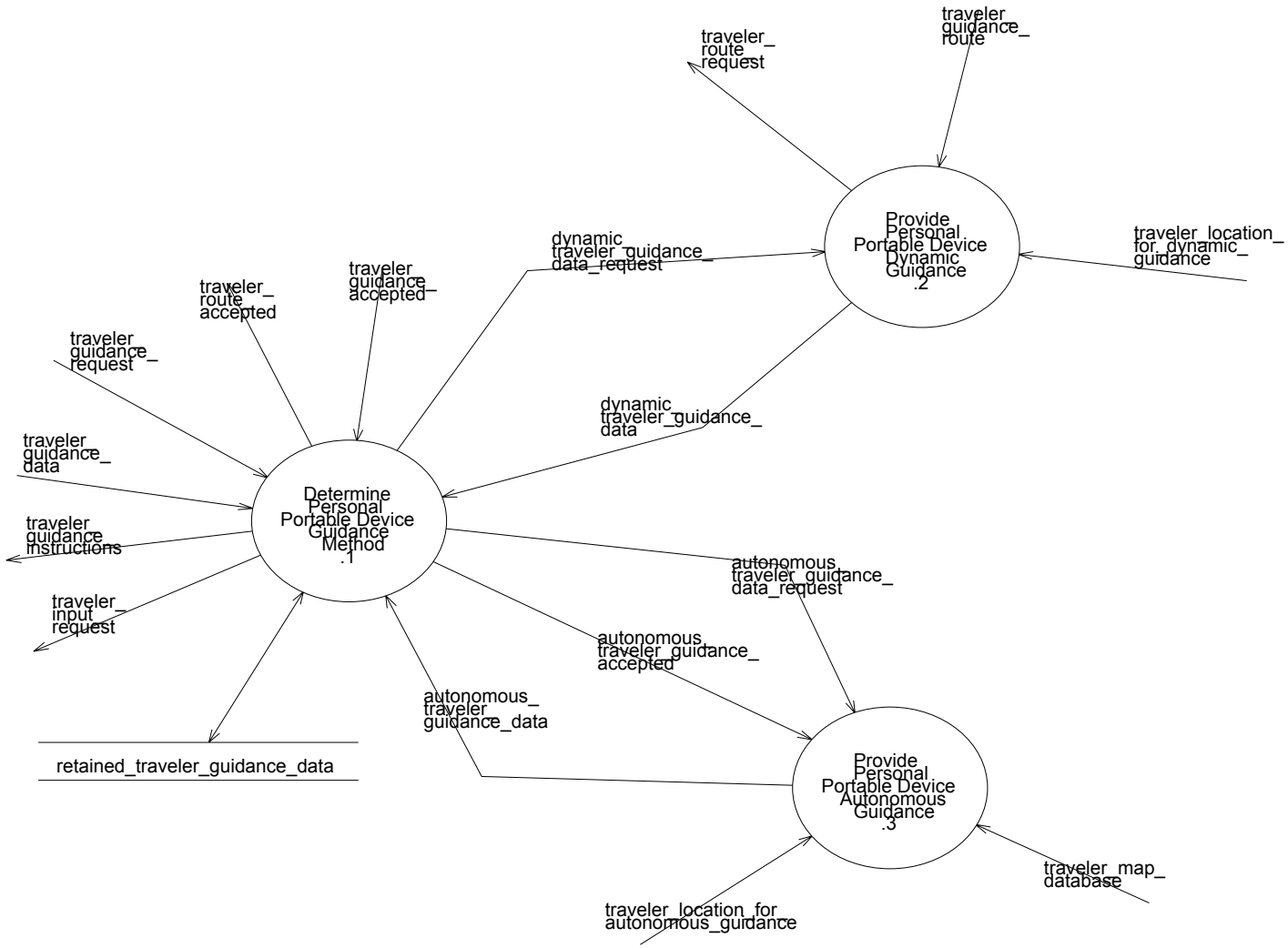


Figure 83. Provide Traveler Guidance (DFD 6.8.1.1)

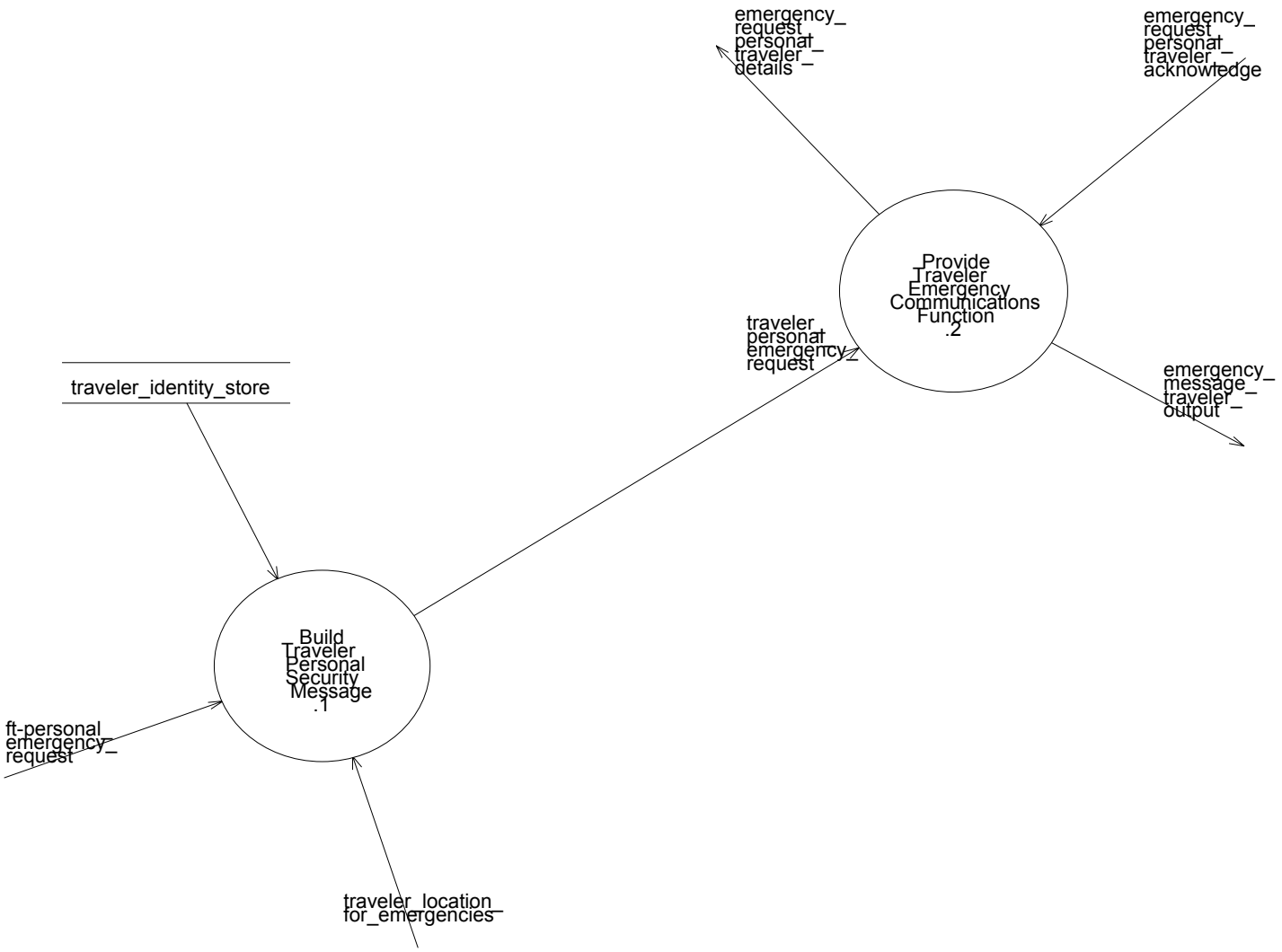


Figure 84. Provide Traveler Personal Security (DFD 6.8.2)

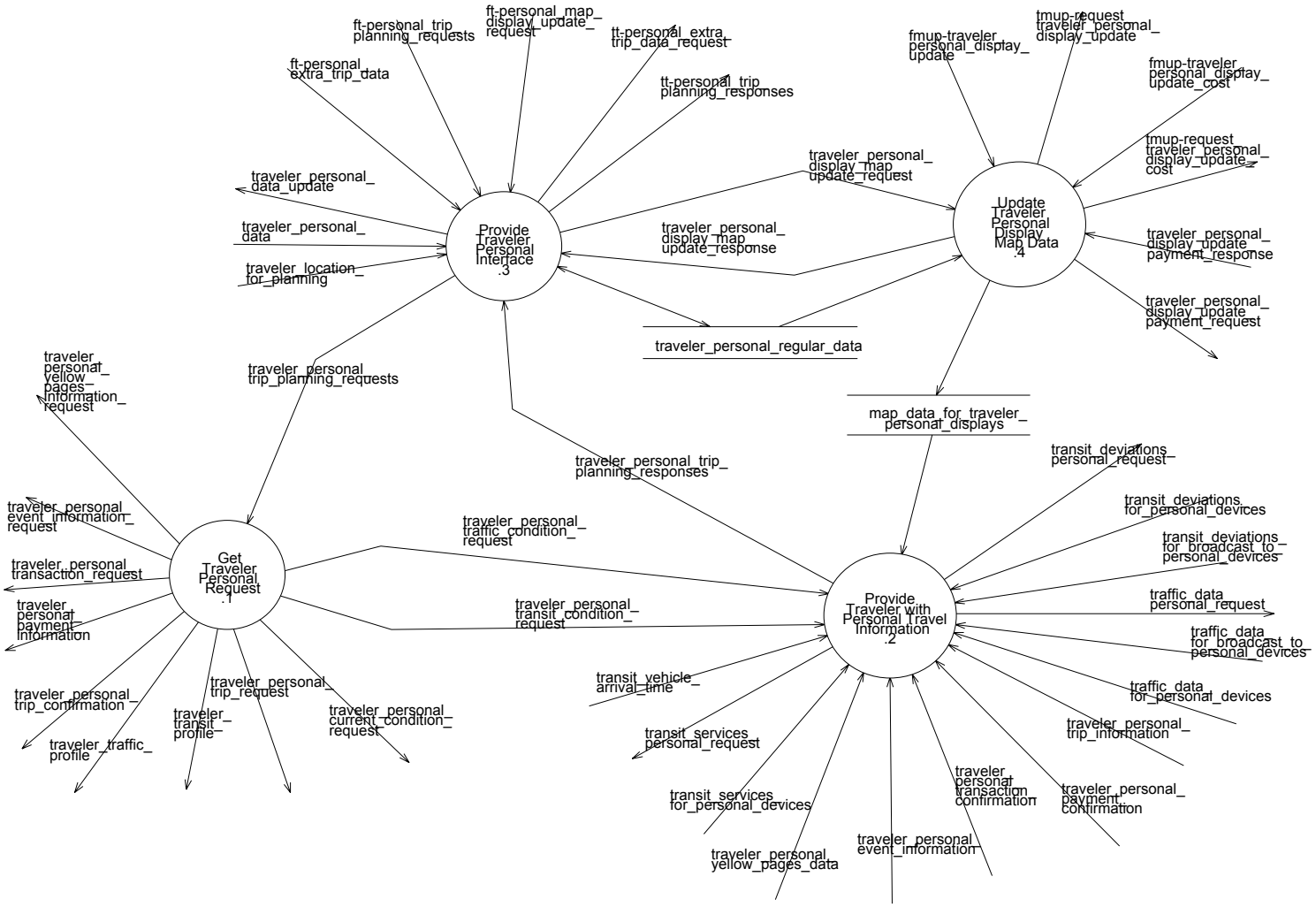


Figure 85. Provide Traveler Services at Personal Devices (DFD 6.8.3)

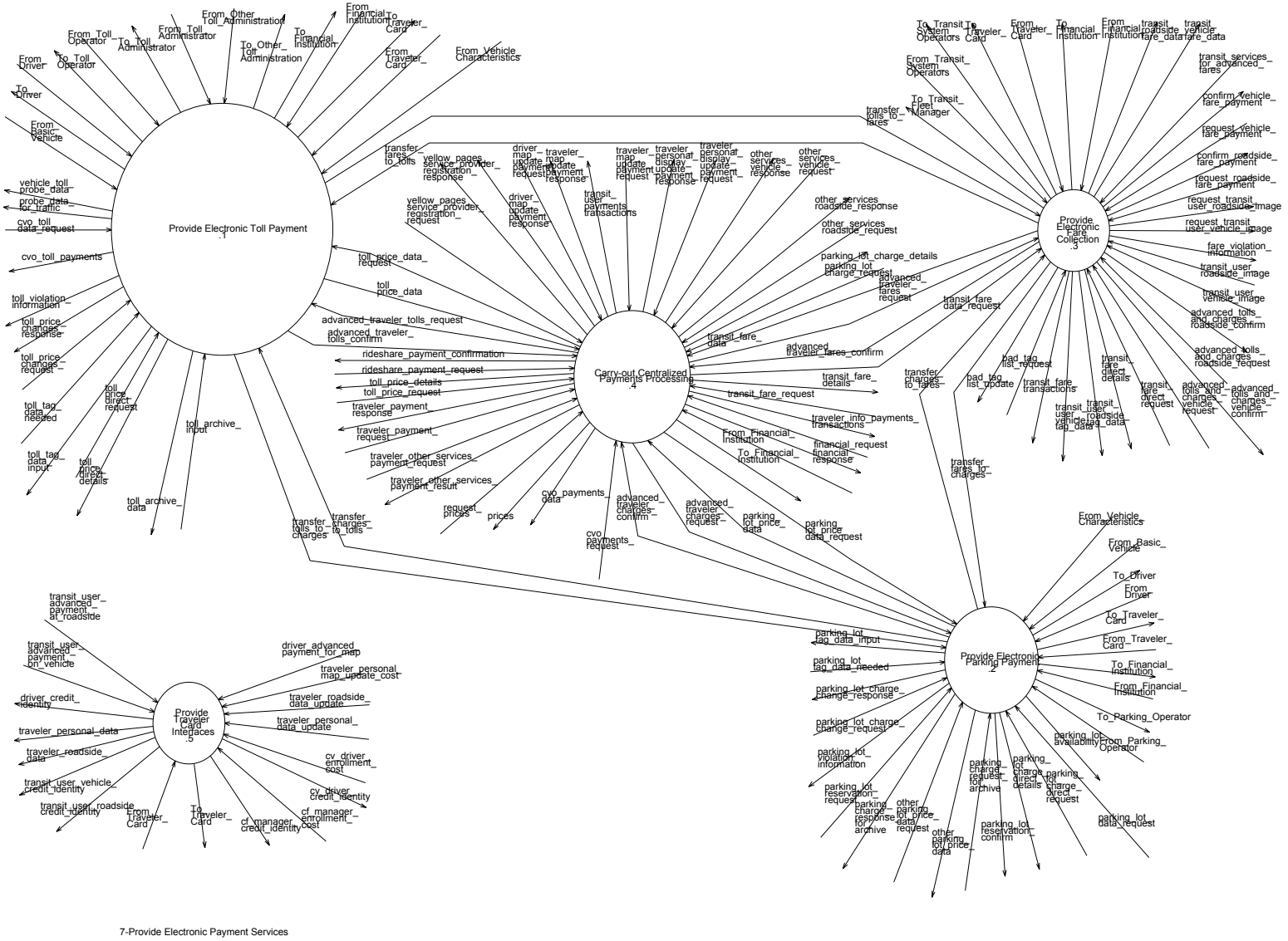
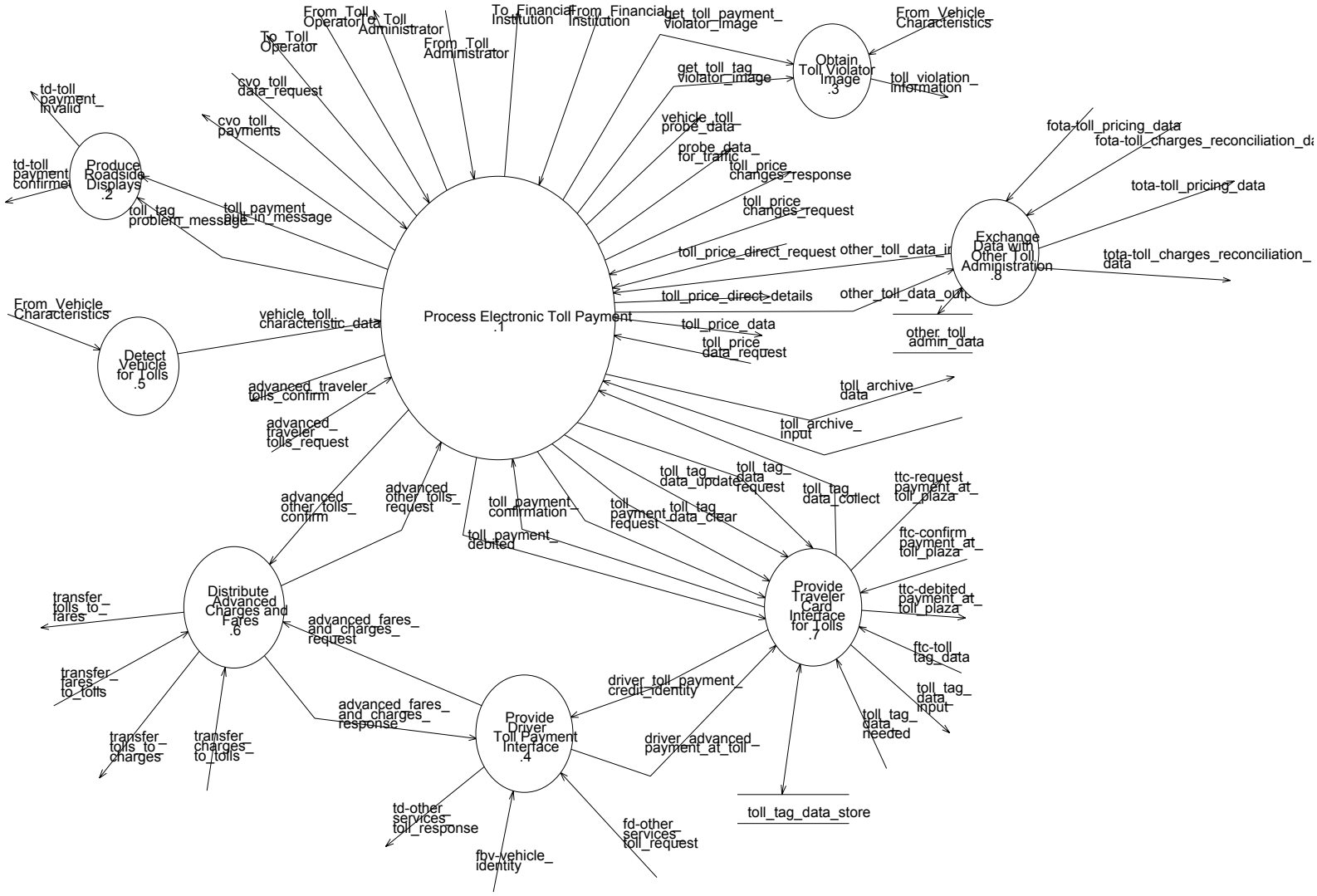


Figure 86. Provide Electronic Payment Services (DFD 7)



7.1-Provide Electronic Toll Payment

Figure 87. Provide Electronic Toll Payment (DFD 7.1)

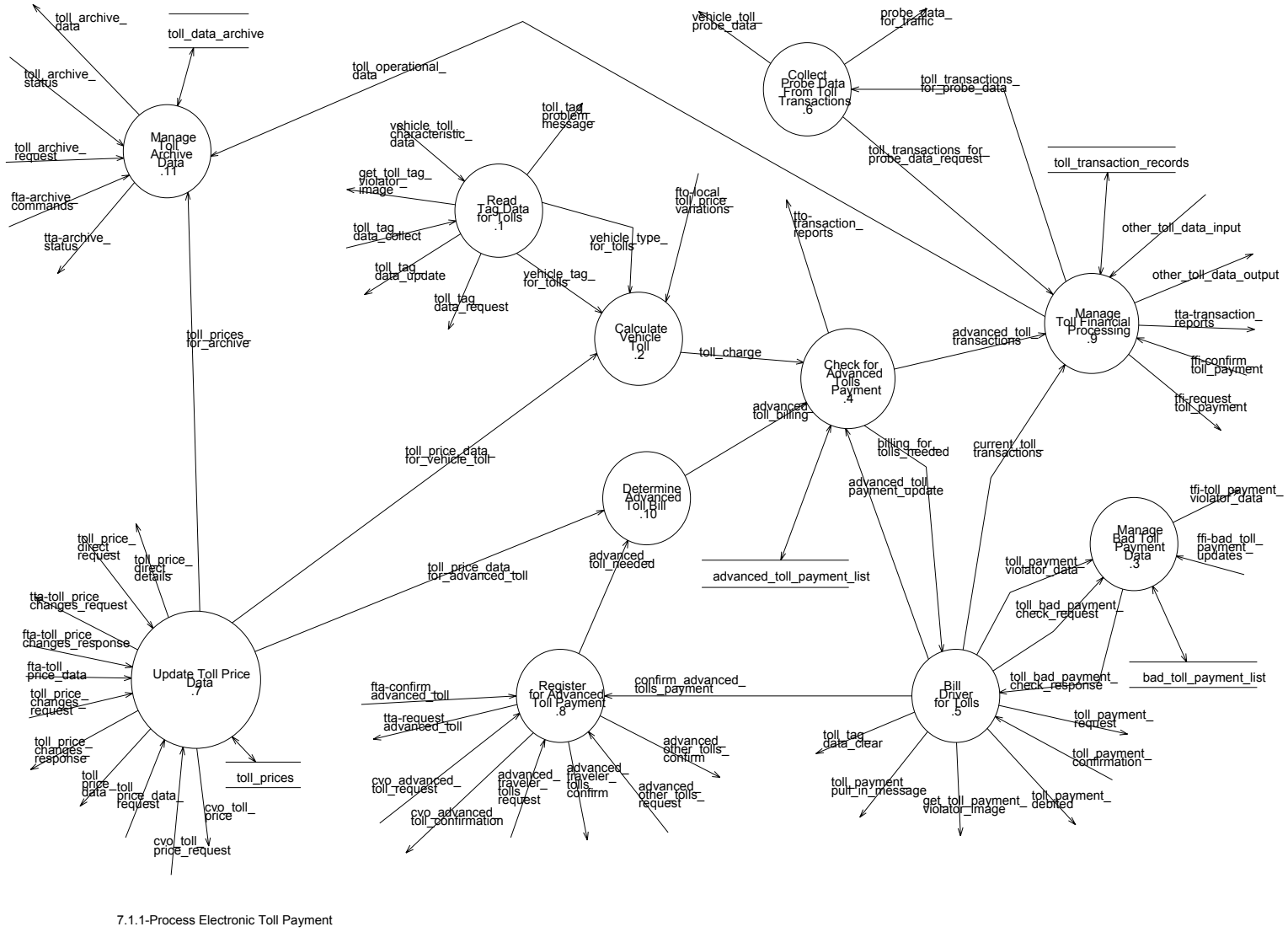


Figure 88. Process Electronic Toll Payment (DFD 7.1.1)

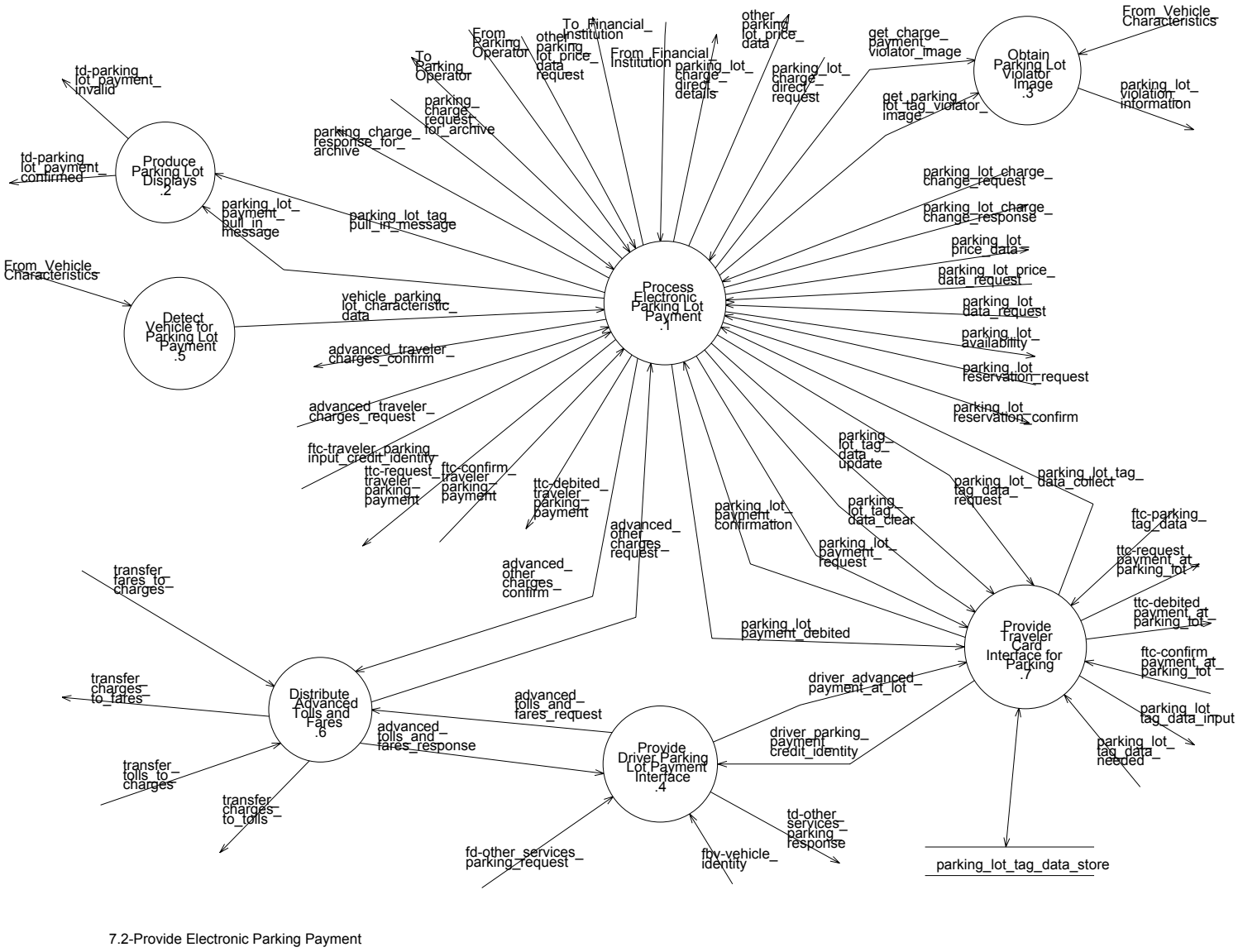


Figure 89. Provide Electronic Parking Payment (DFD 7.2)

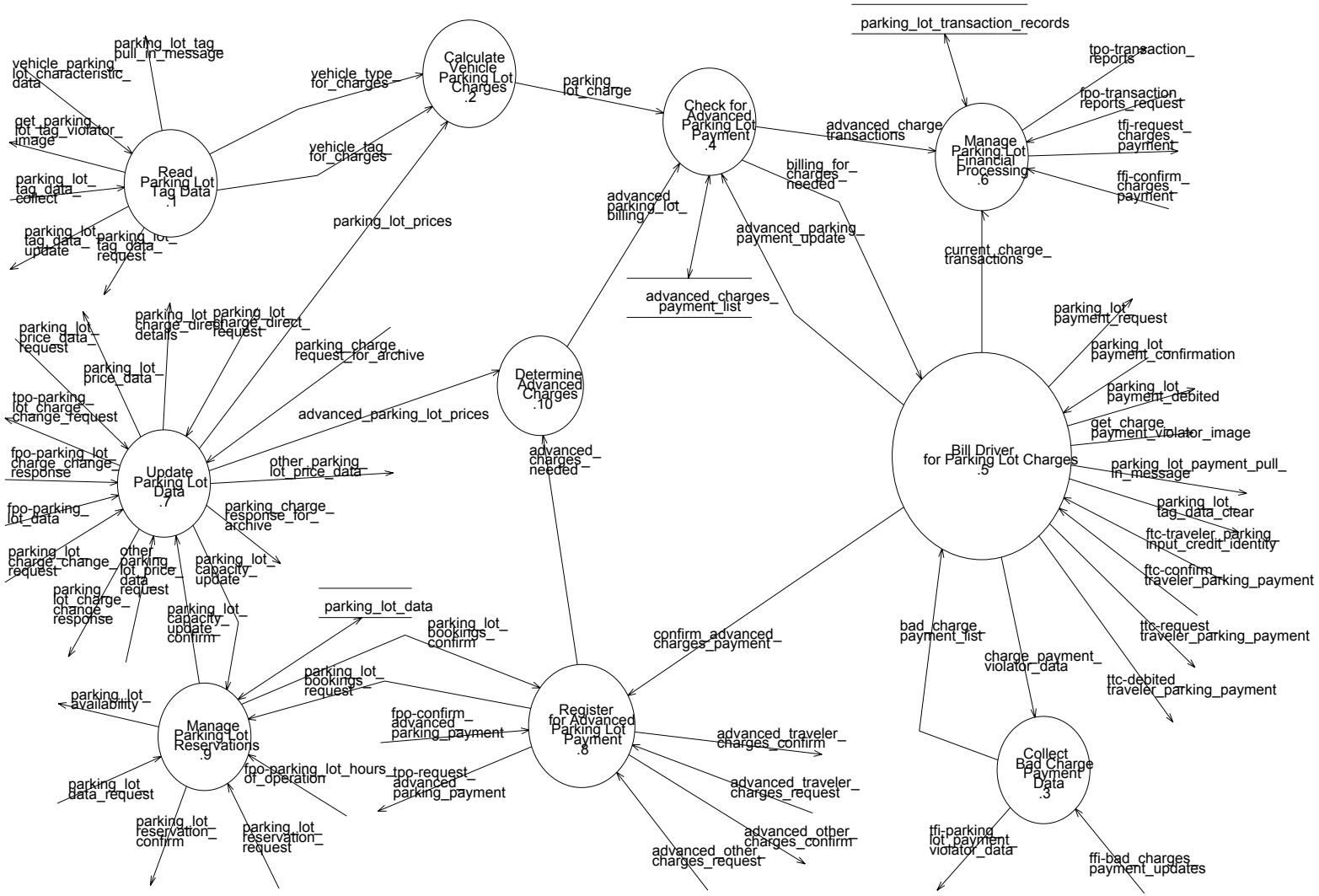


Figure 90. Process Electronic Parking Lot Payment (DFD 7.2.1)

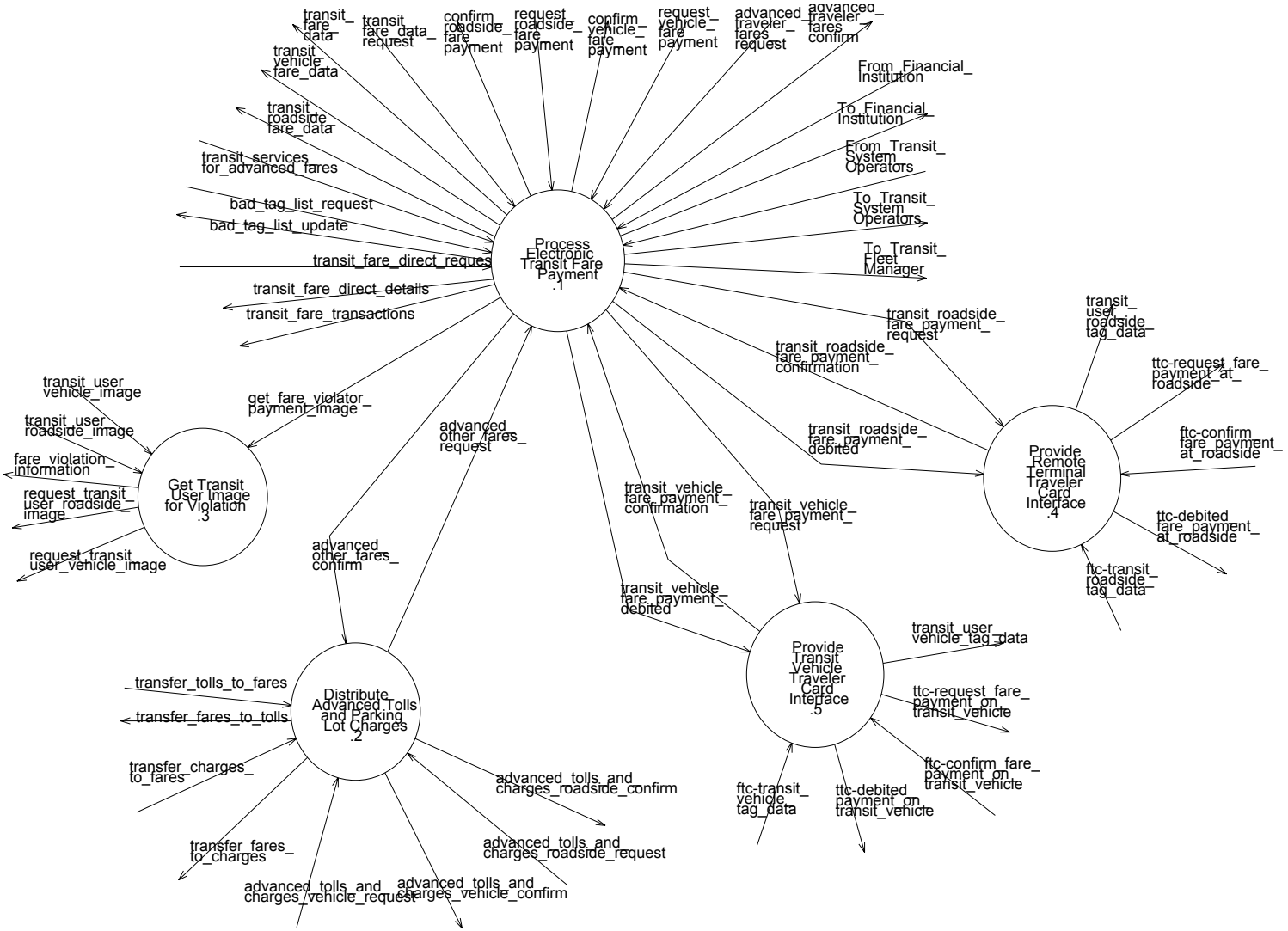


Figure 91. Provide Electronic Fare Collection (DFD 7.3)

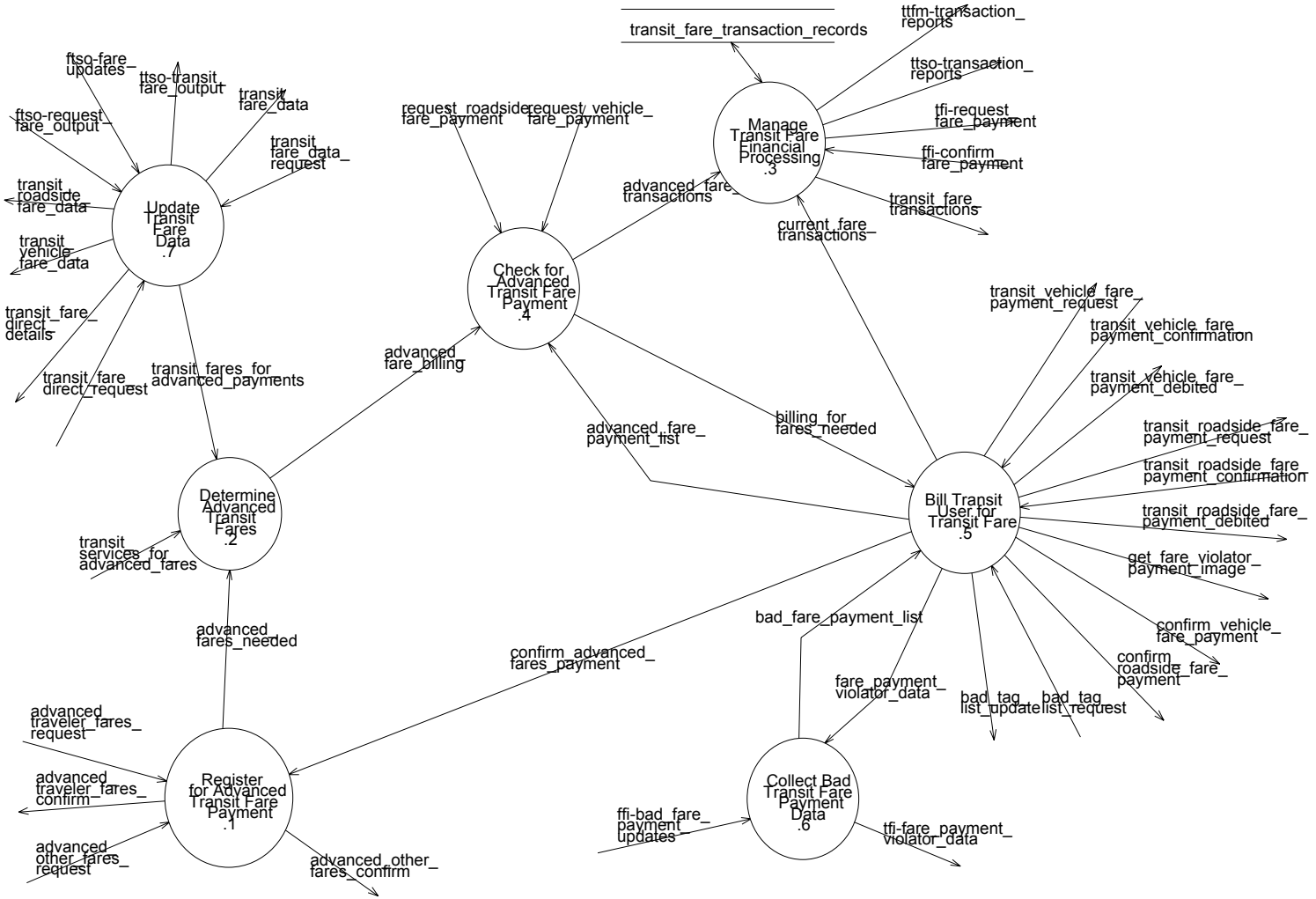


Figure 92. Process Electronic Transit Fare Payment (DFD 7.3.1)

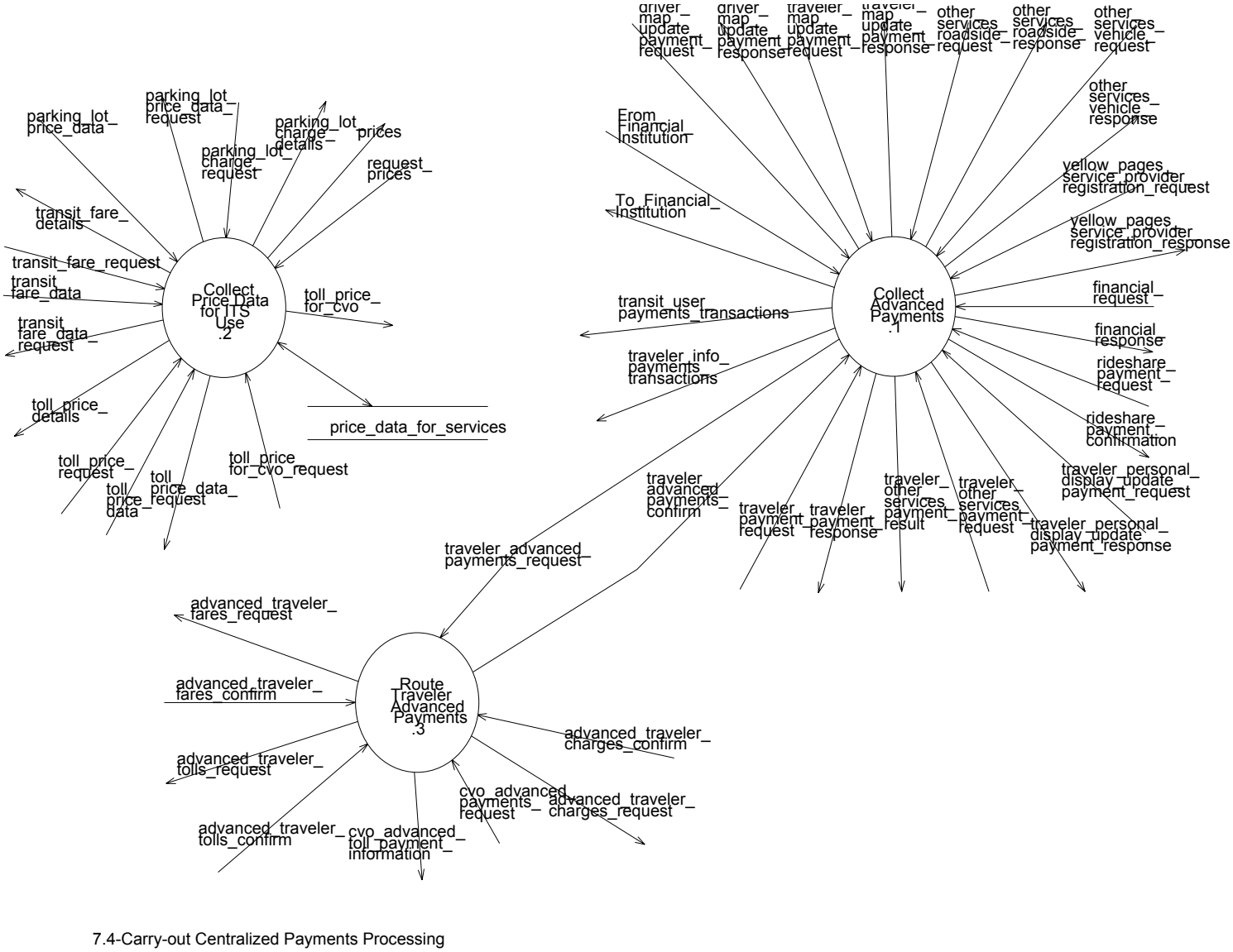


Figure 93. Carry-Out Centralized Payments Processing (DFD 7.4)

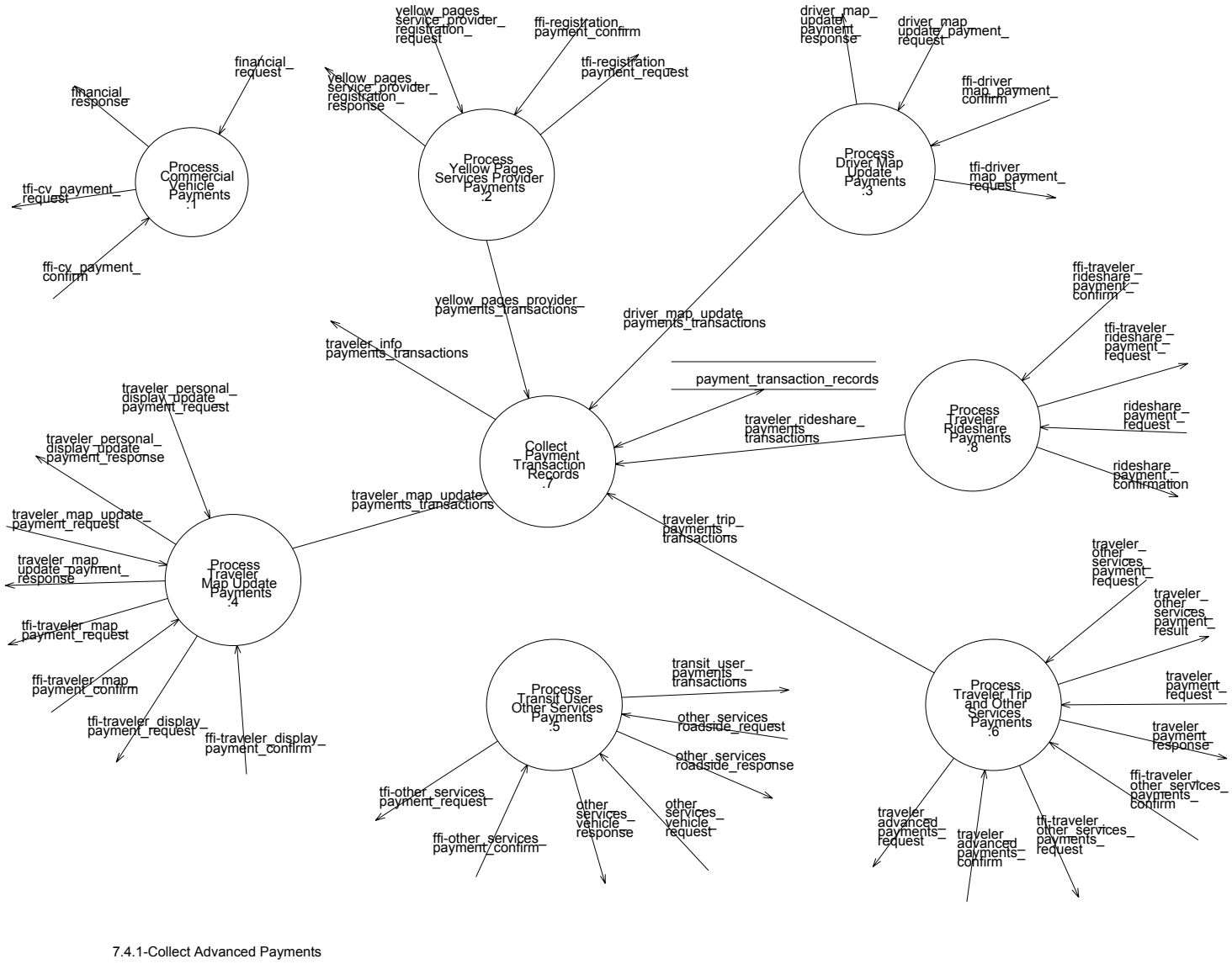


Figure 94. Collect Advanced Payments (DFD 7.4.1)

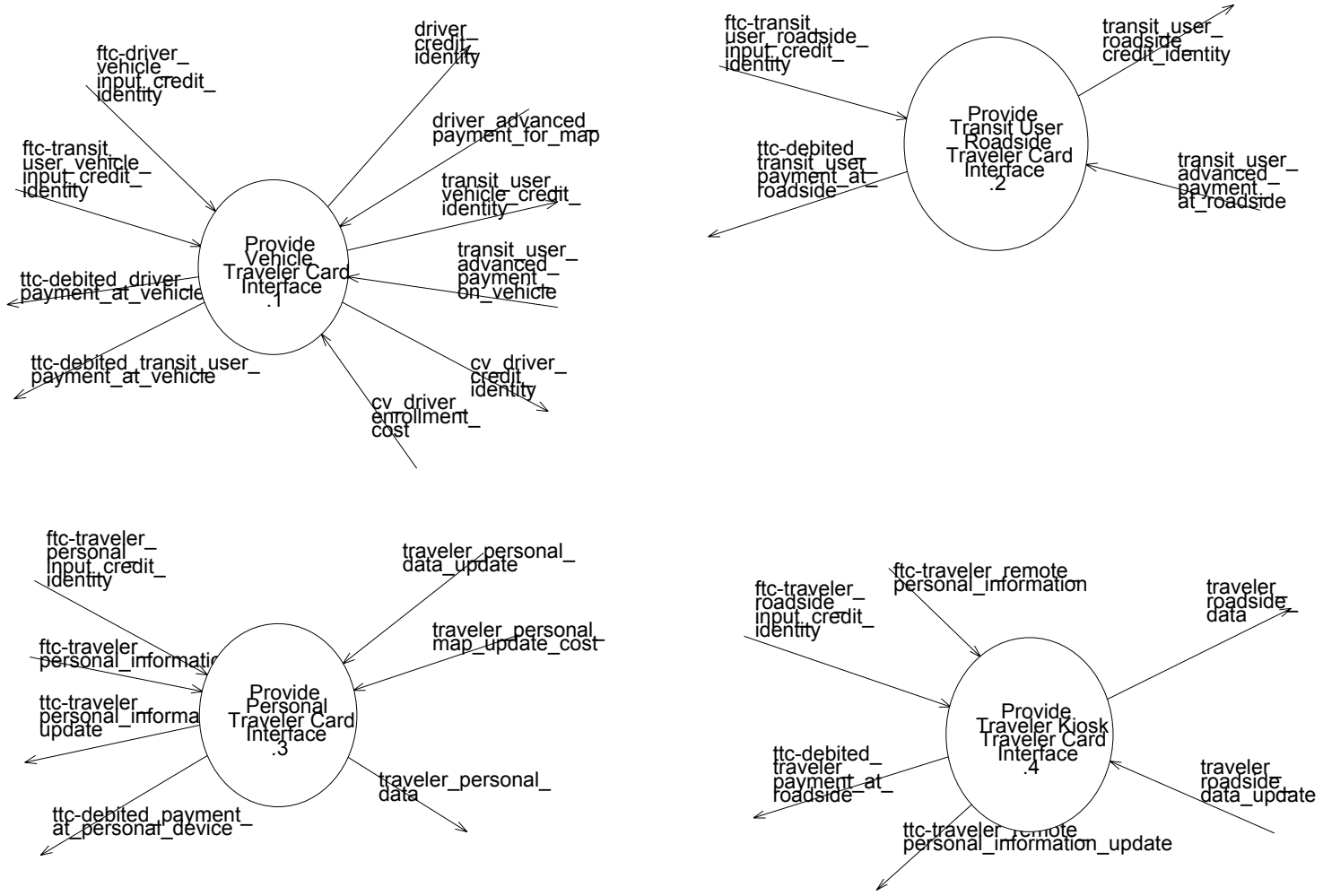
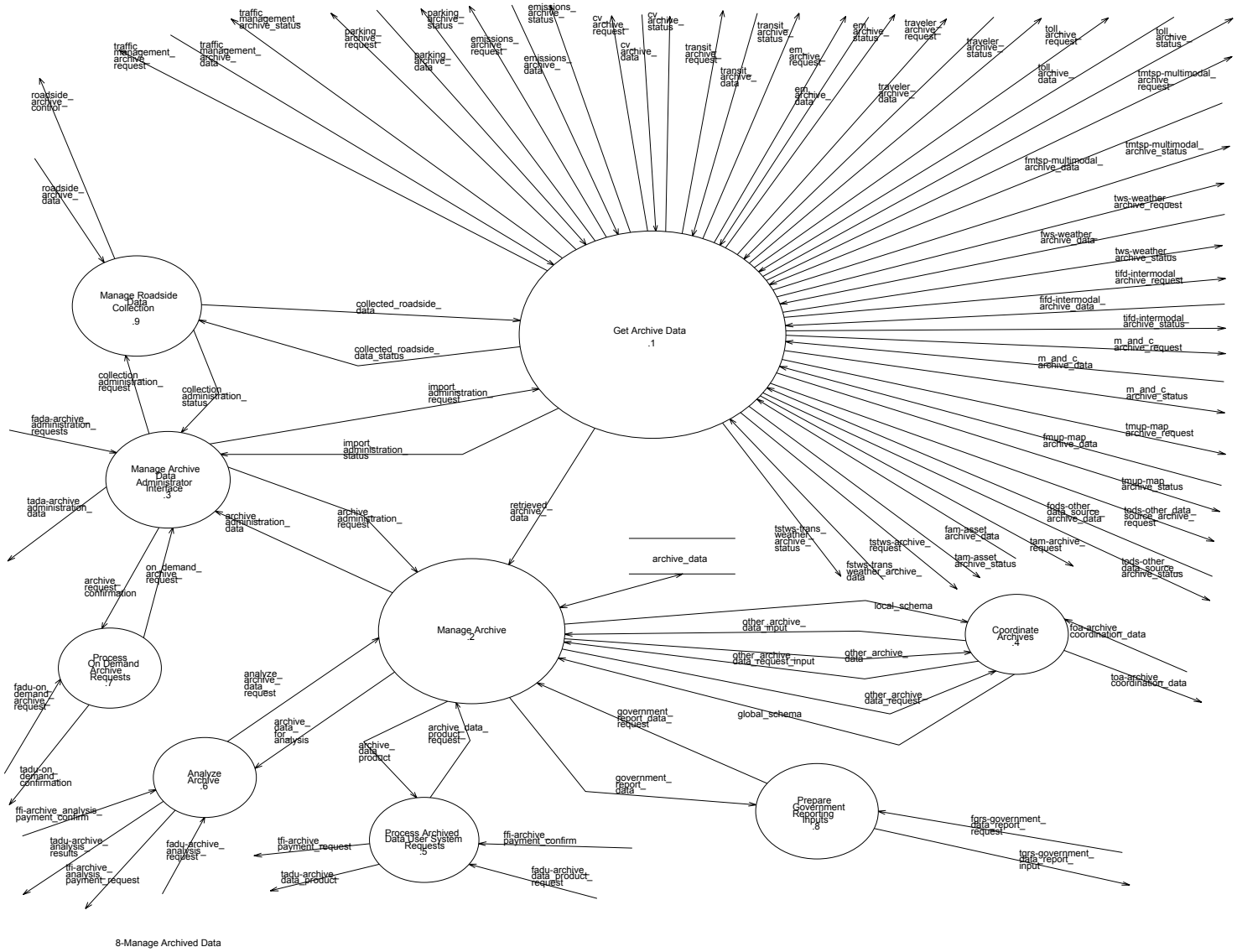


Figure 95. Provide Payment Instrument Interfaces (DFD 7.5)



8-Manage Archived Data

Figure 96. Manage Archived Data (DFD 8)

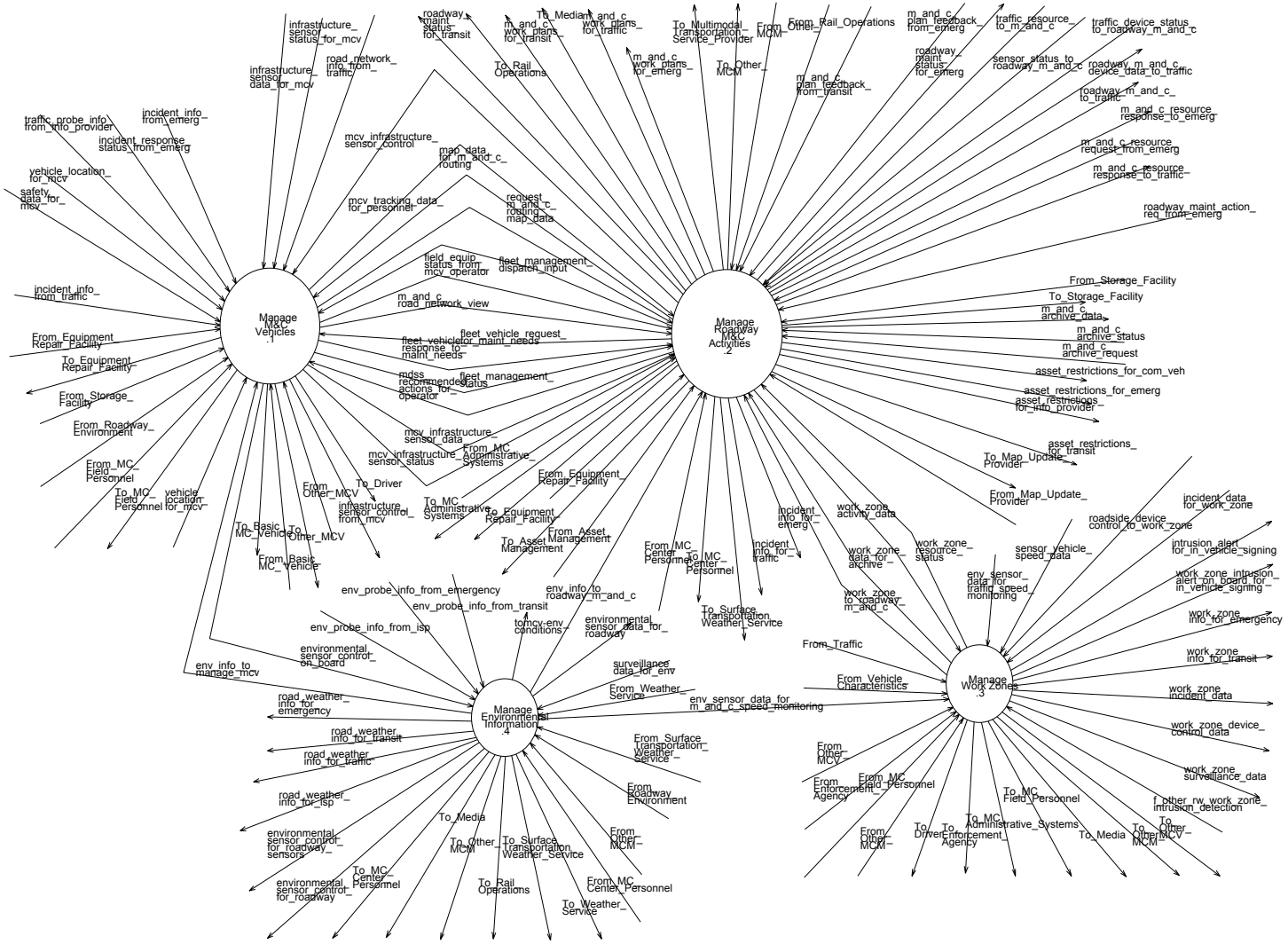


Figure 97. Manage Maintenance and Construction (DFD 9)

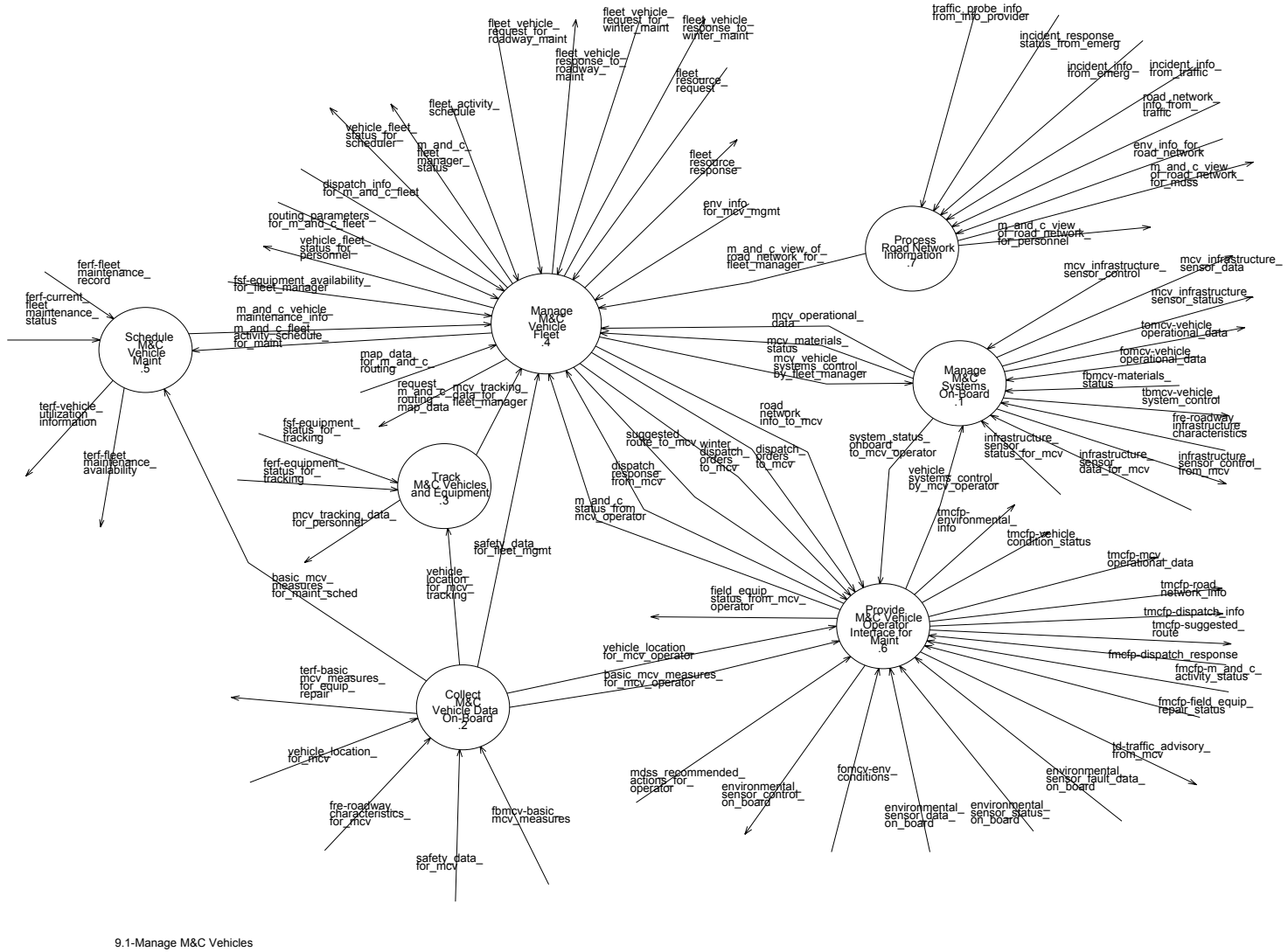


Figure 98. Manage M&C Vehicles (DFD 9.1)

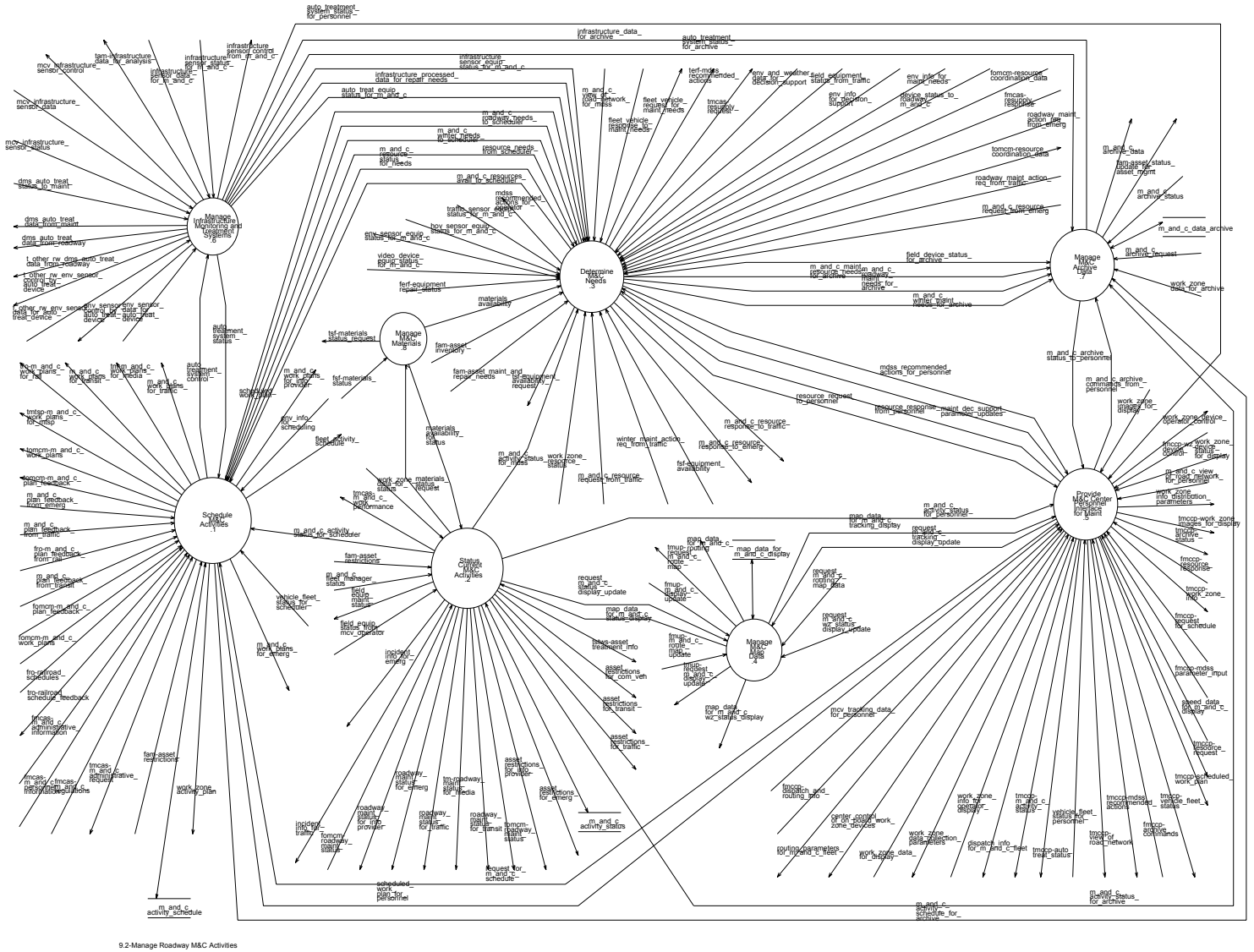
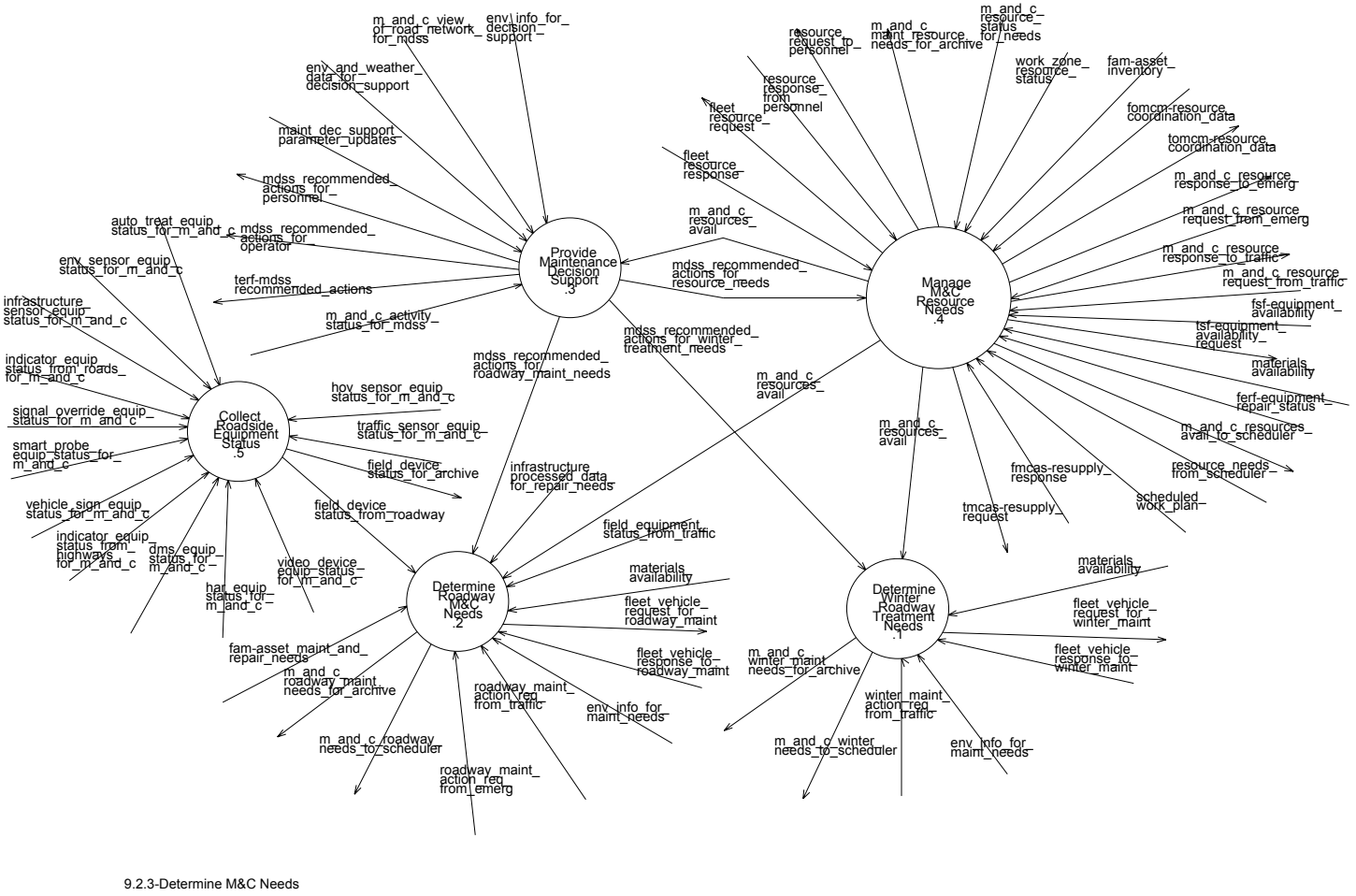
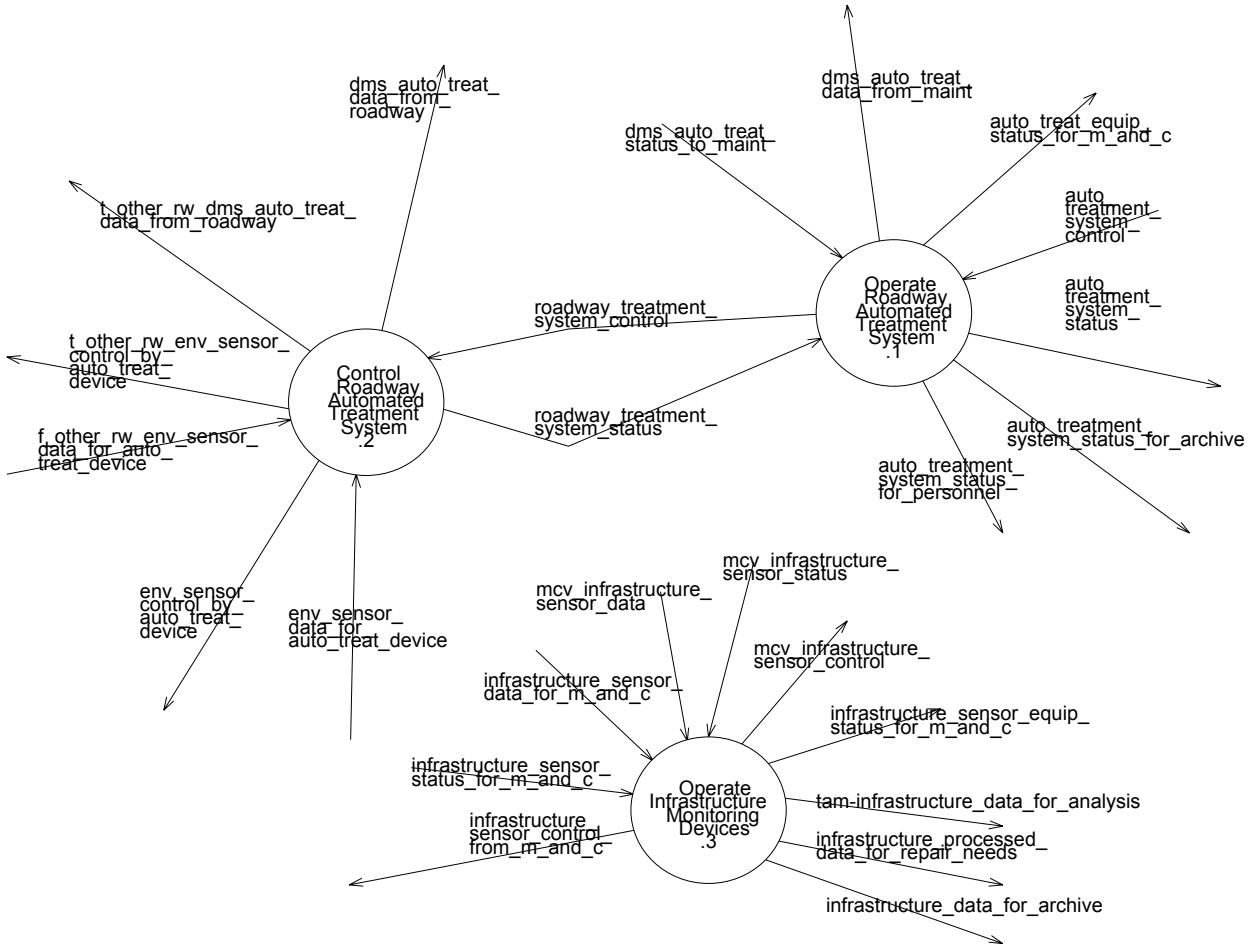


Figure 99. Manage Roadway M&C Activities (DFD 9.2)



9.2.3-Determine M&C Needs

Figure 100. Determine M&C Needs (DFD 9.2.3)



9.2.6-Manage Infrastructure Monitoring and Treatment Systems

Figure 101. Manage Infrastructure Monitoring and Treatment Systems (DFD 9.2.6)

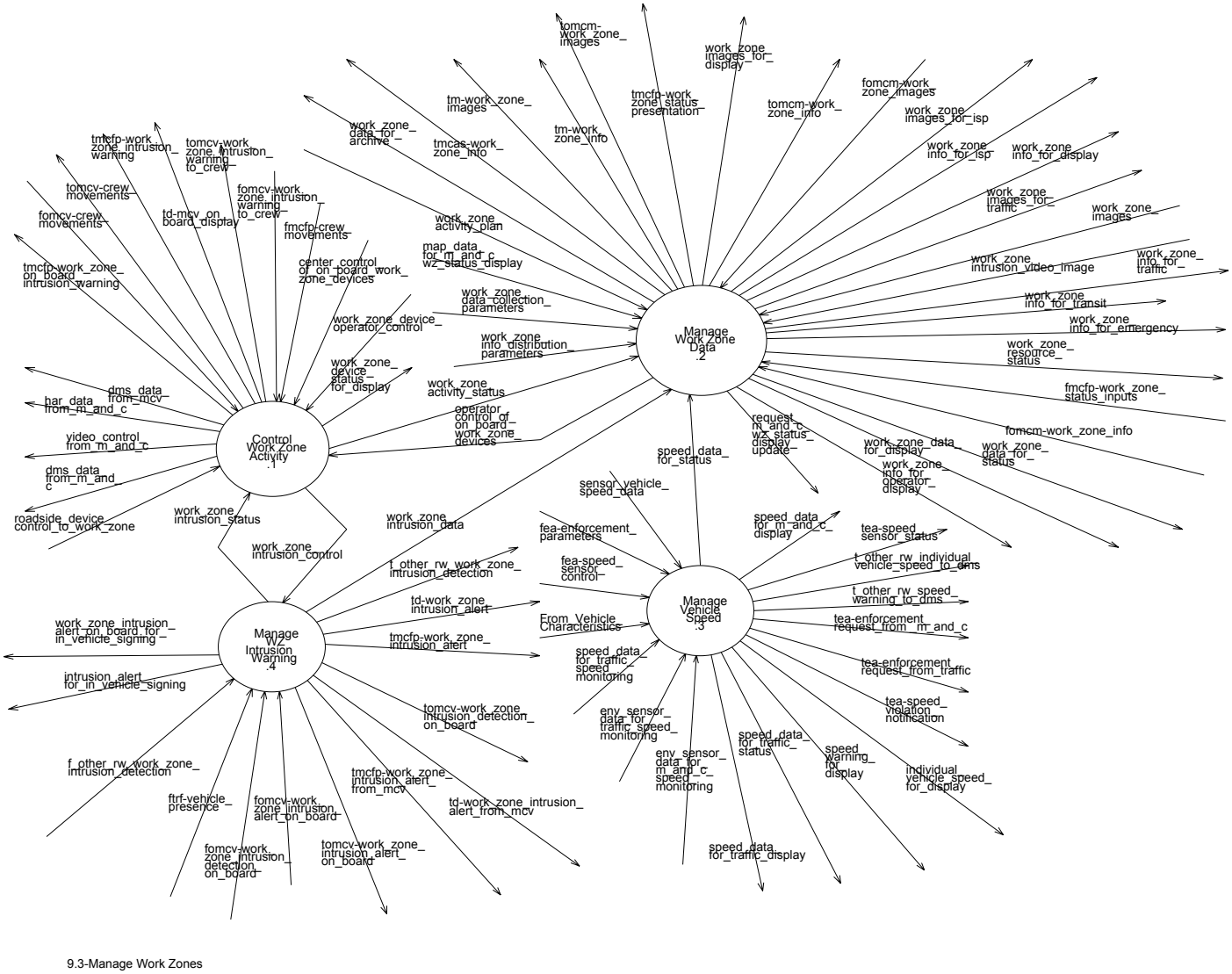
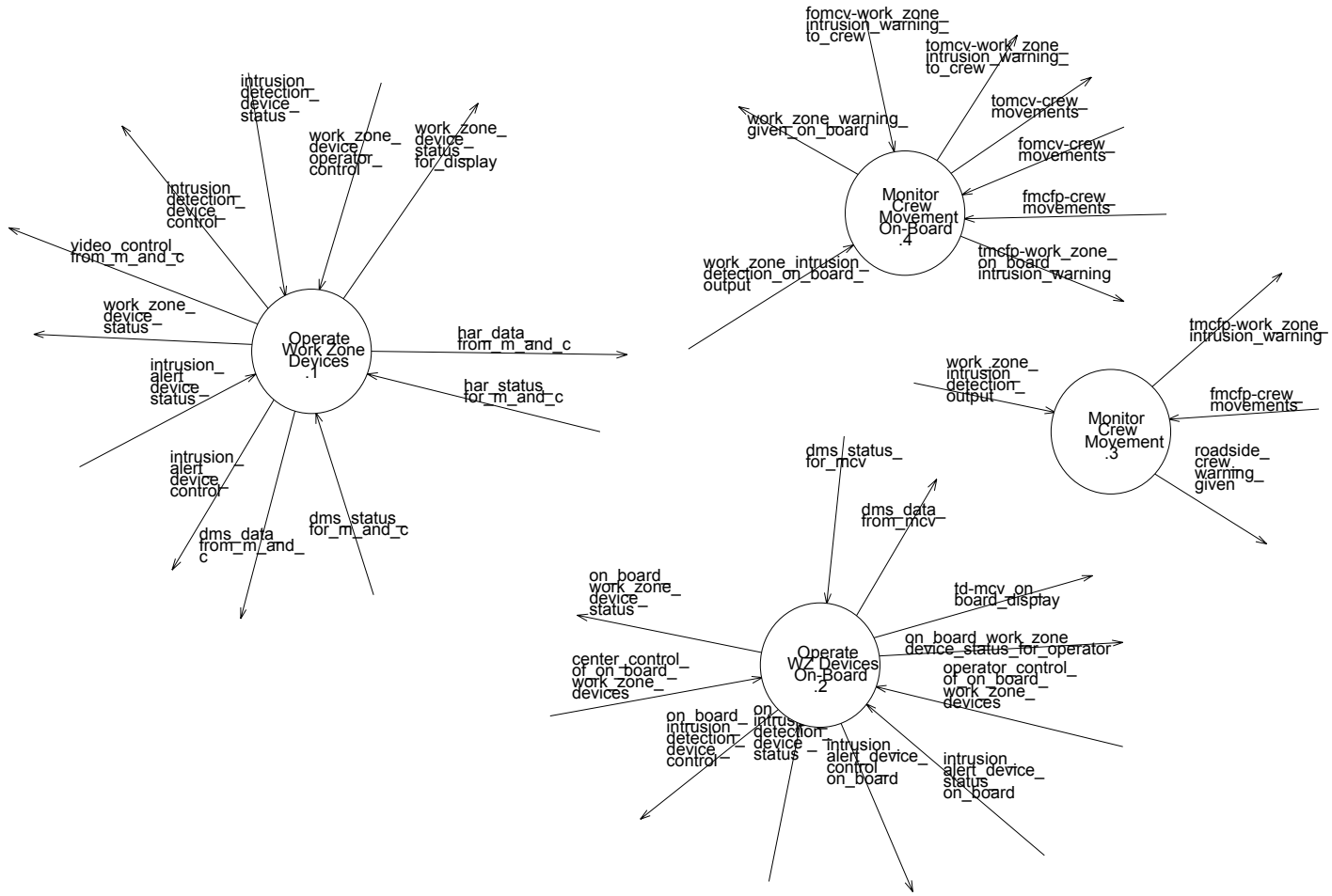


Figure 102. Manage Work Zones (DFD 9.3)



9.3.1-Control Work Zone Activity

Figure 103. Control Work Zone Activity (DFD 9.3.1)

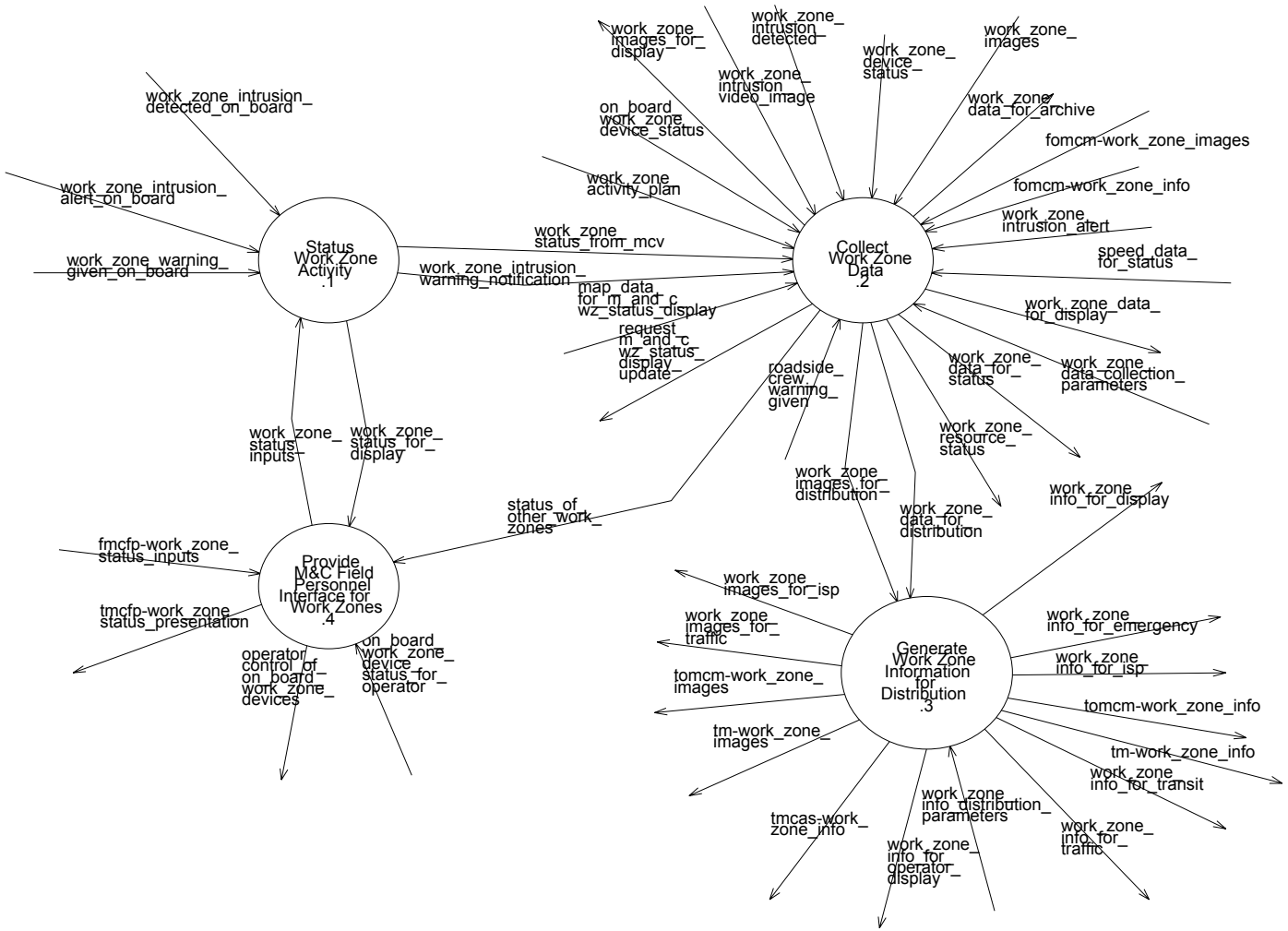
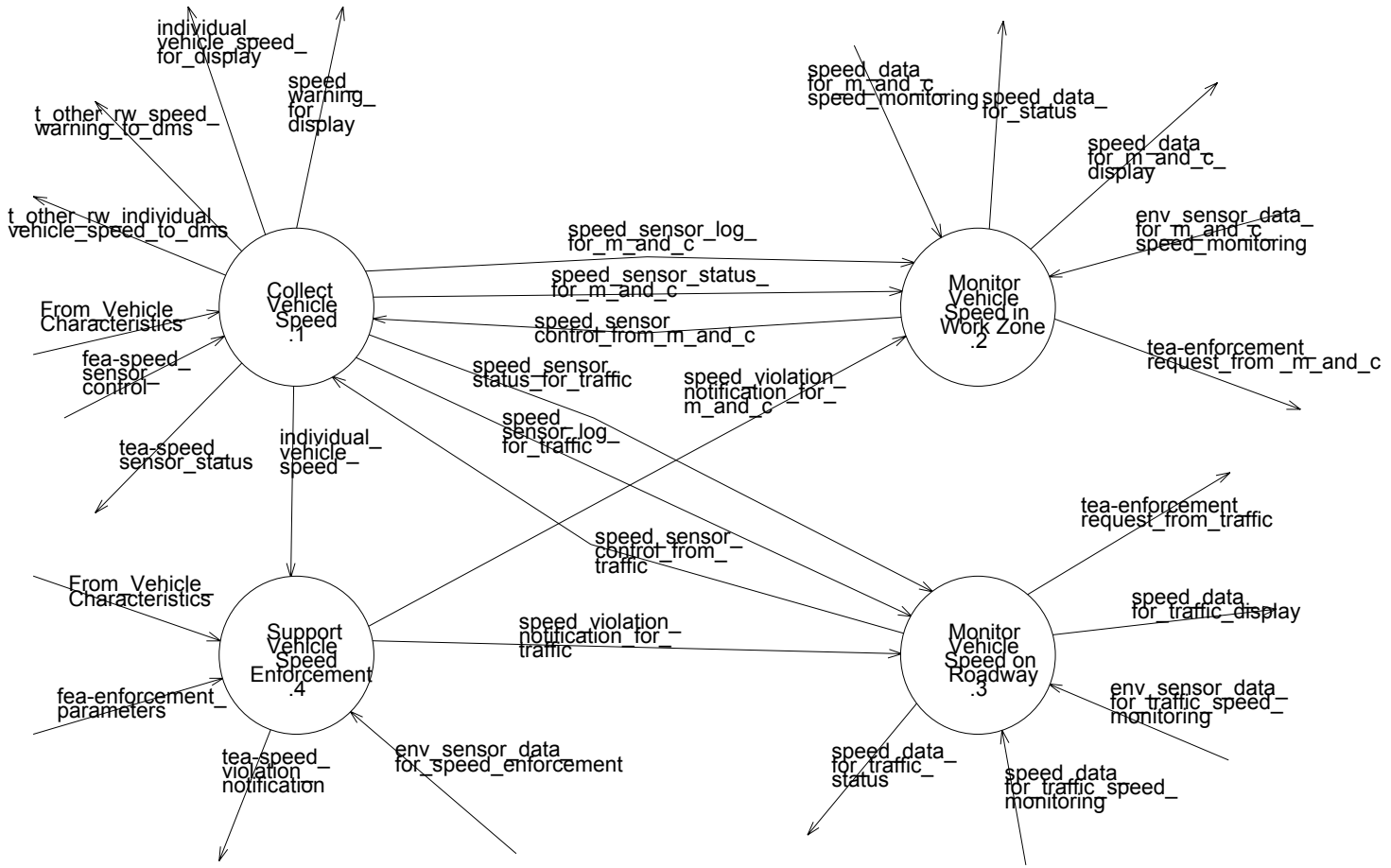


Figure 104. Manage Work Zone Data (DFD 9.3.2)



9.3.3-Manage Vehicle Speed

Figure 105. Manage Vehicle Speed (DFD 9.3.3)

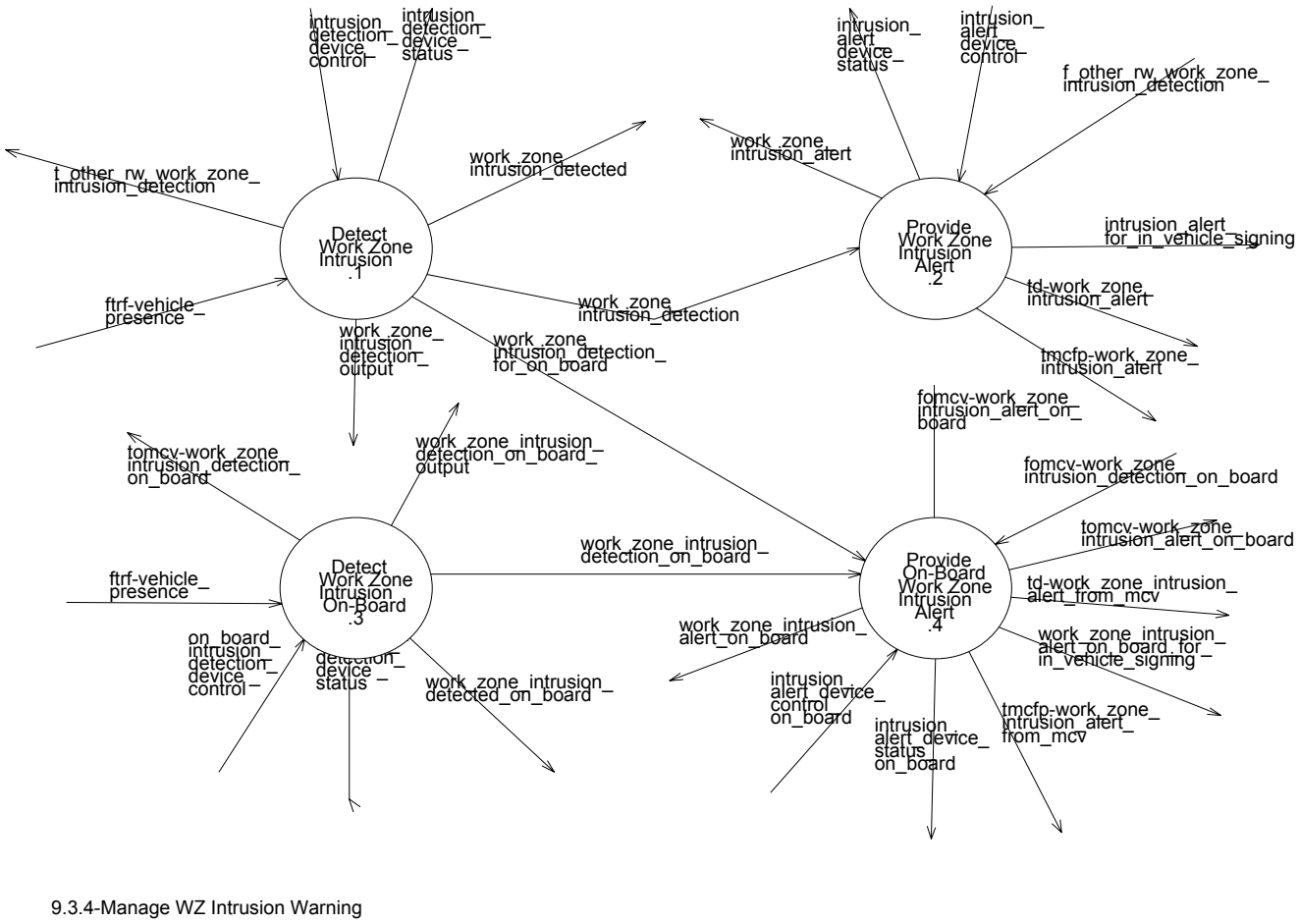


Figure 106. Manage WZ Intrusion Warning (DFD 9.3.4)

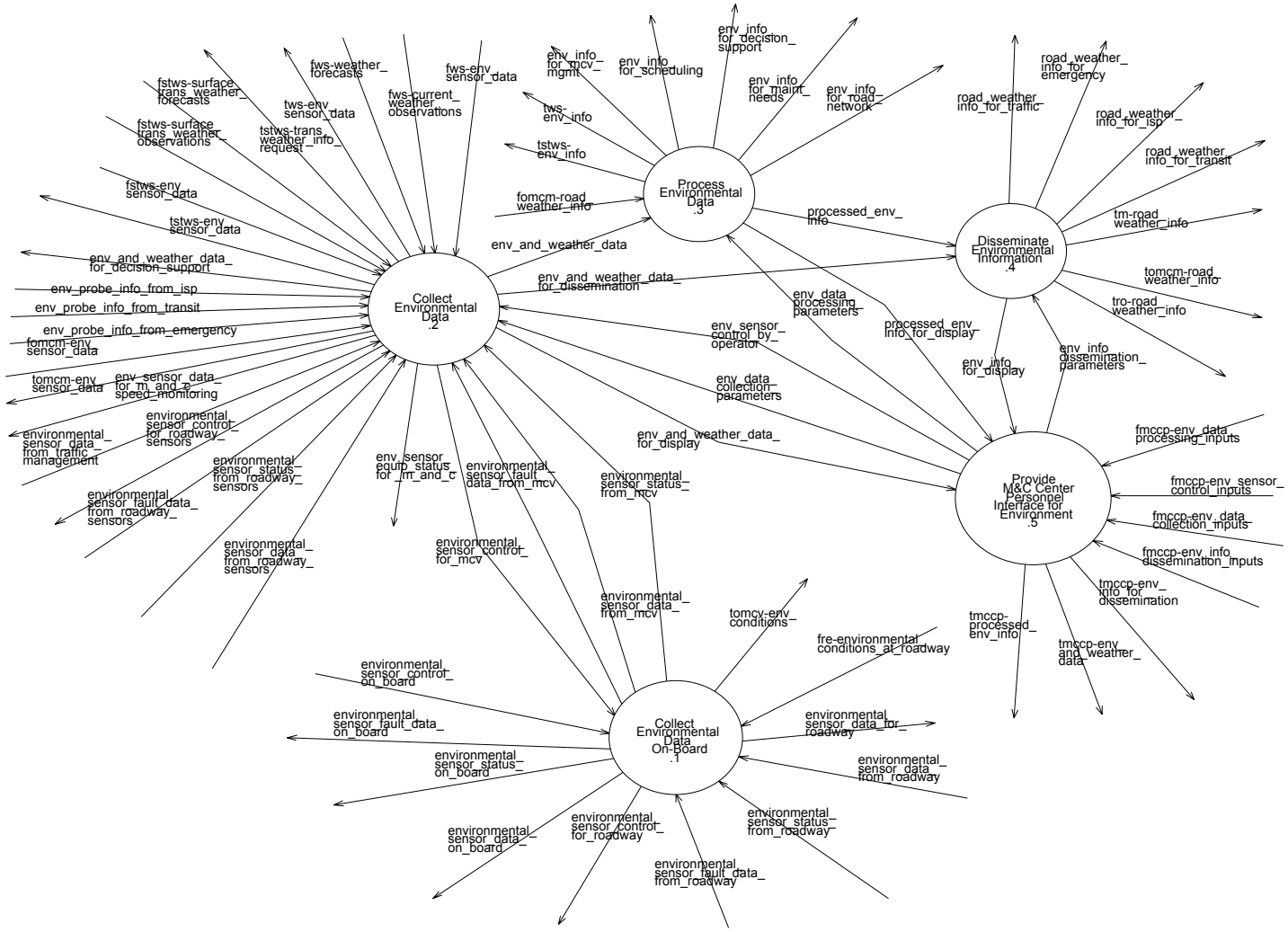


Figure 107. Manage Environmental Information (DFD 9.4)

4. Data Driven Control Concepts

The notion of control flow in the ITS Logical Architecture is captured directly in the structured English of the Process Specifications (P-Specs). This is a natural implementation when the system is strongly oriented towards data-triggered control. In the Architecture, P-Specs are connected by data flows which will generally be implemented with discreet messages or datagrams (also known as data packets). The arrival of a message at a P-Spec captures not only the notion of a data flow, but also the notion of a possible control-event. Thus P-Specs that issue data messages as a result of processing can be effectively issuing control flows simultaneously, and P-Specs that wait for a data message (or set of data messages) and then begin processing are effectively activated by a data/control flow (or a set of flows). This notion of data-triggered control is used throughout the design of the Architecture. Control is essential to the design and explicitly appears in this form throughout the P-Specs.

5. Functional Specification, DFD Descriptions

The Functional Specification is expressed in two ways. First, in graphical form as Data Flow Diagrams (DFDs), and second, in more detailed textual form as Process Specifications (P-Specs) and data flow descriptions.

In general, the DFDs provide a convenient "road map" of the structure of the requirements and are shown by the Figures in section 3.2 of this document. They consist of lines showing data flows and "bubbles" that represent either a P-Spec, or a lower level DFD. Descriptions are provided for the DFDs starting from the highest level, DFD 0. DFD 0 shows the highest (least detailed) level of functionality needed to meet the User Service Requirements. Each of its nine "bubbles" is itself a DFD which provides a first level decomposition of the high level functionality. The "bubbles" within these nine DFDs are either P-Specs, or will themselves decompose into further lower level DFDs. They form a hierarchical structure that is shown in tabular form in Appendix B to this document. Each of the descriptions highlights the main features of each DFD.

The P-specs provide the essence of the requirements in that they describe how data that flows into the Logical Architecture is transformed either for use elsewhere, or for output from the Architecture. The P-specs stand alone in that they completely and rigorously capture the functional requirements of the Architecture. A full textual description of the functionality provided by each P-Spec, including a list of User Service Requirements that they serve, is provided separately in Volume II of the Logical Architecture Document.

The descriptions of the data flows are contained in the Data Dictionary Entries (DDEs), which like the DFDs and P-specs, form a hierarchical structure. In this instance, the hierarchical structure enables one data flow to be comprised of several other data flows, each of which may decompose into other data flows until the primitive or lowest level data flows are reached. Due to their number and overall size, the DDEs describing each data flow, its components (if any), and size, are also provided separately as a second reference volume to this document - see Volume III of the Logical Architecture Document.

DFD: 0 Manage ITS

This DFD shows the nine functional process trees that encompass all the functionality of the National ITS Architecture. The processes within these nine high level functional process trees satisfy all the functional requirements of the 32 User Services (as defined in the User Service Requirements (USRs)). The processes that make up the functional process trees have been created using a modular approach to enable partial or full deployment of functions depending on technological developments, and the needs of the implementers and stakeholders (jurisdictional authorities and private organizations). The modular approach also allows the inclusion of other later architecture developments without needing major changes.

The processes subordinate to this DFD are themselves DFDs:

a) Manage Traffic
b) Manage Commercial Vehicles
c) Provide Vehicle Monitoring and Control
d) Manage Transit
e) Manage Emergency Services
f) Provide Driver and Traveler Services
g) Provide Electronic Payment Services
h) Manage Archived Data
i) Manage Maintenance and Construction Operations

5.1 DFD: 1 Manage Traffic

This DFD shows the processes that provide the Manage Traffic function. This function is responsible for providing facilities to manage traffic flowing in the area it serves so that the most efficient use is made of the surface street and freeway network. The User Services Requirements included in this functional tree are:

1.6 Traffic Control
1.7 Incident Management
1.8 Travel Demand Management
1.9 Emission Testing and Mitigation
1.10 Highway Rail Intersections

The key points about the function are as follows:

- Collection of traffic data and traffic management provided for the surface street and freeway network;
- Collected data can be used by other ITS functions, operations personnel and the media;
- Incident management available based on pre-defined responses;
- Demand management available based on pre-defined policies and operational data;
- Pollution monitoring available both on a wide area and individual vehicle basis;
- Highway rail intersection is monitored and controlled;
- Intersection collision avoidance data provided to vehicles;
- Data can be exchanged with similar functions serving other geographic or jurisdictional areas.

There are six processes in this DFD all of which are themselves DFDs. They divide the overall functionality of the DFD between themselves in the following ways.

a) Provide Traffic Surveillance (DFD 1.1)
b) Provide Device Control (DFD 1.2)
c) Manage Incidents (DFD 1.3)
d) Manage Travel Demand (DFD 1.4)
e) Manage Emissions (DFD 1.5)
f) Manage Highway Rail Intersections (DFD 1.6)

Each of the traffic control, manage incidents and manage emissions facilities could be implemented independently without any of the others. In this form the traffic control process would be able to provide some improvement to the overall traffic flow within the surface street and freeway network, whereas the incident management and manage emissions facilities would do little more than provide data recording services. There would be little or no point in implementing the manage travel demand facility without any of the other facilities that provide the data on which the demand forecasting is based.

DFD: 1.1 Provide Traffic Surveillance

This DFD shows the processes that make up the Provide Traffic Surveillance facility within the Manage Traffic function. These processes collect and store traffic data collected by sensors for use in traffic management, and by the media and other ITS functions. They are also responsible for using the data to generate a predictive model of network operation and for the exchange of data with Manage Traffic functions serving other areas. The key points about the facility are as follows:

- Data collected about the passage of vehicles and pedestrians through the surface street and freeway network;
- Collected data is stored as either current data (five minutes old) or long term (historic) data;
- Collected data used by the Provide Device Control facility to control vehicles and pedestrians;
- Predictive model produced using long term data and data from other traffic management centers;
- Predictive model data used by the Manage Travel Demand and Route Selection facilities;
- Many ITS functions use the current, long term and predictive data stores as a source of traffic data;
- Traffic operations personnel can display current, long term and predicted data;

- Output sent to the media;
- Smart probe data collected from vehicles and provided both for storage and for output;
- Collected data and incident data is exchanged with other traffic management centers.

There are seven processes in this DFD and three are separate DFDs:
a) Process Sensor Data (DFD 1.1.1)
b) Process and Store Traffic Data (DFD 1.1.2)
c) Generate Predictive Traffic Model (1.1.3)
d) Display and Output Traffic Data (DFD 1.1.4)
e) Exchange data with Other Traffic Centers (1.1.5)
f) Collect Vehicle Tag Data for Link Time Calculations (1.1.6)
g) Collect Vehicle Smart Probe Data (1.1.7)

All data about vehicles and pedestrians passing through the surface street and freeway network is collected by processes (a) and (f). It is then sent to processes in (b) which distribute it to other facilities and load it into the current and long term data stores. The data in these stores plus weather and incident data is used by process (c) to produce a predictive model of future traffic conditions. The results of this process and the data stored by processes in (b) are available for display by the traffic operations personnel and the media through the processes in (d). The long term data is also exchanged with other traffic centers, the data from which is also used as input to the predictive model by process (c).

Although all of these processes, except (a), (f) and (g), depend on others in the group for data, they will each operate continuously and independently. This enables traffic data to be processed, stored and accumulated in a timely fashion. Process (a) could be deployed on its own with some of the control processes in the Roadside Control facility - see DFD 1.2.7, to provide a roadside based traffic control facility with no links to any central system for coordination, fault reporting, etc.

Processes in (a) also controls the video cameras used for traffic surveillance. This enables them to be set up to collect traffic data from different "views", where a "view" is a particular video image of part of the surface street and freeway network. The "view" being provided by a camera may be changed by either the traffic operations personnel or automatically as part of a traffic control strategy through a process in the Provide Device Control facility - see DFD 1.2. This enables the same camera to be used to gather different traffic data at different times of the day, days of the week, etc. One example is the data needed to monitor traffic flows in the morning and evening peak traffic periods may need to be obtained from different "views".

DFD: 1.1.1 Process Sensor Data

This DFD shows the processes that make up the Process Sensor Data facility within the Manage Traffic function. These processes analyze, collect, store, and distribute sensor data to other facilities. The key points about the facility are as follows:
- Processed sensor data to other processes within the Manage Traffic function;
- Sensors are monitored to detect and report any sensor faults;
- Collected sensor data is stored within a sensor data store.

There are six processes in this DFD:
a) Process Traffic Sensor Data (1.1.1.1)
b) Collect and Process Sensor Fault Data (1.1.1.2)
c) Process Environmental Sensor Data (1.1.1.3)
d) Manage Data Collection and Monitoring (1.1.1.4)
e) Provide Sensor Interface to Other Roadway Devices (1.1.1.5)
f) Collect Infrastructure Sensor Data (1.1.1.6)

The collected data is received by process (b). The actual sensor data from the roadside is received by processes (a), (b), and (c). Data from the sensors are collected and sent to the Manage Archive function in process (c). Status and control of sensors between roadside devices is distributed by process (e). The Maintenance and Construction facility and Maintenance and Construction Vehicle obtains infrastructure conditions from process (f). All sensor status and faults from process (a) and (c)-(e) are detected and stored by process (b) then sent to the Manage Maintenance and Construction facility to correct the fault. Infrastructure sensor data in process (f) is sent directly to DFD 9.2.3 in the Manage Maintenance facility. These processes distribute the sensor data to other facilities in the Manage Traffic function.

DFD: 1.1.2 Process and Store Traffic Data

This DFD shows the processes that make up the Process Traffic Data for Storage facility within the Manage Traffic function. These processes analyze collected data, distribute it to other facilities in the function and store the data, together with that provided by other facilities.

The key points about the facility are as follows:

- Processed sensor data to other processes within the Manage Traffic function;
- High occupancy vehicle (HOV) lane operation monitored and violators reported;
- Data from on-board vehicle tags processed to determine journey times;
- Vehicle smart probe data processed to determine roadway hazards ready for storage and output.

There are seven processes in this DFD:

a) Process Traffic Data for Storage (1.1.2.1)
b) Process Traffic Data (1.1.2.2)
c) Update Data Source Static Data (1.1.2.3)
d) Monitor HOV lane use (1.1.2.4)
e) Process Probe Data (1.1.2.5)
f) Process Collected Vehicle Smart Probe Data (1.1.2.6)
g) Monitor Reversible Lanes (1.1.2.7)

The collected data is received by process (b). This distributes it to other facilities in the Manage Traffic function using the data in the store of static data to decide which processes should actually receive the data. The data is also sent by process (a) to process 1.1.5 for loading into the current and long term data stores. This process also receives and loads into the stores indicator control and response data, implemented strategies, freeway ramp and parking lot data received from the Provide Device Control facility. Process (d) provides its link journey time data direct to process (a) again for loading into the stores. Process (e) and (f) analyze data from vehicle smart probes. Both of the processes then sends the data for storage to the Provide Roadside Control Facilities facility - see DFD 1.2.7, for output to passing vehicles. Data in process (g) is collected to monitor and detect possible incidents on reversible lanes and sends information to the Traffic Data Analysis for Incidents facility in DFD 1.3.1.

Overwriting of the data stored in the current data store will remove the data for the previous five minute period. The exception to this is the video image data, which is overwritten as soon as it is received. The data in the long term data store will not be overwritten as new data is accumulated and, it will be possible to display the data so far accumulated in the current hour. The life of this data will depend on the size of the data store in each implementation and the availability of store archiving and back-up facilities.

Although all of these processes depend on others in the group for data, they will each operate continuously and independently so that traffic data can be processed, stored and accumulated in a timely fashion. The last two processes may be omitted from specific implementations if no HOV lanes are present, or there is no roadside equipment to interrogate on-board vehicle tags for data.

DFD: 1.1.4 Display and Output Traffic Data

This DFD shows the processes that make up the Display and Output Traffic Data facility within the Manage Traffic function. These processes provide the interfaces through which stored traffic data can be provided to other ITS functions and the media.

The key points about the facility are as follows:

- Access to current, historic and predictive model data provided for traffic operations personnel and for archiving;
- Media can access data under the control of traffic operations personnel;
- Other ITS functions and Manage Traffic facilities provided with access to the data on request;
- Output can be presented against the background of digitized map data.

There are seven processes in this DFD:

a) Retrieve Traffic Data (1.1.4.1)
b) Provide Traffic Operations Personnel Traffic Data Interface (1.1.4.2)
c) Provide Direct Media Traffic Data Interface (1.1.4.3)
d) Update Traffic Display Map Data (1.1.4.4)
e) Provide Media System Traffic Data Interface (1.1.4.5)
f) Provide Traffic Data Retrieval Interface (1.1.4.6)
g) Manage Traffic Archive Data (1.1.4.7)

Process (a) is responsible for retrieving the requested data from the stores of current, long term (historic) and predictive model data. It receives requests from either process (b), which provides the traffic operations personnel interface, or from process (f). This process acts as the interface between processes (c) and (a). It enables the traffic operations personnel to control the access that the media and other ITS functions have to the stored data. It also controls the output of data to process (e) which is the output interface to the media systems, e.g. highway advisory radio (HAR), dynamic message signs (DMS), or flashing lights that direct drivers to tune their radios to a particular frequency to receive traffic information. The data collected in process (a) is then sent to process (g) for archiving.

The process (b), (c) and (e) depend on the process (a) and (f) for data and can only function as a group. It is possible for the outputs provided by the processes (b) and (c) to appear without the digitized map data produced by the fourth process. For process (b) an example might be video image data provided by traffic surveillance cameras.

DFD: 1.2 Provide Device Control

This DFD shows the processes that make up the Provide Device Control facility within the Manage Traffic function. These processes provide the mechanism through which traffic management strategies can be implemented on the road and highway network served by the function.

The key points about this facility are as follows:

- Traffic management provided through coordination of roadside equipment (indicators);
- Traffic management strategy depends on current traffic conditions and default strategy;
- Traffic management strategy can be overridden by Manage Incident and Manage Demand facilities;
- Traffic management strategy can also be overridden by traffic operations personnel;
- Indicators can be intersection, ramp or pedestrian controllers, or dynamic message signs (DMS);
- Coordination of controller outputs can be based on a range of algorithms using real time data;
- Controllers can operate using local data with no coordination;
- Override strategies available to give emergency, high occupancy (HOV), and transit vehicle priority;
- DMS can be used to guide drivers away from congestion;
- DMS can also be used to guide drivers towards parking lots with spaces currently available;
- Output of data to in-vehicle signage equipment provided through roadside units;

· Output of smart probe data collected from vehicles provided through roadside units;
· Incorrect operation of indicators reported as faults to the construction and maintenance organization.

There are two processes and six DFDs in this DFD:
a) Select Strategy (1.2.1)
b) Determine Road and Freeway State (DFD 1.2.2)
c) Determine Ramp State (1.2.3)
d) Output Control Data (DFD 1.2.4)
e) Manage Parking Lot State (DFD 1.2.5)
f) Maintain Static Data for TMC (DFD 1.2.6)
g) Provide Roadside Control Facilities (DFD 1.2.7)
h) Collect and Process Indicator Fault Data (DFD 1.2.8)

Although some of these processes depend on others in the group for data, they will each operate continuously and independently so that traffic control can be implemented in a timely fashion. Note that the processes in (g) receive data from the process (a) in the Provide Traffic Surveillance facility - see DFD 1.1, so that they can continue to function using local data if control data is not received from the processes in (d).

DFD: 1.2.2 Determine Road and Freeway State

This DFD shows the processes that make up the Determine Road and Freeway State facility within the Manage Traffic function. These processes implement selected traffic management strategies for the road and highway network served by the function.

The key points about the facility are as follows:
· Adaptive, fixed time and local control strategies supported for indicators on roads;
· Sequencing control strategies supported for indicators on freeways;
· Strategies may be implemented on one, some or all indicators on roads and freeways;
· Coordination provided between freeway, road and ramp control processes.

There are two processes in this DFD:
a) Determine Indicator State for Freeway Management (1.2.2.1)
b) Determine Indicator State for Road Management (1.2.2.2)

These processes can be implemented singly, or as a pair where traffic management of a mixed system is required. In either case, the coordination flows will be present to provide linkages to the other process controlling the other roadway type.

DFD: 1.2.4 Output Control Data

This DFD shows the processes that make up the Output Control Data facility within the Manage Traffic function. The key points about the facility are as follows:
· Non-compliance with control commands by indicators reported as faults;
· Data for in-vehicle signage output to roadside equipment automatically.

There are four processes in this DFD:
a) Output Control Data for Roads (1.2.4.1)
b) Output Control Data for Freeways (1.2.4.2)
c) Output In-vehicle Signage Data (1.2.4.3)
d) Output Roadway Information Data (1.2.4.4)

These processes can be implemented separately, as two pairs, one for freeways and the other for roads. In the latter case there will be a broadcast output process in each of the pairs, with only one input flow. It would also be possible to implement all three processes as one group for a mixed freeway and road management system.

DFD: 1.2.5 Manage Parking Lot State

This DFD shows the processes that make up the Manage Parking Lot State facility within the Manage Traffic function. These processes determine and manage the state of parking lots in the area served by the function. The key points about the facility are as follows:

- Parking lot state can be determined from inputs provided by a variety of sources;
- The precise input configuration can be set up to suit individual parking lots;
- Manage Transit function link enables provision of a demand responsive park and ride (P+R) service;
- Parking lot data output using signs is used to guide vehicles to lots with spaces;
- Parking lot data stored for use by traffic operations personnel and the media;
- Parking lot data also used by the Mange Demand facility.

There are six processes in this DFD:

a) Determine Parking Lot State (1.2.5.1)
b) Coordinate Other Parking Data (1.2.5.2)
c) Provide Parking Lot Operator Interface (1.2.5.3)
d) Determine P+R needs for Transit Management (1.2.5.4)
e) Manage Parking Archive Data (1.2.5.5)
f) Calculate Parking Lot Occupancy (1.2.5.6)

These processes can be implemented in a variety of sub-sets. The one common process is (a) which determines the parking lot state, some or all of the others need not be present in any individual implementation. A typical implementation would have process (a), plus one out of processes (b), (c), or (f), plus (optionally) process (d).

DFD: 1.2.6 Maintain Static Data for TMC

This DFD shows the processes that make up the Maintain Traffic and Sensor Static Data facility within the Manage Traffic function. These processes provide static data for use by facilities within the function. The key points about the facility are as follows:

- Static data maintained by Traffic Operations Personnel;
- Current static data can be retrieved and sent to the Manage Archived Data function.

There are two processes in this DFD:

a) Maintain Traffic and Sensor Static Data (1.2.6.1)
b) Provide Static Data Store Output Interface (1.2.6.2)

The two processes in this facility must be implemented as a pair. This is because process (b) is driven to provide its outputs by process (a) and relies on that process to provide the data in the store. Process (a) may also receive a request for a copy of the current static data from the Manage Archived Data function. In this case it requests the current data from the processes that serve the stores in the Provide traffic Surveillance and Manage Incidents facilities - see DFDs 1.1 and 1.3, and combines the data that they provide with that in its own store. This combined set of data is then sent to the Manage Archived Data function.

DFD: 1.2.7 Provide Roadside Control Facilities

This DFD shows the processes that make up the Provide Roadside Control Facilities facility within the Manage Traffic function. These processes distribute the data implementing traffic management strategies to roadside equipment served by the function. The key points about the facility are as follows:

- Control data translated into output that will be easily and readily understood by drivers and travelers;
- Indicator faults reported when their operation does not match that specified in their control data;
- Indicators can operate with local sensor data possible if required, or no control data is provided;
- Local priority can be given to transit and emergency vehicles;
- In-vehicle signage data and smart probe data output to passing vehicles;
- Data provided warning vehicles of potential intersection collisions;
- Data provided by probes on vehicles to monitor roadside conditions;
- Allows the exchange of controls and commands between roadside devices;

There are nine processes in this DFD:

a) Process Indicator Output Data for Roads (1.2.7.1)
b) Monitor Roadside Equipment Operation for Faults (1.2.7.2)
c) Manage Indicator Preemptions (1.2.7.3)
d) Process In-vehicle Signage Data (1.2.7.4)
e) Process Indicator Output Data for Freeways (1.2.7.5)
f) Provide Intersection Collision Avoidance Data (1.2.7.6)
g) Process Vehicle Smart Probe Data for Output (1.2.7.7)
h) Provide Device Interface to Other Roadway Devices (1.2.7.8)
i) Process Roadway Information Data (1.2.7.9)

Although the processes in this facility form a cohesive group, only process (i) is essential for the output of indications to drivers and travelers. This process receives data from the output control data process in the Provide Device Control facility - see DFD 1.2. Process (b) provides the facility to monitor the operation of processes (a) and (e) unless this is temporarily suspended by process (c), as well as the operation of processes (d) and (g). Process (d) will enable vehicles to receive a copy of the data that is being output by indicators plus information about incidents and traffic conditions, that are local to the process itself.

All processes apart from (a), (b) and (e) may be regarded as options and need only included when the facility that they provide is required by a particular implementation. Processes (a), (e), or (h) could be provided in conjunction with process (a) in the Provide Traffic Surveillance facility - see DFD 1.1, as a local roadside traffic control unit. This would use locally detected traffic and pedestrian data to determine its control outputs and not be able to provide the benefits of coordination obtained from links other traffic management equipment.

DFD: 1.2.8 Collect and Process Indicator Fault Data

This DFD shows the processes that make up the Collect and Process Indicator Fault Data facility within the Manage Traffic function. These processes manage faults detected in roadside equipment served by the function. The key points about the facility are as follows:

- Faults reported to and cleared by, the construction and maintenance organization;
- Fault reporting and clearance monitored by traffic operations personnel;
- Traffic operations personnel can modify fault data and enter faults not detected automatically.

There are four processes in this DFD:

a) Collect Indicator Fault Data (1.2.8.1)
b) Maintain Indicator Fault Data Store (1.2.8.2)
c) Provide Device Fault Interface for C and M (1.2.8.3)
d) Provide Traffic Operations Personnel Indicator Fault Interface (1.2.8.4)

Fault data is collected by process (a) which passes the data to process (b) for logging in the list of current indicator faults. The data is then sent from process (b) to process (c) for output to the construction and maintenance organization. Process (b) also updates the Select Strategy process (see process (a) in DFD 1.2.2) with the fault state, so that the faulty indicator(s) are not included in any strategy selection, and if necessary some strategies may be revised to take account of indicator faults. Fault clearance data is received from the construction and maintenance organization by process (c) and sent to process (b). This updates the current indicator faults list and outputs the new (cleared) fault status to the Select Strategy process.

The four processes in this facility form a cohesive group, although only the first three are essential to the processing of indicator fault data. The operator interface process can be omitted if the reporting and clearance of indicator faults is to be left as an automatic process.

DFD: 1.3 Manage Incidents

This DFD shows the processes that make up the Manage Incidents facility within the Manage Traffic function. These processes manage the classification of incidents and implement responses when they actually occur.

The key points about the facility are as follows:

- Incident inputs available from many sources, e.g. emergency services, event promoters, etc.;
- Data from traffic sensors analyzed for indications of possible incidents;
- Traffic operations personnel can update incident data with other inputs, e.g. telephone reports;
- Incident inputs from construction and maintenance organization must be confirmed;
- When an incident occurs predefined mitigation strategy is automatically implemented;
- Predefined incident strategies can be set up in advance by the traffic operations personnel;
- Incident status provided as input to the predictive traffic model and to vehicle route selection criteria;
- Information on incidents is available to the media.

There are seven processes in this DFD and three are DFDs themselves:

a) Traffic Data Analysis for Incidents (DFD 1.3.1)
b) Review and Manage Incident Data (DFD 1.3.2)
c) Respond to Current Incidents (1.3.3)
d) Provide Operator Interfaces for Incidents (DFD 1.3.4)
e) Manage Possible Predetermined Responses Store (1.3.5)
f) Manage Predetermined Incident Response Data (1.3.6)
g) Analyze Incident Response Log (1.3.7)

The processes in this DFD and its constituent DFDs divide incidents up into three types comprising, possible, predicted and current data. Those in the possible category need further analysis work to establish their status as actual incidents. They may then be either planned events, which are those that have yet to happen, or current incidents, which are those that are actually happening currently. Examples of planned events are, special events, sports events and maintenance and construction activities, while current incidents can be any event when it actually occurs, traffic accidents and incidents caused by the effects of the weather.

Facilities are provided to enable the traffic operations personnel to oversee the management of incidents through the processes in (d). Thus planned events notified by event promoters and the construction and maintenance organization through processes in (b) are subject to confirmation by the traffic operations personnel. This enables these types of incident to be scheduled away from peak travel times. Traffic operations personnel can also amend incident data, and are responsible for the setting up of the defined responses that are implemented when an incident becomes current.

The defined responses used for current incidents can be based on policy data provided by the jurisdictional authorities, or on the responses to previous incidents of the same type. The latter are produced by process (g) which analysis the previous responses to incidents. This creates a store of possible responses, which could be added to the library of pre-defined responses. The transfer to this category is carried out by processes (e) and (f) under the direction of the traffic operations personnel. If a defined response is not available for a particular type of current incident, the traffic operations personnel will be notified and expected to provide one, before any further action is taken.

Although the processes in this DFD and its constituents feed each other data they will operate continuously and independently in order that incidents are detected and acted upon in a timely manner. As a minimum, the current incidents processes in (b) and the process in (c) are needed to provide a very basic incident management system, with no automatic detection, or differentiation between current incidents and planned events.

DFD: 1.3.1 Traffic Data Analysis for Incidents

This DFD shows the processes that make up the Traffic Data Analysis for Incidents facility within the Manage Traffic function. These processes analyze traffic data to look for indications of possible incidents.

The key points about the facility are as follows:
- Video image and other sensor data analyzed for indications of possible incidents;
- Location of possible incidents fixed by location of data source.

There are three processes in this DFD:
a) Analyze Traffic Data for Incidents (1.3.1.1)
b) Maintain Static Data for Incident Management (1.3.1.2)
c) Process Traffic Images (1.3.1.3)

Process (a) provides data about possible incidents. It takes data from traffic sensors provided by processes in the Provide Traffic Surveillance facility - see DFD 1.1.1 plus video image data provided by process (c), and analyzes it for anomalies that may indicate the presence of a possible incident. When a possible incident is detected, the process sends the data to the Review and Manage Incidents facility - see DFD 1.3.2. Process (c) acts as the video image processor. It can also change the video image being used for incident analysis and provide the actual video images at the request of the traffic operations personnel through processes in the Provide Operator Interface for Incidents facility - see DFD 1.3.4.

The three processes should be implemented as a group of three. However there may be some implementations without process (c) which provides analysis of video images.

DFD: 1.3.2 Review and Manage Incident Data

This DFD shows the processes that make up the Review and Manage Incident Data facility within the Manage Traffic function. These processes manage the classification of incidents into the categories of possible, current, and planned events.

The key points about the facility are as follows:
- Possible incidents data reviewed for transfer to predicted category if confidence level high enough;
- Planned events data reviewed for transfer to current category when start time occurs;
- Traffic operations personnel can review and amend incident data;
- Current incidents automatically cleared when duration has expired.

There are five processes in this DFD:
a) Store Possible Incident Data (1.3.2.1)
b) Review and Classify Possible Incidents (1.3.2.2)
c) Review and Classify Planned Events (1.3.2.3)
d) Provide Planned Events Store Interface (1.3.2.4)
e) Provide Current Incidents Store Interface (1.3.2.5)

Data on possible incidents in provided to process (a), which analyses it and if it has enough confidence that the incident is genuine, will upgrade its status to that of a planned event. The data is then passed to process (b) which again analyses it to determine whether the incident is current or is a planned event. Those in the former category are loaded into the store of planned events which process (c) will review periodically. Data about incidents that become current are sent to process (e) and on to process (c) in the Manage Incidents facility - see DFD 1.3, for response implementation. Process (d) acts as the interface to the store of planned events and also accepted data about such incidents in geographic areas served by other Manage Traffic functions.

Although these processes feed each other data they will operate continuously and independently in order that incidents are detected and acted upon in a timely manner. They should be implemented as a group since incident data is designed to exchange data from one process to another as its status changes.

DFD: 1.3.4 Provide Operator Interfaces for Incidents

This DFD shows the processes that make up the Provide Operator Interfaces for Incidents facility within the Manage Traffic function. These processes provide the interfaces for traffic operations personnel to manage incidents, and the media to gain access to incident information.

The key points about the facility are as follows:
· Incident data output to traffic operations personnel and media using digitized map display;
· Traffic operations personnel can provide incident data and set up defined incident responses;
· Warning of incidents can be output through the media.

There are five processes in this DFD:
a) Retrieve Incident Data (1.3.4.1)
b) Provide Traffic Operations Personnel Incident Data Interface (1.3.4.2)
c) Provide Media Incident Data Interface (1.3.4.3)
d) Update Incident Display Map Data (1.3.4.4)
e) Manage Resources for Incidents (1.3.4.5)

The interfaces for the traffic operations personnel and the media are provided through processes (b) and (c). Both use process (a) as the mechanism for obtaining data about possible incidents planned events, and current incidents. Process (b) also enables the traffic operations personnel to have access to data in other parts of the Manage Incidents facility such as that for defined incident responses - see DFD 1.3, to control the use and set up of these responses, and to see the video images being used for incident analysis obtained by the Traffic Data Analysis for Incidents facility - see DFD 1.3.1. As well as enabling incident data to be displayed, process (c) enables the media to report incidents. These will reports will be based on data received by the media from those of their customers who are travelers.

One of the features of the structure of the processes in this DFD is that it enables the media to have direct access to the lists of both current incidents and planned events using processes (a) and (c). However this access will be controlled through data in the store of defined responses and can be set up by the traffic operations personnel. This enables the personnel to set up the type and extent of incident information to

which the media can have direct access, so that those incidents of a "sensitive" nature can be deleted as far as direct media access is concerned. The same mechanism is used to control the output of incident warnings as well as request assistance from the Maintenance and Construction organization through process (e).

DFD: 1.4 Manage Travel Demand

This DFD shows the processes that make up the Manage Travel Demand facility within the Manage Traffic function. These processes enable travel demand to be predicted and managed to make the most efficient use of the road, highway and other parts of the transportation network served by the function.

The key points about the facility are as follows:

- Demand forecasts are based on current operational data and policy data;
- Current operational data provided by Manage Traffic and other ITS functions;
- Policy data is set up by the traffic operations personnel, who also run the forecast process;
- Demand forecast results are implemented by requesting action by ITS functions.

There are five processes in this DFD:

a) Provide Traffic Operations Personnel Demand Interface (1.4.1)
b) Collect Demand Forecast Data (1.4.2)
c) Update Demand Display Map Data (1.4.3)
d) Implement Demand Management Policy (1.4.4)
e) Calculate Forecast Demand (1.4.5)

The traffic operations personnel through process (a) control the operation of the demand forecasting facility. This enables operational data to gathered by process (b) and loaded into the store of demand input data. This data will originate from sources such as the current use of the road network, transit services and other modes, weather predictions, the predictive model of traffic conditions, the status of the current transit services and their schedules, current charges for tolls, parking lots and public transit fares, plus current pollution levels. Policy data, which is the other input to the demand forecasting carried out by process (e) is provided directly by the traffic operations personnel.

Preparation of a demand forecast by process (e) is initiated by the traffic operations personnel, who can review the results and request their implementation by process (d). This process will report the results of its implementation back to the traffic operations personnel. All output to the personnel can be shown against a background of digitized map data provided through process (c).

The processes themselves do not need to know anything about the structure of responsibility in the geographic area they control. For example it will be possible for process in (b) to receive data from several Provide Traffic Surveillance facilities each of which serves a different part of the total geographic area served by the Manage Traffic function.

DFD: 1.5 Manage Emissions

This DFD shows the processes that make up the Manage Emissions facility within the Manage Traffic function. These processes monitor atmospheric pollution levels and provide details of those that are above pre-set limits to other facilities.

The key points about the facility are as follows:

- Current pollution levels monitored both on an area basis and from individual vehicles;
- Area pollution levels above permitted levels reported as incidents to the Manage Incidents facility;
- Driver and law enforcement agency(ies) notified of vehicle pollution levels above permitted levels;

· Provide Traffic Surveillance facility sent pollution data for loading into current and long term stores;
· Pollution data also provided to Manage Archived Data function.

There are nine processes in this DFD:
a) Provide Traffic Operations Personnel Pollution Data Interface (1.5.1)
b) Process Pollution Data (1.5.2)
c) Update Pollution Display Map Data (1.5.3)
d) Manage Pollution State Data Store (1.5.4)
e) Process Vehicle Pollution Data (1.5.5)
f) Detect Roadside Pollution Levels (1.5.6)
g) Manage Pollution Data Log (1.5.7)
h) Manage Pollution Reference Data Store (1.5.8)
i) Manage Pollution Archive Data (1.5.9)

Pollution levels are detected at the roadside by process (f), in the wider geographic area by process (b) and from vehicles by process (e). The data from these three processes is supplied to process (d) which maintains and stores the data for access by the traffic operations personnel through process (a). Process (d) also supplies a copy of the stored pollution data on request to the Manage Demand facility - see DFD 1.4. The wide area and vehicle pollution data is also supplied to process (g) for loading into the log of pollution data. A copy of this is periodically sent to the Manage Archived Data function - see DFD 8.

The need for are pollution levels to be reported as incidents by process (b), or vehicle drivers and the law enforcement agency notified of high pollution by process (e), depends on the pollution reference data. This is contained in a store managed by process (h). It can be monitored and updated by the traffic operations personnel through process (a). The output of data by process (a) may be against a background of a digitized map supplied by process (c). Although these processes are shown as a coherent group, they can be implemented in part if needed. For example, the monitoring of either area or vehicle pollution can be omitted. Data about the ownership of polluting vehicles is obtained from the relevant Department of Motor Vehicles by the process responsible for law enforcement - see DFD 5.4.

DFD: 1.6 Manage Highway Rail Intersections

This DFD shows the processes that make up the Highway Rail Intersection facility within the Manage Traffic function. The process in this DFD contains the principal functions that provide User Service 30, Highway Rail Intersection management.

The key points about the facility are as follows:
· Management of the HRI is accomplished by direct interfaces to railroad operations,
· Wayside equipment interface provides real-time information about approaching trains,
· Provides a two way interactive exchange of traffic data between ITS and a railroad operator.
· Provides inputs to ITS traffic demand management,
· Receives traffic surveillance data from sensors
· Provides real-time crossing status
· Controls devices at the grade crossing and nearby intersections by passing device control requests
· Provides status of device controls to the Manage HRI Traffic process.
· Provides grade crossing status and information to detect and manage incidents around grade crossings.
· Reports incident information that may be important to trains and grade crossing operation
· Reports HRI status to the Manage Travel Demand process so that HRI operations can be factored into demand management algorithms and decisions.

There are five processes in this DFD, all of which are DFD themselves:
a) Manage HRI Traffic Volume (DFD 1.6.1)

b) Interact with Rail Operations (DFD 1.6.2)
c) Manage HRI Rail Traffic (DFD 1.6.3)
d) Interact with Traffic Management (DFD 1.6.4)
e) Monitor HRI Status (DFD 1.6.5)

All of the data about traffic at an HRI is collected and managed by processes within DFD (a) and (c). The processes in (d) interact with other ITS Traffic Management functions to obtain surveillance data and control strategies used by the processes in (e).

DFD: 1.6.1 Manage HRI Traffic Volume

This DFD shows the processes that are responsible for managing traffic volume at an HRI and in the immediate vicinity. The key points about the facility are as follows:

- Monitors local sensor data obtained from traffic surveillance;
- Detects hazardous conditions or potential hazards at an HRI;
- Detects real-time HRI blockages or collisions;
- Provides advanced warnings where warranted.

There are seven processes in this DFD and four are DFDs themselves:

a) Detect Roadway Events (1.6.1.1)
b) Activate HRI Device Controls (DFD 1.6.1.2)
c) Perform Equipment Self-Test (1.6.1.3)
d) Provide Advisories and Alerts (DFD 1.6.1.4)
e) Detect HRI Hazards (1.6.1.5)
f) Provide Advance Warnings (DFD 1.6.1.6)
g) Execute Local Control Strategy (DFD 1.6.1.7)

The collected data is by process (a). Process (a) is responsible for detecting any roadway events and then determining and reporting the current state of traffic. Processes (a), (e), and (f) depend on processes in (d) and (g). Processes in (d) are responsible for providing advisories and alerts as well as the conditions at the HRI. The processes in (g) are responsible for managing and executing control strategies at the HRI.

DFD: 1.6.1.2 Activate HRI Device Controls

This DFD controls different types of devices for translating traffic management strategies into the appropriate sequences of traffic device control requests. The key points about the facility are as follows:

- Interprets HRI control messages,
- Activates HRI control devices.

There are six processes in this DFD:

a) Control HRI Traffic Signals (1.6.1.2.1)
b) Control HRI Warnings and Barriers (1.6.1.2.2)
c) Provide SSR Device Controls (1.6.1.2.3)
d) Provide HSR Device Controls(1.6.1.2.4)
e) Manage Device Control (1.6.1.2.5)
f) Maintain Device State (1.6.1.2.6)

The collected data is received by process (a). Process (a) distributes the data to all other processes within the DFD. Processes (e) and (f) distribute the data to other facilities in the Manage Traffic function.

DFD: 1.6.1.4 Provide Advisories and Alerts

This DFD generates and reports on conditions at the HRI. This process generates the message to advise and protect all persons approaching and crossing railroad crossings. This process reports real-time HRI

traffic volume advisories as they approach an HRI.

There are four processes in this DFD:
a) Generate Alerts and Advisories (1.6.1.4.1)
b) Provide Closure Parameters (1.6.1.4.2)
c) Report Alerts and Advisories (1.6.1.4.3)
d) Report HRI Status on Approach (1.6.1.4.4)

The collected data is received by processes all processes to determine the need to generate an alert, to provide closure, and to report HRI status. Process (a) and (c) depend on processes (b) and (d). Processes (c) and (d) distribute data to other facilities in the Manage Traffic function.

DFD: 1.6.1.6 Provide Advance Warnings

This DFD is responsible for predicting likely conditions at the HRI and providing advance warnings where warranted. The key points about the facility are as follows:
· Detect HRI closure,
· Detect vehicle/train collisions.

There are two processes in this DFD:
a) Close HRI on Detection(1.6.1.6.1)
b) Detect Imminent Vehicle/Train Collision(1.6.1.6.2)

All data is received by process (a) and also sent to other facilities within the Manage Traffic function. Process (b) reports any vehicle/train collisions and reports the collision to process (a).

DFD: 1.6.1.7 Execute Local Control Strategy

This DFD is responsible for maintaining the local traffic control parameters and for selecting the appropriate strategy, based on roadway events and detected hazards. The key points about thefacility are as follows:
· Responsible for controlling traffic volume at passive grade crossings,
· Responsible for closing the HRI to traffic.

There are two processes in this DFD:
a) Control Traffic Volume at Active HRI (1.6.1.7.1)
b) Close HRI on Command (1.6.1.7.3)

The collected data is received and sent to other Manage Traffic functions by process (a). Processes (a) and depend on process (b). Data is collected from process (a) and passes HRI closure messages to process (b).

DFD: 1.6.2 Interact with Rail Operations

This DFD is responsible for interacting with railroad owned and operated operations management facilities. The key points about the facility are as follows:
· Exchanges data with rail operations,
· Provides and maintains a current store of rail operations data.

There are three processes in this DFD:
a) Exchange Data with Rail Operations (1.6.2.1)
b) Manage Alerts and Advisories (1.6.2.2)

c) Manage Rail Traffic Control Data (1.6.2.3)

The collected data is received by process (a) which is dependent on processes (b) and (c). Process (s) is responsible for exchanging data with rail operations. The data collected in process (a) is also distributed to other Manage Traffic function.

DFD: 1.6.3 Manage HRI Rail Traffic

This DFD is responsible for performing real-time equipment checks and reporting the status of the equipment associated with an active grade crossing. The key points about the facility are as follows:

- Responsible for generating advisories/ alerts,
- Responsible for protecting all traffic approaching and crossing grade crossings.

There are three processes in this DFD:

a) Interact with Wayside Systems (1.6.3.1)
b) Advise and Protect Train Crews (1.6.3.2)
c) Provide ATS Alerts (1.6.3.3)

The collected data is received by process (b). Process (a) interacts with the wayside equipment system and reports the status to process (c). Data collected in process (b) is distributed to process (a) to report HRI data. All of the processes distribute data to other Manage Traffic functions.

DFD: 1.6.4 Interact with Traffic Volume Management

This DFD generates and reports on conditions at the HRI. The key points about the facility are as follows:

- Coordinate and manage HRI closures,
- Exchange data with other traffic management processes.

There are two processes in this DFD:

a) Manage HRI Closures (1.6.4.1)
b) Exchange Data with Traffic Management (1.6.4.2)

The collected data is received by process (b). Process (a) is responsible for managing HRI closures and receiving HRI real time traffic data. Data is distributed to other processes within the Manage Traffic function by process (b).

DFD: 1.6.5 Monitor HRI Status

This DFD contains the processes associated with monitoring the overall operation of the HRI, maintaining a consistent "health status" and reporting to both Traffic Management and Rail Operations. The key points about the facility are as follows:

- Initiates reports of health status of HRI to Traffic Management and Rail Operations,
- Manages a data log of HRI operations.

There are three processes in this DFD:

a) Provide Interactive Interface (1.6.5.1)
b) Determine HRI Status (1.6.5.2)
c) Maintain HRI Closure Data (1.6.5.3)

The collected data is received by process (b) which depend on both processes (a) and (c). Process (b) determines the status of a HRI and reports the status to processes (a) and (c).

5.2 DFD: 2 Manage Commercial Vehicles

The processes in this DFD make up the Manage Commercial Vehicles function. This function is responsible for providing facilities for the management of commercial vehicle operations, with their primary concern being the efficient management of Commercial Vehicles, e.g., electronic credentials, tax filing, safety checking, and the movement of freight. Although the movement of vehicles is confined to the surface transportation system, interfaces are provided to enable freight to be moved by this and any other means, e.g., specialist carriers using air or sea transport.

The functional processes contained in this DFD satisfies the User Service Requirements from the following User Services:
4.1 Commercial Vehicle Electronic Clearance
4.2 Automated Roadside Safety Inspection
4.3 On-Board Safety Monitoring
4.4 Commercial Vehicle Administrative Processes
4.5 Hazardous Material Incident Response
4.6 Commercial Fleet Management

The key points about this function are as follows:
- Facilities provided for commercial vehicle managers and drivers who are their own managers;
- Trip planning and electronic credential and tax filing provided for managers and owner drivers;
- Managers and owner drivers may pre-clear vehicles through roadside check station facilities;
- Roadside facilities can check vehicles for pre-clearance, safety and international border clearance;
- CVO inspectors can override pass/pull-in decisions at roadside facilities;
- Details of actions at roadside facilities recorded on vehicle's on-board tag;
- Vehicle collects data about its operation and stores it on-board;
- Manager can access on-board vehicle data and exchange messages with driver;

There are seven processes subordinate to this DFD, six of which are themselves DFDs:
a) Manage Commercial Vehicle Fleet Operations (DFD 2.1).
b) Manage Commercial Vehicle Driver Operations (DFD 2.2).
c) Provide Commercial Vehicle Roadside Facilities (DFD 2.3).
d) Provide Commercial Vehicle Data Collection (DFD 2.4).
e) Administer Commercial Vehicles (DFD 2.5).
f) Provide Commercial Vehicle On-board Data (DFD 2.6).
g) Manage Cargo (2.7).

DFD: 2.1 Manage Commercial Vehicle Fleet Operations

The processes in this DFD make up the Manage Commercial Vehicle Fleet Operations facility within the manage Commercial Vehicles function. These processes enable commercial fleet managers to plan commercial vehicle routes taking into account the needs of this type of vehicle, as well as the electronic credential and tax filing needed to use the route. The manager is provided with facilities to use the route data to set up a set of delivery instructions for the driver. Information can also be exchanged between the manager and the driver, and the manager can up-load and review a copy of the data that has been ollected on-board the vehicle.
The key points about the facility are as follows:
- Managers may plan trips using either static route selection, or request a dynamic route selection;
- Static route selection is based on surface street and freeway network geometry;
- Dynamic route selection based on current and future traffic conditions;
- Managers do credential and tax filing to pre-clear vehicles at roadside checkstation facilities;
- Managers store routes for access by drivers with cargo drop-off/pick-up details added;
- Managers can access on-board vehicle data and exchange general data with the driver.

There are six processes in this DFD:
a) Manage Commercial Fleet Electronic Credentials and Tax Filing (2.1.1).
b) Provide Commercial Fleet Static Route (2.1.2).
c) Provide Flt Mgr Electronic Credentials and Tax Filing Interface (2.1.3).
d) Provide Fleet Manager Commercial Vehicle Communications (2.1.4).
e) Provide Commercial Vehicle Driver Routing Interface (2.1.5).
f) Manage Driver Instruction Store (2.1.6).

DFD: 2.2 Manage Commercial Vehicle Driver Operations

This DFD shows the processes that make up the Manage Commercial Vehicle Driver Operations facility within the Manage Commercial Vehicles function. These processes enable commercial vehicle drivers who manage their own vehicles, to plan commercial vehicle routes taking into account the needs of this type of vehicle, as well as the electronic credential and tax filing needed to use the route. The driver is provided with facilities to up-load and review a copy of the data that has been collected on-board the vehicle.

The key points about the facility are as follows:
· Facilities provided for commercial vehicle owner/drivers who do their own management;
· Facilities are available from a driver's personal portable device (ppd);
· Drivers may plan trips using either static route selection, or request a dynamic route selection;
· Static route selection is based on surface street and freeway network geometry;
· Dynamic route selection based on current and future traffic conditions;
· Drivers do credential and tax filing to pre-clear vehicles at roadside checkstation facilities;
· Drivers can access on-board vehicle data.

There are four processes in this DFD:
a) Manage CV Electronic Credential and Tax Filing Interface (2.2.1).
b) Provide Vehicle Static Route (2.2.2).
c) Provide CV Driver Electronic Credential and Tax Filing Interface (2.2.3).
d) Provide Commercial Vehicle Driver Communications (2.2.4).

DFD: 2.3 Provide Commercial Vehicle Roadside Facilities

The processes in this DFD are responsible for the Provide Commercial Vehicle Roadside Facilities facility within the Manage Commercial Vehicles function. These processes enable roadside checkstation facilities to selectively pull-in approaching vehicles. They provide the capability for commercial vehicles to be pre-cleared through screening and international border crossing checks and to carry-out safety checks.
The key points about the facility are as follows:
· Credential, international border and safety clearance provided at roadside checkstations;
· Credential clearance given if vehicle of the same physical characteristics as that pre-cleared;
· Cargo lock tag checked for tampering at international border crossing facilities;
· Safety clearance given if vehicle passes specified criteria and no poor safety history found;
· Pass/pull-in request sent to driver by roadside sign(s) and in-vehicle display unit;
· Pass/pull-in decisions subject to override by CVO inspector at the roadside facility;
· Roadside facility may be configured for any of the credential, border crossing or safety checking.

There are eight processes in this DFD, two of which are themselves DFDs:
a) Produce Commercial Vehicle Driver Message at Roadside (2.3.1).
b) Provide Commercial Vehicle Clearance Screening (DFD 2.3.2).
c) Provide Roadside Commercial Vehicle Safety (DFD 2.3.3).

d) Detect Commercial Vehicle (2.3.4).
e) Provide Commercial Vehicle Roadside Operator Interface (2.3.5).
f) Provide Commercial Vehicle Reports (2.3.6).
g) Produce Commercial Vehicle Driver Message on Vehicle (2.3.7).
h) Provide Commercial Vehicle Border Screening (2.3.8).

DFD: 2.3.2 Provide Commercial Vehicle Clearance Screening

The processes in this DFD make up the Provide Commercial Vehicle Clearance Screening facility within the Manage Commercial Vehicles function. These processes enable roadside facilities to pull-in approaching vehicles whose credentials have not been pre-cleared.

The key points about the facility are as follows:
· Pre-clearance of a commercial vehicle based on its identity plus size and weight is provided;
· All pass/pull-in decisions may be overridden by the CVO inspector override and are logged.

There are two processes in this DFD:
a) Administer Commercial Vehicle Credentials Database (2.3.2.1).
b) Process Screening Transactions (2.3.2.2).

DFD: 2.3.3 Provide Roadside Commercial Vehicle Safety

The five processes in this DFD are responsible for the Provide Roadside Commercial Vehicle Safety facility within the Manage Commercial Vehicles function. These processes enable roadside facilities to pull-in approaching vehicles with a poor safety history and to carry out roadside inspections.

The key points about the facility are as follows:
· Vehicles are pulled in if they, their owners or drivers have had previous safety problems;
· Roadside safety inspection may be carried out by CVO inspector using hand held terminal;
· All pass/pull-in decisions may be overridden by the CVO inspector and are logged.

There are five processes in this DFD:
a) Provide Commercial Vehicle Checkstation Communications (2.3.3.1).
b) Provide Commercial Vehicle Inspector Hand Held Terminal Interface (2.3.3.2).
c) Administer Commercial Vehicle Roadside Safety Database (2.3.3.3).
d) Carry-out Commercial Vehicle Roadside Safety Screening (2.3.3.4).
e) Carry-out Commercial Vehicle Roadside Inspection (2.3.3.5).

DFD: 2.4 Provide Commercial Vehicle Data Collection

The processes in this DFD are responsible for the Provide Commercial Vehicle Data Collection facility within the Manage Commercial Vehicles function. These processes are responsible for collecting data from on-board sensors and from the driver. The data is kept in an in-vehicle data store which can be transmitted to the roadside check facility to enable safety checks and roadside inspections. The contents of the store can also be sent to the commercial vehicle driver and fleet manager.
The key points about the facility are as follows:
· Automatic collection and processing of vehicle operational, safety and driver data;
· Commercial vehicle driver is able to enter data on cargo details, fuel consumed, etc.;
· Recorded data sent to the roadside checkstation facility or commercial vehicle manager on request;
· Commercial vehicle driver and vehicle manager can exchange general messages as textual data.

There are seven processes in this DFD:
a) Communicate Commercial Vehicle On-board Data to Roadside (2.4.1).

b) Collect On-board Commercial Vehicle Sensor Data (2.4.2).
c) Analyze Commercial Vehicle On-board Data (2.4.3).
d) Provide Commercial Vehicle Driver Interface (2.4.4).
e) Communicate Commercial Vehicle On-board Data to Vehicle Manager (2.4.5).
f) Provide Commercial Vehicle On-board Data Store Interface (2.4.6).
g) Manage CV On-board Sensor Data Store (2.4.7).

DFD: 2.5 Administer Commercial Vehicles

The processes in this DFD are responsible for the Administer Commercial Vehicles facility within the Manage Commercial Vehicles function. These processes enable commercial vehicle pre-clearance to be managed and data from roadside checkstation facilities to be analyzed. These processes provide the electronic credential and tax filing functions that interface to the commercial vehicle manager and commercial vehicle driver acting as a fleet manager.

The key points about the facility are as follows:

· Provides a central facility for the processing of electronic credential and tax filing;
· Pre-clearance obtained for the selected route through roadside check facilities, including international borders;
· Roadside checkstation facility logs analyzed daily for safety problems and storage;
· Transportation and declaration information analyzed for border clearance assessments;
· Stored roadside facility logs available for output to the commercial vehicle manager;
· Collect and manage border clearance data used by the checkstation.

There are ten processes in this DFD, and one is itself a DFD:

a) Manage Commercial Vehicle Trips and Clearances (2.5.1).
b) Obtain Electronic Credential and Tax Filing Payment (2.5.2).
c) Manage Border Clearances (DFD 2.5.3).
d) Communicate with Other Commercial Vehicle Administration System (2.5.4).
e) Manage Commercial Vehicle Credentials and Enrollment (2.5.5).
f) Output Commercial Vehicle Enrollment Data to Roadside Facilities (2.5.6).
g) Process Commercial Vehicle Violations (2.5.7).
h) Process Data Received from Roadside Facilities (2.5.8).
i) Manage Commercial Vehicle Archive Data (2.5.9).
j) Manage CV Database Store (2.5.10).

DFD: 2.5.3 Manage Border Clearances

The processes in this DFD are responsible for the Manage Border Clearances facility within the Manage Commercial Vehicles function. These processes enable commercial vehicles to communicate with Trade Regulatory Agencies and allow data from Trade Regulatory Agencies and roadside checkstation facilities to be analyzed in support of international border clearance activities.

The key points about the facility are as follows:

· Provides a means for communicating with Trade Regulatory Agencies;
· Analyze information obtained for border clearance through roadside check facilities.

There are two processes in this DFD:

a) Communicate With Trade Regulatory Agencies (2.5.3.1).
b) Analyze Border Clearance Data (2.5.3.2).

DFD: 2.6 Provide Commercial Vehicle On-board Data

The processes in this DFD are responsible for the Provide Commercial Vehicle On-board Data facility within the Manage Commercial Vehicles function. These processes enable data to be loaded into

commercial vehicle tags by the vehicle manager, driver, or roadside facilities passed by the vehicle. This data will enable it to be recognized at each roadside check facility and can be used by the facility for pre-clearance and safety checks. For clearance at international border crossings, the contents of the lock tag can also be sent to the roadside facility.
The key points about the facility are as follows:
· Enables the vehicle tag to be loaded with the data by the commercial vehicle manager or driver;
· Tag data is output on request to each roadside facility approached by the vehicle;
· Tag data is updated by the roadside facility with the results of the pass/pull-in decision.

There are five processes in this DFD:
a) Provide Commercial Vehicle Manager Tag Data Interface (2.6.1).
b) Transmit Commercial Vehicle Tag Data (2.6.2).
c) Provide Commercial Vehicle Driver Tag Data Interface (2.6.3).
d) Provide Lock Tag Data Interface (2.6.4).
e) Manage Commercial Vehicle Tag Data Store (2.6.5).

5.3 DFD: 3 Provide Vehicle Monitoring and Control

This DFD shows the processes that make up the Provide Vehicle Monitoring and Control function. This function is responsible for providing facilities for the automatic control of vehicles, either in basic form, or as required for operation in platoons or on Automatic Highway System (AHS) lanes. The key points about the function are as follows:
· Emergency services automatically notified when the vehicle is involved in a collision;
· Cargo information is provided to emergency services if any is present on the vehicle;
· Vehicle control provided at various levels of automation from basic to full AHS level;
· Automatic vehicle control canceled by driver action or failure of built in self test processes.

There are four processes in this DFD, three of which are DFDs themselves:
a) Monitor Vehicle Status (DFD 3.1)
b) Provide Automatic Vehicle Operation (DFD 3.2)
c) Provide Automatic Emergency Notification (DFD 3.3)
d) Enhance Driver's Vision (3.4)

Although links are provided between the processes in (a) and those in (b), (c) and (d), they can operate independently. All of the processes use the Provide Information Services facility - see DFD 6.2, to interface with the driver for the input of commands and the output of information. Another part of the Provide Driver and Traveler function (see DFD 6) is used to provide the vehicle's location for the automatic notification of emergency situations.

DFD: 3.1 Monitor Vehicle Status

The three processes in this DFD provide the Monitor Vehicle Status facility within the Provide Vehicle Monitoring and Control function. The processes in this facility monitor vehicle operation, driver performance and data provided from the roadway on which the vehicle is operating. This data is used to generate messages for output to the driver and may also provide input to the vehicle control facilities for automatic action. The key points about the facility are as follows:
· Potentially unsafe vehicle conditions detected by on-board vehicle sensors;
· Driver's condition continuously analyzed and warning data provided if found unsafe;
· Unsafe vehicle and driver conditions notified to the driver through safety and warning messages;
· Crash and collision avoidance data automatically provided if unsafe condition likely;
· In the event of a potential collision, crash restraint deployment action is also initiated.

There are three processes in this DFD:
a) Produce Collision and Crash Avoidance Data (3.1.1)
b) Carry-out Safety Analysis (3.1.2)
c) Process Vehicle On-board Data (3.1.3)

The above processes provide an early form of vehicle control that is limited to on-board vehicle safety analysis and crash avoidance functions. The analysis of data collected on-board the vehicle or from its surroundings is carried out by process (c). Safety analysis of the data from process (c) is carried out by process (b) and potential collision analysis by process (a). The safety and position warnings that they generate will be output to the Provide Information Services facility - see DFD 6.2. These two processes will also output data to the Provide Vehicle Control facility - see DFD 3.2.3, for action, if the vehicle is so equipped. These processes can be applied to all types of vehicle with the exception of the safety analysis in process (b), which need not be applied commercial vehicles as they have their own on-board safety analysis systems.

DFD: 3.2 Provide Automatic Vehicle Operation

This DFD shows the seven processes that make up the Provide Automatic Vehicle Operation facility within the Provide Vehicle Monitoring and Control function. The processes in this facility provide automatic vehicle operation, either for a single vehicle, or as part of a platoon, and may use AHS lanes.

The key points about the facility are as follows:
- Automatic vehicle control functions provided for speed, lane position and platoon following;
- Driver activation of vehicle controls will cancel automatic vehicle control;
- Failure of built in self test function for critical processes will also cancel automatic vehicle control;
- AHS operating parameters may be changed to improve lane utilization efficiency;
- AHS facilities provided in separate processes for implementation when the technology matures.

There is one DFD and eight processes in this DFD:
a) Provide Driver Interface (3.2.1)
b) Provide AHS Control (3.2.2)
c) Provide Vehicle Control (DFD 3.2.3)
d) Process Sensor Data for AHS input (3.2.4)
e) Check Vehicle for AHS eligibility (3.2.5)
f) Manage AHS Check-in and Check-out (3.2.6)
g) Manage AHS Operations (3.2.7)
h) Provide Automated Lane Changing (3.2.8)

Process (a) provides the means by which these processes can communicate with the driver interface provided in the Provide Information Services facility - see DFD 6.2. This is also the mechanism by which information about the status of automatic vehicle control is output to the driver.

The AHS check-in and check-out facility is provided by processes (e) through (h). They are provided with AHS operational data by the Manage Demand facility - see DFD 1.4, through process (g). This process also provides AHS operational data to the Manage Traffic function which forwards the data to the Manage Archived Data function - see DFD 8.

The processes in this DFD can be divided up into two groups, those concerned with basic automatic vehicle control (processes (a) and (c)) and those concerned with the AHS facilities (processes (b), plus (d) through (h)). This is to enable the latter to be deployed after the processes in the former group and allows for the later development of a mature AHS technology.

DFD: 3.2.3 Provide Vehicle Control

This DFD shows the processes that make up the Provide Vehicle Control facility within the Provide Vehicle Monitoring and Control function. The processes in this facility provide automatic vehicle control including the interface to the platoon in which it may be running.

The key points about the facility are as follows:

- Simple speed, headway and lane position control functions are provided;
- The more complicated platoon following function is provided as a separate facility;
- Incorrect vehicle control command response feedback will cause automatic control to be disabled;
- Vehicle control disabled if driver activation of the controls detected;
- Any failure of built in self test in control processes will also disable vehicle control.

There are six processes and one DFD in this DFD:

a) Provide Command Interface (3.2.3.1)
b) Manage Platoon Following (3.2.3.2)
c) Process data for Vehicle Actuators (3.2.3.3)
d) Provide Servo Control (DFD 3.2.3.4)
e) Process Vehicle Sensor Data (3.2.3.5)
f) Communicate with other Platoon Vehicles (3.2.3.6)

The basic vehicle control facilities are provided through processes (c) and (d), with inputs being provided from on-board vehicle sensors through process (e) and the driver through process (a). Output of the control status to the driver is provided through process (a). Optionally the exchange of data with other vehicles to enable their operation as part of a platoon can be provided through processes (b) and (f). These two processes can be implemented at a later date from the others, enabling basic vehicle control to be introduced ahead of the more advanced facilities for platooning vehicles.

DFD: 3.2.3.4 Provide Servo Controls

This DFD shows the processes that are in the Provide Servo Controls facility within the Provide Vehicle Monitoring and Control function. The processes in this facility provide automatic control of the basic vehicle functions such as speed and position.

The key points about the facility are as follows:

- Separate processes provided for control of throttle, brake and steering;
- One or more of these processes may be implemented on a vehicle;
- Driver use of the vehicle controls immediately cancels automatic control operation;
- All processes have built in self test functions canceling automatic control when a failure is detected.

There are five processes in this DFD:

a) Provide Speed Servo Control (3.2.3.4.1)
b) Provide Headway Servo Control (3.2.3.4.2)
c) Provide Lane Servo Control (3.2.3.4.3)
d) Provide Change Lane Servo Control (3.2.3.4.4)
e) Provide Vehicle Control Data Interface (3.2.3.4.5)

The five processes have been organized so they can be implemented separately and not necessarily at the same time. Processes (a) through (d) provide particular control functions, while process (d) provides interfaces for communications with other processes and with the store of vehicle control data. This store is provided as part of the vehicle's control system; and is pre-loaded with data during its manufacture. It may be changed centrally from the Manage Demand facility - see DFD 1.4. This enables the way in

which AHS lane operation is carried out to be adjusted to suit demand management strategies. Any such changes will be lost and the store returned to its original settings when the vehicle is switched off. This is to prevent the data being changed by unauthorized means which could be prejudicial to automatic vehicle operation.

DFD: 3.3 Provide Automatic Emergency Notification

This DFD shows the processes that provide the Provide Automatic Emergency Notification facility within the Provide Vehicle Monitoring and Control function. The processes in this facility enable the vehicle to automatically inform the Manage Emergency Services function of its involvement in an incident.

The key points about the facility are as follows:

- Automatic emergency notification provided in the event of an accident regardless of driver condition;
- Vehicle location and identity provided automatically.

There are two processes in this DFD:

a) Provide Communications Function (3.3.1)
b) Build Automatic Collision Notification Message (3.3.2)

These processes are designed to enable notification of an accident or other kind of emergency involving any combination of the driver, the vehicle, to be sent as soon as possible to the Manage Emergency Services function - see DFD 5. The data from the vehicle will be generated automatically by process (a), plus process (b) if the vehicle is carrying any cargo. This enables the data to reach the emergency services though process (a) even if the driver is unable to initiate the action. Although the processes depend on others in the facility for data, they will each operate continuously and independently so that the data can processed, stored and accumulated as fast as possible bearing in mind the urgency with which their work has to be done.

5.4 DFD: 4 Manage Transit

This functional process performs the management functions that apply to fixed routed transit services, plus the provision of the flexibly routed transit service (demand responsive transit). Information is provided to the Transit Driver and Transit User directly through this function, but information for the traveler trip planning and guidance is provided through the Provide Driver and Traveler Services function. Interaction with the Manage Traffic function is provided to support priority at signalized intersections and freeway ramps, and also to reflect the overall coordination between transit and traffic management services (including provision for transit vehicle location data to be passed to traffic management and maintenance and construction as probe information. Interaction is also provided with the Provide Electronic Payment Services function to enable the advanced payment of transit fares and other services, and with the Maintenance and Construction function to coordinate scheduled maintenance and construction work activities including anticipated closures and impact to the roadway that will affect transit routes or schedules.

The User Services Requirements that are included in this functional process are:

2.1 Public Transportation Management
2.2 En-Route Transit Information
2.3 Personalized Public Transit
2.4 Public Travel Security

The processes in this DFD comprise the Manage Transit function. This function is responsible for the management of transit operations within some or all of the areas served by ITS. The key points about the function are as follows:

- monitoring of transit services operation uses data collected on-board transit vehicles;
- strategies available for returning late running transit vehicles to normal operation;
- transit services planned using current operational data and input from various other sources;
- demand responsive transit provides personalized transport for travelers on request;
- security coordination and monitoring provides links to the Manage Emergency Services function;
- transit driver activities can be assigned using past performance and other factors;
- transit vehicle maintenance can be scheduled and work assigned to technicians;
- transit fares can be collected either on-board the vehicle or at the roadside;
- transit service information and data from approaching transit vehicles is available at the roadside.

The processes subordinate to this DFD are themselves DFDs:

(a) Operate Transit Vehicles and Facilities (4.1)
(b) Plan and Schedule Transit Services (4.2)
(c) Schedule Transit Vehicle Maintenance (4.3)
(d) Support Transit Security and Coordination (4.4)
(e) Generate Transit Driver Schedules (4.5)
(f) Collect Transit Fares in the Vehicle (4.6)
(g) Provide Transit User Roadside Facilities (4.7)

The key processes in this function are those provided by the facilities in (a) and (b), since they both provide data to other parts of the Manage Transit function, and in the case of process (b) to other ITS functions. Implementation of the processes in (c) through (g) without these two facilities will limit the effectiveness of their operation. However stand-alone implementation of some or all of the processes in (c) through (g) is possible if particular implementations do not require the full functionality. It is also not necessary to include the transit fare collection facilities provided by processes in both (f) and (g) in the same implementation.

Although many of the processes and some of the variables they use refer to a "transit vehicle", the definition of what this actually means is flexible. Thus the processes can be applied to a fleet of Light Rail Vehicles (LRVs) or Light Rail Trams (LRTs), or taxis used for demand responsive transit services, as well as a fleet of buses used in the roadway.

The term "transit system operator" is frequently used within the descriptions of the facilities in this function. It is intended to represent an employee of the functional entity that is providing transit services. This employee is expected to oversee the operation of the transit services and to provide inputs to aid its operation, as required by the various facilities. A "transit fleet manager" is someone who is also employed by the functional entity that is providing transit services, but who has more decision making authority than a transit system operator.

The transit route data is supplied to the map update provider to enable the supplier to produce transit route maps and include them in the digitized map databases sent to other ITS functions. The raw route data is also made available to other ITS functions so that where possible they can display transit route maps using their current map display data.

DFD: 4.1 Operate Transit Vehicles and Facilities

The processes in this DFD provide the Operate Transit Vehicles and Facilities feature for the Manage Transit function. They provide information on the current state of operation of transit vehicles, and how they are performing against the schedules. These processes collect operational data from transit vehicles for use by other facilities in the Manage Transit and other ITS functions, and for the management of the

deviation of transit vehicles from their schedules. The processes are responsible for keeping vehicles on schedule and taking action to get them back on schedule when any deviations are found. Two types of actions are supported, one for single vehicles and the other for multiple vehicles. In both cases, instructions will be sent to the vehicle driver(s) and vehicle priority requested through the Manage Traffic function - see DFD 1. This function includes sending transit probe and vehicle location data to the Manage Traffic function and receiving data concerning current incidents in the roadway that affect transit operations.

The key points about the facility are as follows:
- data from sensors on-board transit vehicles is stored centrally for use within the rest of the facility;
- data is used to provide other ITS functions with information about transit system performance;
- information about arrival time of the next service is provided for use at roadside locations;
- correction of service deviations is provided separately for single and multiple vehicles;
- single vehicle corrective action uses priority at intersections and driver instructions;
- multiple vehicle corrective action uses service changes and wide ranging intersection priority;
- deviation data is sent to the multimodal transportation service provider for service coordination;
- asset restriction data (height, weight, etc.), maintenance and construction work planning information, and road weather information, is distributed to this function from the Maintenance and Construction function for use in determining deviations from transit routes and schedules.

There are seven processes and one DFD that comprise this DFD:
(a) Process Transit Vehicle Sensor Trip Data (4.1.1)
(b) Determine Transit Vehicle Deviation and Corrections (DFD 4.1.2)
(c) Provide Transit Vehicle Location Data (4.1.3)
(d) Manage Transit Vehicle Deviations (4.1.4)
(e) Provide Transit Vehicle Status Information (4.1.5)
(f) Manage Transit Vehicle Operations Data (4.1.6)
(g) Provide Transit Vehicle Deviation Data Output Interface (4.1.7)
(h) Provide Transit Operations Data Distribution Interface (4.1.8)
(i) Process Transit Vehicle Sensor Maintenance Data (4.1.9)

Data from on-board the transit vehicle is provided by process (a) and (on request) from process (i). It is supplied to process (f) for storage. The data from process (a) is also provided to processes in (b), and to process (c). This process is responsible for providing the vehicle location based on the standard location data received from the Provide Driver and Traveler Services function (see DFD 6), plus inputs peculiar to transit vehicle operation, e.g., passenger doors opening. The location data is again sent for storage by process (f) and used by processes in (b), and process (d) for the management of deviations from schedules. Processes (e) and (h) provide access to the stored operational data to other parts of the Manage Transit function, the transit fleet manager, and to other ITS functions. Process (d) determines the corrective action for service deviations that are large or in the rural environment, where the effects can be different from those in the urban environment. Output of service corrections produced by this process is provided to multimodal transportation service providers through process (g), and to transit vehicle drivers through the interface process in (b).

The above processes form a cohesive group. Partial implementation could be provided if, for example, the facility for the organized restoration of transit services after any kind of deviation was not required. Process (g) can be omitted where there are no other transportation services with which coordination needs to be maintained.

DFD: 4.1.2 Determine Transit Vehicle Deviation and Corrections

The processes in this DFD provide the Determine Transit Vehicle Deviation and Corrections facility within the Manage Transit function. They are responsible for providing a facility that enables transit

vehicle deviations to be calculated and corrective instructions provided to the driver when the deviation is small or in an urban environment. These processes use the data provided by the Process Transit Vehicle Sensor Trip Data function plus the current transit routes and schedules to determine the expected time of arrival (ETA) of a transit vehicle and its deviation (if any) from the schedule. Information concerning current incidents on a transit route also affects the transit vehicle deviation from the route or schedule. All of this information is sent for storage so that it can be used by other ITS functions, and is also sent to a process in the main facility in case several vehicles are involved. When the deviation only involves one vehicle, corrective instructions are sent to the driver, individual vehicle priority is requested at intersections, and data is sent to the multimodal transportation service provider to enable coordination with other services.

The key points about the facility are as follows:

- schedule deviations and corrections are determined from transit vehicle position and current schedules;
- corrective instructions are provided to the driver where deviation is small and in urban environments;
- local roadside priority is requested from Manage Traffic function for late running transit vehicles;
- deviation data is sent to other processes for use within this function and by other ITS functions;
- deviation data is sent to the multimodal transportation service provider for service coordination.

There are five processes in this DFD:

(a) Determine Transit Vehicle Deviation and ETA (4.1.2.1)
(b) Determine Transit Vehicle Corrective Instructions (4.1.2.2)
(c) Provide Transit Vehicle Driver Interface (4.1.2.3)
(d) Provide Transit Vehicle Correction Data Output Interface (4.1.2.4)
(e) Request Transit Vehicle Priorities (4.1.2.5)

The determination of transit vehicle deviation and estimated time of arrival (ETA) is carried out by process (a). The data is passed to process (b) for determination of the corrective instructions and to process (c) for output to the transit vehicle driver. When the instructions are produced by process (b), they are also output to the driver by process (c) and are sent to the multimodal transportation service provider through process (d). Requests for priority for the transit vehicle at traffic intersections are sent to the Provide Device Control facility (see DFD 1.2) through process (e).

The above processes form a cohesive group from which only the Provide Transit Vehicle Correction Data Output Interface function could be omitted without loss of facilities. This process is not needed where there are no other transportation services with which coordination has to be maintained.

DFD: 4.2 Plan and Schedule Transit Services

The processes in this DFD provide the Plan and Schedule Transit Services facility within the Manage Transit function. The term “transit services” is used as the collective name for transit routes and schedules. These processes provide the management of the route planning and scheduling of both regular and demand responsive transit services. The generation of new regular transit routes and schedules is done at the request of the transit fleet manager and takes into account the operational data plus input from a variety of other sources. New schedules can be generated separately from routes, and can be produced in response to inputs from parking lots if a change to the current park and Ride (P+R) service is needed. The new routes and services are made available to this and other ITS functions, plus external agencies. The generation of demand responsive transit services is provided in response to requests from the Provide Driver and Traveler Services function - see DFD 6. The services will be personalized to suit the traveler’s request and will make use of regular transit services where possible.

The key points about the facility are as follows:

- transit service determination is initiated by the transit fleet manager and uses a variety of inputs;

- transit service details are sent to other Manage Transit facilities and ITS functions;
- transit service details are sent to other transit centers and multimodal transportation service providers;
- transit service details are sent to Manage Archived Data function;
- transit route details can be used to overlay route data onto existing digitized map data;
- demand responsive transit facility provides personalized transport for travelers;
- demand responsive transit services will use regular services where and when possible;
- current incidents data is received by this function for use in determining deviations from transit routes and schedules.

There are two DFDs and two processes that comprise this DFD:
(a) Provide Demand Responsive Transit Service (DFD 4.2.1)
(b) Provide Transit Plans Store Interface (4.2.2)
(c) Generate Transit Routes and Schedules (DFD 4.2.3)
(d) Manage Transit Archive Data (4.2.4)

The details of transit routes generated by processes in (c) can be used by other facilities as the background to transit data displays. They are also sent to the map update provider. This enables the provider to generate the route details in digitized form as part of the next map data update, and to provide transit route information by other means, such as printed transit maps, etc.

The processes are organized so that either the demand responsive transit or regular transit service determinations can be omitted from any particular implementation. To this end they each have their own separate communication links with the transit fleet manager and other ITS functions.

DFD: 4.2.1 Provide Demand Responsive Transit Service

The processes in this DFD comprise the Provide Demand Responsive Transit Service facility within the Manage Transit function. The processes in this facility generate transit schedules that are tailored to the specific needs of travelers. These processes provide the response to a traveler's request for a demand responsive transit service. This request is received from the Provide Driver and Traveler Services function and will therefore be made as part of a trip plan by the traveler. Details of the proposed service are sent back to the traveler for confirmation, after which they are sent to both the transit driver and the transit fleet manager.

The key points about the facility are as follows:
- demand responsive transit services tailored to a traveler's needs are requested as part of trip plans;
- demand responsive transit services will be integrated into regular transit services if possible;
- demand responsive transit service is only activated after confirmation from the traveler;
- demand responsive transit service details are made available for regular transit service generation.

There are six processes in this DFD:
(a) Process Demand Responsive Transit Trip Request (4.2.1.1)
(b) Compute Demand Responsive Transit Vehicle Availability (4.2.1.2)
(c) Generate Demand Responsive Transit Schedule and Routes (4.2.1.3)
(d) Confirm Demand Responsive Transit Schedule and Route (4.2.1.4)
(e) Process Demand Responsive Transit Vehicle Availability Data (4.2.1.5)
(f) Provide Demand Responsive Transit Driver Interface (4.2.1.6)

The request from the traveler for a demand responsive transit service originates in the Provide Driver and Traveler Services function and is received by process (a). It is passed to process (c) which generates details of the service, using details of the regular transit services, plus the vehicle availability provided through processes (b) and (e). Details of the newly generated service are sent back to the traveler through

process (a) and are stored to await confirmation. This is again received by process (a) which passes it on to process (d). This generates the data for the transit driver, the transit fleet manager, the Generate Transit Driver Schedules facility - see DFD 4.5, and for loading into a store for use by the Generate Transit Routes and Schedules facility - see DFD 4.2.3 below.

The processes above form a cohesive group. They have their own links to other ITS functions and only require a link to the store of regular transit services within the Manage Transit function. However it would be possible for these processes to operate without reference to the regular transit services if coordination with their activities is not required.

DFD: 4.2.3 Generate Transit Routes and Schedules

The processes in this DFD provide the Generate Transit Routes and Schedules facility within the Manage Transit function. The processes in this facility determine new routes and schedules for regular transit operations and output them to other processes within the Manage Transit and other ITS functions. The determination processes use parameters provided by the transit fleet manager, data from other transit centers (Other TRM) and multimodal transportation service providers, operational data from the current regular transit services, as well as the current regular transit routes and schedules, plus the most popular demand responsive transit services. New routes are always determined first and then new schedules applied to them. However new schedules can be determined for an existing set of routes. The route and schedule generation processes are run at the request of the transit fleet manager, but requests for the generation of new schedules can also come from parking lots to accommodate the fluctuating demands of park and ride (P+R) sites. Details of the new services are sent to the sources of input data listed above. They are also sent to other processes in this and other ITS functions. In some cases, this data may also be requested by these processes where it is possible that they have missed an update.

The key points about the facilities that these processes provide are as follows:
- transit service determination is initiated by the transit fleet manager;
- transit service determination uses data from many sources;
- transit schedule determination can be initiated from parking lots to suit park and ride (P+R) needs;
- transit services data is automatically output to other service providers and Manage Transit facilities;
- transit services data is available for use by other ITS functions on request.

There are nine processes that comprise this DFD:
(a) Generate Transit Routes (4.2.3.1)
(b) Generate Transit Schedules (4.2.3.2)
(c) Produce Transit Service Data for External Use (4.2.3.3)
(d) Provide Transit Fleet Manager Interface for Services Generation (4.2.3.4)
(e) Manage Transit Operational Data Store (4.2.3.5)
(f) Produce Transit Service Data for Manage Transit Use (4.2.3.6)
(g) Provide Interface for Other TRM Data (4.2.3.7)
(h) Provide Interface for Transit Service Raw Data (4.2.3.8)
(i) Update Transit Map Data (4.2.3.9)

Transit routes and schedules are generated by processes (a) and (b), at the instigation of the transit fleet manager through process (d). They use data from the stores of operational data provided by process (e), parameters provided by the fleet manager through process (d), the most popular demand responsive transit services, and the current regular transit routes and schedules. The results are sent to the store of raw routes and schedules data through process (h). Data about transit services is automatically sent to other parts of the function through process (f), and on request to other ITS functions through process (c). The exchange of service data with other transit centers is provided through process (g) and only takes place when a new set of services is generated. Transit map data is updated in process (i) from data received from process (d), and placed in a data store for use by other processes in the Manage Transit

function.

The determination of routes and schedules for use by the regular transit operation also takes into account data provided by other transit centers and multimodal transportation service providers. This is designed to achieve coordination between geographically adjacent transit operations areas, and between transit and other types of passenger service provision, e.g., heavy rail, ferries, and airlines.

DFD: 4.3 Schedule Transit Vehicle Maintenance

and airlines.The processes in this DFD provide the Schedule Transit Vehicle Maintenance facility within the Manage Transit function. These processes enable transit vehicle maintenance to be scheduled and monitored, and for the work to be assigned to maintenance technicians. They use the operational data provided by the processes in the Operate Transit Vehicles and Facilities function and the maintenance specifications for each type of vehicle. A log is maintained of all maintenance activity so that current progress on activities and individual technician assignments can be tracked and monitored by the transit fleet manager.

The key points about the facility are as follows:

- maintenance is scheduled from operational data collected by the transit vehicles;
- maintenance schedules include the assignment of technicians to carry out specific tasks;
- the transit fleet manager has ultimate control over all maintenance activities.

There are seven processes in this DFD:

(a) Monitor Transit Vehicle Condition (4.3.1)
(b) Generate Transit Vehicle Maintenance Schedules (4.3.2)
(c) Generate Technician Work Assignments (4.3.3)
(d) Monitor and Verify Maintenance Activity (4.3.4)
(e) Report Transit Vehicle Information (4.3.5)
(f) Update Transit Vehicle Information (4.3.6)
(g) Manage Transit Vehicle Operations Data Store (4.3.7)

The current transit vehicle condition is provided to process (a), which compares it against the vehicle's maintenance specifications obtained from the store of transit vehicle operations data managed by process (g). When maintenance is found to be required, data is sent to process (b) which generates the maintenance schedules. These are passed to process (c) which assigns the work to a particular technician according to their availability and skills. Process (d) monitors the state of the maintenance activity from the vehicle status and receives updates from the maintenance technician through process (f) and the transit vehicle operations data store managed by process (g). It sends the results back to process (c) to enable the technician to be assigned new work. The transit fleet manager can monitor the state of maintenance activity using the data in the transit vehicle operations data store and update vehicle maintenance specifications through process (e). The above processes form a tightly coupled group, although they are able to operate independently.

DFD: 4.4 Support Transit Security and Coordination

The processes in this DFD make up the Support Transit Security and Coordination facility within the Manage Transit function. These processes enable incidents that occur either on-board transit vehicles or in other parts of the transit network to be reported and actions coordinated with the emergency services. These processes manage the actions that are taken when an emergency occurs on-board a transit vehicle or within a transit facility, modal interchange facility, or transit depot. Notification of an emergency may come from transit users via such things as panic buttons, from a transit vehicle driver, or from surveillance equipment located at transit stops and other parts of the transit network. The processes work to pre-defined plans of action for each type of emergency situation and communicate with the Manage Emergency Services function (see DFD 5) for coordination of emergency service activities and multiple

agency responses to incidents. The processes also communicate with the transit system operator and fleet manager to both gain approval for and keep informed of, the actions being taken, and for actual input of actions if none are defined. Automatic output of information about emergencies to the media is also provided.

The key points about the facility are as follows:
- transit system operators can monitor and respond to incidents detected in the transit system;
- details of incidents are sent to the Manage Emergency Services function for a response;
- transit fleet managers can define responses to incidents and the way activities are coordinated;
- incidents may be reported by transit drivers and users, or detected by sensors in the transit system;
- information about incidents is automatically passed to the media.

There are two processes and one DFD that comprise this DFD:
(a) Provide Transit Security and Emergency Management (DFD 4.4.1)
(b) Coordinate Multiple Agency Responses to Transit Incidents (4.4.2)
(c) Generate Responses for Transit Incidents (4.4.3)

The incident and emergency data obtained by the processes in (a) is passed to process (b). This is responsible for coordinating activities with the emergency services and uses a pre-planned sequence of activities prepared by the transit fleet manager. If there are no pre-planned activities to suit a particular incident or emergency, the fleet manager will be prompted to provide the activities in real time. These processes may be implemented as a single coordinated group. For some implementations, process (c) may be omitted so that the transit fleet manager must always actively participate in the response to incidents and emergencies.

DFD: 4.4.1 Provide Transit Security and Emergency Management

The processes in this DFD make up the Provide Transit Security and Emergency Management facility within the Manage Transit function. The processes respond to notifications of incidents and emergencies, and make the data available for activity coordination and use by the media. These processes collect incident and emergency notification data from both transit vehicles and from fixed facilities within the transit operations network. This data may be generated by transit users or transit drivers on-board transit vehicles recognizing that an incident or emergency has occurred. It may also be produced by the analysis of video image (see DFD 5.1.7) and transit user input from fixed facilities such as transit stops and modal interchange points. The data is sent to the transit system operator, to process (b) below for the coordination of response activities, and is also made available for use by the media. Acknowledgment of the receipt of the original incident or emergency notification data is sent back to the transit user and/or driver.

The key points about the facility are as follows:
- incidents and emergencies are detected on transit vehicles and in fixed facilities;
- a media interface is provided for the output of messages about incidents and emergencies;
- traffic system operators are involved in the response actions for all incidents and emergencies.

There are six processes in this DFD:
(a) Manage Transit Security (4.4.1.1)
(b) Manage Transit Emergencies (4.4.1.2)
(c) Provide Transit System Operator Security Interface (4.4.1.3)
(d) Provide Transit External Interface for Emergencies (4.4.1.4)
(e) Provide Transit Driver Interface for Emergencies (4.4.1.5)
(f) Collect Transit Vehicle Emergency Information (4.4.1.6)

Incidents in fixed facilities and emergencies on-board vehicles are detected by processes (a) and (b). They rely on input to sensors, input from panic buttons which can be activated by travelers, transit users, or for process (b) input from the transit vehicle driver, via process (e). The transit system operator is kept informed of all these inputs via process (c), and can change the parameters used to set up data for output to the media and control the video images. The data about the incident or emergency is output by processes (a) and (b) to the coordination processes in the Support Security and Coordination facility (see DFD 4.4) and in the Monitor Secure Area facility (see DFD 5.1.7). Process (a) sends information to be broadcast to travelers in the secure area environment to the Monitor Secure Area facility (DFD 5.1.7). The processes in DFD 4.4.1 also send an acknowledgment of receipt of the input to its source, this again being via process (e) for the transit vehicle driver. Process (f) is used to collect transit emergency information from the other processes in this DFD, and place it in a data store. Process (d) receives this data and distributes it to the media and to the Provide Driver and Traveler Services function for use by the traveler (see DFD 6).

The above processes may be implemented as a single coordinated group or in part. For any individual implementation, process (a) or (b) and (e) may be omitted. Alternatively process (d) may be omitted from any implementation involving a combination of the others.

DFD: 4.5 Generate Transit Driver Schedules

The processes in this DFD make up the Generate Transit Driver Schedules facility within the Manage Transit function. These processes produce transit driver work assignments, schedules, and routes, based on such things as previous work history and seniority. Drivers are assigned to their duties based on a number of criteria, including availability, previous experience, performance on previous assignments, seniority, and personal preferences. Activities are monitored by the transit fleet manager who can update the data about individual drivers.

The key points about the facility are as follows:

- the transit fleet manager manages the allocation of transit drivers to routes and schedules;
- transit drivers' allocation depends on performance, cost effectiveness, preferences, and availability;
- transit driver allocations are provided for both regular and demand responsive (paratransit) services.

There are eight processes that comprise this DFD:

(a) Assess Transit Driver Performance (4.5.1)
(b) Assess Transit Driver Availability (4.5.2)
(c) Assess Transit Driver Cost Effectiveness (4.5.3)
(d) Assess Transit Driver Eligibility (4.5.4)
(e) Generate Transit Driver Route Assignments (4.5.5)
(f) Update Transit Driver Information (4.5.6)
(g) Report Transit Driver Information (4.5.7)
(h) Provide Transit Driver Information Store Interface (4.5.8)

Transit driver route assignments are produced by the process in (e). This uses the data from the store of transit driver information, managed by process (h), to match drivers with the routes and schedules provided by the Plan and Schedule Transit Services facility. It runs when it receives a new set of regular or demand responsive (paratransit) transit services. The data in the store of transit driver information is updated as a result of data being supplied by the transit fleet manager through processes (f) and (g). When process (h) loads the data into the store, it also sends the data to each of the processes (a) through (d) for analysis. These processes return the results of their analysis to process (h), which when they are all done will send the resulting complete set of data to process (e) to generate a new set of assignments.

The above processes may be implemented as a single coordinated group or in a reduced form leaving out some or all of processes (a) through (d). The result of the omission of some or all of these processes will

be to reduce the factors that are taken into account when making transit driver route assignments.

DFD: 4.6 Collect Transit Fares in the Vehicle

The processes in this DFD make up the Collect Transit Fares in the Vehicle facility within the Manage Transit function. These processes collect fares from transit users as they board transit vehicles, for the use of current transit services, advanced payments for transit services, and for other (yellow pages) services. The fare payment processing may be carried out interactively from on-board the vehicle, or may be held until the vehicle reaches a convenient point and then carried out as a batch transaction. The processes support the use of debit/credit cards, including those with stored credit value, as may be issued by transit operators as well as financial institutions. When a violation of an interactive payment transaction is detected, an image of the offending transit user will be obtained from the vehicle for use by the law enforcement agency.

The key points about the facility are as follows:

- transit vehicle fare collection is provided either on-board the vehicle or as advanced payment (at the roadside, via a kiosk, online, etc.);
- fare processing can be interactive, or as a batch when the vehicle reaches a convenient point;
- advanced payment of transit fares, tolls, and parking lot charges is supported.

There are eight processes in this DFD.

(a) Detect Transit User on Vehicle (4.6.1)
(b) Determine Transit User Needs on Vehicle (4.6.2)
(c) Determine Transit Fare on Vehicle (4.6.3)
(d) Manage Transit Fare Billing on Vehicle (4.6.4)
(e) Provide Transit User Fare Payment Interface on Vehicle (4.6.5)
(f) Update Transit Vehicle Fare Data (4.6.6)
(g) Provide Transit Vehicle Passenger Data (4.6.7)
(h) Manage Transit Vehicle Advanced Payments (4.6.8)

Detection of a transit user by process (a) and the collection of the desired destination data by process (e) enables the transit fare to be calculated by processes (b) and (c). This data is passed to process (d) which determines whether the payment will be processed interactively, i.e., as transit users board the vehicle, or as a batch. Batch processing will take place either when the vehicle reaches a convenient point on its route or at the request of the transit driver. In both cases the tag data provided by the transit user will be checked against the list of bad payers requested by process (d) from the Provide Electronic Fare Collection facility of the Provide Electronic Payment Services function - see DFD 7.3. If a match is found, the transit user is informed and the payment transaction is aborted. Transit users are also informed of the successful completion of a payment transaction.

The selection of the appropriate fare processing option is made by the transit vehicle driver. Failure of the transfer of data for batch processing will be notified to the driver who can then request a re-transmission of the data. These two fare processing options are provided to enable the optimum use of the vehicle to the central transit management facility communications network. Thus for example, in urban environments where there may be many transit users boarding vehicles, the batch mode of processing will be employed, while in rural environments or for demand responsive transit operation, where the number of users may be less frequent, interactive processing can be used. The actual fare payment processing will be carried out by processes in the Provide Electronic Fare Collection facility of the Provide Electronic Payment Services function - see DFD 7.3. Facilities for transit users to pay for transit fares, tolls and parking lot charges in advance are also provided through process (e) and (advanced payments only) process (h). Processes (f) and (g) are used to manage data stores containing information about transit fares and transit passengers and trips.

The above processes are intended to be implemented as a single coordinated group. However some of the interfaces in process (e) could be omitted if only transit fare processing is to be provided, and the reporting process (g) could also be left out if its functionality is not required by a particular transit operation.

DFD: 4.7 Provide Transit User Roadside Facilities

The processes in this DFD make up the facility Provide Transit User Roadside Facilities within the Manage Transit function. These processes provide transit users at the roadside with information and the collection of payment for services that they require. These processes act as the interface through which the transit user can obtain information and pay for the use of services at a roadside location, such as a transit stop. The information provided includes transit services in general, and the time at which the next transit vehicle is due to arrive at the location. Information provided by transit vehicles approaching the location is also automatically output to the transit user. Payment by the transit user for the use of current transit services, advanced payments for transit services and for other (yellow pages) services, is supported by the processes, as is the use of debit/credit cards, including those with stored credit value, as may be issued by transit operators as well as financial institutions. When a violation of a payment transaction is detected, an image of the offending transit user will be obtained from the roadside for use by the law enforcement agency.

The key points about the facility are as follows:

- transit users can request transit service information and can receive data about approaching services;
- transit fares can be collected at the roadside before transit users board a vehicle;
- data about transit services in general can be requested by transit users;
- data from on-board approaching transit vehicles is automatically output to the transit user;
- data is stored locally in case contact with the transit vehicle is lost and to avoid repetitive requests.

There is one process and one DFD that comprise this DFD:

(a) Provide Transit User Roadside & Vehicle Data Iterface (4.7.1)
(b) Collect Transit Fares at the Roadside (DFD 4.7.2)

These two sets of processes can be implemented independently at some or all roadside locations. They could share the same physical facilities such as power supply, communications interface, and be located within the same roadside physical structure.

DFD: 4.7.2 Collect Transit Fares at the Roadside

The processes in this DFD make up the Collect Transit Fares at the Roadside facility within the Manage Transit function. These processes enable transit fares to be collected from transit users at the roadside before they board the vehicle. The processes operate together in much the same way as those performing a similar function on-board the transit vehicle. They also enable the transit user to obtain information about and pay for other (yellow pages) services, and to pay for tolls and parking lot charges in advance.

The key points about the facility are as follows:

- transit fare collection is provided without transit users needing to stop while boarding the vehicle;
- fare processing is interactive as the transit users pass through the roadside location;
- transit users may request and pay for other (yellow pages) services;
- advanced payment of transit fares, tolls, and parking lot charges is supported.

There are seven processes in this DFD:

(a) Detect Transit User at Roadside (4.7.2.1)

(b) Determine Transit User Needs at Roadside (4.7.2.2)
(c) Determine Transit Fare at Roadside (4.7.2.3)
(d) Manage Transit Fare Billing at Roadside (4.7.2.4)
(e) Provide Transit User Roadside Fare Interface (4.7.2.5)
(f) Update Roadside Transit Fare Data (4.7.2.6)
(g) Provide Transit Roadside Passenger Data (4.7.2.7)

Detection of a transit user passing through the roadside facility by process (a) and the collection of the desired destination data by process (e) enables the transit fare to be calculated by processes (b) and (c). This data is passed to process (d) which sends the data to the Transit Management Center for payment processing. This is always carried out interactively as even with large numbers of transit users, there should be no constraints on the communications with the Transit Management Center that there would be with a transit vehicle. Interactive processing also enables the images of all users making invalid payments to be obtained. Facilities for transit users to pay for transit fares, tolls, and parking lot charges in advance are also provided through process (e). Processes (f) and (g) are used to manage data stores containing information about transit fares and transit passengers and trips obtained at the roadside.

The above processes are intended to be implemented as a single coordinated group. However some of the interfaces in process (e) could be omitted if only transit fare processing is to be provided, and the reporting process (g) could also be left out if its functionality is not required by a particular transit operation.

5.5 DFD: 5 Manage Emergency Services

The processes in this DFD make up the Manage Emergency Services function. This function is responsible for the management of the emergency services' response to incidents and communications with law enforcement agencies. An interface is also provided to the Manage Traffic function for the coordination of incident management functions (including resource coordination between traffic management and emergency management) and to provide priority for emergency vehicles at signalized roadway intersections and freeway ramps. The User Services Requirement satisfied by this functional process tree include those from User Services 5.1 "Emergency Notifications and Personal Security" and 5.2, "Emergency Vehicle Management".

The key points about the function are as follows:
- ITS functions can automatically call-out appropriate emergency services to an incident;
- Confirmation of response action is provided to the emergency services operator;
- Emergency telephone and E911 systems can call-out appropriate emergency services to an incident;
- Information about incidents can be exchanged with the Manage Incidents facility;
- Emergency vehicles can be provided priority routing (e.g."green waves") along their routes to an incident;
- Incident responses can be coordinated with other Emergency Management Systems;
- ITS functions provided with access to law enforcement agencies for action on violations.

There are six processes subordinate to this DFD, three of which are themselves DFDs:
(a) Provide Emergency Service Allocation (DFD 5.1).
(b) Provide Operator Interface for Emergency Data (5.2).
(c) Manage Emergency Vehicles (DFD 5.3).
(d) Provide Law Enforcement Allocation (DFD 5.4).
(e) Update Emergency Display Map Data (5.5).
(f) Manage Emergency Services Data (5.6).

Data about incidents is received by the processes in (a) which determine the response plan from data set up by the emergency services operator. This data is then passed to the processes in (c) for the dispatch of suitable vehicles, and back to the source of the incident information via a process in (a). The processes in (c) monitor the activities of all vehicles and maintain a store of vehicle status from which availability can be determined. They also obtain the route for the vehicle(s) from the Provide Driver and Traveler Services function and send data about the route to the Manage Traffic function to enable an emergency vehicle priority routing (e.g. green wave) to be provided.

There can be several sets of the processes in (c) above, one for each type of emergency service. The processes in (a) will then send their dispatch data to the most appropriate set(s) of processes in (c). The link to other Emergency Management Services enables coordination to be achieved across jurisdictional and/or operational boundaries thereby helping to achieve the best possible response to an incident.

DFD: 5.1 Provide Emergency Service Allocation

This DFD shows the processes that make up the Provide Emergency Services Allocation facility within the Manage Emergency Services function. These processes receive reported incident data and initiate the appropriate response. The key points about the facility are as follows:

- Facilities are provided to identify the type of emergency dependent on source;
- Response plan is determined from allocation criteria and sent to the vehicle dispatch function;
- Emergency services status reporting facility is provided for other ITS functions.

There are seven processes in this DFD, and one is itself a DFDs:

a) Identify Emergencies from Inputs (5.1.1).
b) Determine Coordinated Response Plan (5.1.2).
c) Communicate Emergency Status (5.1.3).
d) Manage Emergency Response (5.1.4).
e) Manage Emergency Service Allocation Store (5.1.5).
f) Process Mayday Messages (5.1.6).
g) Provide Traveler Security (DFD 5.1.7).

The data about incidents is received by process (a) which formats it and passes it to process (b). This process requests the appropriate response data from the store of predefined responses through process (e). The response is loaded into a coordination plan which is sent to processes (c) and (d). Process (c) sends data acknowledging the receipt of the incident data back to the source of the data and also provides access to the log of incident responses maintained by process (d). This process manages the response to the incident, sending data to the dispatch vehicles facility and obtaining data about hazardous cargoes when commercial vehicles are involved. These process are intended to work as a coordinated group in a single implementation. If necessary some of the sources of emergency data for process (a) can be omitted if they do not exist in some implementations.

DFD: 5.1.7 Provide Traveler Security

This DFD shows the processes that make up the Provide Emergency Services Allocation facility within the Manage Emergency Services function. These processes receive reported incident data and initiate the appropriate response. The key points about the facility are as follows:

- Facilities are provided to identify the type of emergency dependent on source;
- Response plan is determined from allocation criteria and sent to the vehicle dispatch function;
- Emergency services status reporting facility is provided for other ITS functions.

There are three processes in this DFD:

a) Monitor Secure Area (5.1.7.1).

b) Manage Secure Area Security (5.1.7.2).
c) Report Traveler Emergencies (5.1.7.3).

Incidents in fixed facilities and secure areas are detected by processes (a) and (b). Process (a) also broadcast this information to travelers in the secure are. Both process (a) and (b) rely on input to sensors, panic buttons, and video images. The data about the incident or emergency is output by process (b) to the coordination process in the Provide Operator Interface for Emergency Data - see DFD 5.2. Process (b) also distributes this data to the media and to the Provide Driver and Traveler Services function for use by the traveler – see DFD 6. Process (c) provides an interface through which travelers can declare emergencies. The above processes may be implemented as a single coordinated group or in part.

DFD: 5.3 Manage Emergency Vehicles

The five processes in this DFD provide the Manage Emergency Vehicles facility within the Manage Emergency Services function. These processes dispatch the appropriate emergency vehicles to the incident and monitor their status. The key points about the facility are as follows:

- Vehicle type is selected to suit the incident;
- Status of vehicles monitored at all times to determine availability;
- Routes generated for vehicles to get to incidents;
- Vehicle preemption along routes and at intersections provided via the Manage Traffic function.

There are eight processes in this DFD:
a) Select Response Mode (5.3.1);
b) Dispatch Vehicle (5.3.2);
c) Track Vehicle (5.3.3);
d) Assess Response Status (5.3.4);
e) Provide Emergency Personnel (5.3.5);
f) Maintain Vehicle Status (5.3.6);
g) Provide Emergency Vehicle Route (5.3.7);
h) Collect Environmental Data on Emergency Vehicle (5.3.8).

Details of an incident are received by the process in (a) which dispatches the appropriate vehicle(s). It obtains current vehicle status from the store of this data via process (f) and sends the dispatch information to the selected vehicle(s) and driver(s) via processes (b) and (e). If the correct number of vehicles are not available, the process reports this information back to the management process in the Provide Emergency Services Allocation facility - see DFD 5.1. Process (b) requests a route for the vehicles from process (g). Vehicles that are dispatched provide updates to their status through process (d). Process (c) is able to provide local signal preemption at intersections for vehicles on their way to incidents. This will supplement the "green wave" route requested by process (b) from the Manage Traffic function.

DFD: 5.4 Provide Law Enforcement Allocation

The seven processes in this DFD provide the Provide Law Enforcement Allocation function. These processes receive violation data from other ITS functions and send it to the appropriate law enforcement agency. The key points about their functions are as follows:

- The law enforcement agency tasked with responding to each type of violation is pre-defined;
- These processes just report the violations, responsibility for eventual prosecution of offenders rests with the law enforcement agency;

There are seven processes in this DFD:
a) Process TM Detected Violations (5.4.1);

b) Process Violations for Tolls (5.4.2);
c) Process Parking Lot Violations (5.4.3);
d) Process Fare Payment Violations (5.4.4);
e) Process Vehicle Fare Collection Violations (5.4.5);
f) Process CV Violations (5.4.6);
g) Process Roadside Fare Collection Violations (5.4.7).

These processes each provide interfaces to law enforcement agencies for different ITS functions. With the exception of processes (a) and (f) the data about violators is provided by facilities in the Provide Electronic Payment Services function - see DFD 7. The data provided by this function concerns those drivers or transit users who are trying to make invalid toll, parking lot charge or transit fare payments. Process (a) receives data from the Manage Traffic function - see DFD 1, about high occupancy vehicle (HOV) lane and pollution violations. Process (f) receives data from the Manage Commercial Vehicles function - see DFD 2 about invalid payments for electronic credentials and tax filing by commercial vehicle managers or commercial vehicle owner drivers. Processes (a), (b) and (c) which all deal with violations by drivers, will request details of their vehicles from the appropriate Department of Motor Vehicles office. This data will be added to that already provided by the particular ITS function. The processes can be implemented individually as required by each associated ITS function.

5.6 DFD: 6 Provide Driver and Traveler Services

The processes in this DFD are responsible for multimodal trip planning, route guidance and advisory functions such as traffic and incident information, for all types of travelers and drivers. It also enables them to confirm and pay for yellow pages services and provides personal emergency notification functions. The driver interface to the Provide Vehicle Monitoring and Control functions is provided, as is that to other functions, to enable advisory information to be output to both drivers and travelers. The multimodal trip planning function enables trips to include private car and regular transit modes, plus ridesharing, demand responsive transit and other modes such as walking, cycling, etc. Links are also provided to multimodal transportation service providers so that travelers may use modes such as heavy rail and airlines as part of their trips. Both centralized dynamic and autonomous modes of on-line guidance are provided for drivers and travelers, with drivers also being able to use current link journey times as part of the autonomous vehicle guidance.

The User Service Requirements that are included in this functional process tree are:
1.1 Pre-Trip Travel Information
1.2 En Route Driver Information
1.3 Route Guidance
1.4 Ride Matching and Reservation
1.5 Traveler Services Information
2.2 En Route Transit Information
5.1 Emergency Notification and Personal Security

The key points about the function are as follows:
· Travelers may plan, confirm and be guided along single mode or multimodal trips;
· En route advisory traffic and transit information provided for drivers and transit users;
· Drivers are provided with a vehicle interface for automatic control and output of warning/safety messages;
· Travelers and transit users may obtain information on and pay for yellow pages services;
· Travelers may obtain event information;
· Vehicle and personal traveler guidance may be provided dynamically or autonomously;
· Dynamic guidance provided centrally using current traffic and transit information;
· Autonomous guidance using in-vehicle data that can be supplemented with current traffic

information;
- Autonomous personal traveler guidance using a personal navigable database;
- Traveler may use home, office, or travel agent's computer, kiosk, or personal portable device (ppd);
- Personal security provided for drivers and travelers through personal portable devices and kiosks.

The processes subordinate to this DFD are all themselves DFDs:
a) Provide Trip Planning Services (DFD 6.1)
b) Provide Information Services (DFD 6.2)
c) Provide Traveler Services at Kiosks (DFD 6.3)
d) Manage Ridesharing (DFD 6.4)
e) Manage Traveler Information Services (DFD 6.5)
f) Provide Guidance and Trip Planning Services (DFD 6.6)
g) Provide Driver Personal Services (DFD 6.7)
h) Provide Traveler Personal Services (DFD 6.8)

The term "ISP" is used in this function. It stands for Information Service Provider, and is the generic name given to the functional entity that is actually implementing the facility. Thus an ISP operator is someone who works for the ISP organization in much the same way as a transit system operator.

DFD: 6.1 Provide Trip Planning Services

The six processes in this DFD provide the Manage Trip Planning Services facility within the system operator. Provide Driver and Traveler Services function. These processes enable travelers to plan trips and make other (yellow pages) service reservations.

The key points about the facility are as follows:
- Multimodal trip planning available to include private car, transit, demand responsive transit, ridesharing and other modes, e.g., walking and cycling, plus services from Multimodal Transportation Service Providers;
- Trip planning available for routes using all modes of transportation;
- Traveler provided with details of the best possible route including its cost;
- Trip confirmation reserves any included services e.g., demand responsive transit and ridesharing;
- Trip confirmation may also involve payment for services it includes;
- Yellow pages services may be included in trip plan, confirmation and payment;
- ISP operator controls parameters used in selecting the best modes for trips;
- Data about the types of services and trips requested is stored for later archival.

There are six processes in this DFD:
a) Provide Trip Planning Information to Traveler (6.1.1)
b) Confirm Traveler's Trip Plan (6.1.2)
c) Manage Multimodal Service Provider Interface (6.1.3)
d) Provide ISP Operator Interface for Trip Planning Parameters (6.1.4)
e) Collect Service Requests and Confirmation for Archive (6.1.5)
f) Manage Traveler Info Archive Data (6.1.6)

The traveler's trip request is received by process (a) which determines the route that provides the best match to the request. In doing this the process will be guided by the traveler's requirements and by the parameters set up by the ISP operator through process (d). Process (a) will obtain vehicle, transit and other mode route details from the Provide Guidance and Trip Planning Services facility - see DFD 6.6. If required the process will also obtain details of multimodal services from process (c), a demand responsive transit service from the Provide Demand Responsive Transit Service facility (see DFD 4.2.1), or details of a rideshare that fits in with the trip plan from the Manage Ridesharing facility - see DFD 6.4. The travelers' confirmation of a previously requested trip and any required payments are received by process (b). This makes any necessary reservations with the previously mentioned facilities and gets the

payments transacted by the Collect Advanced Payments facility - see DFD 7.4.1. These four processes are coupled through their joint use of the two data stores. However some implementations could omit the process in (c) if no interface to multimodal transportation service providers is required.

The parameters set up through process (d) by the ISP operator for use in trip planning, influence the type of trip that is provided in response to requests from travelers. They will control the degree to which the preferences and constraints specified by the traveler in the trip request should be ignored, and to set the priority that will be given to the use of non-private vehicle modes. For example, the parameters will give the weighting that should be applied to one preference, e.g., start and arrival time, over that which requests the use of several modes. Thus for example, a traveler may find that the proposed trip starts earlier or finishes later (and therefore takes longer) than requested in order to accommodate the use of modes other than the private car.

Processes (e) and (f) collect data about the types of trips and services requested by travelers for later archival, and could therefore be implemented separately, depending upon whether archival will be supported by the implementation.

DFD: 6.2 Provide Information Services

This DFD shows the seven processes that make up the Provide Information Services facility within the Provide Driver and Traveler Services function. This facility provides advisory and broadcast information to drivers and transit users. The key points about the facility are as follows:

- Advisories provided to drivers and transit users about traffic, transit, events, and yellow pages services;
- The traveler can make a specific request for information or can submit a travel profile for subsequent transmission of information to the traveler.
- Driver advisories are selected to be relevant to the vehicle's current location;
- Drivers are also provided with warning messages produced by the vehicle control functions;
- Drivers are provided with work zone intrusion alerts from on-board and roadside sensors;
- Travelers and transit users are able to make and pay for yellow pages reservations.

There are seven processes in this DFD, and one is itself a DFD:

a) Provide Advisory and Broadcast Data (DFD 6.2.1)
b) Prepare and Output In-vehicle Displays (6.2.2)
c) Provide Transit User Advisory Interface (6.2.3)
d) Collect Yellow Pages Data (6.2.4)
e) Provide Driver Information Interface (6.2.5)
f) Provide Yellow Pages Data and Reservations (6.2.6)
g) Provide Transit Advisory Data on Vehicle (6.2.7)

Requests for advisory information are input by the driver and transit user through processes (e), (c), and (g). These are sent to process (b) which adds the vehicle location and sends the necessary data requests to processes in (a), and to process (f). The responses are received by process (b) are sent back to whichever process was the source of the request. Process (b) will also receive broadcast data from processes in (a) and the output from various in-vehicle functions from facilities in the Provide Vehicle Monitoring and Control function - see DFD 3. It will be responsible for setting different priority levels for the outputs to the driver though process (e) so that advisory, broadcast, safety and warning messages are overlaid on top of vision enhancement data, with safety or warning messages themselves taking priority over and overlaying advisory or broadcast messages.

Although all of these processes depend on others in the group for data, they will each operate continuously and independently so that the data can be processed, stored and accumulated in a timely fashion.

DFD: 6.2.1 Provide Advisory and Broadcast Data

This DFD shows the processes that make up the Provide Advisory and Broadcast Data facility within the Provide Information Services function. These processes obtain traffic and transit data from other ITS functions for use in advisory and broadcast data outputs. Environmental data is collected from vehicle-based sensors. The key points about the facility are:

- Traffic and transit data is requested from the Manage Traffic and Manage Transit functions;
- Data from the Manage Traffic function regarding traffic state and incidents provided as they occur;
- Environmental data collected from vehicle-based sensors;
- Data for advisory information output provided on request and can be filtered by vehicle location;
- Data for broadcast information output determined using parameters set up by the ISP operator.

There are six processes in this DFD:

a) Collect Traffic Data for Advisory Messages (6.2.1.1)
b) Provide Traffic and Transit Advisory Messages (6.2.1.2)
c) Collect Transit Data for Advisory Messages (6.2.1.3)
d) Provide Traffic and Transit Broadcast Messages (6.2.1.4)
e) Provide ISP Operator Broadcast Parameters Interface (6.2.1.5)
f) Collect Environmental Probe Data (6.2.1.6)

Process (a) requests traffic data from the Manage Traffic facility and receives data about planned and predicted. Transit data is requested by process (c) from the Manage Transit facility. Each process loads the data it receives into its own data store and forwards it to processes (b) and (d). Process (b) retrieves data when requests are received from other processes within the Provide Information Services facility - see DFD 6.2, and can filter the output based on the vehicle location supplied with the request. Broadcast data is output periodically by process (d) when an analysis of the two data stores shows that they contain information that is of importance. The analysis is carried out using stored parameters provided by the ISP operator through process (e).

These processes may be used in several combinations to suit individual implementation requirements. For example, processes (a), (b), and (c) may be implemented as a group to provide advisory data. Processes (d) and (e) could be added later to provide a broadcast data facility. Alternatively either processes (a) or (c) could be omitted to provide a service of just traffic or just transit information respectively. Process (f) operates independently, periodically providing aggregated environmental probe data from sensors on the private vehicles it services.

DFD: 6.3 Provide Traveler Services at Kiosks

The processes in this DFD provide the Provide Traveler Services at Kiosks facility within the Provide Driver and Traveler Services function. These processes enable the traveler to obtain traffic and transit information and to plan trips from a kiosk.

The key points about the facility are as follows:

- Travelers can plan trips and get traffic, transit, events, and yellow pages services information;
- Trips may be multimodal, including demand responsive transit and ridesharing;
- Planned trips may be confirmed and paid for in advance as may yellow pages services;
- Travelers may also obtain traffic and transit information without planning any trips or making reservations;
- Kiosks may be at the roadside, in shopping malls, and at other major trip generation sites.

There are four processes in this DFD:

a) Get Traveler Request (6.3.1)
b) Inform Traveler (6.3.2)
c) Provide Traveler Kiosk Interface (6.3.3)
d) Update Traveler Display Map Data at Kiosk (6.3.4)

These processes form a tightly coupled group and communicate with many other ITS functions. The traveler provides trip planning, trip confirmation, plus traffic and transit information requests through process (c). These are sent to process (a) which distributes the trip planning and confirmation requests to the appropriate processes in the Provide Trip Planning Services facility - see DFD 6.1. Requests for traffic and transit information are sent for implementation by process (b) which also receives the results from the trip planning requests made by process (a). All data received by process (b) is sent to process (c) for output to the traveler. Travelers can request as many trip plans as are needed before an acceptable match is found to their trip requirements. Data used for previous inputs and regularly used data is kept in the store of traveler regular data by process (c). The outputs produced by process (c) may be shown against a background of digitized map data produced by process (d). This map data is requested automatically, at a frequency set up in process (d) when the supplier or owner installs it within the kiosk.

DFD: 6.4 Manage Ridesharing

The four processes in this DFD provide the Manage Ridesharing facility within the Provide Driver and Traveler Services function. These processes enable travelers whose destinations and time of travel match to share rides for some or their entire trip. The key points about the facility are as follows:

- Travelers are matched to share transport (private car or van) for as much of their trip as possible;
- Travelers must specify the time of day, source and destination of their trip;
- Travelers may also specify any preferences or constraints on the rideshare arrangement;
- Once a rideshare is confirmed, the traveler may make a payment to the service (if required).

There are four processes in this DFD:

a) Screen Rider Requests (6.4.1)
b) Match Rider and Provider (6.4.2)
c) Report Ride Match Results to Requestor (6.4.3)
d) Confirm Traveler Rideshare Request (6.4.4)

The traveler's rideshare request is received by process (a) from the Provide Trip Planning Services facility - see DFD 6.1. It checks the data to see if the traveler is eligible for ride sharing and if not, sends a negative response to process (c) which sends it back to the process from which the request originated. If the traveler is eligible, process (a) sends the data to process (b). This process tries to match the traveler's trip data with both existing ridesharing travelers and those for whom no match could previously be found. The results are sent to process (c) which compares the result with the original request and if satisfactory again sends the result back to the process from which the request originated. Traveler ride share confirmations are received by process (d) which obtains payment for the service through the Collect Advanced Payments facility - see DFD 7.4.1. If payment is successfully completed it then sends the ride share details to process (b) for the records of successful ride shares to be updated.

These processes form a tightly coupled group and cannot be implemented other than as a group. Travelers are themselves expected to contact others in the matched rideshare, or those who have yet to find a match. Once this has been successfully done, the travelers will be expected to make their own arrangements for sharing the cost of each trip. Processes (a) and (b) will require sophisticated screening techniques to highlight any travelers making repeated requests for the wrong reasons.

DFD: 6.5 Manage Traveler Information Services

The processes in this DFD provide the Manage Traveler Information Services facility within the Provide Driver and Traveler Services function. They enable the traveler to be provided with information about yellow pages services, to make payment for those services that they need, and to be informed about local events.

The key points about the facility are as follows:

- Yellow pages services information is obtained from many sources in response to traveler requests;
- Some data is provided automatically without the need for a specific traveler request;
- Yellow pages providers register (and possibly pay for this registration) before their data can be sent to travelers;
- Event information is provided to travelers.

There are four processes in this DFD:

a) Collect and Update Traveler Information (6.5.1)
b) Provide Traveler Yellow Pages Information and Reservations (6.5.2)
c) Register Yellow Pages Service Providers (6.5.3)
d) Provide Traveler Event Information (6.5.4)

Traveler information about incidents, road construction, weather, events, and yellow pages data is obtained by process (a), either by requesting it from the media, event promoters, or yellow pages service providers, or by receiving it as unsolicited input, e.g., weather, road network, or incident information. All the data that the process receives is loaded into the store of tourist information. Process (b) receives requests for information and payments for services from travelers via processes in the Provide Traveler Services at Kiosks and Provide Traveler Services at Personal Devices facilities - see DFDs 6.3 and 6.8.3 respectively. If the information requested by the traveler is not in the store of tourist information, process (b) requests process (a) to obtain the missing data. Payment transactions are passed by process (b) to the Collect Advanced Payments facility - see DFD 7.4.1. Yellow pages service providers can enable details of their services to be made available to travelers by requesting and paying for registration through process (c). Process (d) collects event information and distributes it to travelers via kiosks and personal devices.

These processes form a tightly coupled group. The requirement that yellow pages service providers must pay to register before details of the service(s) that they provide are made available to travelers provided through process (c), could be omitted from individual implementations, if the ISP did not want to use this as a source of income.

DFD: 6.6 Provide Guidance and Trip Planning Services

This DFD shows the processes that make up the Provide Guidance and Trip Planning Services facility in the Provide Driver and Traveler Services function. These processes select vehicle routes for a variety of applications using current, historical, and predicted traffic conditions. The key points about the facility are as follows:

- Routes provided for trip planning, dynamic guidance and special uses (such as transport of vehicles carrying hazardous materials);
- Traveler routes and guidance may be multimodal using private cars, transit and other modes;
- Route selection takes into account current, historical, and predicted conditions obtained from the Manage Traffic and Manage Transit functions;
- Other route selection data is provided by weather services and the map update provider;
- Route details for commercial vehicles with unusual cargoes sent to the Manage Incidents facility.

There are five processes in this DFD, and one is itself a DFD:

a) Provide Multimodal Route Selection (6.6.1)
b) Select Vehicle Route (DFD 6.6.2)
c) Update Other Routes Selection Map Data (6.6.3)
d) Select Transit Route (6.6.4)
e) Select Other Routes (6.6.5)

Requests for traveler guidance and trip planning, plus commercial vehicle route requests are received by process (a). The traveler requests are received from the Provide Traveler Services at Kiosks and at Personal Devices facilities - see DFDs 6.3 and 6.8.3 respectively. The commercial vehicle route requests are received from the Manage Commercial Vehicle Fleet Operations and Driver Operations - see DFDs 2.1 and 2.2). The requests for vehicle routes are passed directly to the processes in (b) and the results returned to the requesting facilities. The traveler requests are analyzed by process (a) to see which modes of travel can be used. Based on this analysis, it sends route requests to the processes in (b), and/or process (d), and/or process (e) to build up a contiguous route for the trip plan or guidance. Process (a) may iterate the requests, changing the modal transfer points until it arrives at an optimal solution to suit the traveler's trip plan or guidance request. Process (c) runs at the request of the ISP operator through the interface process in (b), and updates the store of map data used by process (e).

Drivers are in fact a special group of travelers and it will be possible for a traveler to become a driver for part of a trip. Both mobile and infrastructure based guidance systems can be supported since the processes are not aware of how information on traveler location is provided. Autonomous vehicle guidance is supported either as the prime function or when no guidance information is received by the vehicle from the central facility. In the latter situation the guidance process will continue operating in the vehicle using the most recently obtained route until new data is received. Details about the most commonly used routes will be retained to prevent repeated data entry by the traveler. Autonomous vehicle guidance can be provided in basic form using an on-board navigable map database which contains details of all route segments, plus average historical journey times and queue times. This may be supplemented with more up to date journey and queue times that are available from the central facility to provide an enhanced autonomous guidance. The choice of which of the three forms of guidance to use (dynamic, autonomous, or enhanced autonomous) is up to the driver either through the type of equipment that is installed in the vehicle, or through choice when guidance is requested. The highest level of guidance available (if requested) will always be used and only degrade if communication with the source of dynamic guidance is lost. When in dynamic guidance, a new route will be calculated at selected points as the vehicle or traveler moves towards the final destination. This ensures that the route takes into account the most up to date traffic and transit data.

Disabled travelers (including drivers) are accommodated through the use of variables that identify their unique preferences and constraints. These variables are part of the data used to request a route. They enable the special needs of these groups of travelers to be taken into account when preparing routes and when giving guidance.

DFD: 6.6.2 Select Vehicle Route

This DFD shows the processes that provide the Select Vehicle Route facility within the Provide Guidance and Trip Planning Services function. The processes are responsible for selecting routes that are only for use by private cars and commercial vehicles. The key points about the facility are as follows:

- Routes are selected using a variety of parameters, e.g., safest, least used, etc. and traffic data;
- Additional data requested from ITS functions serving other areas when routes go outside local area;
- Traffic and vehicle probe data plus previously selected routes can be used in calculation of route;
- Route data can be used in predictive model generation and demand forecasting by Manage Traffic function;
- Map updates describing the surface street and freeway network are provided by the map update supplier;
- Parameters controlling route selection set up by ISP operator;
- In-vehicle guidance only provided when acceptance received from the vehicle.

There are six processes in this DFD:

a) Calculate Vehicle Route (6.6.2.1)
b) Provide Vehicle Route Calculation Data (6.6.2.2)
c) Provide Route Segment Data for Other Areas (6.6.2.3)

d) Update Vehicle Route Selection Map Data (6.6.2.4)
e) Provide ISP Operator Route Parameters Interface (6.6.2.5)
f) Calculate Vehicle Probe Data for Guidance (6.6.2.6)

Requests for vehicle routes and in-vehicle guidance are received by process (a). This selects a route using the parameters in the store set up by the ISP operator through process (e), the road and freeway geometry provided by the map update provider through process (d), traffic data provided by process (b) and data from the store of previously selected routes. In-vehicle guidance uses the same sources of data, except that the road and freeway geometry is much more detailed so that the driver can be given detailed instructions, such as which lane to take. When the route for guidance is first selected, it is sent to the vehicle, but guidance will only begin once the driver has positively accepted the route. Traffic data for use by process (a) is provided by process (b) using data requested from the Display and Output Traffic Data facility - see DFD 1.1.4, plus data provided by the predictive model (see process (c) in DFD 1.1), vehicle probes through process (f) and the Determine Road and Freeway State and Review and Manage Incident Data facilities - see DFDs 1.2.2 and 1.3.2. If process (a) cannot find the data that it needs, it requests process (b) to obtain the data from ITS functions in other areas. Process (b) uses the link data provided by the Manage Traffic function to request the required data through process (c).

When determining a route, process (a) will use the preferences and constraints specified in the route request (such as a route that avoids freeways), and the parameters set up by the ISP operator. These parameters take preference over the preferences in a traveler's route request, and are designed to enable the use of certain types of road, modes, etc. to be given priority.

The processes also provide routes for commercial vehicles, when requested by the appropriate supporting functions. Route selection for transit vehicles has not been included since they operate over pre-determined routes. For inter-surface street public transport routes, especially those used by express bus services, the driver could obtain guidance in the same way as the driver of any other vehicle.

The processes (a) and (b) run continuously, but independently. This allows the route calculation work to proceed while new or additional data is being obtained. The calculation process is prompted to refine its results every time the data in either of the two stores of road data is updated, ensuring that the routes being used by the vehicles take account of the latest changes in traffic conditions.

DFD: 6.7 Provide Driver Personal Services

This DFD shows the processes that make up the Provide Driver Personal Services facility within the Provide Driver and Traveler Services function. These processes provide in-vehicle security and guidance services to the driver. The key points about the facility are as follows:

- Personal security is provided through driver action, e.g., pressing a panic button;
- Vehicle guidance can be dynamic or autonomous.

The processes subordinate to this DFD are themselves DFDs:

a) Provide Driver Personal Security (DFD 6.7.1)
b) Provide On-line Vehicle Guidance (DFD 6.7.2)

The processes in the two DFDs are intended to be provided separately, with the exception that the security processes in (a) make use of the vehicle location provided by a process in (b). It is also expected that they will share a common data output mechanism through the functionality provided by the Provide Information Services facility in DFD 6.2.

DFD: 6.7.1 Provide Driver Personal Security

This DFD shows the processes that make up the Provide Driver Personal Security facility within the Provide Driver Personal Services function. The processes enable the driver to call for emergency services in the event of an incident. The key points about the facility are as follows:

- Driver has only to initiate emergency message building process;
- Output of messages provided through the driver advisory message interface.

There are two processes in this DFD:

a) Build Driver Personal Security Message (6.7.1.1)
b) Provide Driver In-vehicle Communications Function (6.7.1.2)

These processes must be implemented together. Process (a) supports the driver's ability to call for emergency services in the event that the vehicle is involved in an accident, or an incident occurs to which the driver wishes to summon the emergency services. In both cases only one input is required and all output is passed through process (b) to the Provide Emergency Service Allocation facility - see DFD 5.1. The emergency message received in acknowledgment by process (b) is sent to the Provide Information Services facility - see DFD 6.2 for output to the driver. The store containing the vehicle identity will be set up by the manufacturer.

DFD: 6.7.2 Provide On-line Vehicle Guidance

This DFD shows the processes that make up the Provide On-line Vehicle Guidance facility within the Provide Driver Personal Services function. These processes provide in-vehicle guidance on request from the driver. The key points about the facility are as follows.

- Three types of in-vehicle guidance are available, including dynamic and two types of autonomous;
- Dynamic guidance is provided by a centralized route selection function;
- Autonomous guidance uses an in-vehicle database which may be enhanced by link journey times obtained centrally;
- Driver may choose the guidance type depending upon vehicle equipment and communications links;
- In-vehicle trip planning available by specifying a route start time later than the current time;
- If dynamic guidance fails, the guidance will continue based on the last data received.

There are four processes in this DFD, and one is itself a DFD:

a) Provide Vehicle Guidance (DFD 6.7.2.1)
b) Process Vehicle Location Data (6.7.2.2)
c) Provide Driver Guidance Interface (6.7.2.3)
d) Update Vehicle Navigable Map Database (6.7.2.4)

Guidance requests from drivers are received by process (c) and passed to the processes in (a) for implementation. Depending on the type of guidance selected (and available), they will communicate with a central facility (dynamic guidance) or use the store of navigable map data maintained by process (d) to provide the requested guidance. This will only commence when the driver provides positive acknowledgment of the message that the processes in (a) have a route and are ready to begin guidance. All guidance output to the driver is sent to process (c) and provided in a form that does not impair the driver's ability to control the vehicle.

The data in the store of navigable map data is updated by process (d) when a request is received from the driver through process (c). The completion of the update depends on successful completion of the payment transaction sent by process (d) to the Collect Advanced Payments facility - see DFD 7.4.1. Vehicle location data is provided by process (b) for use by the processes in (a) and for use by other

facilities and ITS functions. Disabled drivers are accommodated by specifying their needs using the preferences and constraints variables in the data used for the guidance request input to process (c). This ensures that they are guided to such things as the parking spaces for the disabled, etc.

In-vehicle trip planning is available by specifying a start time that is later than the current time. In this case no guidance data is provided by the processes in (a), and is replaced by simple route data, i.e., a list of route segments that will make up the proposed trip. In-vehicle guidance assumes that the start time is almost immediate.

DFD: 6.7.2.1 Provide Vehicle Guidance

This DFD shows the three processes that make up the Provide Vehicle Guidance facility within the Provide On-line Vehicle Guidance function. These processes determine the actual vehicle guidance method, and generate the route and guidance instructions. The key points about the facility are as follows:

- Guidance type depends on driver's request and on the availability of in-vehicle equipment;
- Dynamic guidance requires a communications links to a central facility;
- If dynamic guidance fails then autonomous guidance is automatically provided until it is restored;
- Autonomous guidance may use link travel times provided centrally, at the driver's request.

There are three processes in this DFD:

a) Determine In-vehicle Guidance Method (6.7.2.1.1)
b) Provide Dynamic In-vehicle Guidance (6.7.2.1.2)
c) Provide Autonomous In-vehicle Guidance (6.7.2.1.3)

The process in (a) is responsible for deciding on the type of guidance to be used and setting up the data sent to the chosen route calculation process. This data defines the type of route and the preferences and constraints that are to be applied to the calculation process. These will have been set up by the driver through the interface process in the Provide On-line Vehicle Guidance facility - see DFD 6.7.2, except when the request is for a route involving automatic highway system (ahs) lanes. In this instance the constraints in particular will be set by process (b) so that this type of lane is used. If these lanes are not available at some point, the route will be specified with the end of the last ahs lane as a new route calculation point, so that alternative preferences and constraints can be used. If the driver omits data from the guidance request, the option is provided for its direct input, or the use of data from the store of retained data.

If dynamic guidance is selected then process (a) sends the route request to process (b) for the addition of the vehicle location and communication with the Select Vehicle Route facility - see DFD 6.6.2. The data that is returned to process (b) is sent to process (a) and then to the driver interface. If no route can be provided by process (b), then process (a) sends the request to process (c) which provides autonomous guidance. At the driver's request, this may make use of link journey times provided by the Select Vehicle Route facility. Failure of dynamic guidance will cause process (a) to request autonomous guidance from process (c) starting at the vehicle's current location.

When providing dynamic guidance, process (b) will continually monitor the vehicle's location. When the vehicle reaches pre-defined points on the route (way points), it will request a new route from the Select Vehicle Route facility. It will also provide the facility with its location at the end of each route segment so that the facility has a feedback of the actual segment journey times (probe data).

The processes (b) or (c) above may be omitted from any particular implementation or offered as options since they are independent. However if the process in (c) is not included, and the communications link with the source of dynamic guidance data fails, then the vehicle will be left to depend on the last set of

dynamic guidance data that it received. This cannot now be updated if the vehicle departs from the originally specified route since no autonomous guidance will be available.

DFD: 6.8 Provide Traveler Personal Services

This DFD shows the processes that make up the Provide Traveler Personal Services facility within the Provide Driver and Traveler Services function. These processes provide personal security, on-line guidance, and traveler information to a traveler using a personal portable device. Traveler information and trip planning is provided for travelers using a personal (but not portable) device. The key points about the facility are as follows:

- To access the security or on-line guidance features, the traveler must be using a personal portable device (ppd);
- Personal security is provided through traveler action, e.g., pressing a panic button, on the ppd;
- On-line traveler guidance can be dynamic or autonomous;
- Traveler information is requested and provided in a similar way to that at a kiosk.

The processes subordinate to this DFD are all themselves DFDs:

a) Provide On-line Traveler Guidance (DFD 6.8.1)
b) Provide Traveler Personal Security (DFD 6.8.2)
c) Provide Traveler Services at Personal Devices (DFD 6.8.3)

These three sets of processes can form a coupled group. The processes (b) and (c) could be provided as options in any implementation, because they both make use of the traveler location provided by a process in (a).

DFD: 6.8.1 Provide On-line Traveler Guidance

This DFD shows the processes that make up the Provide On-line Traveler Guidance facility within the Provide Traveler Personal Services function. These processes provide the traveler with on-line guidance that may be dynamic or autonomous. The key points about the facility are as follows:

- On-line guidance provides detailed instructions for a traveler along a route;
- Guidance request includes preferences and constraints for travelers with special needs;
- Trip planning available by specifying a route start time that is later than the current time;
- Guidance and trip planning available for multimodal routes, including heavy rail and airline services;
- Often used traveler data can be retained for future re-use.

There are five processes in this DFD, and one is itself a DFD:

a) Provide Traveler Guidance (DFD 6.8.1.1)
b) Provide Personal Portable Device Guidance Interface (6.8.1.2)
c) Process Personal Portable Device Location Data (6.8.1.3)
d) Update Traveler Navigable Map Database (6.8.1.4)
e) Provide Traveler Emergency Message Interface (6.8.1.5)

Guidance requests from travelers are received by process (b) and passed to the processes in (a) for implementation. Depending on the type of guidance selected (and available), they will communicate with a central facility (dynamic guidance) or use the store of navigable map data maintained by process (d) to provide the requested guidance. This will only commence when the traveler provides positive acknowledgment of the message that the processes in (a) have a route and are ready to begin guidance. All guidance output to the traveler is sent to process (b) and provided in a form that does not distract the traveler so that they become a hazard or nuisance to others.

The data in the store of navigable map data is updated by process (d) when a request is received from the

traveler through process (b). The completion of the update depends on successful completion of the payment transaction sent by process (d) to the Collect Advanced Payments facility - see DFD 7.4.1. Traveler location data is provided by process (c) for use by the processes in (a) and for use by other facilities and ITS functions. Process (e) provides output of the response to an emergency request from the traveler through processes in the Provide Traveler Personal Security facility - see DFD 6.8.2.

The above processes support the traveler's use of multimodal routes, the choice of modes being specified by the traveler as part of the data input process (b). Similarly travelers with special needs, e.g., those who are deaf, wheelchair bound, or have a guide dog, can register their special requirements as part of the input data to ensure that they are guided to elevators, seats for disabled travelers, etc. and warned of escalators, road crossings, etc.

The actual guidance information provided as output from process (b) will have enough detail for travelers to 'navigate' themselves through the transportation network, including when to cross the street, which transit service to take, where to change from one service to another, etc.

DFD: 6.8.1.1 Provide Traveler Guidance

This DFD shows the processes that make up the Provide Traveler Guidance facility within the Provide On-line Traveler Guidance function. These processes determine the actual traveler guidance method, and generate the route and guidance instructions. The key points about the facility are as follows:

- Guidance type depends on the traveler's request and on the availability of specific ppd equipment;
- Dynamic guidance requires communications links to a central facility;
- If dynamic guidance fails then autonomous guidance is automatically provided until it is restored.

There are three processes in this DFD:

a) Determine Personal Portable Device Guidance Method (6.8.1.1.1)
b) Provide Personal Portable Device Dynamic Guidance (6.8.1.1.2)
c) Provide Personal Portable Device Autonomous Guidance (6.8.1.1.3)

The process in (a) is responsible for deciding on the type of guidance to be used and setting up the data sent to the chosen route calculation process. This data defines the type of route and the preferences and constraints that are to be applied to the calculation process. These will have been set up by the traveler through the interface process in the Provide On-line Traveler Guidance facility - see DFD 6.8.1. If the traveler omits data from the guidance request, the option is provided for its direct input, or the use of data from the store of retained data.

If dynamic guidance is selected then process (a) sends the route request to process (b) for the addition of the traveler's location and communication with the Provide Guidance and Trip Planning Services facility - see DFD 6.6. The data that is returned to process (b) is sent to process (a) and then to the traveler interface. If no route can be provided by process (b), then process (a) sends the request to process (c) which provides autonomous guidance. Failure of dynamic guidance will cause process (a) to request autonomous guidance from process (c) starting at the traveler's current location. When providing dynamic guidance, process (b) will continually monitor the traveler's location. When pre-defined points on the route (way points) are reached, it will request a new route from the Provide On-line Traveler Guidance facility.

The processes (b) or (c) above may be omitted from any particular implementation or offered as options since they are independent. However if the process in (c) is not included, and the communications link with the source of dynamic guidance data fails, then the traveler will be left to depend on the last set of dynamic guidance data that they received. This cannot now be updated if the traveler departs from the originally specified route since no autonomous guidance will be available.

DFD: 6.8.2 Provide Traveler Personal Security

This DFD shows the processes that make up the Provide Traveler Personal Security facility within the Provide Traveler Personal Services function. The processes enable the traveler to use a personal portable device (ppd) to call for emergency services in the event of an incident. The key points about the facility are as follows:

- Traveler has only to initiate emergency message building process;
- Output of messages provided through the traveler guidance interface.

There are two processes in this DFD:

a) Build Traveler Personal Security Message (6.8.2.1)
b) Provide Traveler Emergency Communications Function (6.8.2.2)

These processes must be implemented together. Process (a) supports the traveler's ability to call for emergency services following involvement in an accident, or an incident occurs to which the traveler wishes to summon the emergency services. In both cases only one input is required and all output is passed through process (b) to the Provide Emergency Service Allocation facility - see DFD 5.1. The emergency message received in acknowledgment by process (b) is sent to the Provide Traveler On-line Guidance facility - see DFD 6.8.1 for output to the traveler. The store containing the traveler identity will be set up by the manufacturer of the personal portable device.

DFD: 6.8.3 Provide Traveler Services at Personal Devices

The processes in this DFD provide the Provide Traveler Services at Personal Devices facility within the Provide Traveler Personal Services function. These processes enable the traveler to obtain traffic and transit information and to plan trips from a personal device. The key points about the facility are as follows:

- Travelers can plan trips and obtain traffic, transit, events, and yellow pages services information;
- Trips may be multimodal, including such things as demand responsive transit and ridesharing;
- Planned trips may be confirmed and paid for in advance as may yellow pages services;
- Travelers may also obtain traffic and transit information without planning any trips or making reservations;
- Provides "kiosk" type facilities for travelers using their own personal devices.

There are four processes in this DFD:

a) Get Traveler Personal Request (6.8.3.1)
b) Provide Traveler with Personal Traveler Information (6.8.3.2)
c) Provide Traveler Personal Interface (6.8.3.3)
d) Update Traveler Personal Display Map Data (6.8.3.4)

The traveler provides trip planning, trip confirmation, plus traffic and transit information requests through process (c). These are sent to process (a), which distributes the trip planning, and confirmation requests to the appropriate processes in the Provide Trip Planning Services facility - see DFD 6.1. Requests for traffic and transit information are sent for implementation by process (b) which also receives the results from the trip planning requests made by process (a). All data received by process (b) is sent to process (c) for output to the traveler. Travelers can request as many trip plans as are needed before an acceptable match is found to their trip requirements. Data used for previous inputs and regularly used data is kept in the store of traveler regular data by process (c). The outputs produced by process (c) may be shown against a background of digitized map data produced by process (d). This process will also update the store of map data on request from the traveler through process (c), and successful completion of payment through the Collect Advanced Payments facility - see DFD 7.4.1.

These processes form a tightly coupled group and communicate with many other ITS functions. They can only be implemented as a group, except that process (d) may be omitted if digitized map data is not to be used as the background for data output.

5.7 DFD: 7 Provide Electronic Payment Services

The processes in this DFD are responsible for the Provide Electronic Payment Services function. This function is responsible for enabling drivers, transit users and travelers to pay for their journeys and for other services. It also collects charges for yellow pages services and has an interface to the Manage Transit function for the management of fare collection plus advanced payment of fares and other services. The User Service Requirements satisfied by this functional process tree include those from User Service 3.1, "Electronic Payment Services".
The key points about this function are as follows:

- Facilities are provided for non-stop toll, fare and parking lot charges collection;
- Drivers and travelers can pay for tolls, fares, parking lot charges in advance;
- Additionally travelers can only pay for yellow pages services in advance;
- Images of those making invalid payments are sent to the Provide Law Enforcement Allocation function;
- The only item of data required by the driver for toll or parking lot charges is an identity.

The processes subordinate to this DFD are all themselves DFDs:

a) Provide Electronic Toll Payment (DFD 7.1)
b) Provide Electronic Parking Payment (DFD 7.2)
c) Provide Electronic Fare Collection (DFD 7.3)
d) Carry-out Centralized Payments Processing (DFD 7.4)
e) Provide Traveler Card Interfaces (DFD 7.5)

The above processes are able to implement a flexible toll, fare, and parking lot charging policy that enables each of these to change or be changed by time of day, day or week, or in response to input from the service providers, who may be influenced by the Manage Travel Demand facility - see DFD 1.4. This is designed to provide some influence over the modal split of travelers' journeys between the private car and transit modes of transportation.

DFD: 7.1 Provide Electronic Toll Payment

The processes in this DFD are responsible for the Provide Electronic Toll Payment facility within the Provide Electronic Payment Services function. These processes transact the payments for tolls either for current use by drivers, or as advanced payments by transit users and travelers. The key points about the facility are as follows:

- Drivers can pay tolls without stopping or slowing down as they pass toll plazas;
- Drivers can also pay in advance for transit fares and parking lot charges;
- Images of drivers making invalid payments are sent to the Provide Law Enforcement Allocation function.
- A record of all transactions is periodically sent to the toll operator, toll service provider, and in a sanitized form, to the Manage Archived Data function - see DFD 8.

There are 7 processes in this DFD, and one is itself a DFD:

a) Process Electronic Toll Payment (DFD 7.1.1)
b) Produce Roadside Displays (7.1.2)
c) Obtain Toll Violator Image (7.1.3)
d) Provide Driver Toll Payment Interface (7.1.4)

e) Detect Vehicle for Tolls (7.1.5)
f) Distribute Advanced Charges and Fares (7.1.6)
g) Provide Traveler Card Interface for Tolls (7.1.7)

The processes in this group provide all the facilities for handling both current and advanced toll payments. They form a tightly coupled group that should be implemented in their entirety. However process (f) could be omitted if particular implementations are not supporting the advanced payments of tolls, parking lot charges, and transit fares.

DFD: 7.1.1 Process Electronic Toll Payment

The processes in this DFD are responsible for the Process Electronic Toll Payment facility within the Provide Electronic Payment Services function. These processes transact the payments for current and advanced tolls.

The key points about the facility are as follows:
· Tolls are calculated by vehicle characteristics and are set by the toll service provider;
· Support is provided for the "closed" type of toll system;
· A record of all transactions is provided for the toll operator and service provider;
· All vehicles are checked for advanced payment before being billed for the current toll;
· Average journey time between toll plazas is provided as probe data to other ITS functions.
· Operational data is provided to the Manage Archived Data function.

There are 11 processes in this DFD:
a) Read Tag Data for Tolls (7.1.1.1)
b) Calculate Vehicle Toll (7.1.1.2)
c) Manage Bad Toll Payment Data (7.1.1.3)
d) Check for Advanced Tolls Payment (7.1.1.4)
e) Bill Driver for Tolls (7.1.1.5)
f) Collect Probe Data from Toll Transactions (7.1.1.6)
g) Update Toll Price Data (7.1.1.7)
h) Register for Advanced Toll Payment (7.1.1.8)
i) Manage Toll Financial Processing (7.1.1.9)
j) Determine Advanced Toll Bill (7.1.1.10)
k) Manage Toll Archive Data (7.1.1.11)

The processes in this group enable payments for tolls to be made by drivers without stopping and also support a flexible toll price structure. Toll prices may be changed at any time by the service provider through process (g). They are implemented immediately by this process, which also sends them to the store of prices maintained by the Carry-out Centralized Payments Processing facility - see DFD 7.4, for use by the Provide Driver and Traveler Services function - see DFD 6. This last set of data may be sent on request or whenever a change in price is made.

Price changes may come directly on the initiative of the toll service provider or indirectly through a request to the provider from the Manage Travel Demand facility - see DFD 1.4, via process (g). Toll charges paid in advance will be unaffected by any new price structure.

DFD: 7.2 Provide Electronic Parking Payment

The processes in this DFD are responsible for the Provide Electronic Parking Payment facility within the Provide Electronic Payment Services function. These processes transact the payments for parking lot charges either for current use by drivers, or as advanced payments by drivers, transit users, and travelers. The key points about the facility are as follows:

- Drivers can pay parking lot charges without leaving their vehicles or stopping the vehicle;
- Drivers can also pay in advance for tolls and transit fares;
- Images of drivers making invalid payments are sent to the Provide Law Enforcement Allocation function.

There are 7 processes in this DFD, and one is itself a DFD:
a) Process Electronic Parking Lot Payment (DFD 7.2.1)
b) Produce Parking Lot Displays (7.2.2)
c) Obtain Parking Lot Violator Image (7.2.3)
d) Provide Driver Parking Lot Payment Interface (7.2.4)
e) Detect Vehicle for Parking Lot Payment (7.2.5)
f) Distribute Advanced Tolls and Fares (7.2.6)
g) Provide Traveler Card Interface for Parking (7.2.7)

The processes in this group provide all the facilities for handling both current and advanced parking lot charge payments from vehicles without stopping. They form a tightly coupled group that should be implemented in their entirety. However process (f) could be omitted if particular implementations are not supporting the advanced payments of parking lot charges, tolls, and transit fares.

DFD: 7.2.1 Process Electronic Parking Lot Payment

The processes in this DFD are responsible for the Process Electronic Parking Lot Payment facility within the Provide Electronic Payment Services function. These processes transact the payments for current and advanced parking lot charges.

The key points about the facility are as follows:
- Charges are calculated by vehicle characteristics and are set by the parking service provider;
- All vehicles are checked for advanced payment before being billed for the current charge;
- A record of all transactions is provided for the parking lot operator and service provider;
- Operational data is provided to the Manage Archived Data function.

There are ten processes in this DFD:
a) Read Parking Lot Tag Data (7.2.1.1)
b) Calculate Vehicle Parking Lot Charges (7.2.1.2)
c) Collect Bad Charge Payment Data (7.2.1.3)
d) Check for Advanced Parking Lot Payment (7.2.1.4)
e) Bill Driver for Parking Lot Charges (7.2.1.5)
f) Manage Parking Lot Financial Processing (7.2.1.6)
g) Update Parking Lot Data (7.2.1.7)
h) Register for Advanced Parking Lot Payment (7.2.1.8)
i) Manage Parking Lot Reservations (7.2.1.9)
j) Determine Advanced Charges (7.2.1.10)

The processes in this group enable payments for parking lot charges to be made by drivers without stopping and also support a flexible parking lot charge structure. Parking lot prices may be changed at any time by the operator through process (g). This data is implemented immediately by this process, which also sends it to the store of prices maintained by the Carry-out Centralized Payments Processing facility - see DFD 7.4, so that it can be used by the Provide Driver and Traveler Services function - see DFD 6. This last set of data may be sent on request or whenever a change in price is made. The price changes may come directly on the initiative of the parking operator or indirectly through a request to the provider from the Manage Demand facility - see DFD 1.4, via process (g). Parking lot charges paid in advance will be unaffected by any new price structure.

DFD: 7.3 Provide Electronic Fare Collection

The processes in this DFD provide the Electronic Fare Collection facility within the Provide Electronic Payment Services function. These processes transact the payments for transit fares either for current trips by transit users, or as advanced payments by drivers, transit users, and travelers. The key points about the facility are as follows:

- Transit users can pay fares without stopping as they board the transit vehicle or at a transit stop;
- Transit users can also pay in advance for tolls and parking lot charges, as well as for yellow pages services;
- Transit users may request payment of the fare by a third party;
- Images of transit users making invalid payments are sent to the Manage Emergency Services function.

There are 5 processes in this DFD and one is itself a DFD:

a) Process Electronic Transit Fare Payment (DFD 7.3.1)
b) Distribute Advanced Tolls and Parking Lot Charges (7.3.2)
c) Get Transit User Image for Violation (7.3.3)
d) Provide Remote Terminal Traveler Card Interface (7.3.4)
e) Provide Transit Vehicle Traveler Card Interface (7.3.5)

The processes in this group provide all the facilities for handling both current and advanced fares. They form a tightly coupled group that should be implemented in their entirety. However process (b) could be omitted if particular implementations are not supporting the advanced payments of parking lot charges, tolls, and transit fares. Similarly, either process (d) or (e) could be omitted if particular implementations are not supporting fare collection either at the roadside or on-board vehicles respectively.

DFD: 7.3.1 Process Electronic Transit Fare Payment

The processes in this DFD are responsible for the Process Electronic Transit Fare Payment facility within the Provide Electronic Payment Services function. These processes transact the payments for current and advanced transit fares. The key points about the facility are as follows:

- Support is provided for transit fare collection on vehicles or at the roadside;
- Payment of transit fares collected on the vehicle may be processed interactively or in batches;
- All transit users are checked for advanced payment before being billed for the current fare.

There are seven processes in this DFD:

a) Register for Advanced Transit Fare Payment (7.3.1.1)
b) Determine Advanced Transit Fares (7.3.1.2)
c) Manage Transit Fare Financial Processing (7.3.1.3)
d) Check for Advanced Transit Fare Payment (7.3.1.4)
e) Bill Transit User for Fare (7.3.1.5)
f) Collect Bad Transit Fare Payment Data (7.3.1.6)
g) Update Transit Fare Data (7.3.1.7)

The processes in this group enable fare payments to be made by transit users without stopping and also support a flexible fare price structure. Fares may be changed at any time by the transit operator through input to process (g). This process implements the new fares immediately by sending data to the Collect Transit Fares on the Vehicle and Collect Transit Fares at the Roadside facilities - see DFDs 4.6 and 4.7.2 respectively, and also for use by the Provide Driver and Traveler Services function (DFD 6) through the store of prices maintained by the Carry-out Centralized Payments Processing facility - see DFD 7.4. This last set of data may be sent on request, or whenever a change is made by the transit operator. The validity of transit fares already paid in advance is unaffected by any new price structure.

DFD: 7.4 Carry-out Centralized Payments Processing

The processes in this DFD provide the Carry-out Centralized Payments Processing facility within the Provide Electronic Payment Services function. These processes provide a central store for pricing information and a central payments facility. The key points about the facility are as follows:

- Central store of prices is provided for use by the Provide Driver and Traveler Services function;
- Yellow pages services cost processing is provided for advanced traveler payments.
- Interface is provided for collection of payee data.

There are 3 processes in this DFD, and one is itself a DFD:

a) Collect Advanced Payments (DFD 7.4.1)
b) Collect Price Data for ITS Use (7.4.2)
c) Route Traveler Advanced Payments (7.4.3)

The processes in (a) and (c) must be implemented together to support traveler advanced payments for confirmed trips. Process (c) acts as the communications interface for advanced payments with the toll, parking lot charge, and transit fare collection facilities in the Provide Electronic Payment Services function - see DFDs 7.1, 7.2, and 7.3. Process (b) maintains a store of prices that are provided by these other facilities. It operates independently and need only be implemented if needed.

DFD: 7.4.1 Collect Advanced Payments

The processes in this DFD provide the Collect Advanced Payments facility within the Provide Electronic Payment Services function. These processes enable payments to be made for services provided as part of several ITS functions. The key points about the facility are as follows:

- All transactions are sent to the financial institution for clearance and payment;
- Processes for specific types of payments can be implemented individually.

There are eight processes in this DFD:

a) Process Commercial Vehicle Payments (7.4.1.1)
b) Process Yellow Pages Services Provider Payments (7.4.1.2)
c) Process Driver Map Update Payments (7.4.1.3)
d) Process Traveler Map Update Payments (7.4.1.4)
e) Process Transit User Other Services Payments (7.4.1.5)
f) Process Traveler Trip and Other Services Payments (7.4.1.6)
g) Collect Payment Transaction Records (7.4.1.7)
h) Process Traveler Rideshare Payments (7.4.1.8)

These processes are each responsible for transacting payments with the financial institution. The payments transacted comprise those for commercial vehicle administration (see DFD 2.5), yellow pages provider registration (see DFD 6.5), map updates for drivers and travelers (see DFDs 6.7.2, 6.8.1, and 6.8.3), other (yellow pages) services for transit users (see DFDs 4.6 and 4.7.2), and ridesharing (see DFD 6.4). The results of the transaction are always returned to the requesting process, and are also sent to process (g) which maintains a store of transaction records. A summary report, without the identities of the payees or other sensitive financial information, is periodically sent by process (g) to the Manage Archived Data function - see DFD 8.

These processes can be implemented separately with the obvious exception of that in (g) which depends on one or more of the others for its source of data. If the process in (f) is implemented, it will require the distribution process described in the previous DFD for the advanced payment of toll, parking lot charges, and transit fares to be completed. The process in (b) enables the Provide Driver and Traveler Services function (DFD 6) to obtain income from giving travelers and transit users access to details of the services available from yellow pages service providers.

DFD: 7.5 Provide Traveler Card Interfaces

The processes in this DFD make up the Provide Traveler Card Interface facility within the Provide Electronic Payment Services function. These processes enable drivers and travelers to pay for services provided by ITS functions. The key points about the facility are as follows:

- Traveler Card / Payment Instrument may be credit/debit card or some form of electronic purse;
- Credit identity from credit/debit card is used for service payment billing through financial institution;
- Stored credit value from electronic purse is directly decreased by the cost of the service.

There are 4 processes in this DFD:

a) Provide Vehicle Traveler Card Interface (7.5.1)
b) Provide Transit User Roadside Traveler Card Interface (7.5.2)
c) Provide Personal Traveler Card Interface (7.5.3)
d) Provide Traveler Kiosk Traveler Card Interface (7.5.4)

Each of these processes can be implemented separately. They each provide an interface that is linked to a particular ITS function. This interface enables the driver, traveler, or transit user to provide data that enables them to pay for services provided by ITS functions. These services comprise such things as updates to navigable map databases and digitized map displays, payment for other (yellow pages) services, and advanced payments.

5.8 DFD: 8 Manage Archived Data

This DFD shows the processes that provide the Manage Archived Data function. This function is responsible for providing facilities to collect ITS and related data, archive it, and make it available to other user systems for use in transportation administration, policy evaluation, safety, planning, performance monitoring, program assessment, operations, and research applications. The User Service Requirements satisfied by this functional process tree include those from User Service 7.1 “Archived Data Function”.

The key points about the function are as follows:

- Data collected from each ITS function and center-type terminators
- Collected data formatted and stored into a permanent data store
- Appropriate meta-data attached with each incoming data set
- Schema, security, and format of data managed through the interface with the Archived Data Administrator
- Coordination with other archives allows data to be shared across multiple sites
- User systems request data or a catalog of data
- User systems request analyses of the archive data such as fusion, mining, or aggregations
- Data extracted from the archive to support government reporting requirements
- Archive on-demand allows additional data to be selected for import into the archive by users systems
- Roadside data collected directly for archive purposes

There are nine processes in this DFD:

a) Get Archive Data (8.1)
b) Manage Archive (8.2)
c) Manage Archive Data Administrator Interface (8.3)
d) Coordinate Archives (8.4)
e) Process Archived Data User System Requests (8.5)
f) Analyze Archive (8.6)

g) Process On Demand Archive Requests (8.7)
h) Prepare Government Reporting Inputs (8.8)
i) Manage Roadside Data Collection (8.9)

5.9 DFD: 9 Manage Maintenance and Construction

The processes in this DFD are responsible for the Manage Maintenance and Construction function. This DFD includes the management of maintenance and construction vehicle fleets, roadway maintenance activities (winter treatment and routine maintenance), work zone activities, collection of environmental data, and dissemination of work plans, road condition, and environmental information to other transportation functions. The User Service Requirements satisfied by this functional process tree include those from User Service 8.1, "Maintenance and Construction Operations".

The key points about the function are as follows:

- Maintenance and construction fleet managers dispatch, route, and track their vehicles, and may remotely operate the operational equipment on those vehicles;
- Location, safety status, operating condition, and operational status are monitored on maintenance and construction vehicles;
- Work zone activity, field equipment repair, winter maintenance, and routine roadway maintenance needs are determined, scheduled, monitored, and shared with other agencies;
- Automated roadway treatment facilities are supported;
- Resources such as materials, fleet equipment and vehicles are managed;
- Work zone activity is managed, including control of roadside and maintenance and construction vehicle work zone devices;
- Crew movements are monitored and alerts issued if a crew member approaches the work zone boundary;
- Vehicle intrusions into a work zone are detected by roadside equipment and maintenance and construction vehicles, and intrusion alerts are issued to maintenance and construction vehicle operators and crew members;
- Environmental information is collected from sensors at the roadside and on vehicles and from other agencies, processed, and disseminated to other agencies.

The processes subordinate to this DFD are all themselves DFDs:
a) Manage M&C Vehicles (DFD 9.1)
b) Manage Roadway M&C Activities (DFD 9.2)
c) Manage Work Zones (DFD 9.3)
d) Manage Environmental Information (DFD 9.4)

The above processes are able to implement a maintenance and construction management function including vehicle fleet management, maintenance and construction activity needs assessment and scheduling, work zone management and crew safety measures, and serve as a central point for collection, processing, and dissemination of environmental information. This is designed to assist in effective and timely maintenance and construction operations, coordinated with other transportation agencies to maximize efficiency and minimize the risk of incidents in the rest of the transportation network.

DFD: 9.1 Manage M&C Vehicles

The seven processes in this DFD provide the Manage M&C Vehicles facility within the Manage Maintenance and Construction function. These processes together provide a fleet management function for maintenance and construction vehicles by providing dispatching and routing, tracking vehicle locations and work activities, scheduling vehicle maintenance, and monitoring

operational status. The key points about the facility are as follows:

- Dispatching and routing of maintenance and construction vehicles;
- Tracking vehicle location, safety status, operating condition, and operational status;
- Maintenance and construction vehicle instructions dependent upon winter or non-winter conditions, incidents, and traffic congestion;
- Preventive and corrective vehicle maintenance automatically scheduled by fleet manager or via direct monitoring of the vehicles themselves by the repair facility;
- Incident and traffic flow information from traffic and emergency management functions is collected to provide an overall view of the road network for maintenance and construction activities;
- Control of on-board equipment is provided, both by the vehicle operator and remotely from a center;
- Field equipment repair status is collected and infrastructure health is monitored via sensors on vehicles and at the roadside.

There are seven processes in this DFD:

a) Manage M&C Systems On-Board (9.1.1)
b) Collect M&C Vehicle Data On-Board (9.1.2)
c) Track M&C Vehicles and Equipment (9.1.3)
d) Manage M&C Vehicle Fleet (9.1.4)
e) Schedule M&C Vehicle Maint (9.1.5)
f) Provide M&C Vehicle Operator Interface for Maint (9.1.6)
g) Process Road Network Information (9.1.7)

The processes in this group provide all the facilities for the management of a fleet of maintenance and construction vehicles, from operation to vehicle repair. They form a tightly coupled group that should be implemented in its entirety. However part of process (f) could be omitted if particular implementations are not supporting remote control of on-board vehicle maintenance equipment, or infrastructure sensor control.

DFD: 9.2 Manage Roadway M&C Activities

This DFD shows the eight functions that provide the Manage Roadway M&C Activities facility within the Manage Maintenance and Construction function. This facility includes determination of maintenance and construction needs, scheduling assets to address those needs, and collecting work activity status. The key points about the facility are as follows:

- Equipment repair, winter maintenance, and routine roadway maintenance needs are determined;
- Resource needs from other agencies are collected and resolved;
- Maintenance Decision Support system makes maintenance recommendations based on current weather, needs, and resources available with parameter input from center personnel;
- Schedules for roadway maintenance are generated and shared with other agencies;
- Roadway maintenance status is collected and shared with other agencies and the function that schedules maintenance and construction activities;
- Map data is used to assist in tracking resources, provide routing recommendations, and monitoring work activities;
- Materials usage and storage is tracked;
- Data is archived to assist in tracking transportation infrastructure health and determining repair needs, monitoring work activity performance, and analyzing trends;
- An automated roadway treatment system operates based on environmental sensors and control parameters from a center.

There are eight processes in this DFD, and two are themselves DFDs:

a) Schedule M&C Activities (9.2.1)
b) Status Current M&C Activities (9.2.2)
c) Determine M&C Needs (DFD 9.2.3)

d) Manage M&C Map Data (9.2.4)
e) Provide M&C Center Personnel Interface for Maint (9.2.5)
f) Manage Infrastructure Monitoring and Treatment Systems (DFD 9.2.6)
g) Manage M&C Archive Data (9.2.7)
h) Manage M&C Materials (9.2.8)

The processes (a), (b), (c), (d), (e), and (h) in this group determine maintenance needs, schedule work activities to address them, and track the status of those activities and the resources required to complete them. Process (f) is somewhat different in that it automatically determines when roadway treatment should be applied based on roadway sensors, and therefore operates rather independently. Process (g) serves only as a storage point for maintenance and construction data and therefore could be modified to collect only that data required by the implementation.

DFD: 9.2.3 Determine M&C Needs

This DFD shows the processes that provide the Determine M&C Needs facility within the Manage Roadway M&C Activities function. These processes identify equipment requiring repair, winter maintenance needs, resource requirements, and then request maintenance and construction work to be scheduled. An automated Maintenance Decision Support system function is also supported. The key points about the facility are:

- Equipment repair, winter maintenance, and routine roadway maintenance needs are determined;
- Resource needs from other agencies are collected and resolved;
- Maintenance Decision Support system makes maintenance recommendations based on current weather, needs, and resources available with parameter input from center personnel.

There are five processes in this DFD:

a) Determine Winter Roadway Treatment Needs (9.2.3.1)
b) Determine Roadway M&C Needs (9.2.3.2)
c) Provide Maintenance Decision Support (9.2.3.3)
d) Manage M&C Resource Needs (9.2.3.4)
e) Collect Roadside Equipment Status (9.2.3.5)

The processes in this group provide all the facilities for determining maintenance and construction needs, from roadside equipment repair, to winter and routine maintenance, to handling resource requests from other agencies. All except process (c) work together, although (a) could be omitted if winter roadway treatment is not required in the implementation. Process (c) is used in more advanced applications in which specific maintenance and construction recommendations are produced automatically, without personnel intervention except for system parameter inputs.

DFD: 9.2.6 Manage Infrastructure Monitoring and Treatment Systems

This DFD shows the processes that make up the Manage Infrastructure Monitoring and Treatment Systems facility within the Manage Roadway M&C Activities function. These processes control and manage the automated roadway treatment functions and transportation infrastructure sensor equipment interface. The key points about the facility are:

- An automated roadway treatment system operates based on environmental sensors and under center control;
- Advisory messages to motorists are displayed on dynamic message signs to warn of ongoing roadway treatment or the environmental condition that required that treatment (e.g., icy roads);
- Infrastructure sensors located on the roadway and on the maintenance and construction vehicle are monitored and managed remotely.

There are three processes in this DFD:
a) Operate Roadway Automated Treatment System (9.2.6.1)
b) Control Roadway Automated Treatment System (9.2.6.2)
c) Operate Infrastructure Monitoring Devices (9.2.6.3)

The processes (a) and (b) provide all the facilities for handling automated roadway treatment and form a tightly coupled group that should be implemented in its entirety. In process (c), roadside sensor equipment detecting transportation infrastructure faults is monitored by a center, and therefore should be implemented with complementary processes 1.1.1.6 (Collect Infrastructure Sensor Data) and 9.1.1 (Manage M&C Systems On-Board).

DFD: 9.3 Manage Work Zones

The processes in this DFD provide the Manage Work Zones facility within the Manage Maintenance and Construction function. These processes control activity in the work zone, collect and disseminate information about work zones to other agencies, monitor vehicle speeds through the work zone, and detect vehicle intrusion into the work zone. The key points about the facility are as follows:
- Work zone activity is managed, including control of roadside and maintenance and construction vehicle work zone devices;
- Crew movements are monitored and alerts issued if a crew member approaches the work zone boundary;
- Information about work zone activity, including status and other data, is collected, analyzed, and disseminated to other agencies;
- Individual vehicle speed through the work zone is monitored, and speed is enforced by reporting violations to traffic management or maintenance and construction management agencies, or posting on driver information devices such as dynamic message signs;
- Vehicle intrusions into the work zone are detected and crew alerts are issued.

The processes subordinate to this DFD are all themselves DFDs:
a) Control Work Zone Activity (DFD 9.3.1)
b) Manage Work Zone Data (DFD 9.3.2)
c) Manage Vehicle Speed (DFD 9.3.3)
d) Manage WZ Intrusion Warning (DFD 9.3.4)

The processes in this group provide all the facilities for managing activities in work zones. Both (a) and (b) form a tightly coupled group that should be implemented in together. Processes (c) and (d) can each be implemented separately, but should be considered as part of the overall function since they enhance safety for the work zone crew, passing vehicles, and maintenance and construction vehicles.

DFD: 9.3.1 Control Work Zone Activity

This DFD shows the processes that make up the Control Work Zone Activity facility within the Manage Work Zones function. These processes manage activity in the work zone by monitoring crew movements and controlling work zone devices located both at the roadside and within the maintenance and construction vehicle. The key points about the facility are:
- Work zone devices, such as dynamic message signs, CCTVs, or intrusion alert devices located at the roadside or on maintenance and construction vehicles are controlled;
- Crew movements are monitored and alerts issued if a crew member approaches the work zone boundary.

There are four processes in this DFD:
a) Operate Work Zone Devices (9.3.1.1)

b) Operate WZ Devices On-Board (9.3.1.2)
c) Monitor Crew Movement (9.3.1.3)
d) Monitor Crew Movement On-Board (9.3.1.4)

The processes (a) and (b) provide the facilities for handling the control of work zone devices from a center and from on-board a maintenance and construction vehicle, respectively. Therefore, one or both of the options may be implemented. Processes (c) and (d) are similar in that crew movements may be monitored from the roadside (as in process c) and/or from a maintenance and construction vehicle (as in process d). Again, one or both of the options may be implemented.

DFD: 9.3.2 Manage Work Zone Data

This DFD shows the processes that make up the Manage Work Zone Data facility within the Manage Work Zones function. These processes collect status and data about work zone activities from field personnel and roadside devices, analyze it, and prepare it for dissemination to other agencies. Information about work zone activity, including status and other data, is collected, analyzed, and disseminated to other agencies.

There are four processes in this DFD:
a) Status Work Zone Activity (9.3.2.1)
b) Collect Work Zone Data (9.3.2.2)
c) Generate Work Zone Information for Distribution (9.3.2.3)
d) Provide M&C Field Personnel Interface for Work Zones (9.3.2.4)

The processes in this group provide all the facilities for collecting data and disseminating information about work zone activities. They form a tightly coupled group that should be implemented in its entirety.

DFD: 9.3.3 Manage Vehicle Speed

This DFD shows the processes that make up the Manage Vehicle Speed facility within the Manage Work Zones function. These processes monitor a vehicle's speed as it passes through a work zone, determine if a speed violation has occurred, and report to traffic and maintenance and construction agencies, as well as enforcement agencies. The key points about the facility are:

- Individual vehicle speed through the work zone is monitored and aggregated to provide an overall speed;
- Unsafe or excessive vehicle speeds, including environmental conditions, are detected;
- Speed enforcement is provided by monitoring speeds, providing camera images, and by reporting violations to traffic management or maintenance and construction management agencies, posting on driver information devices such as dynamic message signs, or informing an enforcement agency.

There are four processes in this DFD:
a) Collect Vehicle Speed (9.3.3.1)
b) Monitor Vehicle Speed in Work Zone (9.3.3.2)
c) Monitor Vehicle Speed on Roadway (9.3.3.3)
d) Support Vehicle Speed Enforcement (9.3.3.4)

The processes in this group provide all the facilities for monitoring vehicle speeds in a work zone and reporting violations. They form a tightly coupled group that could be implemented in its entirety. However, process (b) involves enforcement via a maintenance and construction agency whereas process (c) involves enforcement via a traffic management agency. Process (d) could be omitted if direct control of the speed sensor by an enforcement agency is not required.

DFD: 9.3.4 Manage WZ Intrusion Warning

This DFD shows the processes that make up the Manage WZ Intrusion Warning facility within the Manage Work Zones function. These processes alert maintenance and construction vehicle occupants and work zone crew members when a vehicle intrusion into the work zone has been detected. The key points about the facility are:

- Vehicle intrusions into a work zone are detected by roadside equipment and maintenance and construction vehicles;
- Intrusion alerts are issued to maintenance and construction vehicle operators and crew members.

There are four processes in this DFD:

a) Detect Work Zone Intrusion (9.3.4.1)
b) Provide Work Zone Intrusion Alert (9.3.4.2)
c) Detect Work Zone Intrusion On-Board (9.3.4.3)
d) Provide On-Board Work Zone Intrusion Alert (9.3.4.4)

The processes in this group provide all the facilities to detect work zone intrusion using sensors on-board a maintenance and construction vehicle (processes c and d) and at the roadside (processes a and b). Therefore, one or both of the options may be implemented, depending upon the location of the intrusion sensors.

DFD: 9.4 Manage Environmental Information

The five processes in this DFD provide the Manage Environmental Information facility within the Manage Maintenance and Construction function. These processes collect environmental data from other agencies, such as the weather service, and from sensors at the roadside and on vehicles. This DFD then processes that data and disseminates it to other agencies. The key points about the facility are as follows:

- Environmental data is collected from sensors at the roadside and on-board probe vehicles, such as private vehicles, transit vehicles, emergency vehicles, and maintenance and construction vehicles;
- Environmental data is collected from weather service providers and from other agencies;
- All of this environmental data is then processed and disseminated to other agencies.

There are five processes in this DFD:

a) Collect Environmental Data On-Board (9.4.1)
b) Collect Environmental Data (9.4.2)
c) Process Environmental Data (9.4.3)
d) Disseminate Environmental Information (9.4.4)
e) Provide M&C Center Personnel Interface for Environment (9.4.5)

The processes in this group provide all the facilities for the collection of environmental data, processing, and dissemination to other agencies. They form a tightly coupled group that should be implemented in its entirety.

A.0 List of Acronyms

A

ABS	Antilock Brake System
ADA	Americans with Disabilities Act
ADMS	Archived Data Management subsystem
AFD	Architecture Flow Diagram
AID	Architecture Interconnect Diagram
AHS	Automated Highway System
AMPS	Advanced Mobile Phone System
ATC	Automatic Train Control
ATIS	Advanced Traveler Information System
ATM	Asynchronous Transfer Mode
ATMS	Advanced Traffic Management System
AVCS	Advanced Vehicle Control System
AVI	Automated Vehicle Identification
AVL	Automated Vehicle Location
AVO	Automated Vehicle Operation

C

CAAA	Clean Air Act Amendment
CASE	Computer Aided Systems Engineering
CCTV	Closed Circuit TV
CDMA	Code Division Multiple Access
CDPD	Cellular Digital Packet Data
CMS	Changeable Message System
COTR	Contracting Officer Technical Representative
CSP	Communication Service Provider
CVAS	Commercial Vehicle Administration Subsystem
CVCS	Commercial Vehicle Check Subsystem
CVISN	Commercial Vehicle Information Systems and Networks
CVO	Commercial Vehicle Operations
CVS	Commercial Vehicle Subsystem

D

DAB	Digital Audio Broadcast
DD	Data Dictionary
DDE	Data Dictionary Element
DFD	Data Flow Diagram
DGPS	Differential Global Positioning System
DMS	Dynamic Message Sign
DMV	Department of Motor Vehicles
DOD	Department of Defense
DOT	Department of Transportation
DSRC	Dedicated Short Range Communications
DTA	Dynamic Traffic Assignment

E

ECPA	Electronic Communications Privacy Act
EDI	Electronic Data Interchange
EM	Emergency Management Subsystem
EMC	Emergency Management Center
EMMS	Emissions Management Subsystem
EPA	Environmental Protection Agency
ESMR	Enhanced SMR
ETA	Expected Time of Arrival
ETTM	Electronic Toll and Traffic Management
EVS	Emergency Vehicle Subsystem

F

FARS	Fatal Accident Reporting System
FCC	Federal Communications Commission for the U.S.
FHWA	Federal Highway Administration
FIPS	Federal Information Processing Standard
FMS	Fleet Management Subsystem
FOT	Field Operational Test
FPR	Final Program Review
FTA	Federal Transit Administration

G

GIS	Geographic Information System
GPS	Global Positioning System

H

HAR	Highway Advisory Radio
HAZMAT	Hazardous Material(s)
HOV	High Occupancy Vehicle
HRI	Highway Rail Intersection
HSR	High Speed Rail
HUD	Head–Up Display

I

IEEE	Institute of Electrical and Electronics Engineers, Inc
IP	Internet Protocol
IPR	Interim Program Review
ISO	International Standards Organization
ISP	Information Service Provider
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
ITI	Intelligent Transportation Infrastructure
ITS	Intelligent Transportation Systems
ITS AMERICA	Intelligent Transportation Society of America
IVHS	Intelligent Vehicle Highway Systems
IVIS	In Vehicle Information System

L

LAN	Local Area Network

LCD	Liquid Crystal Display
LED	Light Emitting Diode
LEO	Low–Earth Orbit satellite system
LPD	Liability and Property Damage
LRMP	Location Reference Messaging Protocol
LRMS	Location Reference Messaging Standard
M	
MAN	Metropolitan Area Network
MMI	Man–Machine Interface (or Interaction)
MOE	Measure Of Effectiveness
MPH	Miles per Hour
MPO	Metropolitan Planning Organization
MTC	Metro Traffic Control
N	
NA	National Architecture
NAR	National Architecture Review
NEMA	National Electrical Manufacturers Association
NHPN	National Highway Planning Network
NHTSA	National Highway Traffic Safety Administration
NII	National Information Infrastructure (aka Information Superhighway)
NTCIP	National Transportation Communications for ITS Protocol
O	
OEM	Original Equipment Manufacturer
OSI	Open Systems Interconnection
OTP	Operational Test Plan
P	
PCS	Personal Communications System
PDA	Personal Digital Assistant
PIAS	Personal Information Access Subsystem
PMS	Parking Management Subsystem
PS	Planning Subsystem
PSA	Precursor System Architecture
PSPEC	Process Specification
PSTN	Public Switched Telephone Network
PTS	Positive Train Separation
Q	
QFD	Quality Functional Deployment
R	
R&D	Research and Development
RDS	Radio Data Systems
RDS–TMC	Radio Data Systems incorporating a Traffic Message Channel
RS	Roadway Subsystem
RTA	Regional Transit Authority
RTS	Remote Traveler Support Subsystem

S

SAE	Society of Automotive Engineers
SDO	Standards Development Organization
SMR	Specialized Mobile Radio
SONET	Synchronous Optical Network
SOV	Single Occupancy Vehicle
SQL	Standard Query Language
SSR	Standard Speed Rail
STMF	Simple Transportation Management Framework

T

TAS	Toll Administration Subsystem
TCS	Toll Collection Subsystem
TDM	Travel Demand Management
TDMA	Time Division Multiple Access
TIGER	Topologically Integrated Geographic Encoding & Referencing files
TMC	1. Traffic Management Center 2. Traffic Message Channel. See RDS–TMC
TMS	Traffic Management Subsystem
TRMC	Transit Management Center
TRMS	Transit Management Subsystem
TRT	Technical Review Team
TRVS	Transit Vehicle Subsystem

V

VRC	Vehicle/Roadside Communications
VS	Vehicle Subsystem

W

WAN	Wide Area Network
WIM	Weigh–in Motion
WWW	World Wide Web

B.0 Hierarchy of DFDs and Process Specifications

Document Control Information
CASE Model: 02/12/02
Logical Database 02/12/02

DFD 1.0			Manage Traffic
DFD 1.1			Provide Traffic Surveillance
DFD 1.1.1			Process Sensor Data
PS	1.1.1.1		Process Traffic Sensor Data
PS	1.1.1.2		Collect and Process Sensor Fault Data
PS	1.1.1.3		Process Environmental Sensor Data
PS	1.1.1.4		Manage Data Collection and Monitoring
PS	1.1.1.5		Provide Sensor Interface to Other Roadway Devices
PS	1.1.1.6		Collect Infrastructure Sensor Data
DFD 1.1.2			Process and Store Traffic Data
PS	1.1.2.1		Process Traffic Data for Storage
PS	1.1.2.2		Process Traffic Data
PS	1.1.2.3		Update Data Source Static Data
PS	1.1.2.4		Monitor HOV lane use
PS	1.1.2.5		Process Probe Data
PS	1.1.2.6		Process Collected Vehicle Smart Probe Data
PS	1.1.2.7		Monitor Reversible Lanes
PS	1.1.3		Generate Predictive Traffic Model
DFD 1.1.4			Display and Output Traffic Data
PS	1.1.4.1		Retrieve Traffic Data
PS	1.1.4.2		Provide Traffic Operations Personnel Traffic Data Interface
PS	1.1.4.3		Provide Direct Media Traffic Data Interface
PS	1.1.4.4		Update Traffic Display Map Data
PS	1.1.4.5		Provide Media System Traffic Data Interface
PS	1.1.4.6		Provide Traffic Data Retrieval Interface
PS	1.1.4.7		Manage Traffic Archive Data
PS	1.1.5		Exchange data with Other Traffic Centers
PS	1.1.6		Collect Vehicle Probe Data
PS	1.1.7		Collect Vehicle Smart Probe Data
DFD 1.2			Provide Device Control
PS	1.2.1		Select Strategy
DFD 1.2.2			Determine Road and Freeway State
PS	1.2.2.1		Determine Indicator State for Freeway Management
PS	1.2.2.2		Determine Indicator State for Road Management
PS	1.2.3		Determine Ramp State
DFD 1.2.4			Output Control Data
PS	1.2.4.1		Output Control Data for Roads
PS	1.2.4.2		Output Control Data for Freeways
PS	1.2.4.3		Output In-vehicle Signage Data
PS	1.2.4.4		Output Roadway Information Data
DFD 1.2.5			Manage Parking Lot State

PS	1.2.5.1	Determine Parking Lot State
PS	1.2.5.2	Coordinate Other Parking Data
PS	1.2.5.3	Provide Parking Lot Operator Interface
PS	1.2.5.4	Determine P+R needs for Transit Management
PS	1.2.5.5	Manage Parking Archive Data
PS	1.2.5.6	Calculate Parking Lot Occupancy
DFD	1.2.6	Maintain Static Data for TMC
PS	1.2.6.1	Maintain Traffic and Sensor Static Data
PS	1.2.6.2	Provide Static Data Store Output Interface
DFD	1.2.7	Provide Roadside Control Facilities
PS	1.2.7.1	Process Indicator Output Data for Roads
PS	1.2.7.2	Monitor Roadside Equipment Operation for Faults
PS	1.2.7.3	Manage Indicator Preemptions
PS	1.2.7.4	Process In-vehicle Signage Data
PS	1.2.7.5	Process Indicator Output Data for Freeways
PS	1.2.7.6	Provide Intersection Collision Avoidance Data
PS	1.2.7.7	Process Vehicle Smart Probe Data for Output
PS	1.2.7.8	Provide Device Interface to Other Roadway Devices
PS	1.2.7.9	Process Roadway Information Data
DFD	1.2.8	Collect and Process Indicator Fault Data
PS	1.2.8.1	Collect Indicator Fault Data
PS	1.2.8.2	Maintain Indicator Fault Data Store
PS	1.2.8.3	Provide Device Fault Interface for M and C
PS	1.2.8.4	Provide Traffic Operations Personnel Indicator Fault Interface
DFD	1.3	Manage Incidents
DFD	1.3.1	Traffic Data Analysis for Incidents
PS	1.3.1.1	Analyze Traffic Data for Incidents
PS	1.3.1.2	Maintain Static Data for Incident Management
PS	1.3.1.3	Process Traffic Images
DFD	1.3.2	Review and Manage Incident Data
PS	1.3.2.1	Store Possible Incident Data
PS	1.3.2.2	Review and Classify Possible Incidents
PS	1.3.2.3	Review and Classify Planned Events
PS	1.3.2.4	Provide Planned Events Store Interface
PS	1.3.2.5	Provide Current Incidents Store Interface
PS	1.3.3	Respond to Current Incidents
DFD	1.3.4	Provide Operator Interfaces for Incidents
PS	1.3.4.1	Retrieve Incident Data
PS	1.3.4.2	Provide Traffic Operations Personnel Incident Data Interface
PS	1.3.4.3	Provide Media Incident Data Interface
PS	1.3.4.4	Update Incident Display Map Data
PS	1.3.4.5	Manage Resources for Incidents
PS	1.3.5	Manage Possible Predetermined Responses Store
PS	1.3.6	Manage Predetermined Incident Response Data
PS	1.3.7	Analyze Incident Response Log
DFD	1.4	Manage Travel Demand
PS	1.4.1	Provide Traffic Operations Personnel Demand Interface
PS	1.4.2	Collect Demand Forecast Data

PS 1.4.3 Update Demand Display Map Data
PS 1.4.4 Implement Demand Management Policy
PS 1.4.5 Calculate Forecast Demand
DFD 1.5 Manage Emissions
PS 1.5.1 Provide Traffic Operations Personnel Pollution Data Interface
PS 1.5.2 Process Pollution Data
PS 1.5.3 Update Pollution Display Map Data
PS 1.5.4 Manage Pollution State Data Store
PS 1.5.5 Process Vehicle Pollution Data
PS 1.5.6 Detect Roadside Pollution Levels
PS 1.5.7 Manage Pollution Data Log
PS 1.5.8 Manage Pollution Reference Data Store
PS 1.5.9 Manage Pollution Archive Data
DFD 1.6 Manage Highway Rail Intersections
DFD 1.6.1 Manage HRI Traffic Volume
PS 1.6.1.1 Detect Roadway Events
DFD 1.6.1.2 Activate HRI Device Controls
PS 1.6.1.2.1 Control HRI Traffic Signals
PS 1.6.1.2.2 Control HRI Warnings and Barriers
PS 1.6.1.2.3 Provide SSR Device Controls
PS 1.6.1.2.4 Provide HSR Device Controls
PS 1.6.1.2.5 Manage Device Control
PS 1.6.1.2.6 Maintain Device State
PS 1.6.1.3 Perform Equipment Self-Test
DFD 1.6.1.4 Provide Advisories and Alerts
PS 1.6.1.4.1 Generate Alerts and Advisories
PS 1.6.1.4.2 Provide Closure Parameters
PS 1.6.1.4.3 Report Alerts and Advisories
PS 1.6.1.4.4 Report HRI Status on Approach
PS 1.6.1.5 Detect HRI Hazards
DFD 1.6.1.6 Provide Advance Warnings
PS 1.6.1.6.1 Close HRI on Detection
PS 1.6.1.6.2 Detect Imminent Vehicle/Train Collision
DFD 1.6.1.7 Execute Local Control Strategy
PS 1.6.1.7.1 Control Traffic Volume at Active HRI
PS 1.6.1.7.2 Close HRI on Command
DFD 1.6.2 Interact with Rail Operations
PS 1.6.2.1 Exchange Data with Rail Operations
PS 1.6.2.2 Manage Alerts and Advisories
PS 1.6.2.3 Manage Rail Traffic Control Data
DFD 1.6.3 Manage HRI Rail Traffic
PS 1.6.3.1 Interact with Wayside Systems
PS 1.6.3.2 Advise and Protect Train Crews
PS 1.6.3.3 Provide ATS Alerts
DFD 1.6.4 Interact with Traffic Volume Management
PS 1.6.4.1 Manage HRI Closures
PS 1.6.4.2 Exchange Data with Traffic Management
DFD 1.6.5 Monitor HRI Status

	PS	1.6.5.1	Provide Interactive Interface
	PS	1.6.5.2	Determine HRI Status
	PS	1.6.5.3	Maintain HRI Closure Data
DFD 2.0			Manage Commercial Vehicles
DFD 2.1			Manage Commercial Vehicle Fleet Operations
PS	2.1.1		Manage Commercial Fleet Electronic Credentials and Tax Filing
PS	2.1.2		Provide Commercial Fleet Static Route
PS	2.1.3		Provide Flt Mgr Electronic Credentials and Tax Filing Interface
PS	2.1.4		Provide Fleet Manager Commercial Vehicle Communications
PS	2.1.5		Provide Commercial Vehicle Driver Routing Interface
PS	2.1.6		Manage Driver Instruction Store
DFD 2.2			Manage Commercial Vehicle Driver Operations
PS	2.2.1		Manage CV Electronic Credential and Tax Filing Interface
PS	2.2.2		Provide Vehicle Static Route
PS	2.2.3		Provide CV Driver Electronic Credential and Tax Filing Interface
PS	2.2.4		Provide Commercial Vehicle Driver Communications
DFD 2.3			Provide Commercial Vehicle Roadside Facilities
PS	2.3.1		Produce Commercial Vehicle Driver Message at Roadside
DFD	2.3.2		Provide Commercial Vehicle Clearance Screening
	PS	2.3.2.1	Administer Commercial Vehicle Roadside Credentials Database
	PS	2.3.2.2	Process Screening Transactions
DFD	2.3.3		Provide Roadside Commercial Vehicle Safety
	PS	2.3.3.1	Provide Commercial Vehicle Checkstation Communications
	PS	2.3.3.2	Provide Commercial Vehicle Inspector Handheld Terminal Interface
	PS	2.3.3.3	Administer Commercial Vehicle Roadside Safety Database
	PS	2.3.3.4	Carry-out Commercial Vehicle Roadside Safety Screening
	PS	2.3.3.5	Carry-out Commercial Vehicle Roadside Inspection
PS	2.3.4		Detect Commercial Vehicle
PS	2.3.5		Provide Commercial Vehicle Roadside Operator Interface
PS	2.3.6		Provide Commercial Vehicle Reports
PS	2.3.7		Produce Commercial Vehicle Driver Message on Vehicle
PS	2.3.8		Provide Commercial Vehicle Border Screening
DFD 2.4			Provide Commercial Vehicle Data Collection
PS	2.4.1		Communicate Commercial Vehicle On-board Data to Roadside
PS	2.4.2		Collect On-board Commercial Vehicle Sensor Data
PS	2.4.3		Analyze Commercial Vehicle On-board Data
PS	2.4.4		Provide Commercial Vehicle Driver Interface
PS	2.4.5		Communicate Commercial Vehicle On-board Data to Vehicle Manager
PS	2.4.6		Provide Commercial Vehicle On-board Data Store Interface
PS	2.4.7		Manage CV On-board Sensor Data Store
DFD 2.5			Administer Commercial Vehicles
PS	2.5.1		Manage Commercial Vehicle Trips and Clearances
PS	2.5.2		Obtain Electronic Credential and Tax Filing Payment
DFD	2.5.3		Manage Border Clearances
	PS	2.5.3.1	Communicate with Trade Regulatory Agencies

		PS	2.5.3.2		Analyze Border Clearance Data
	PS	2.5.4			Communicate with Other Commercial Vehicle Administration System
	PS	2.5.5			Manage Commercial Vehicle Credentials and Enrollment
	PS	2.5.6			Output Commercial Vehicle Enrollment Data to Roadside Facilities
	PS	2.5.7			Process Commercial Vehicle Violations
	PS	2.5.8			Process Data Received from Roadside Facilities
	PS	2.5.9			Manage Commercial Vehicle Archive Data
	PS	2.5.10			Manage CV Database Store
DFD	2.6				Provide Commercial Vehicle On-board Data
	PS	2.6.1			Provide Commercial Vehicle Manager Tag Data Interface
	PS	2.6.2			Transmit Commercial Vehicle Tag Data
	PS	2.6.3			Provide Commercial Driver Tag Data Interface
	PS	2.6.4			Provide Lock Tag Data Interface
	PS	2.6.5			Manage Commercial Vehicle Tag Data Store
PS	2.7				Manage Cargo
DFD	3.0				Provide Vehicle Monitoring and Control
DFD	3.1				Monitor Vehicle Status
	PS	3.1.1			Produce Collision and Crash Avoidance Data
	PS	3.1.2			Carry-out Safety Analysis
	PS	3.1.3			Process Vehicle On-board Data
DFD	3.2				Provide Automatic Vehicle Operation
	PS	3.2.1			Provide Driver Interface
	PS	3.2.2			Provide AHS Control
	DFD	3.2.3			Provide Vehicle Control
		PS	3.2.3.1		Provide Command Interface
		PS	3.2.3.2		Manage Platoon Following
		PS	3.2.3.3		Process data for Vehicle Actuators
		DFD	3.2.3.4		Provide Servo Controls
			PS	3.2.3.4.1	Provide Speed Servo Control
			PS	3.2.3.4.2	Provide Headway Servo Control
			PS	3.2.3.4.3	Provide Lane Servo Control
			PS	3.2.3.4.4	Provide Change Lane Servo Control
			PS	3.2.3.4.5	Provide Vehicle Control Data Interface
		PS	3.2.3.5		Process Vehicle Sensor Data
		PS	3.2.3.6		Communicate with other Platoon Vehicles
	PS	3.2.4			Process Sensor Data for AHS input
	PS	3.2.5			Check Vehicle for AHS eligibility
	PS	3.2.6			Manage AHS Check-in and Check-out
	PS	3.2.7			Manage AHS Operations
	PS	3.2.8			Provide Automated Lane Changing
DFD	3.3				Provide Automatic Emergency Notification
	PS	3.3.1			Provide Communications Function
	PS	3.3.2			Build Automatic Collision Notification Message
PS	3.4				Enhance Driver's Vision
DFD	4.0				Manage Transit
DFD	4.1				Operate Transit Vehicles and Facilities

PS	4.1.1		Process Transit Vehicle Sensor Data
DFD	4.1.2		Determine Transit Vehicle Deviation and Corrections
	PS	4.1.2.1	Determine Transit Vehicle Deviation and ETA
	PS	4.1.2.2	Determine Transit Vehicle Corrective Instructions
	PS	4.1.2.3	Provide Transit Vehicle Driver Interface
	PS	4.1.2.4	Provide Transit Vehicle Correction Data Output Interface
	PS	4.1.2.5	Request Transit Vehicle Priorities
PS	4.1.3		Provide Transit Vehicle Location Data
PS	4.1.4		Manage Transit Vehicle Deviations
PS	4.1.5		Provide Transit Vehicle Status Information
PS	4.1.6		Manage Transit Vehicle Operations Data
PS	4.1.7		Provide Transit Vehicle Deviation Data Output Interface
PS	4.1.8		Provide Transit Operations Data Distribution Interface
PS	4.1.9		Process Transit Vehicle Sensor Maintenance Data
DFD	4.2		Plan and Schedule Transit Services
DFD	4.2.1		Provide Demand Responsive Transit Service
	PS	4.2.1.1	Process Demand Responsive Transit Trip Request
	PS	4.2.1.2	Compute Demand Responsive Transit Vehicle Availability
	PS	4.2.1.3	Generate Demand Responsive Transit Schedule and Routes
	PS	4.2.1.4	Confirm Demand Responsive Transit Schedule and Route
	PS	4.2.1.5	Process Demand Responsive Transit Vehicle Availability Data
	PS	4.2.1.6	Provide Demand Responsive Transit Driver Interface
PS	4.2.2		Provide Transit Plans Store Interface
DFD	4.2.3		Generate Transit Routes and Schedules
	PS	4.2.3.1	Generate Transit Routes
	PS	4.2.3.2	Generate Transit Schedules
	PS	4.2.3.3	Produce Transit Service Data for External Use
	PS	4.2.3.4	Provide Transit Fleet Manager Interface for Services Generation
	PS	4.2.3.5	Manage Transit Operational Data Store
	PS	4.2.3.6	Produce Transit Service Data for Manage Transit Use
	PS	4.2.3.7	Provide Interface for Other TRM Data
	PS	4.2.3.8	Provide Interface for Transit Service Raw Data
	PS	4.2.3.9	Update Transit Map Data
PS	4.2.4		Manage Transit Archive Data
DFD	4.3		Schedule Transit Vehicle Maintenance
PS	4.3.1		Monitor Transit Vehicle Condition
PS	4.3.2		Generate Transit Vehicle Maintenance Schedules
PS	4.3.3		Generate Technician Work Assignments
PS	4.3.4		Monitor And Verify Maintenance Activity
PS	4.3.5		Report Transit Vehicle Information
PS	4.3.6		Update Transit Vehicle Information
PS	4.3.7		Manage Transit Vehicle Operations Data Store
DFD	4.4		Support Transit Security and Coordination
DFD	4.4.1		Provide Transit Security and Emergency Management
	PS	4.4.1.1	Manage Transit Security
	PS	4.4.1.2	Manage Transit Emergencies
	PS	4.4.1.3	Provide Transit System Operator Security Interface
	PS	4.4.1.4	Provide Transit External Interface for Emergencies

		PS	4.4.1.5	Provide Transit Driver Interface for Emergencies
		PS	4.4.1.6	Collect Transit Vehicle Emergency Information
	PS	4.4.2		Coordinate Multiple Agency Responses to Transit Incidents
	PS	4.4.3		Generate Responses for Transit Incidents
DFD	4.5			Generate Transit Driver Schedules
	PS	4.5.1		Assess Transit Driver Performance
	PS	4.5.2		Assess Transit Driver Availability
	PS	4.5.3		Access Transit Driver Cost Effectiveness
	PS	4.5.4		Assess Transit Driver Eligibility
	PS	4.5.5		Generate Transit Driver Route Assignments
	PS	4.5.6		Update Transit Driver Information
	PS	4.5.7		Report Transit Driver Information
	PS	4.5.8		Provide Transit Driver Information Store Interface
DFD	4.6			Collect Transit Fares in the Vehicle
	PS	4.6.1		Detect Transit User on Vehicle
	PS	4.6.2		Determine Transit User Needs on Vehicle
	PS	4.6.3		Determine Transit Fare on Vehicle
	PS	4.6.4		Manage Transit Fare Billing on Vehicle
	PS	4.6.5		Provide Transit User Fare Payment Interface on Vehicle
	PS	4.6.6		Update Transit Vehicle Fare Data
	PS	4.6.7		Provide Transit Vehicle Passenger Data
	PS	4.6.8		Manage Transit Vehicle Advanced Payments
DFD	4.7			Provide Transit User Roadside Facilities
	PS	4.7.1		Provide Transit User Roadside & Vehicle Data Interface
	DFD	4.7.2		Collect Transit Fares at the Roadside
		PS	4.7.2.1	Detect Transit User at Roadside
		PS	4.7.2.2	Determine Transit User Needs at Roadside
		PS	4.7.2.3	Determine Transit Fare at Roadside
		PS	4.7.2.4	Manage Transit Fare Billing at Roadside
		PS	4.7.2.5	Provide Transit User Roadside Fare Interface
		PS	4.7.2.6	Update Roadside Transit Fare Data
		PS	4.7.2.7	Provide Transit Roadside Passenger Data
DFD	5.0			Manage Emergency Services
DFD	5.1			Provide Emergency Service Allocation
	PS	5.1.1		Identify Emergencies from Inputs
	PS	5.1.2		Determine Coordinated Response Plan
	PS	5.1.3		Communicate Emergency Status
	PS	5.1.4		Manage Emergency Response
	PS	5.1.5		Manage Emergency Service Allocation Store
	PS	5.1.6		Process Mayday Messages
	DFD	5.1.7		Provide Traveler Security
		PS	5.1.7.1	Monitor Secure Area
		PS	5.1.7.2	Manage Secure Area Security
		PS	5.1.7.3	Report Traveler Emergencies
PS	5.2			Provide Operator Interface for Emergency Data
DFD	5.3			Manage Emergency Vehicles
	PS	5.3.1		Select Response Mode
	PS	5.3.2		Dispatch Vehicle

		PS	5.3.3	Track Vehicle
		PS	5.3.4	Assess Response Status
		PS	5.3.5	Provide Emergency Personnel Interface
		PS	5.3.6	Maintain Vehicle Status
		PS	5.3.7	Provide Emergency Vehicle Route
		PS	5.3.8	Collect Environmental Data on Emergency Vehicle
	DFD	5.4		Provide Law Enforcement Allocation
		PS	5.4.1	Process TM Detected Violations
		PS	5.4.2	Process Violations for Tolls
		PS	5.4.3	Process Parking Lot Violations
		PS	5.4.4	Process Fare Payment Violations
		PS	5.4.5	Process Vehicle Fare Collection Violations
		PS	5.4.6	Process CV Violations
		PS	5.4.7	Process Roadside Fare Collection Violations
	PS	5.5		Update Emergency Display Map Data
	PS	5.6		Manage Emergency Services Data
DFD	6.0			Provide Driver and Traveler Services
	DFD	6.1		Provide Trip Planning Services
		PS	6.1.1	Provide Trip Planning Information to Traveler
		PS	6.1.2	Confirm Traveler's Trip Plan
		PS	6.1.3	Manage Multimodal Service Provider Interface
		PS	6.1.4	Provide ISP Operator Interface for Trip Planning Parameters
		PS	6.1.5	Collect Service Requests and Confirmation for Archive
		PS	6.1.6	Manage Traveler Info Archive Data
	DFD	6.2		Provide Information Services
		DFD	6.2.1	Provide Advisory and Broadcast Data
			PS 6.2.1.1	Collect Traffic Data for Advisory Messages
			PS 6.2.1.2	Provide Traffic and Transit Advisory Messages
			PS 6.2.1.3	Collect Transit Data for Advisory Messages
			PS 6.2.1.4	Provide Traffic and Transit Broadcast Messages
			PS 6.2.1.5	Provide ISP Operator Broadcast Parameters Interface
			PS 6.2.1.6	Collect Environmental Probe Data
		PS	6.2.2	Prepare and Output In-vehicle Displays
		PS	6.2.3	Provide Transit User Advisory Interface
		PS	6.2.4	Collect Yellow Pages Data
		PS	6.2.5	Provide Driver Information Interface
		PS	6.2.6	Provide Yellow Pages Data and Reservations
		PS	6.2.7	Provide Transit Advisory Data On Vehicle
	DFD	6.3		Provide Traveler Services at Kiosks
		PS	6.3.1	Get Traveler Request
		PS	6.3.2	Inform Traveler
		PS	6.3.3	Provide Traveler Kiosk Interface
		PS	6.3.4	Update Traveler Display Map Data at Kiosk
	PS	6.4		Manage Ridesharing
		PS	6.4.1	Screen Rider Requests
		PS	6.4.2	Match Rider and Provider
		PS	6.4.3	Report Ride Match Results to Requestor
		PS	6.4.4	Confirm Traveler Rideshare Request

DFD 6.5 Manage Traveler Information Services
- PS 6.5.1 Collect and Update Traveler Information
- PS 6.5.2 Provide Traveler Yellow Pages Information and Reservations
- PS 6.5.3 Register Yellow Pages Service Providers
- PS 6.5.4 Provide Traveler Event Information

DFD 6.6 Provide Guidance and Trip Planning Services
- PS 6.6.1 Provide Multimodal Route Selection
- DFD 6.6.2 Select Vehicle Route
  - PS 6.6.2.1 Calculate Vehicle Route
  - PS 6.6.2.2 Provide Vehicle Route Calculation Data
  - PS 6.6.2.3 Provide Route Segment Data for Other Areas
  - PS 6.6.2.4 Update Vehicle Route Selection Map Data
  - PS 6.6.2.5 Provide ISP Operator Route Parameters Interface
  - PS 6.6.2.6 Calculate Vehicle Probe Data for Guidance
- PS 6.6.3 Update Other Routes Selection Map Data
- PS 6.6.4 Select Transit Route
- PS 6.6.5 Select Other Routes

DFD 6.7 Provide Driver Personal Services
- DFD 6.7.1 Provide Driver Personal Security
  - PS 6.7.1.1 Build Driver Personal Security Message
  - PS 6.7.1.2 Provide Driver In-vehicle Communications Function
- DFD 6.7.2 Provide On-line Vehicle Guidance
  - DFD 6.7.2.1 Provide Vehicle Guidance
    - PS 6.7.2.1.1 Determine In-Vehicle Guidance Method
    - PS 6.7.2.1.2 Provide Dynamic In-Vehicle Guidance
    - PS 6.7.2.1.3 Provide Autonomous In-Vehicle Guidance
  - PS 6.7.2.2 Process Vehicle Location Data
  - PS 6.7.2.3 Provide Driver Guidance Interface
  - PS 6.7.2.4 Update Vehicle Navigable Map Database

DFD 6.8 Provide Traveler Personal Services
- DFD 6.8.1 Provide On-line Traveler Guidance
  - DFD 6.8.1.1 Provide Traveler Guidance
    - PS 6.8.1.1.1 Determine Personal Portable Device Guidance Method
    - PS 6.8.1.1.2 Provide Personal Portable Device Dynamic Guidance
    - PS 6.8.1.1.3 Provide Personal Portable Device Autonomous Guidance
  - PS 6.8.1.2 Provide Personal Portable Device Guidance Interface
  - PS 6.8.1.3 Process Personal Portable Device Location Data
  - PS 6.8.1.4 Update Traveler Navigable Map Database
  - PS 6.8.1.5 Provide Traveler Emergency Message Interface
- DFD 6.8.2 Provide Traveler Personal Security
  - PS 6.8.2.1 Build Traveler Personal Security Message
  - PS 6.8.2.2 Provide Traveler Emergency Communications Function
- DFD 6.8.3 Provide Traveler Services at Personal Devices
  - PS 6.8.3.1 Get Traveler Personal Request
  - PS 6.8.3.2 Provide Traveler with Personal Travel Information
  - PS 6.8.3.3 Provide Traveler Personal Interface
  - PS 6.8.3.4 Update Traveler Personal Display Map Data

DFD 7.0 Provide Electronic Payment Services

DFD	7.1		Provide Electronic Toll Payment
	DFD	7.1.1	Process Electronic Toll Payment
		PS 7.1.1.1	Read Tag Data for Tolls
		PS 7.1.1.2	Calculate Vehicle Toll
		PS 7.1.1.3	Manage Bad Toll Payment Data
		PS 7.1.1.4	Check for Advanced Tolls Payment
		PS 7.1.1.5	Bill Driver for Tolls
		PS 7.1.1.6	Collect Probe Data From Toll Transactions
		PS 7.1.1.7	Update Toll Price Data
		PS 7.1.1.8	Register for Advanced Toll Payment
		PS 7.1.1.9	Manage Toll Financial Processing
		PS 7.1.1.10	Determine Advanced Toll Bill
		PS 7.1.1.11	Manage Toll Archive Data
	PS	7.1.2	Produce Roadside Displays
	PS	7.1.3	Obtain Toll Violator Image
	PS	7.1.4	Provide Driver Toll Payment Interface
	PS	7.1.5	Detect Vehicle for Tolls
	PS	7.1.6	Distribute Advanced Charges and Fares
	PS	7.1.7	Provide Traveler Card Interface for Tolls
	PS	7.1.8	Exchange Data with Other Toll Administration
DFD	7.2		Provide Electronic Parking Payment
	DFD	7.2.1	Process Electronic Parking Lot Payment
		PS 7.2.1.1	Read Parking Lot Tag Data
		PS 7.2.1.2	Calculate Vehicle Parking Lot Charges
		PS 7.2.1.3	Collect Bad Charge Payment Data
		PS 7.2.1.4	Check for Advanced Parking Lot Payment
		PS 7.2.1.5	Bill Driver for Parking Lot Charges
		PS 7.2.1.6	Manage Parking Lot Financial Processing
		PS 7.2.1.7	Update Parking Lot Data
		PS 7.2.1.8	Register for Advanced Parking Lot Payment
		PS 7.2.1.9	Manage Parking Lot Reservations
		PS 7.2.1.10	Determine Advanced Charges
	PS	7.2.2	Produce Parking Lot Displays
	PS	7.2.3	Obtain Parking Lot Violator Image
	PS	7.2.4	Provide Driver Parking Lot Payment Interface
	PS	7.2.5	Detect Vehicle for Parking Lot Payment
	PS	7.2.6	Distribute Advanced Tolls and Fares
	PS	7.2.7	Provide Traveler Card Interface for Parking
DFD	7.3		Provide Electronic Fare Collection
	DFD	7.3.1	Process Electronic Transit Fare Payment
		PS 7.3.1.1	Register for Advanced Transit Fare Payment
		PS 7.3.1.2	Determine Advanced Transit Fares
		PS 7.3.1.3	Manage Transit Fare Financial Processing
		PS 7.3.1.4	Check for Advanced Transit Fare Payment
		PS 7.3.1.5	Bill Transit User for Transit Fare
		PS 7.3.1.6	Collect Bad Transit Fare Payment Data
		PS 7.3.1.7	Update Transit Fare Data
	PS	7.3.2	Distribute Advanced Tolls and Parking Lot Charges

	PS	7.3.3		Get Transit User Image for Violation
	PS	7.3.4		Provide Remote Terminal Traveler Card Interface
	PS	7.3.5		Provide Transit Vehicle Traveler Card Interface
DFD	7.4			Carry-out Centralized Payments Processing
	DFD	7.4.1		Collect Advanced Payments
		PS	7.4.1.1	Process Commercial Vehicle Payments
		PS	7.4.1.2	Process Yellow Pages Services Provider Payments
		PS	7.4.1.3	Process Driver Map Update Payments
		PS	7.4.1.4	Process Traveler Map Update Payments
		PS	7.4.1.5	Process Transit User Other Services Payments
		PS	7.4.1.6	Process Traveler Trip and Other Services Payments
		PS	7.4.1.7	Collect Payment Transaction Records
		PS	7.4.1.8	Process Traveler Rideshare Payments
	PS	7.4.2		Collect Price Data for ITS Use
	PS	7.4.3		Route Traveler Advanced Payments
DFD	7.5			Provide Traveler Card Interfaces
	PS	7.5.1		Provide Vehicle Traveler Card Interface
	PS	7.5.2		Provide Transit User Roadside Traveler Card Interface
	PS	7.5.3		Provide Personal Traveler Card Interface
	PS	7.5.4		Provide Traveler Kiosk Traveler Card Interface
DFD	8.0			Manage Archived Data
PS	8.1			Get Archive Data
PS	8.2			Manage Archive
PS	8.3			Manage Archive Data Administrator Interface
PS	8.4			Coordinate Archives
PS	8.5			Process Archived Data User System Requests
PS	8.6			Analyze Archive
PS	8.7			Process On Demand Archive Requests
PS	8.8			Prepare Government Reporting Inputs
PS	8.9			Manage Roadside Data Collection
DFD	9.0			Manage Maintenance and Construction
	DFD	9.1		Manage M&C Vehicles
	PS	9.1.1		Manage M&C Systems On-Board
	PS	9.1.2		Collect M&C Vehicle Data On-Board
	PS	9.1.3		Track M&C Vehicles and Equipment
	PS	9.1.4		Manage M&C Vehicle Fleet
	PS	9.1.5		Schedule M&C Vehicle Maint
	PS	9.1.6		Provide M&C Vehicle Operator Interface for Maint
	PS	9.1.7		Process Road Network Information
	DFD	9.2		Manage Roadway M&C Activities
	PS	9.2.1		Schedule M&C Activities
	PS	9.2.2		Status Current M&C Activities
	DFD	9.2.3		Determine M&C Needs
		PS	9.2.3.1	Determine Winter Roadway Treatment Needs
		PS	9.2.3.2	Determine Roadway M&C Needs
		PS	9.2.3.3	Provide Maintenance Decision Support
		PS	9.2.3.4	Manage M&C Resource Needs
		PS	9.2.3.5	Collect Roadside Equipment Status

		PS	9.2.4	Manage M&C Map Data
		PS	9.2.5	Provide M&C Center Personnel Interface for Maint
		DFD	9.2.6	Manage Infrastructure Monitoring and Treatment Systems
			PS 9.2.6.1	Operate Roadway Automated Treatment System
			PS 9.2.6.2	Control Roadway Automated Treatment System
			PS 9.2.6.3	Operate Infrastructure Monitoring Devices
		PS	9.2.7	Manage M&C Archive Data
		PS	9.2.8	Manage M&C Materials
	DFD	9.3		Manage Work Zones
		DFD	9.3.1	Control Work Zone Activity
			PS 9.3.1.1	Operate Work Zone Devices
			PS 9.3.1.2	Operate WZ Devices On-Board
			PS 9.3.1.3	Monitor Crew Movement
			PS 9.3.1.4	Monitor Crew Movement On-Board
		DFD	9.3.2	Manage Work Zone Data
			PS 9.3.2.1	Status Work Zone Activity
			PS 9.3.2.2	Collect Work Zone Data
			PS 9.3.2.3	Generate Work Zone Information for Distribution
			PS 9.3.2.4	Provide M&C Field Personnel Interface for Work Zones
		DFD	9.3.3	Manage Vehicle Speed
			PS 9.3.3.1	Collect Vehicle Speed
			PS 9.3.3.2	Monitor Vehicle Speed in Work Zone
			PS 9.3.3.3	Monitor Vehicle Speed on Roadway
			PS 9.3.3.4	Support Vehicle Speed Enforcement
		DFD	9.3.4	Manage WZ Intrusion Warning
			PS 9.3.4.1	Detect Work Zone Intrusion
			PS 9.3.4.2	Provide Work Zone Intrusion Alert
			PS 9.3.4.3	Detect Work Zone Intrusion On-Board
			PS 9.3.4.4	Provide On-Board Work Zone Intrusion Alert
	DFD	9.4		Manage Environmental Information
		PS	9.4.1	Collect Environmental Data On-Board
		PS	9.4.2	Collect Environmental Data
		PS	9.4.3	Process Environmental Data
		PS	9.4.4	Disseminate Environmental Information
		PS	9.4.5	Provide M&C Center Personnel Interface for Environment
PS	10			Satisfy Implementation Requirements

C.0 User Service Requirements

1.0	TRAVEL AND TRAFFIC MANAGEMENT
1.1	PRE-TRIP TRAVEL INFORMATION
1.1.0	ITS shall include a Pre-Trip Travel Information (PTTI) capability to assist travelers in making mode choices, travel time estimates, and route decisions prior to trip departure. It consists of four major functions, which are, (1) Available Services Information, (2) Current Situation Information, (3) Trip Planning Service, and (4) User Access. Information is integrated from various transportation modes and presented to the user for decision making.
1.1.1	PTTI shall provide travelers with Available Services Information on travel, for their use.
1.1.1.1	PTTI shall provide users with available services information that is timely.
1.1.1.1.1	PTTI shall provide users the latest available information on transit routes.
1.1.1.1.2	PTTI shall provide users the latest available information on transit schedules.
1.1.1.1.3	PTTI shall provide users with the latest available schedule adherence information.
1.1.1.1.4	PTTI shall provide users the latest available information on transit transfer options.
1.1.1.1.5	PTTI shall provide users the latest available information on transit fares.
1.1.1.1.6	PTTI shall provide users information on accessing ridematching services.
1.1.2	PTTI shall provide the capability for users to access the Current Situation Information on transportation systems.
1.1.2.1	PTTI shall provide the latest available information on the current status of transportation services.
1.1.2.1.1	Real-time information provided by PTTI shall include the current condition of any incidents, including rural incidents such as high winds, extreme temperature, and falling rocks.
1.1.2.1.2	Real-time information provided by PTTI shall include the current status of any accidents or incidents.
1.1.2.1.3	Real-time information provided by PTTI shall include the current condition of any road construction.
1.1.2.1.4	Real-time information provided by PTTI shall include any currently recommended alternate routes.
1.1.2.1.5	Real-time information provided by PTTI shall include the current speeds on specific routes.
1.1.2.1.6	Real-time information provided by PTTI shall include current parking conditions in key areas.
1.1.2.1.7	Real-time information provided by PTTI shall include the schedules for any current or soon to start events.
1.1.2.1.8	Real-time information provided by PTTI shall include the current weather situation.
1.1.3	PTTI shall include a Trip Planning Service.
1.1.3.1	PTTI trip planning service shall provide the users with information needed for planning an upcoming trip.
1.1.3.1.1	Based on user specified parameters PTTI shall provide users with a calculated itinerary.
1.1.3.1.2	Based on user specified parameters PTTI shall provide users with transportation mode choices.
1.1.3.1.3	Based on user specified parameters PTTI shall provide users with real-time travel conditions for time of inquiry and estimated conditions for estimated time of travel.
1.1.3.1.4	Based on user specified parameters PTTI shall provide users with one or more alternate itineraries in addition to the primary calculated itinerary.
1.1.3.2	PTTI shall provide the capability for users to specify transportation parameters that are unique to their individual needs.
1.1.3.2.1	PTTI shall provide the capability for users to specify a desired destination.
1.1.3.2.2	PTTI shall provide the capability for users to specify a planned departure location.
1.1.3.2.3	PTTI shall provide the capability for users to specify their desired departure time.
1.1.3.2.4	PTTI shall provide the capability for users to specify their desired arrival time.
1.1.3.2.5	PTTI shall provide the capability for users to specify their maximum acceptable travel time.
1.1.3.2.6	PTTI shall provide the capability for users to specify their maximum acceptable number of mode changes.
1.1.3.2.7	PTTI shall provide the capability for users to specify a maximum number of transfers.
1.1.3.2.8	PTTI shall provide the capability for users to specify their preferred route(s) or segment of route(s).
1.1.3.2.9	PTTI shall provide the capability for users to specify their preferred transportation mode(s).
1.1.3.2.10	PTTI shall provide the capability for users to specify their preferred weather conditions.
1.1.3.3	In addition to the user specified parameters PTTI shall use additional factors when planning trips.

1.1.3.3.1	PTTI shall consider current travel conditions when calculating a trip itinerary.
1.1.3.3.2	PTTI shall consider predicted travel conditions when calculating a trip itinerary.
1.1.4	PTTI shall provide the capability for User Access.
1.1.4.1	PTTI shall provide the capability for users to access the system from multiple distributed locations.
1.1.4.1.1	PTTI shall provide the capability for users to access the system from their homes.
1.1.4.1.2	PTTI shall provide the capability for users to access the system from their place of work.
1.1.4.1.3	PTTI shall provide the capability for users to access the system from major trip generation sites.
1.1.4.1.4	PTTI shall provide the capability for users to access the system from personal portable devices.
1.1.4.2	PTTI shall provide the capability for users to access the system over multiple types of electronic media.
1.1.4.2.1	Access media shall comply with the Americans with Disabilities Act (ADA) legislation.
1.2	EN-ROUTE DRIVER INFORMATION
1.2.0	ITS shall include an En-Route Driver Information (DI) function. Driver Information provides vehicle drivers with information, while en-route, which will allow alternative routes to be chosen for their destination. Driver Information consists of two major functions, which are, (1) Driver Advisory and (2) In-vehicle Signing. The potential decrease in traffic may also provide benefits in highway safety, reduced air pollution, and decreased congestion.
1.2.1	DI shall be implemented in a manner that is beneficial to the transportation system and the public.
1.2.1.1	DI shall be implemented in a manner that helps improve highway safety.
1.2.1.2	DI shall be implemented in a manner that helps reduce air pollution.
1.2.1.3	DI shall be implemented in a manner that helps decrease congestion.
1.2.1.4	DI shall be designed in a manner that permits a two-phase implementation.
1.2.1.4.1	The DI two-phase implementation shall include a short term capability to address those features that can be implemented in the present time frame.
1.2.1.4.2	The DI two-phase implementation shall include a long term capability to address those features that can be implemented when the remainder of the ITS system is deployed.
1.2.1.5	DI shall include a driver advisory capability and an in-vehicle signing capability.
1.2.2	DI shall include a Driver Advisory function, which shall be implemented in two phases with first a short term capability and later a long term capability.
1.2.2.1	The short term DI driver information capability shall include the ability to provide information to travelers within the limited area of deployment.
1.2.2.1.1	DI shall include the capability to provide travelers with accurate information concerning available travel options and their state of operational availability.
1.2.2.1.2	DI shall provide information to travelers required for them to avoid areas of congestion.
1.2.2.1.2.1	DI shall provide information needed for travelers to select transportation modes that allow them to avoid congestion.
1.2.2.1.3	DI shall provide the capability for users to receive travel information in their vehicles.
1.2.2.1.4	In the short-term DI shall be deployed in those limited areas where the need and associated benefits are more immediate.
1.2.2.2	The long term DI driver information capability shall include the ability to provide information to travelers within all geographic areas of the ITS deployment.
1.2.3	DI shall provide an In-vehicle Signing capability.
1.2.3.1	The DI In-vehicle Signing function shall include a short term capability to serve the more immediate needs of travelers.
1.2.3.1.1	The short term In-vehicle Signing function shall include the capability to provide assistance to individuals with impaired vision.
1.2.3.1.2	The short term In-vehicle Signing function shall include the capability to provide assistance to individuals needing local guidance in areas that the driver is unfamiliar with (e.g., airports, resort areas, tourist attractions).
1.2.3.1.3	The short term In-vehicle Signing function shall include the capability to provide assistance to individuals in areas that frequently have conditions of poor visibility, high winds, extreme temperature, and falling rocks.
1.2.3.1.4	The short term In-vehicle Signing function shall be implemented in a manner that augments existing signs.
1.2.3.1.4.1	The short term In-vehicle Signing function shall augment control signs (e.g., stop signs).

1.2.3.1.4.2	The short term In-vehicle Signing function shall augment warning signs (e.g., slow signs).
1.2.3.1.5	The short term In-vehicle Signing function shall provide a user interface that allows travelers to access its capabilities.
1.2.3.2	The DI In-vehicle Signing function shall include a long term capability to serve more of the traveler's needs.
1.2.3.2.1	The long term In-vehicle Signing function shall be integrated with other ITS system capabilities.
1.2.3.2.2	The long term In-vehicle Signing function shall provide the capability to customize warnings.
1.2.3.2.2.1	The customized warnings function shall provide the capability to control the contents of warning messages to the extant environmental conditions.
1.2.3.2.3	The In-vehicle Signing function shall provide the capability to utilize data from roadside environmental sensors as inputs to warning messages.
1.2.3.2.4	The In-vehicle Signing function shall provide travelers with information on road conditions.
1.2.3.2.5	The In-vehicle Signing function shall provide travelers with precautionary reminder messages.
1.3	ROUTE GUIDANCE
1.3.0	ITS shall include a Route Guidance (RG) function. Route Guidance will provide travelers with directions to selected destinations. Four functions are provided, which are, (1) Provide Directions, (2) Static Mode, (3) Real-Time Mode, and (4) User Interface.
1.3.1	RG shall include the capability to Provide Directions to travelers.
1.3.1.1	The Provide Directions function shall provide travelers with directions to their selected destination locations.
1.3.1.2	The Provide Directions function shall issue directions to travelers based on information about current conditions of transportation systems.
1.3.1.2.1	Current transportation system conditions upon which directions to travelers is based shall include, but not be limited to, the following:
1.3.1.2.1(a)	Current traffic conditions.
1.3.1.2.1(b)	Status of transit systems.
1.3.1.2.1(c)	Schedules of transit systems.
1.3.1.2.1(d)	Events taking place that influence travel routes.
1.3.1.2.1(d).1	Street closures.
1.3.1.2.1(d).2	Pedestrian events.
1.3.1.2.1(d).3	No pedestrian zones.
1.3.1.3	The Provide Directions function shall issue traveler directions that are simple and easy to understand, providing turning instructions on which way to turn onto including, but not limited to, the following:
1.3.1.3(a)	Particular streets.
1.3.1.3(b)	Roads.
1.3.1.3(c)	Walkways.
1.3.1.3(d)	Transit facilities.
1.3.2	RG shall include a Static Mode for issuing information to travelers.
1.3.2.1	Static Mode shall provide travelers with information that includes, but is not limited to, the following:
1.3.2.1(a)	Mapping information about roadways.
1.3.2.1(b)	Scheduling information about transit systems.
1.3.2.2	Static Mode infrastructure systems shall provide the capability to have two-way communications between the traveler and the infrastructure.
1.3.2.2.1	The two-way communications shall provide the capability for the infrastructure to receive the traveler's desired destination.
1.3.2.2.2	The two-way communications shall provide the capability to provide directions back to the traveler that are based on the infrastructure's calculated routing.
1.3.2.3	The Real-Time Mode shall provide the capability for autonomous operation of mobile based systems.
1.3.2.3.1	Autonomous Mobile Based systems shall have the capability to operate independent of infrastructure.
1.3.3	RG shall include a Real-Time Mode for issuing information to travelers.
1.3.3.1	The Real-Time Mode shall utilize current travel condition information to provide performance that is enhanced over the Static Mode performance, to include, but not be limited to, the following:
1.3.3.1(a)	Traffic conditions information.

1.3.3.1(b)	Dynamic transit schedule information.
1.3.3.2	The Real-Time Mode shall include the capability to operate in either or both of the following two configurations:
1.3.3.2(a)	Route selection processors located on the mobile unit.
1.3.3.2(b)	Route selection processors installed in the transportation system infrastructure.
1.3.3.2.1	Real-Time Mode Mobile Based systems shall include the capability to receive infrastructure information and use it in determining routing.
1.3.3.2.2	If current real-time information is included in route determination, the system shall be denoted as an Infrastructure-based real-time system.
1.3.3.3	The Real-Time Mode shall provide the capability for autonomous operation of mobile-based systems.
1.3.4	RG shall include a User Interface function.
1.3.4.1	The User Interface function shall provide the capability for travelers to access the system by utilizing interactive devices that include, but are not limited to, the following:
1.3.4.1(a)	Visual displays.
1.3.4.1(b)	Keypads.
1.3.4.1(c)	Touch sensitive devices.
1.3.4.1(d)	Computer generated voice.
1.3.4.1(e)	Voice recognition system.
1.3.4.2	Mobile systems shall use the best information available to provide routing instructions.
1.3.4.2.1	Mobile systems shall provide the capability for individual travelers to customize the routing selected for them.
1.3.4.2.2	Mobile systems shall allow customization of traveler's routing based on certain conditions specified by the traveler to include, but not be limited to, the following:
1.3.4.2.2(a)	Avoid expressway-type highways.
1.3.4.2.2(b)	Avoid multiple mass transit transfers.
1.3.4.3	Infrastructure-based systems shall permit individual travelers to customize their routing selection.
1.3.4.3.1	Infrastructure-based systems shall use the traveler's destination information to estimate extra demand on the transportation system and then provide routing to the traveler based on this predicted demand.
1.4	RIDE MATCHING AND RESERVATION
1.4.0	ITS shall include a Ride Matching and Reservation (RMR) function. Ride Matching and Reservation will provide travel users with information on rideshare providers. Three major functions are provided, which are, (1) Rider Request, (2) Transportation Provider Services, and (3) Information Processing. This will also include a billing service to the providers.
1.4.1	RMR shall include a Rider Request capability.
1.4.1.1	Rider Request shall provide the capability for a traveler to request a ride by placing a single request from a facility to include, but not be limited to, the following:
1.4.1.1(a)	Telephones (including hearing-impaired capability).
1.4.1.1(b)	Kiosks.
1.4.1.2	Rider Request shall provide a traveler the capability to request a specific itinerary by specifying, but not be limited to, the following:
1.4.1.2(a)	Date.
1.4.1.2(b)	Time of pick-up and drop-off.
1.4.1.2(c)	Origin.
1.4.1.2(d)	Destination.
1.4.1.2(e)	Specific restrictions or preferences.
1.4.1.3	Rider Request shall provide the traveler with the available ridesharing options, based on the traveler's request and specified itinerary.
1.4.1.4	Rider Request shall also include the capability to perform real-time ridematching by instantly matching rider and driver.
1.4.2	RMR shall include a Transportation Provider Service function.
1.4.2.1	Transportation Provider Services shall include the capability for providers to have their billing arranged through a central clearinghouse.

1.4.2.2	Transportation Provider Services shall include electronic safeguards against fraud and abuse.
1.4.2.3	Transportation Provider Services shall automatically generate needed reports and financial documentation.
1.4.2.4	Transportation Provider Services shall include the capability for commercial operators such as vanpools and taxis to be included as options for requesting travelers.
1.4.3	RMR shall include an Information Processing function.
1.4.3.1	Information Processing shall quickly match preferences and demands of requesting travelers with the services available from providers.
1.4.3.2	Information Processing shall provide a clearinghouse capability for rideshare financial transactions.
1.4.3.3	Information Processing shall link together the services available from all travel modes including, but not limited to, the following:
1.4.3.3(a)	Bus.
1.4.3.3(b)	Rail.
1.4.3.3(c)	Vanpools.
1.4.3.3(d)	Express bus.
1.4.3.3(e)	Commercial providers.
1.4.3.3(f)	Specialized service.
1.4.3.3(g)	Carpools.
1.4.3.4	Information Processing shall provide the informational infrastructure to connect providers and consumers.
1.4.3.5	Information Processing shall provide the capability to gather market information to assist in the planning of service improvements.
1.4.3.6	Information Processing shall provide the capability to gather market information to assist in operations.
1.5	TRAVELER SERVICES INFORMATION
1.5.0	ITS shall include a Traveler Services Information (TSI) function. Traveler Services Information provides travelers with service and facility data for the purpose of assisting prior to embarking on a trip or after the traveler is underway. The functions which are included in this capability are Information Receipt and Information Access. This will provide the traveler with a "yellow pages" type of capability.
1.5.1	TSI shall include an Information Receipt function for the collection of information to be provided to travelers.
1.5.1.1	Information Receipt shall provide and maintain a database of local area services available to travelers.
1.5.1.2	Information Receipt provides the capability to acquire current information relating to traveler services available in the local area.
1.5.1.2.1	Information Receipt shall acquire information on the condition of local traveler services.
1.5.1.2.2	Information Receipt shall acquire information on the status of local traveler services.
1.5.1.2.3	Information Receipt shall acquire information on the availability of local traveler services.
1.5.1.2.4	Information Receipt shall acquire information on the availability of local motorist services.
1.5.1.2.5	Information Receipt shall acquire information on the availability of local tourist services.
1.5.1.3	Information Receipt shall be capable of being integrated with Pre-Trip Planning information.
1.5.1.4	Information Receipt shall provide the capability to support the financial transactions required for travelers to be billed for the purchase of activity tickets and room reservations.
1.5.1.5	Information Receipt shall include the capability to have interactive connectivity between users, sponsors and providers of services.
1.5.2	TSI shall include an Information Access function that allows travelers to access the available information.
1.5.2.1	Information Access shall provide the capability for travelers to request and receive general information about the local area.
1.5.2.2	Information Access shall provide the capability for travelers and centers to request and receive information about the location of facilities and the quality of specific services provided in an area to include but, not be limited to, the following:
1.5.2.2(a)	Lodging information.
1.5.2.2(b)	Food information.
1.5.2.2(c)	Parking information.
1.5.2.2(d)	Hours of operation information.

1.5.2.2(e)	Tourist activities information.
1.5.2.2(f)	Daily or special events information.
1.5.2.2(g)	Local shelter/medical facility availability information including level of service provided.
1.5.2.2(h)	Nearest gas station information.
1.5.2.2(i)	Local care facility information.
1.5.2.3	Information Access shall provide the capability for travelers to request specific actions of area service providers to include, but not be limited to:
1.5.2.3(a)	Lodging reservations.
1.5.2.3(b)	Dining reservations.
1.5.2.4	Information Access shall provide the capability for all travelers to access information regardless of their particular mode of travel.
1.5.2.5	Information Access shall provide the capability for travelers to access the TSI information via any of, but not limited to, the following methods:
1.5.2.5(a)	Highway advisory radio.
1.5.2.5(b)	Dial-up telephone lines.
1.5.2.5(c)	Computers at home.
1.5.2.5(d)	Computers in the office.
1.5.2.5(e)	In-vehicle computers.
1.5.2.5(f)	Public area kiosks.
1.5.2.5(g)	Personal portable devices.
1.5.2.6	Information Access shall provide the capability for travelers to access TSI information from public kiosk locations which include, but are not limited to:
1.5.2.6(a)	Rest areas.
1.5.2.6(b)	Activity centers.
1.5.2.6(c)	Tourist attractions.
1.5.2.6(d)	Service plazas.
1.5.2.6(e)	Airports.
1.6	TRAFFIC CONTROL
1.6.0	ITS shall include a Traffic Control (TC) function. Traffic Control provides the capability to efficiently manage the movement of traffic on streets and highways. Four functions are provided, which are, (1) Traffic Flow Optimization, (2) Traffic Surveillance, (3) Control, and (4) Provide Information. This will also include control of network signal systems with eventual integration of freeway control.
1.6.1	TC shall include a Traffic Flow Optimization function to provide the capability to optimize traffic flow.
1.6.1.1	Traffic Flow Optimization shall employ control strategies that seek to maximize traffic-movement efficiency.
1.6.1.1.1	Traffic-movement control shall manage movement of traffic on streets.
1.6.1.1.2	Traffic-movement control shall manage movement of traffic on highways.
1.6.1.1.3	Traffic-movement control shall include the goal of minimizing delay times.
1.6.1.1.4	Traffic-movement control shall include the goal of minimizing energy use.
1.6.1.1.5	Traffic-movement control shall include the goal of minimizing air quality impacts due to traffic.
1.6.1.2	Traffic Flow Optimization shall include a wide area optimization capability, to include several jurisdictions.
1.6.1.2.1	Wide area optimization shall integrate the control of network signal systems with the control of freeways.
1.6.1.2.2	Wide area optimization shall include features that provide preferential treatment for transit vehicles.
1.6.1.2.3	Wide area optimization shall include features that provide preferential treatment for HOV.
1.6.1.3	Traffic Flow Optimization shall be implemented in a manner that seeks to optimize traffic movement over a large geographic area.
1.6.1.4	Traffic Flow Optimization shall include a Control function that is responsive to both the current demand as well as the expected demand.
1.6.1.4.1	The Control function shall include the capability to facilitate the dissipation of traffic congestion.
1.6.1.5	Traffic Flow Optimization shall provide the capability to predict travel patterns.
1.6.1.6	The Control function shall include the use of data acquired from traffic surveillance as feedback to the control strategies.

1.6.1.7	Implementation of the Control function shall include strategies that account for at least the following:
1.6.1.7(a)	Human factors.
1.6.1.7(b)	Driver/traveler behavior and expectancies.
1.6.2	TC shall include a Traffic Surveillance function.
1.6.2.1	Traffic Surveillance shall include a vehicle detection function with the capability of accurately detecting vehicles in a real-time fashion.
1.6.2.1.1	Vehicle detection shall include the capability to determine those vehicles that are HOVs.
1.6.2.2	Traffic Surveillance shall include a data collect function to provide the capability to collect data for determining traffic flow and prediction.
1.6.2.2.1	The data collect function shall provide the capability to quickly feedback traffic data to the control processes.
1.6.2.3	Traffic Surveillance shall include a wide-area surveillance capability to include several jurisdictions.
1.6.2.3.1	The wide-area surveillance shall gather speed and flow information.
1.6.2.3.2	The wide-area surveillance shall cover a large number of roadway segments.
1.6.2.4	TC shall provide the capability to acquire detailed traffic measurements at specific locations.
1.6.2.4.1	Traffic Surveillance shall include a data process function to process the traffic data which are acquired.
1.6.2.5	The wide area surveillance shall acquire sufficient data to provide the system with the knowledge of the existing conditions.
1.6.2.5.1	The data process function shall combine and process traffic data from multiple sources and times in order to improve the accuracy of the view of the current traffic condition.
1.6.2.5.2	The data process function shall process traffic data to generate near term predictions of traffic conditions.
1.6.3	TC shall include a Device Control function.
1.6.3.1	The Device Control function shall include a "real-time" traffic-adaptive control capability.
1.6.3.2	The real-time traffic-adaptive control portion of the Device Control function shall be an area wide control to include several jurisdictions.
1.6.3.2.1	The area wide control shall be implemented in an integrated and consistent manner that avoids the issuance of conflicting controls.
1.6.3.2.2	The area wide control shall be implemented in a manner that permits the following types of vehicles to have preference over other vehicles being controlled.
1.6.3.2.2(a)	Transit.
1.6.3.2.2(b)	HOV.
1.6.3.2.2(c)	Emergency Medical Service Vehicles.
1.6.3.3	The Device Control function shall provide the capability to exercise control over those devices utilized for traffic control.
1.6.3.3.1	Device Control shall include the capability to control traffic signalization, including rapid modification of signalization parameters to respond to traffic requirements.
1.6.3.3.2	Device Control shall include the capability to dynamically control traffic signing.
1.6.3.3.3	Device Control shall include the capability to control freeway ramp metering.
1.6.3.3.4	Device Control shall include the capability to exercise dynamic control over the infrastructure (such as reversible-lanes, turning restrictions, etc.).
1.6.3.4	Device Control shall communicate control data to the following devices.
1.6.3.4(a)	Traffic signals.
1.6.3.4(b)	Ramp meters.
1.6.3.4(c)	Information signs.
1.6.3.4(d)	HOV lanes.
1.6.3.4(e)	Human operator support.
1.6.3.4.1	Traffic Surveillance shall include a data process function to process the traffic data which are acquired.
1.6.3.5	Device Control shall provide the operator with the capability to manually override the system's automatic controls.
1.6.3.6	Device Control shall provide the operator the capability to adaptively change system response in order to provide a response that is coordinated with other TMCs responding to incidents.
1.6.4	Device Control shall provide traffic control information to other elements of the ITS, including but not

	limited to the following:
1.6.4(a)	In-vehicle navigation.
1.6.4(b)	Trip planning.
1.6.4(c)	Routing systems.
1.6.4(d)	Fleet management systems.
1.7	INCIDENT MANAGEMENT
1.7.0	ITS shall include an Incident Management (IM) function. Incident Management will identify incidents, formulate response actions, and support initiation and ongoing coordination of those response actions. Four major functions are provided, which are, (1) Incidents Identification, (2) Response Formulation, (3) Response Implementation, and (4) Predict Hazardous Conditions.
1.7.1	Incident Management shall provide an Incident Identification function to identify incidents.
1.7.1.1	The Incident Identification function shall include the capability to identify predicted incidents.
1.7.1.1.1	The Incident Identification function shall use information from the following types of sources, where available, to identify predicted incidents:
1.7.1.1.1(a)	Traffic flow sensors.
1.7.1.1.1(b)	Environmental sensors.
1.7.1.1.1(c)	Public safety sources.
1.7.1.1.1(d)	Media sources.
1.7.1.1.1(e)	Weather information sources.
1.7.1.1.1(f)	Transportation providers.
1.7.1.1.1(g)	Sponsors of special events.
1.7.1.1.1(h)	Hazardous condition prediction algorithms.
1.7.1.1.2	The Incident Identification function shall determine at least the following characteristics of each predicted incident:
1.7.1.1.2(a)	Type (including Terrain Hazards).
1.7.1.1.2(b)	Extent.
1.7.1.1.2(c)	Severity.
1.7.1.1.2(d)	Location.
1.7.1.1.2(e)	Expected duration.
1.7.1.1.3	The Incident Identification function shall determine the expected traffic flow impact of each predicted incident.
1.7.1.2	The Incident Identification function shall include the capability to identify existing (both planned and unplanned) incidents.
1.7.1.2.1	The Incident Identification function shall use information from the following types of sources, where available, to identify existing incidents:
1.7.1.2.1(a)	Traffic flow sensors.
1.7.1.2.1(b)	Environmental sensors.
1.7.1.2.1(c)	Public safety sources.
1.7.1.2.1(d)	Media sources.
1.7.1.2.1(e)	Weather information sources.
1.7.1.2.1(f)	Transportation providers.
1.7.1.2.1(g)	Travelers.
1.7.1.2.2	The Incident Identification function shall determine and continuously monitor at least the following characteristics of each existing incident:
1.7.1.2.2(a)	Type (including Terrain Hazards).
1.7.1.2.2(b)	Extent.
1.7.1.2.2(c)	Severity.
1.7.1.2.2(d)	Location.
1.7.1.2.2(e)	Expected duration.
1.7.1.2.3	The Incident Identification function shall determine and continuously monitor the current and expected traffic flow impact of each existing incident.

1.7.2	IM shall provide a Response Formulation function to formulate appropriate response actions to each identified incident and revise those actions when necessary.
1.7.2.1	The Response Formulation function shall propose and facilitate the appropriate scheduling of those predicted incidents that can be scheduled to minimize incident potential, incident impacts, and/or the resources required for incident management.
1.7.2.2	The Response Formulation function shall propose and facilitate the appropriate dispatch of emergency response vehicles to an incident.
1.7.2.3	The Response Formulation function shall propose and facilitate the appropriate dispatch of service vehicles to an incident.
1.7.2.4	The Response Formulation function shall propose and facilitate the appropriate dissemination of incident related information to travelers and potential travelers.
1.7.2.5	The Response Formulation function shall propose and facilitate the appropriate control of traffic signals and other traffic control to reduce the traffic flow impact of an incident.
1.7.3	IM shall include a Response Implementation function to provide the services to implement a response coordinated with all appropriate agencies.
1.7.3.1	The Response Implementation function shall provide at least the following decision support capabilities needed to implement coordinated incident response actions by all participating institutions:
1.7.3.1(a)	Response Implementation shall allow coordinated selection/determination of the procedures, including alternate routes, needed for resolution of each incident and provide the procedures to those agencies responding to the incident.
1.7.3.1(b)	Response Implementation shall provide the status of all resources needed for incident resolution to those agencies responding to the incident.
1.7.3.2	The Response Implementation function shall provide a link between Incident Management and all other user services necessary to implement incident response actions.
1.7.3.3	The Response Implementation function shall provide the capability to disseminate information relating to response status to other agencies and user services.
1.7.4	IM shall provide the capability to Predict Hazardous Conditions, including the time and location of hazardous conditions that may cause an incident.
1.8	TRAVEL DEMAND MANAGEMENT
1.8.0	ITS shall include a Travel Demand Management (TDM) function. Travel Demand Management will generate and communicate management and control strategies that will support and facilitate the implementation of TDM programs, policies and regulations. It consists of two major functions, which are, (1) Increase Efficiency of Transportation System and (2) Provide Wide Variety of Mobility Options.
1.8.1	TDM shall include a communications function.
1.8.1.1	The communications function shall include the capability to send the information needed to implement management and control strategies that are in response to policies and regulations.
1.8.1.2	The communications function shall include the capability to send information and rates needed to implement management and control strategies that respond to changing environments, conditions, and policy needs to include, but not limited to, the following locations of action:
1.8.1.2(a)	Parking facilities.
1.8.1.2(b)	HOV lanes.
1.8.1.2(c)	Transit centers.
1.8.1.2(d)	Employment sites.
1.8.1.2(e)	Toll facilities.
1.8.1.2(f)	Travel (and traveler) information facilities.
1.8.1.2(g)	Ridesharing facilities.
1.8.1.3	TDM shall provide the capability to receive information and rates needed to implement management and control strategies that respond to changing environments, conditions, and policy needs to include, but not limited to, the following locations of action:
1.8.1.3(a)	Parking facilities.
1.8.1.3(b)	HOV lanes.
1.8.1.3(c)	Transit centers.
1.8.1.3(d)	Employment sites.

1.8.1.3(e)	Toll facilities.
1.8.1.3(f)	Travel (and traveler) information facilities.
1.8.1.3(g)	Ridesharing facilities.
1.8.1.4	The communications function shall provide the capability to send information and data as needed to implement management and control strategies that respond to changing environments, conditions, and policy needs to include, but not limited to, the following:
1.8.1.4(a)	Sensor data.
1.8.1.4(b)	Individual vehicle monitoring.
1.8.1.4(c)	Parking availability.
1.8.1.4(d)	Usage data.
1.8.1.5	The communications function shall provide the capability to receive information and data from transportation operators and/or users that delineate their:
1.8.1.5(a)	Current status.
1.8.1.5(b)	Needs.
1.8.1.5(c)	Level of activity.
1.8.1.6	The communications function shall include the capability for two-way communications with other ITS user services including, but not limited to, the following:
1.8.1.6(a)	Pre-Trip Planning.
1.8.1.6(b)	En-Route Transit Advisory.
1.8.1.6(c)	Driver Information.
1.8.1.6(d)	Ride Matching and Reservation.
1.8.1.6(e)	Electronic Payment.
1.8.1.6(f)	Traffic Control.
1.8.2	TDM shall include a processing function.
1.8.2.1	The processing function shall provide the capability to generate management and control strategies that facilitate the implementation of policies and regulations designed to address the following:
1.8.2.1(a)	Vehicle trip reduction.
1.8.2.1(b)	HOV lanes and ramps.
1.8.2.1(c)	Parking management and control.
1.8.2.1(d)	Ridesharing and transit.
1.8.2.1(e)	Air pollution/emission information and detection.
1.8.2.1(f)	Public awareness of travel alternatives.
1.8.2.2	The processing function shall provide capabilities to enhance the ability to implement and enforce the following:
1.8.2.2(a)	Federal policies.
1.8.2.2(b)	State policies.
1.8.2.2(c)	Local policies.
1.8.2.3	Strategies developed by the processing function shall include the guidance for the operation of physical systems that:
1.8.2.3(a)	Monitor traffic.
1.8.2.3(b)	Inform travelers.
1.8.2.3(c)	Collect fees.
1.8.2.3(d)	Detect traffic.
1.8.2.4	The processing function shall provide the capability generate guidance for the pricing and control for locations of action that include, but are not limited to, the following:
1.8.2.4(a)	Parking facilities.
1.8.2.4(b)	HOV lanes.
1.8.2.4(c)	Transit centers.
1.8.2.4(d)	Employment sites.
1.8.2.4(e)	Toll facilities.

1.8.2.4(f)	Travel information facilities.
1.8.2.4(g)	Ridesharing facilities.
1.8.2.5	The processing function shall provide the capability to develop strategies for implementation of policies and regulations that will accommodate the following:
1.8.2.5(a)	Public sector users and service providers.
1.8.2.5(b)	Private sector users and service providers.
1.8.2.5(c)	Issues of legality.
1.8.2.5(d)	Privacy act.
1.8.2.5(e)	Multi-jurisdictional settings.
1.8.2.6	The processing function shall provide the capability to generate management and control strategies that dynamically respond to changing environments, conditions, and policies.
1.8.2.7	The processing function's dynamically generated management and control strategies shall include the control of HOV facilities including, but not limited to, the following:
1.8.2.7(a)	Lanes.
1.8.2.7(b)	Ramps.
1.8.2.7(c)	Parking areas.
1.8.2.8	The processing function's generation of management and control strategies for HOV facilities shall include as factors, but not be limited to, the following:
1.8.2.8(a)	Auto occupancy requirements.
1.8.2.8(b)	Priority for selected vehicle types at ramps.
1.8.2.8(c)	Priority for selected vehicle types at signalized intersections.
1.8.2.9	The processing function's dynamically generated management and control strategies shall include those roadway pricings that respond to the need for congestion control to include, but not be limited to, the following:
1.8.2.9(a)	Road user and toll rates.
1.8.2.9(b)	Transit fares adjusted concomitant with tolls.
1.8.2.9(c)	Time of day usage pricing (i.e. off hour rates).
1.8.2.10	The processing function's dynamically generated management and control strategies shall include the parking management and controls to include, but not be limited to, the following:
1.8.2.10(a)	Price structure.
1.8.2.10(b)	Allocation to selected vehicles.
1.8.2.10(c)	Variable message signs.
1.8.2.11	The processing function's dynamically generated management and control strategies for parking management and controls shall be based on factors that include, but are not limited to, the following:
1.8.2.11(a)	Parking availability.
1.8.2.11(b)	Usage data.
1.8.2.12	The processing function's dynamically generated management and control strategies shall include the capability to respond to the need for control of pollution by generating messages for variable signs that include, but are not limited to, the following:
1.8.2.12(a)	Informing of higher tolls.
1.8.2.12(b)	Informing of higher parking fees.
1.8.2.13	The processing function's dynamically generated management and control strategies for air pollution control shall be based on factors that include, but are not limited to, the following:
1.8.2.13(a)	Sensor data.
1.8.2.13(b)	Individual vehicle monitoring.
1.8.2.13(c)	Individual vehicle database files.
1.8.2.14	The processing function's dynamically generated management and control strategies shall include the capability to respond to the need for the travelers to change modes by generating messages for variable signs that include, but are not limited to, the following:
1.8.2.14(a)	Where the mode change requests are being made.
1.8.2.14(b)	How the mode changes are requested to be made.

1.8.2.14(c)	Why the mode changes are requested to be made.
1.8.3	TDM shall include a sensors/control function.
1.8.3.1	The sensors/control function shall provide the capability to gather information needed for the generation of management and control strategies to include, but not be limited to the, following:
1.8.3.1(a)	Parking availability.
1.8.3.1(b)	Usage levels.
1.8.3.1(c)	Vehicle occupancy.
1.8.3.1(d)	Vehicle pollution levels.
1.9	EMISSIONS TESTING AND MITIGATION
1.9.0	ITS shall include an Emission Testing and Mitigation (ETAM) Function. The ETAM function will provide state and local governments with the capability to enhance their air quality control strategies. The ETAM will provide both wide area and roadside emissions monitoring. Information gleaned from ETAM will be used by Traffic Demand Management (TDM) in the Traffic Management Center (TMC) to mitigate pollution and may be provided to enforcement agencies to compel offenders to comply with standards.
1.9.1	ETAM shall include a Wide Area Pollution Monitoring (WAPM) capability.
1.9.1.1	WAPM shall support air quality control strategies by assessing the level of emission of ozone precursors in all sectors of the area.
1.9.1.1.1	WAPM shall be capable of detecting the level of emission of ozone precursors with a high degree of accuracy.
1.9.1.1.2	WAPM shall be capable of determining those sectors, within its monitored area, whose emissions exceed the emission standard.
1.9.1.1.3	WAPM shall be capable of automatic self-calibration.
1.9.1.2	WAPM shall be capable of providing air quality statistical data to the TMC.
1.9.1.2.1	WAPM shall be capable of providing the air quality data on the monitored values of pollution.
1.9.1.2.2	WAPM shall be capable of providing the necessary data on emission standards violators for enforcement of air quality standards.
1.9.2	ETAM shall include roadside pollution assessment (RPA) capabilities.
1.9.2.1	RPA shall be capable of detecting the level of emission of ozone precursors with a high degree of accuracy.
1.9.2.1.1	RPA shall be capable of detecting moving vehicles, within its monitored area, whose emissions violate the emission standard.
1.9.2.1.2	RPA shall be capable of automatic self-calibration.
1.9.2.1.3	RPA shall be capable of reading suitably equipped vehicle's diagnostic data to determine that vehicle's operational status.
1.9.2.1.4	RPA shall be capable of determining suspected vehicle's registration data either by license plate or via automatic vehicle identification.
1.9.2.1.5	RPA shall be capable of determining which suspected vehicles are not in compliance with emission standards for that vehicle from the vehicle's registration data.
1.9.2.2	RPA shall be capable of providing air quality statistical data to the TMC.
1.9.2.2.1	RPA shall be capable of providing the air quality data on the monitored values of pollution.
1.9.2.2.2	RPA shall be capable of providing the necessary data to alert non-complaint vehicle drivers of their violation via roadside message signs or in-vehicle devices.
1.9.2.2.3	RPA shall be capable of providing the necessary data on violating vehicles for enforcement of air quality standards.
1.10	HIGHWAY RAIL INTERSECTION
1.10.0	ITS shall include a Highway-Rail Intersection (HRI) function to control highway and rail traffic in at-grade HRIs. Two sub-services are supported: Standard Speed Rail Subservice which is applicable to light rail transit, commuter rail and heavy rail trains with operational speeds up to 79 miles per hour (MPH); and High Speed Rail Subservice which is applicable to all passenger and freight trains with operational speeds from 80 to 125 MPH.
1.10.1	The Highway-Rail Intersection (HRI) function shall be applicable to operational, at-grade highway-rail intersections with train operational speeds up to 125 MPH.
1.10.1.1	HRI users shall include light rail transit and rapid rail transit approaching and crossing HRIs.
1.10.1.2	HRI users shall include commuter rail trains approaching and crossing HRIs.

1.10.1.3	HRI users shall include freight and intercity passenger trains approaching and crossing HRIs.
1.10.1.4	HRI users shall include highway vehicles approaching and crossing HRIs.
1.10.1.5	HRI users shall include motor vehicle operators, bicyclists and pedestrians approaching and crossing HRIs.
1.10.1.6	HRI users shall include train crews operating rail traffic while approaching and crossing HRIs.
1.10.1.7	HRI users shall include rail maintenance and inspection vehicles approaching and crossing HRIs.
1.10.2	HRI shall provide interfaces between highway and rail management functions.
1.10.2.1	HRI shall provide information management interfaces between highway and rail to coordinate traffic, demand and schedules.
1.10.2.1.1	HRI shall be capable of acquiring current train schedules from rail operations functions, and shall determine projected HRI closure times and duration.
1.10.2.1.2	HRI shall be capable of interacting with traffic management functions.
1.10.2.1.3	HRI shall provide closure data to traffic management for in-vehicle traveler advisory messages.
1.10.2.2	HRI shall provide the capability for interactive real-time interfaces.
1.10.2.2.1	HRI shall provide the capability to interface with rail operations functions for rail traffic control information.
1.10.2.2.2	HRI shall provide the capability to interface with traffic management functions for highway traffic coordination.
1.10.2.2.3	HRI shall provide the capability to interface with trains approaching and crossing the HRI for traffic coordination.
1.10.2.2.4	HRI shall provide the capability to interface with highway vehicles approaching and crossing HRIs for traffic control information.
1.10.3	At all HRIs with active railroad warning systems, HRI shall manage the traffic in the intersection.
1.10.3.1	HRI shall be capable of augmenting the intersection with standard highway traffic signal devices.
1.10.3.2	HRI shall include an automated collision avoidance function for highway vehicles approaching HRIs.
1.10.3.3	HRI shall provide an Intelligent Intersection Controller (IIC) function to manage highway and rail traffic in the intersection.
1.10.3.3.1	IIC shall control active highway traffic signal devices at HRIs to manage highway traffic.
1.10.3.3.2	IIC function shall control active railway warning devices, including flashing lights and physical barriers for highway and walkway lanes at HRIs.
1.10.3.3.3	IIC function shall provide an intersection surveillance system to derive the real-time status of traffic in the intersection.
1.10.3.3.4	IIC function shall report real-time HRI equipment status.
1.10.3.3.5	IIC function shall report real-time HRI traffic status as advisories or alerts.
1.10.4	HRI shall include a Standard Speed Rail (SSR) Subservice to manage highway and rail traffic at HRIs for rail lines with operational speeds less than 80 MPH.
1.10.4.1	SSR shall include active railroad warning systems at designated HRIs.
1.10.4.2	SSR shall include passive HRIs with non-active warning systems.
1.10.4.2.1	SSR shall augment passive warning signs with additional highway traffic control devices at passive HRIs.
1.10.5	HRI shall provide a High Speed Rail (HSR) Subservice for HRIs on rail lines with operational speeds between 80 and 125 MPH.
1.10.5.1	HSR shall include active roadside message devices to provide highway closure information at HSR HRIs.
1.10.5.2	HSR shall provide special safety features to enhance safety.
1.10.5.2.1	HSR shall close the HRI to highway traffic at a predetermined time (up to three minutes) before train arrival or when directed by train operations.
1.10.5.2.2	HSR shall include a positive barrier function (e.g. four quadrant gates) to close the intersection to highway traffic for rail lines operating at speeds over 110 MPH.
1.10.5.2.3	HSR HRIs shall verify the intersection's status as either "OPEN" or "BLOCKED" for rail traffic by an immobile obstacle.
1.10.5.2.4	HSR shall provide HRI status to rail operations functions as either a "PROCEED" or a "STOP" indication.
1.10.5.2.5	HSR shall provide HRI status to the train as either a "PROCEED" or a "STOP" indication.
1.10.5.2.6	HSR shall provide HRI status to highway vehicles as either a "STOP FOR TRAIN" or a "PROCEED" indication.

1.10.6	At HRIs with active railroad warning systems, HRI shall provide the capability for automatic collision notification to rail operations and traffic management.
2.0	PUBLIC TRANSPORTATION MANAGEMENT
2.1	PUBLIC TRANSPORTATION MANAGEMENT
2.1.0	ITS shall include a Public Transportation Management (PTM) function.
2.1.1	PTM shall include an Operation of Vehicles and Facilities (OVF) function that provides computer assisted control of the operation of vehicles and their associated facilities.
2.1.1.1	To enable the automation of the vehicle and facilities operations OVF shall provide the capability to gather the needed data to include, but not be limited to, the following:
2.1.1.1(a)	Vehicle passenger loading by bus stop and trip segment.
2.1.1.1(b)	Bus running times between time points.
2.1.1.1(c)	Fare collection by fare category.
2.1.1.1(d)	Drive-line operating condition.
2.1.1.1(e)	Mileage accumulated by individual buses.
2.1.1.1(f)	Real-time vehicle location reports.
2.1.1.2	OVF shall include a Command and Control (CC) capability.
2.1.1.2.1	CC shall provide the capability for real-time Vehicle Command and Control (VCC).
2.1.1.2.1.1	VCC shall provide the capability to compare received information with predetermined operating condition specifications and note any deviations.
2.1.1.2.1.2	VCC shall provide the capability to transmit noted deviations to central control.
2.1.1.2.1.3	VCC shall provide the capability to display any noted deviations.
2.1.1.2.1.4	VCC shall provide the capability to automatically issue corrective instructions to the driver including, but not limited to, the following:
2.1.1.2.1.4(a)	Route corrections.
2.1.1.2.1.4(b)	Changes in stops.
2.1.1.2.2	When CC detects a vehicle(s) has deviated from schedule it shall provide the capability to automatically determine the optimum scenario for returning the vehicle or fleet to schedule.
2.1.1.2.3	CC shall include an integrated traffic control capability that provides traffic signal preemption when required for schedule adjustment to Transit Vehicles at traffic signals (i.e., centralized or distributed).
2.1.1.2.4	CC shall include the capability for its computational capabilities to be located either on-vehicle and/or at remote locations.
2.1.2	PTM shall include a Planning and Scheduling Services (PSS) function to automate the planning and scheduling of public transit operations.
2.1.2.1	The PSS shall include a Planning capability.
2.1.2.1.1	PSS Planning shall be performed off-line from stored data that were collected in real-time.
2.1.2.1.2	PSS Planning shall include processing of the data in a manner that will permit improvements in routes and services.
2.1.2.2	The PSS shall include a Schedule Generation capability.
2.1.2.2.1	The PSS Schedule Generation function shall collect data for schedule generation including, but not limited to, the following:
2.1.2.2.1(a)	Route segment running-time.
2.1.2.2.1(b)	Passenger loading at each stop.
2.1.2.2.1(c)	Revenue information.
2.1.2.2.2	The PSS Schedule Generation function shall use the collected data in the automatic or semiautomatic development of transportation system schedules.
2.1.2.2.3	The PSS Schedule Generation function shall provide the capability to print schedules.
2.1.2.2.4	The PSS Schedule Generation function shall provide the capability to disseminate schedules to, but not be limited to, the following:
2.1.2.2.4(a)	Kiosks.
2.1.2.2.4(b)	Transportation Management Centers.
2.1.2.2.5	The PSS Schedule Generation function shall provide the capability to automatically update the customer

	service operator system with the most current schedule and schedule adherence information.
2.1.3	PTM shall include a Personnel Management (PM) function to facilitate the management of both driver and maintenance personnel.
2.1.3.1	PM shall include a Maintenance Personnel Management (MPM) function.
2.1.3.1.1	MPM shall automatically track vehicle miles on each bus in real-time.
2.1.3.1.2	MPM shall use bus mileage data to automatically generate preventative maintenance schedules for each specific bus.
2.1.3.1.3	MPM shall automatically ensure that proper service personnel are provided information for bus maintenance activities.
2.1.3.1.4	MPM shall automatically assign service technicians by skill level to work on individual buses.
2.1.3.1.5	MPM shall provide the capability to record and verify that maintenance work was performed.
2.1.3.2	PM shall include a Driver Personnel Management (DPM) function.
2.1.3.2.1	DPM shall automatically generate assignments of individual drivers to route, runs and individual vehicles.
2.1.3.2.2	DPM shall assign drivers to routes and runs in a fair manner while minimizing labor and overtime costs.
2.1.3.2.3	In generating fair driver assignments DPM shall include factors relating to drivers preferences and qualifications to include, but not be limited to, the following:
2.1.3.2.3(a)	Seniority.
2.1.3.2.3(b)	Driver schedule preference.
2.1.3.2.3(c)	Garage assignment.
2.1.3.2.3(d)	Vehicle qualification.
2.1.3.2.4	DPM shall automatically track and validate the number of work hours performed by each individual driver.
2.1.4	PTM shall include a Communications function.
2.1.4.1	PTM Communications shall provide the capability to establish two-way voice communication between in vehicle drivers and the central facility.
2.1.4.2	PTM Communications shall provide the capability for two-way data communications between individual buses and the control facility (e.g., sensor data and bus position).
2.1.4.3	OVF Communications shall provide the capability to send information from individual facilities to a central facility for processing and analysis.
2.1.4.4	As support for responding to the detection of an on-board emergency, the OVF Communications shall provide dispatchers with the capability to inform the following:
2.1.4.4(a)	Police.
2.1.4.4(b)	Fire department.
2.1.4.4(c)	Paramedic.
2.1.4.4(d)	Driver (initiation of silent alarm notification).
2.1.4.5	PTM shall use an open vehicle communication network standard for all on-board electronic equipment.
2.2	EN-ROUTE TRANSIT INFORMATION
2.2.0	ITS shall include an En-Route Transit Information (TI) function. En-Route Transit Information provides travelers with real-time transit and high-occupancy vehicle information allowing travel alternatives to be chosen once the traveler is en-route. It consists of three major functions, which are, (1) Information Distribution, (2) Information Receipt, and (3) Information Processing. This capability integrates information from different transit modes and presents it to travelers for decision making.
2.2.1	TI shall include an Information Distribution function that disseminates information to travelers.
2.2.1.1	Information Distribution shall include an Information Network capability.
2.2.1.1.1	The Information Network shall provide the capability to furnish users with real-time travel related information while they are traveling.
2.2.1.1.2	The Information Network shall provide the capability to disseminate information to travelers that will assist them in making decisions about transfers.
2.2.1.1.3	The Information Network shall provide the capability to disseminate information to travelers that will assist them in making decisions in the modification (includes both intermode and intramode) of their trips.
2.2.1.1.4	The Information Network shall provide all users with information that is from a single source in order to ensure consistency across all users.
2.2.1.2	Information Distribution shall include a User Interface feature.

2.2.1.2.1	User Interface shall provide the capability for users to access travel related information at fixed locations.
2.2.1.2.1.1	Fixed location user interfaces shall be provided at transit stops.
2.2.1.2.1.1.1	Transit stop user interfaces shall have interactive visual displays.
2.2.1.2.1.1.2	Transit stop user interfaces shall provide audio messages containing the following:
2.2.1.2.1.1.2(a)	Notification of imminent transit arrival.
2.2.1.2.1.1.2(b)	Identification of route of arriving transit vehicles.
2.2.1.2.1.1.3	Transit stop user interfaces shall provide the capability to provide information to individuals who are physically impaired.
2.2.1.2.1.2	Fixed location user interface shall provide interactive video (e.g., cable TV) interfaces in kiosks at the following:
2.2.1.2.1.2(a)	Travel information centers.
2.2.1.2.1.2(b)	Transfer points.
2.2.1.2.1.2(c)	Wayside stops.
2.2.1.2.1.3	Fixed location user interface shall provide the capability to utilize local ATM networks to provide travel information to users.
2.2.1.2.2	User Interface shall provide the capability for users to access travel related information at mobile locations.
2.2.1.2.2.1	Mobile Location user interfaces shall provide the capability for users, either one passenger at a time or to a group environment, to access travel related information while on board transit vehicles.
2.2.1.2.2.2	Mobile user interfaces shall provide the capability for users to access travel related information while in transit vehicles through the use of variable message signs.
2.2.1.2.2.3	Mobile user interfaces shall provide the capability for users to access travel related information via personal portable devices.
2.2.1.2.2.4	Mobile user interfaces shall include the capability to provide audible messages to the on-board users.
2.2.2	TI shall include an Information Receipt function for acquiring that data that are used for generation of the En-Route Transit Information.
2.2.2.1	Information Receipt shall provide the capability to be continuously updated with real-time information from each transit system within the local area of jurisdiction.
2.2.2.2	Information Receipt shall provide the capability to be updated with information that is inclusive of all possible transportation modes within the local area of jurisdiction.
2.2.2.3	Information Receipt shall provide the capability to be updated with information from all providers of transportation services in the local area of jurisdiction to include:
2.2.2.3(a)	Regional paratransit services.
2.2.2.3(b)	Public providers.
2.2.2.3(c)	Private providers.
2.2.3	TI shall include an Information Processing function for processing that data used for generation of the En-Route Transit Information.
2.2.3.1	Information Processing shall include an information collection feature.
2.2.3.1.1	Information collection shall acquire transit operations information to include, but not be limited to, the following type:
2.2.3.1.1(a)	Schedule.
2.2.3.1.1(b)	Actual service provided.
2.2.3.1.1(c)	Next available vehicle, based on actual operating conditions.
2.2.3.1.1(d)	Transfer options describing available services and their associate schedules.
2.2.3.1.2	Information collection shall acquire transit situation conditions to include, but not be limited to, the following type:
2.2.3.1.2(a)	Actual road data.
2.2.3.1.2(b)	Traffic data.
2.2.3.2	Information Processing shall include an information integration feature.
2.2.3.2.1	Information integration shall collect data, store it and maintain it on-line.
2.2.3.2.2	Information integration shall collect data from traffic and transit systems including, but not limited to, the following:

2.2.3.2.2(a)	Transit systems.
2.2.3.2.2(b)	Traffic management services.
2.2.3.2.2(c)	Rideshare programs.
2.3	PERSONALIZED PUBLIC TRANSIT
2.3.0	ITS shall include a Personalized Public Transit (PPT) function.
2.3.1	The PPT shall include a Rider Request function.
2.3.1.1	Rider Request shall provide the capability for an individual rider to request a trip by specifying the trip origin and destination, time and date.
2.3.1.2	Rider Request shall provide the capability for an individual to specify a rider's special equipment or handling requirements.
2.3.1.3	Rider Request shall provide the capability to notify a requester of the fact that a trip assignment has been made including the time at which the vehicle is expected at the point of departure.
2.3.1.4	Rider Request shall include the capability to notify the requester that the transit vehicle's arrival is imminent.
2.3.2	The PPT shall include a Vehicle Assignment function.
2.3.2.1	Vehicle Assignment shall utilize vehicle availability, special requirements and rides requested information to determine vehicle assignments and routing.
2.3.2.2	For random route operations Vehicle Assignment shall assign trip origin and destination.
2.3.2.3	For flexible route operations Vehicle Assignment shall control how fixed route buses are detoured.
2.3.2.4	For reservation based random-route operations Vehicle Assignment shall provide the capability to plan routes that optimize vehicle schedules while considering passengers' needs.
2.3.2.5	Vehicle Assignment shall provide the capability to select the best match between riders' needs and the available vehicles.
2.3.2.6	Vehicle Assignment shall provide services to both publicly owned and privately owned, publicly licensed vehicles.
2.3.2.7	In order to service travelers in low-demand time (e.g., night time and weekends) Vehicle Assignment shall provide services 24 hours per day, 7 days per week.
2.3.2.8	Vehicle Assignment shall assign vehicle routes within 4 blocks of rider's trip origin point.
2.3.2.9	Vehicle Assignment shall be a real-time system.
2.3.2.10	Vehicle Assignment shall provide the capability to accommodate immediate trip requests when enough capacity is available for the added rider pickup and delivery.
2.3.3	The PPT shall include a Data Collection function.
2.3.3.1	Data Collection shall include on-board sensors to monitor, but not be limited to, the following:
2.3.3.1(a)	Vehicle location.
2.3.3.1(b)	Passenger loading.
2.3.3.1(c)	Fare collection.
2.3.3.2	Data Collection shall process and store collected data so that it is available for:
2.3.3.2(a)	Real-time schedule adjustments.
2.3.3.2(b)	Off-line analysis and planning.
2.3.3.3	Data Collection shall support the off-line billing for fares paid by agencies.
2.3.4	The PPT shall include an Information Processing function.
2.3.4.1	PPT shall be implemented such that Information Processing may be located either centrally or distributed.
2.3.4.2	Information Processing shall use information to attempt to minimize the amount of time each passenger must ride.
2.3.4.3	Information Processing shall provide the capability to automate the assignment of drivers to vehicles.
2.3.5	The PPT shall include a Communications function.
2.3.5.1	The Communications function shall provide the capability link all PPT service into a single entity.
2.3.5.2	The Communications function shall provide a two-way communications capability between vehicles and a central base for:
2.3.5.2(a)	Voice communications.
2.3.5.2(b)	Data communications.
2.3.5.3	The Communications function shall provide the capability for sensor data (either raw or processed) to be

	transmitted from vehicles to a central headquarters or dispatch station.
2.3.5.4	The Communications function shall provide the capability for data to be transferred between dispersed points and central base including:
2.3.5.4(a)	Data from vehicles.
2.3.5.4(b)	Data from locations where passengers are located.
2.4	PUBLIC TRAVEL SECURITY
2.4.0	ITS shall include a Public Travel Security (PTS) function to create an environment of safety in public transportation.
2.4.1	PTS shall include specific Secure Areas.
2.4.1.1	The Secure Areas shall encompass all physical areas related to public transit travel including the following:
2.4.1.1(a)	Bus stop areas.
2.4.1.1(b)	Park and Ride areas.
2.4.1.1(c)	Riding on transit vehicles.
2.4.1.1(d)	Kiosks.
2.4.1.1(e)	Transit transfer locations.
2.4.1.2	All Secure Areas shall have traveler activated alarms.
2.4.1.3	There shall be silently activated alarms on board public transit vehicles which are capable of activation by the driver.
2.4.2	PTS shall include a Security Sensors (SS) function.
2.4.2.1	SS shall provide that sensor technology required to alert operators and police of potential incidents.
2.4.2.2	SS shall include both video and audio systems at key locations, including rest areas, to monitor activities.
2.4.3	PTS shall include a Personal Sensors Items (PSI) function.
2.4.3.1	PSI for ridematching shall include the capability for participants to be identified.
2.4.3.2	PSI shall provide the capability for riders to use electronic payment to eliminate the need for passengers to carry cash and to reduce cash handling.
2.4.4	PTS shall include a Security Management and Control (SMC) function.
2.4.4.1	SMC shall provide the capability to receive alarm information through electronic communication systems.
2.4.4.2	SMC shall include monitoring equipment to assist in responding to terrorist incidents.
2.4.4.3	SMC shall include the capability for transit operators to direct and control fleet operations in a manner that supports law enforcement and emergency response agencies with flexible and responsive transportation for large numbers of people.
2.4.4.4	SMC shall include the capability to generate coordinated preplanned responses for incidents.
2.4.4.5	SMC shall include the capability to support coordinated multiple agency responses to incidents.
3.0	ELECTRONIC PAYMENT
3.1	ELECTRONIC PAYMENT SERVICES
3.1.0	ITS shall include an Electronic Payment capability. Electronic Payment Services allows travelers to pay for transportation services by electronic means. Four functions are provided, which are, (1) Electronic Toll Collection, (2) Electronic Fare Collection, (3) Electronic Parking Payment, and (4) Electronic Payment Services Integration.
3.1.1	Electronic Payment shall provide an Electronic Toll Collection (ETC) capability.
3.1.1.1	ETC shall provide the capability for vehicle operators to pay tolls without stopping their vehicles.
3.1.1.2	ETC shall provide the capability to implement pricing structures for locally determined needs.
3.1.1.3	ETC shall provide confirmation of the transaction to each customer.
3.1.1.4	ETC shall include the capability to identify those vehicles and/or operators that violate its toll collection process.
3.1.1.5	ETC shall accommodate single billing to commercial carriers.
3.1.1.6	ETC shall provide the capability to automatically access and process each commercial vehicle's required documentation.
3.1.1.7	ETC shall be implemented in a manner that reduces the cost of toll collection.
3.1.1.8	ETC shall be implemented in a manner that seeks to minimize the opportunities for fraud.
3.1.2	Electronic Payment shall include an Electronic Fare Collection (EFC) capability.

3.1.2.1	EFC shall be implemented in a manner that the traveler is able to use a compatible fare medium for all applicable surface transportation services.
3.1.2.2	EFC shall provide the capability to implement variable and flexible fare structures.
3.1.2.3	EFC shall be capable of identifying voided and/or invalid payment media.
3.1.2.4	EFC shall provide the capability for third party payment of transportation services.
3.1.2.5	For those systems requiring special eligibility, EFC shall provide the capability to verify the eligibility of riders.
3.1.2.6	EFC shall be implemented in a manner that permits expansion into other uses for the payment medium such as payment of retail, telephone, etc.
3.1.2.7	EFC shall include the capability to collect the data required to determine accurate ridership levels.
3.1.2.8	EFC shall provide the capability for passengers to pay fares without stopping.
3.1.3	Electronic Payment shall include an Electronic Parking Payment (EPP) capability.
3.1.3.1	EPP shall provide the capability to pay for parking without the use of cash.
3.1.3.2	EPP shall include the capability for transit operators to utilize a single medium to charge for both transit related charges and parking charges.
3.1.3.3	EPP shall provide the capability to provide flexible pricing parking fee structures based upon factors including, but not limited to, vehicle classification.
3.1.4	ITS shall include an Electronic Payment Services Integration (EPSI) feature.
3.1.4.1	EPSI shall provide the capability to combine electronic payments made for use of various transportation modes into a single integrated system.
3.1.4.2	EPSI shall provide the capability to integrate fare and toll pricing structures of multiple agencies.
3.1.4.3	EPSI shall collect and provide usage data to develop pricing strategies that favor certain transportation modes or routes.
3.1.4.4	EPSI shall be implemented in a manner that ensures that it may be deployed across multiple agency political boundaries without degrading the services it provides.
3.1.5	ITS shall provide a Roadway Pricing (RP) capability.
3.1.5.1	RP shall provide the capability to implement various road pricing policies.
3.1.5.1.1	Road pricing policies capable of being implemented by RP shall include variable pricing.
3.1.5.2	RP shall provide the capability to implement roadway pricing strategies, developed by other services, that alleviate congestion.
3.1.5.3	RP shall provide the capability to implement roadway pricing, developed by other services, that can be used to influence mode selection.
4.0	COMMERCIAL VEHICLE OPERATIONS
4.1	COMMERCIAL VEHICLE ELECTRONIC CLEARANCE
4.1.0	ITS shall include a Commercial Vehicle Electronic Clearance (CVEC) capability.
4.1.1	CVEC shall include a Fixed Facility consisting of those structures and equipment to include Ports Of Entry, Inspection Stations, Weigh Stations and Toll Booths.
4.1.1.1	Fixed Facility shall provide the capability for state participation in the CVEC program to be voluntary.
4.1.1.2	Fixed Facility shall provide the capability to support the enrollment of vehicles/carriers in the CVEC program.
4.1.1.3	Fixed Facility shall provide the capability to accommodate both interstate and intrastate vehicles/carriers.
4.1.1.4	Fixed Facility shall include processing to issue pull-in for safety inspection signals of the following type:
4.1.1.4(a)	Automatically generated from Pass/Need To Stop tests.
4.1.1.4(b)	Randomly generated.
4.1.1.4(c)	Manually generated.
4.1.1.5	Fixed Facility shall provide the facility operator the capability to manually override the issuance of automatically and randomly generated Pull-In requests.
4.1.1.6	When making the "Pass/Need To Stop" determination the Fixed Facility shall perform checks on the following:
4.1.1.6(a)	Vehicle/Carrier Safety Information.
4.1.1.6(b)	Vehicle Credentials.

4.1.1.6(c)	Driver Credentials/Status.
4.1.1.6(d)	Vehicle Weight Information.
4.1.1.6(e)	Tax Payment Account.
4.1.1.7	Fixed Facility shall provide the capability to establish two-way communications with each vehicle approaching the facility.
4.1.1.8	Fixed Facility shall include the capability to access and quickly update information on vehicle problems that are detected.
4.1.2	CVEC shall include a Vehicle System capability
4.1.2.1	Vehicle System shall provide the capability to accommodate both interstate and intrastate carriers.
4.1.2.2	Vehicle System shall provide the capability for each vehicle to establish two-way communications with fixed facilities.
4.2	AUTOMATED ROADSIDE SAFETY INSPECTION
4.1.2.3	Vehicle System shall provide the capability for each individual vehicle's or carrier's participation in the process to be on a voluntary basis.
4.2.0	ITS shall include an Automated Roadside Safety Inspection (ARSI) capability.
4.2.1	The ARSI capability shall include a Roadside Facility (RF) function that improves the ability to perform safety inspection through the use of automation.
4.2.1.1	RF shall provide a processing capability that automates the roadside inspection tasks.
4.2.1.2	RF shall include the capability to perform brake inspections at the roadside.
4.2.1.3	RF shall include the capability for operators to use hand held devices to rapidly inspect vehicle and driver components that produce the following:
4.2.1.3(a)	Pass/Fail results.
4.2.1.3(b)	Data on actual condition.
4.2.1.3(c)	Data on expected life projections.
4.2.1.4	RF shall collect, store, maintain and provide real-time on-line interactive access to historical safety data at the roadside facility.
4.2.1.5	RF shall provide the capability to continuously update information flags for the following:
4.2.1.5(a)	Office of Motor Carriers (OMC) carrier ratings.
4.2.1.5(b)	Vehicle/driver inspection and maintenance data.
4.2.1.5(c)	Verification of repairs and out-of-service records.
4.2.1.5(d)	Driver status (including licensing and citations).
4.2.1.6	RF shall provide the capability to automatically identify to the enforcement personnel approaching vehicles that have been flagged as potentially needing maintenance or put out of service.
4.2.1.7	RF shall provide the capability to receive identification data from each vehicle that is stopped at the inspection station that enables the access and receipt at the roadside of historical safety records to include the following:
4.2.1.7(a)	Carrier.
4.2.1.7(b)	Vehicle.
4.2.1.7(c)	Driver.
4.2.1.7(d)	Cargo.
4.2.2	The ARSI capability shall include a Vehicle System (VS) function.
4.2.2.1	VS shall provide a processing capability that automates the roadside inspection tasks.
4.2.2.2	The VS architecture shall provide the capability to be developed and integrated as a phased implementation.
4.2.2.3	The VS shall include sensors to efficiently check vehicle systems and driver condition.
4.2.2.4	The VS shall include the capability for continuous updates to vehicle safety records or an "electronic decal/record" on the vehicle.
4.2.2.5	The VS shall include an on-board safety status monitoring system that is accessible from the roadside.
4.2.2.6	The VS shall provide an initial automated inspection capability that will expedite and supplement the existing visual and manual inspection processes.
4.2.2.7	The VS shall provide a two-way Communications capability that facilitates the roadside inspection tasks.
4.3	ON-BOARD SAFETY MONITORING

4.3.0	ITS shall include an On-Board Safety Monitoring (OBSM) function, that provides monitoring and warnings of safety problems. Of primary importance is to inform the driver, as soon as possible, of any problem that has been detected. Of secondary importance is notifying the carrier of detected safety problems. Last in importance is the notification of appropriate enforcement agencies. Requirements for On-Board Safety Monitoring are given below:
4.3.1	OBSM shall include a Fixed Facility (FF) capability for the analysis and control of safety information.
4.3.1.1	The FF shall provide the capability to analyze data received from each vehicle approaching and determine the identification of:
4.3.1.1(a)	Vehicle.
4.3.1.1(b)	Driver.
4.3.1.2	The FF shall provide the capability to provide warnings of any safety problem that has been identified.
4.3.1.3	The FF shall provide capability to log the passing of each vehicle and the associated results from the decision of whether to request the vehicle to pull in or continue without stopping.
4.3.1.4	The FF shall provide the capability to automatically make a decision as to whether to allow each vehicle to pass or require them to stop for a check.
4.3.1.5	The FF shall provide the capability for enforcement officials to manually override the automatically generated decision for vehicles to pull-in for safety inspection.
4.3.1.6	The FF shall provide the capability to perform pre-trip and post-trip inspections of each vehicle.
4.3.1.7	The FF shall provide the capability to have two-way data exchange between the Roadside facility and each vehicle.
4.3.2	OBSM shall include a Vehicle System (VS) that is a part of each vehicle.
4.3.2.1	The VS shall provide the capability to collect and process information to supply those roadside facilities being encountered at mainline speeds with each vehicle's safety status to include the following:
4.3.2.1(a)	Vehicle safety status.
4.3.2.1(b)	Cargo safety status.
4.3.2.1(c)	Driver safety status.
4.3.2.1(d)	Vehicle Identification.
4.3.2.1(e)	Driver Identification.
4.3.2.2	The VS shall provide the capability to alert the vehicle driver whenever there is a critical safety problem or potential emergency.
4.3.2.3	The VS shall provide the capability to have two-way data exchange between each Roadside facility encountered and the vehicle.
4.4	COMMERCIAL VEHICLE ADMINISTRATIVE PROCESSES
4.4.0	ITS shall include a Commercial Vehicle Administrative Process (CVAP) function consisting of 3 subservices to include Electronic Purchase Of Credentials, Automated Mileage and Fuel Reporting and Auditing, and International Border Electronic Clearance.
4.4.1	CVAP shall include an Electronic Purchase Of Credentials (EPC) function with capabilities that include but are not limited to the following:
4.4.1(a)	Annual Electronic Credentials.
4.4.1(b)	Temporary Electronic Credentials.
4.4.1(c)	Order Forms Computer Input Screens.
4.4.1(d)	Multiple Permits.
4.4.1(e)	Specific Situation Permits.
4.4.1(f)	Electronic Payment.
4.4.1(g)	Automated Processing of Applications.
4.4.2	CVAP shall include an Automated Mileage and Fuel Reporting and Auditing (AMFRA) function that includes but is not limited to the following:
4.4.2(a)	Quarterly Reports Submission.
4.4.2(b)	Electronic Vehicle Log.
4.4.2(c)	Fuel Purchase Data.
4.4.2(d)	Create And Audit Tax Reports.
4.4.3	CVAP shall include an International Border Electronic Clearance (IBEC) function.

4.4.3.1	IBEC provides the capability to electronically clear vehicles crossing international borders with those countries adjacent to the United States. IBEC shall provide the capability to clear the following:
4.4.3.1(a)	Driver Clearance.
4.4.3.1(b)	Cargo Clearance.
4.4.3.1(c)	Vehicle.
4.4.3.2	IBEC shall have an Electronic Records function that enables certification of border crossing shipment with the verification capabilities to include but not be limited to the following:
4.4.3.2(a)	Verify driver identity.
4.4.3.2(b)	Verify shipper.
4.4.3.2(c)	Verify Nature of cargo.
4.4.3.2(d)	Verify Carrier safety.
4.4.3.2(e)	Verify credential records.
4.4.3.2(f)	Verify Duties Paid.
4.4.3.2(g)	Verify Vehicle Identity.
4.4.3.2(h)	Verify Vehicle Weight.
4.5	HAZARDOUS MATERIAL INCIDENT RESPONSE
4.5.0	ITS shall include a Hazardous Materials (HAZMAT) Incident Response (HIR) service.
4.5.1	HIR shall include a HAZMAT Incident Notification (HIN) function.
4.5.1.1	HIN shall include the capability to provide enforcement and HAZMAT response teams with timely and accurate information on cargo contents when the vehicle is involved in an incident.
4.5.1.2	HIN shall be capable of providing the following Information :
4.5.1.2(a)	Time of incident.
4.5.1.2(b)	Location of the incident.
4.5.1.2(c)	The material(s) involved.
4.5.2	HIR shall provide an Operation Focal Point (OFP) for initiating appropriate responses.
4.5.2.1	OFP shall be capable of being implemented as either a centralized dispatch or several de-centralized dispatch units or vehicles.
4.5.2.2	OFP shall provide the capability for existing dispatch centers to receive the calls, determine response requirements, and route distress calls to predesignated responding agencies.
4.5.2.3	OFP shall provide the capability for operators to coordinate with other agencies and response services to include, but not be limited to, the following:
4.5.2.3(a)	State and/or local transportation officials.
4.5.2.3(b)	Police departments.
4.5.2.3(c)	Highway patrol.
4.5.2.3(e)	Emergency medical services.
4.5.2.3(f)	Environmental protection agencies.
4.5.2.3(g)	HAZMAT teams.
4.5.2.3(h)	Towing and other "courtesy" services.
4.5.3	HIR shall include a Communications (COMM) function.
4.5.3.1	COMM shall provide the capability for distress signals to be sent to a focal point.
4.5.3.2	COMM shall provide the capability for relay of distress information to response units in real-time.
4.5.3.3	COMM shall provide the capability for data to be sent from any location covering all areas of the contiguous United States.
4.5.3.4	COMM shall provide the capability for linkages/interfaces with various existing networks.
4.5.3.5	COMM shall provide the capability for the motorist to travel from region to region without performing manual adjustment of equipment.
4.6	COMMERCIAL FLEET MANAGEMENT
4.6.0	ITS shall include a Commercial Fleet Management (CFM) function.
4.6.1	CFM shall include the capability for users to provide commercial drivers and dispatchers with real-time routing information in response to congestion or incidents.

4.6.2	CFM shall provide the capability for real-time communication between the following:
4.6.2(a)	Vehicle Drivers.
4.6.2(b)	Dispatchers.
4.6.2(c)	Intermodal Transportation Providers.
5.0	EMERGENCY MANAGEMENT
5.1	EMERGENCY NOTIFICATION AND PERSONAL SECURITY
5.1.0	ITS shall include an Emergency Notification and Personal Security (ENPS) function that provides for faster notification when travelers are involved in an incident.
5.1.1	ENPS shall include a Driver and Personal Security (DPS) function.
5.1.1.1	DPS shall include an in-vehicle manually initiated distress signal capability to provide a first-alert that an incident has occurred to include the following:
5.1.1.1(a)	Medical services required.
5.1.1.1(b)	Minor property damage only crashes.
5.1.1.1(c)	Breakdowns.
5.1.1.1(d)	Vehicle location.
5.1.1.1(e)	Vehicle identification.
5.1.1.2	DPS shall include the capability to cancel a previously issued manual request for help.
5.1.1.3	DPS shall include the capability to send an acknowledge signal to the motorist to indicate that the signal was received and help is on the way.
5.1.1.4	DPS shall include the capability for in-vehicle sensors to automatically detect vehicle problems and in certain cases, automatically send the appropriate distress signal.
5.1.2	ENPS shall include an Automated Collision Notification (ACN) function.
5.1.2.1	ACN shall provide the capability to automatically identify that a collision has occurred.
5.1.2.1.1	ACN shall provide the capability to instantly transmit information about the occurrence of a collision.
5.1.2.1.2	The ACN crash sensors shall include the capability to provide information about the extent of crash damage.
5.1.2.2	When sending notification of a collision ACN shall send pertinent information about the collision including the following:
5.1.2.2(a)	That vehicle has been in a collision.
5.1.2.2(b)	Accurate vehicle location.
5.1.2.2(c)	Severity of collision and/or injuries.
5.1.3	ITS shall include a Remote Security and Emergency Monitoring (RSEM) function to create an environment of safety in remote areas.
5.1.3.1	RSEM shall include specific Secure Areas.
5.1.3.1.1	The Secure Areas shall encompass all physical areas related to travel including but not limited to the following: rest stops and picnic areas, park-and-ride areas, tourism and travel information areas, remote roadways, emergency pull off areas, and work zones.
5.1.3.1.2	All Secure Areas shall have traveler-activated alarms.
5.1.3.1.3	There shall be included automatically activated alarms in the secure areas for theft, vandalism, fire, etc.
5.1.3.2	RSEM shall include a Security Sensors (SS) function.
5.1.3.2.1	SS shall provide that sensor technology required to alert operators and police of potential incidents.
5.1.3.2.2	SS shall include both video and audio systems at key locations to monitor activities.
5.2	EMERGENCY VEHICLE MANAGEMENT
5.2.0	ITS shall include an Emergency Vehicle Management (EVM) Service.
5.2.1	EVM Service shall include an Emergency Vehicle Fleet Management System.
5.2.1.1	Emergency Vehicle Fleet Management System shall maintain the availability status of relevant emergency vehicles.
5.2.1.2	Emergency Vehicle Fleet Management System shall determine the emergency response vehicles best suited to respond to an incident.
5.2.1.3	Emergency Vehicle Fleet Management System shall dispatch the appropriate emergency response vehicle (s) to the incident.
5.2.2	EVM Service shall include a Route Guidance System.

5.2.2.1	Route Guidance System shall maintain real-time information on traffic conditions in urban and rural areas, emergency response vehicle locations, and emergency response vehicle destinations.
5.2.2.2	Route Guidance System shall advise emergency response vehicles of appropriate routes.
5.2.3	EVM Service shall include a Signal Priority System.
5.2.3.1	Signal Priority System shall maintain real-time information on signal timing, emergency vehicle locations and emergency vehicle routing.
5.2.3.2	Signal Priority System shall determine signal prioritize timing sequences for relevant signals.
6.0	ADVANCED VEHICLE SAFETY SYSTEMS
6.1	LONGITUDINAL COLLISION AVOIDANCE
6.1.0	ITS shall include a Longitudinal Collision Avoidance Service.
6.1.1	Longitudinal Collision Avoidance Service shall include a Rear-End Subservice.
6.1.1.1	Rear-End Subservice shall include a Headway Maintenance System which assists in maintaining a safe relative longitudinal separation between vehicles.
6.1.1.1.1	Headway Maintenance System shall include a Manual Operations Subsystem.
6.1.1.1.1.1	Manual Operations Subsystem shall determine impending situations that are inconsistent with safe headway.
6.1.1.1.1.2	Manual Operations Subsystem shall alert the vehicle's driver of the need for speed control to maintain a safe headway.
6.1.1.1.2	Headway Maintenance System shall include an Autonomous Intelligence Cruise Control (AICC) Subsystem.
6.1.1.1.2.1	Autonomous Intelligence Cruise Control Subsystem shall determine actions necessary to maintain the vehicle at a safe distance behind a lead vehicle.
6.1.1.1.2.2	Autonomous Intelligence Cruise Control Subsystem shall implement necessary vehicle speed control.
6.1.1.1.3	Headway Maintenance System shall include a Cooperative Intelligence Cruise Control (CICC) Subsystem.
6.1.1.1.3.1	Cooperative Intelligence Cruise Control Subsystem shall be capable of operating the vehicle in a follow-lead-vehicle mode or a "platoon" mode.
6.1.1.2	Rear-End Subservice shall include a Driver Action System
6.1.1.2.1	Driver Action System shall inform the driver of the need for immediate collision avoidance action.
6.1.1.3	Rear-End Subservice shall include an Automatic Control System.
6.1.1.3.1	Automatic Control System shall automatically implement needed collision avoidance action.
6.1.2	Longitudinal Collision Avoidance Service shall include a Backing Subservice.
6.1.2.1	Backing Subservice shall include an Advisory System.
6.1.2.1.1	Advisory System shall notify the driver of the presence of potentially hazardous situations.
6.1.2.2	Backing Subservice shall include a Driver Action System
6.1.2.2.1	Driver Action System shall inform the driver of the need for immediate collision avoidance action.
6.1.2.3	Backing Subservice shall include an Automatic Control System.
6.1.2.3.1	Automatic Control System shall automatically implement needed collision avoidance action.
6.1.3	Longitudinal Collision Avoidance Service shall include a Head-On/Passing Subservice.
6.1.3.1	Head-On/Passing Subservice shall include an Advisory System.
6.1.3.1.1	Advisory System shall notify the driver of the presence of potentially hazardous situations.
6.1.3.2	Head-On /Passing Subservice shall include a Driver Action System.
6.1.3.2.1	Driver Action System shall inform the driver of the need for immediate collision avoidance action.
6.1.3.3	Head-On/Passing Subservice shall include an Automatic Control System.
6.1.3.3.1	Automatic Control System shall automatically implement needed collision avoidance action.
6.2	LATERAL COLLISION AVOIDANCE
6.2.0	ITS shall include a Lateral Collision Avoidance Service.
6.2.1	Lateral Collision Avoidance Service shall include a Lane Change/Merge Subservice.
6.2.1.1	Lane Change/Merge Subservice shall include an Advisory System.
6.2.1.1.1	Advisory System shall notify the driver of the presence of potentially hazardous situations.
6.2.1.2	Lane Change/Merge Subservice shall include a Driver Action System.
6.2.1.2.2	Driver Action System shall inform the driver of the need for immediate collision avoidance action.
6.2.1.3	Lane Change/Merge Subservice shall include an Automatic Control System.

6.2.1.3.1	Automatic Control System shall automatically implement needed collision avoidance action.
6.2.2	Lateral Collision Avoidance Service shall include a Single Vehicle Roadway Departure (SVRD) Subservice.
6.2.2.1	Single Vehicle Roadway Departure Subservice shall include an Advisory System.
6.2.2.1.1	Advisory System shall notify the driver of the presence of a potentially hazardous situation.
6.2.2.2	Single Vehicle Roadway Departure Subservice shall include a Driver Action System.
6.2.2.2.1	Driver Action System shall inform the driver of the need for immediate collision avoidance action.
6.2.2.3	Single Vehicle Roadway Departure Subservice shall include an Automatic Control System.
6.2.2.3.1	Automatic Control system shall automatically implement needed collision avoidance action.
6.3	INTERSECTION COLLISION AVOIDANCE
6.3.0	ITS shall include an Intersection Collision Avoidance Service.
6.3.1	Intersection Collision Avoidance Service shall include an Advisory System.
6.3.1.1	Advisory System shall notify the driver of the presence of potentially hazardous situations.
6.3.2	Intersection Collision Avoidance Service shall include a Driver Action System.
6.3.2.1	Driver Action System shall notify the driver of the need for immediate collision avoidance action.
6.3.3	Intersection Collision Avoidance Service shall include an Automatic Control System.
6.3.3.1	Automatic Control system shall automatically implement needed collision avoidance action.
6.4	VISION ENHANCEMENT FOR CRASH AVOIDANCE
6.4.0	ITS shall include a Vision Enhancement for Crash Avoidance Service.
6.4.1	Vision Enhancement for Crash Avoidance Service shall include an Enhanced Vision System, which augments the vehicle operator's capability to see pedestrians and hazardous situations, where driving visibility is low.
6.5	SAFETY READINESS
6.5.0	ITS shall include a Safety Readiness Service.
6.5.1	Safety Readiness Service shall include a Driver Monitor Subservice.
6.5.1.1	Driver Monitor Subservice shall include an Advisory/Control System
6.5.1.1.1	Advisory/Control System shall determine the driver's readiness.
6.5.1.1.2	Advisory/Control System shall notify the driver of need to take corrective action.
6.5.1.1.3	Advisory/Control System shall automatically counteract insufficient driver's readiness to operate the vehicle by safely stopping the vehicle.
6.5.2	Safety Readiness Service shall include a Vehicle Condition Subservice.
6.5.2.1	Vehicle Condition Subservice shall include an Advisory System.
6.5.2.1.1	Advisory System shall determine the condition of critical vehicle components.
6.5.2.1.2	Advisory System shall notify the driver of need to take corrective action.
6.5.3	Safety Readiness Service shall include an Infrastructure Condition Subservice.
6.5.3.1	Infrastructure Condition Subservice shall include an In-Vehicle Infrastructure Advisory System.
6.5.3.1.1	In-Vehicle Infrastructure Advisory System shall determine unsafe roadway conditions.
6.5.3.1.2	In-Vehicle Infrastructure Advisory System shall notify the driver of the need to take corrective action.
6.6	PRE-CRASH RESTRAINT DEPLOYMENT
6.6.0	ITS shall include the Pre-Crash Restraint Deployment Service.
6.6.1	Pre-Crash Restraint Deployment Service shall include an Automatic Activation System.
6.6.1.1	Automatic Activation System shall detect an impending collision with a moving or a stationary object prior to crash impact.
6.6.1.2	Automatic Activation System shall initiate pre-impact deployment of restraint devices when appropriate to reduce injury severity.
6.7	AUTOMATED VEHICLE OPERATION
6.7.0	ITS shall include an Automated Vehicle Operation Service (AVO).
6.7.1	AVO service shall include an Automated Highway System (AHS), the Target Level System.
6.7.1.1	AHS shall include an Automated Check-In Subsystem (ACIS).
6.7.1.1.1	The ACIS shall include the capability for the driver to initiate a transaction, including indication of destination, with the AHS.

6.7.1.1.2	The ACIS shall be capable of determining the vehicle qualifications for access to AHS.
6.7.1.1.3	The ACIS shall be capable of safely controlling access to AHS.
6.7.1.2	AHS shall include a Vehicle Control Subsystem (VCS).
6.7.1.2.1	VCS shall be capable of determining the condition, location, and motion of each vehicle on the automated lanes.
6.7.1.2.2	VCS shall determine the conditions for safe operation of vehicles on the automated lanes.
6.7.1.2.3	VCS shall automatically control the vehicles on AHS.
6.7.1.3	AHS shall include an Automated Check-Out Subsystem (ACOS).
6.7.1.3.1	ACOS shall determine the readiness of the vehicle operator to resume control of the vehicle.
6.7.1.3.2	ACOS shall be capable of safely controlling egress from AHS.
6.7.2	AVO service shall include a Partially Automated Highway System (PAHS) as a Transitional System.
6.7.2.1	PAHS shall include Vehicle Subsystems which utilize capabilities of collision avoidance systems and other systems to implement safe "platooning" and other transitional levels of performance.
6.7.2.2	PAHS shall include a Highway Subsystem which utilizes capabilities of Advanced Highway Infrastructure systems to assist in providing better control of vehicle routes.
6.7.2.3	PAHS shall include a Driver Subsystem which utilizes capabilities of driver alertness systems and other systems to assist in managing vehicles in situations other than full automatic control.
7.0	INFORMATION MANAGEMENT
7.1	ARCHIVED DATA FUNCTION
7.1.0	ITS shall provide an Archived Data Function to control the archiving and distribution of ITS data. The Archived Data User Service provides the Historical Data Archive Repositories and controls the archiving functionality for all ITS data with five major functions: 1) the Operational Data Control function to manage operations data integrity; 2) the Data Import and Verification function to acquire historical data from the Operational Data Control function; 3) the Automatic Data Historical Archive function for permanently archiving the data; 4) the Data Warehouse Distribution function, which integrates the planning, safety, operations, and research communities into ITS and processes data products for these communities; and 5) the ITS Community Interface which provides the ITS common interface to all ITS users for data products specification and retrieval. ADUS helps achieve the ITS information goal of unambiguous interchange and reuse of data and information throughout all functional areas.
7.1.1	The Archived Data Function shall provide a Historical Data Archive (HDA) system for ITS data.
7.1.1.1	HDA shall include repositories of operational data received from field equipment or data collection devices.
7.1.1.2	HDA shall provide permanent historical data repositories.
7.1.1.3	HDA repositories shall include meta data and meta-attributes repositories.
7.1.1.4	HDA shall provide ITS data system security.
7.1.1.4.1	HDA shall be capable of employing security solutions.
7.1.1.4.2	HDA shall be capable of preventing data loss.
7.1.1.4.3	HDA shall be capable of preventing unauthorized access to ITS data repositories
7.1.1.4.4	HDA shall be capable of providing a secure interface for online support of the ITS user interface.
7.1.1.5	HDA shall be capable of supporting online analytical functions to enable users to analyze data across multiple sources or acquire data for their off-line applications.
7.1.2	The Archived Data Function shall include an Operational Data Control (ODC) function to ensure integrity of operational data as received from field equipment or data collection devices.
7.1.2.1	ODC shall be capable of receiving and storing all ITS operational data, as received from the source.
7.1.2.1.1	ODC shall ensure ITS operational data are in proper format.
7.1.2.1.2	ODC shall maintain the meta data schema for all ITS data entering the system.
7.1.2.1.3	ODC shall be capable of assigning the following meta attributes, when available, to ITS operational data during the archive process.
7.1.2.1.3(a)	The equipment used to collect the data.
7.1.2.1.3(b)	The conditions under which the data were collected.
7.1.2.1.3(c)	The status of the equipment at the time of collection.
7.1.2.1.4	ODC shall be capable of applying user-defined quality control verification on ITS data and annotating results in the appropriate meta files.

7.1.2.1.5	ODC shall be capable of assigning meta-attributes to the data indicating the methods used to perform:
7.1.2.1.5(a)	summarization and aggregation
7.1.2.1.5(b)	transformations (i.e., reconstructing original data or constructing new data elements)
7.1.2.2	ODC shall be capable of collecting user-selected data.
7.1.2.3	ODC shall be capable of archiving, in data repositories, ITS operational data as received from field equipment or data collection devices.
7.1.2.4	ODC shall be capable of maintaining the integrity of all received operational data.
7.1.2.5	ODC shall be capable of disseminating data replicates to ITS operational users in real-time.
7.1.2.6	ODC shall be capable of performing data fusion on replicated data for operational users in near real-time.
7.1.3	The Archived Data Function shall include a Data Import and Verification (DIV) function to acquire historical data from the Operational Data Control function.
7.1.3.1	DIV shall be capable of importing selected ITS Operational data from the ITS Operational Repositories.
7.1.3.1.1	DIV shall be capable of importing ITS Freeway Operations data to include:
7.1.3.1.1(a)	Freeway traffic flow surveillance data.
7.1.3.1.1(b)	Ramp meter preemptions.
7.1.3.1.1(c)	Ramp meter operational data.
7.1.3.1.1(d)	Freeway visual and video surveillance data.
7.1.3.1.1(e)	Traffic Management Center generated freeway flow metrics.
7.1.3.1.2	DIV shall be capable of importing ITS Electronic Toll Collection data.
7.1.3.1.3	DIV shall be capable of importing ITS Arterial data to include:
7.1.3.1.3(a)	Traffic signal preemptions.
7.1.3.1.3(b)	Traffic signal operational data.
7.1.3.1.3(c)	Arterial visual and video surveillance data.
7.1.3.1.3(d)	Traffic Management Center generated arterial flow metrics.
7.1.3.1.3(e)	Arterial traffic flow surveillance data.
7.1.3.1.4	DIV shall be capable of importing ITS Transit and Ridesharing data to include:
7.1.3.1.4(a)	Transit usage data.
7.1.3.1.4(b)	Transit route data including schedule deviations.
7.1.3.1.4(c)	Rideshare requests.
7.1.3.1.4(d)	Multimodal Origin/Destination.
7.1.3.1.4(e)	Fares
7.1.3.1.4(f)	Vehicle maintenance
7.1.3.1.4(g)	Personnel management data
7.1.3.1.5	DIV shall be capable of importing ITS Incident Management data to include:
7.1.3.1.5(a)	Incident characteristics.
7.1.3.1.5(b)	Train arrivals at highway rail intersections.
7.1.3.1.5(c)	Emergency vehicle dispatch data.
7.1.3.1.5(d)	Emergency vehicle location data.
7.1.3.1.5(e)	Construction and work zone identification.
7.1.3.1.5(f)	Emergency request data
7.1.3.1.5(g)	Video surveillance data
7.1.3.1.5(h)	Emergency response
7.1.3.1.6	DIV shall be capable of importing ITS Commercial Vehicle Operations data to include:
7.1.3.1.6(a)	Cargo identification data.
7.1.3.1.6(b)	Fleet activity data.
7.1.3.1.6(c)	Hazardous material packaging data.
7.1.3.1.6(d)	Border crossing data.
7.1.3.1.6(e)	Commercial vehicle on-board safety data.
7.1.3.1.6(f)	Truck Origin/Destination and Classification data

7.1.3.1.7	DIV shall be capable of importing ITS Environmental data to include:
7.1.3.1.7(a)	Emission data.
7.1.3.1.7(b)	Weather data.
7.1.3.1.8	DIV shall be capable of importing ITS Vehicle and Traveler data to include:
7.1.3.1.8(a)	Commercial and non-commercial vehicle probe data.
7.1.3.1.8(b)	VMS message set data.
7.1.3.1.8(c)	Vehicle trajectories.
7.1.3.1.8(d)	Route guidance data.
7.1.3.1.8(e)	Parking and roadway pricing change data.
7.1.3.1.8(f)	Origin/destination trip data.
7.1.3.1.8(g)	Service requests
7.1.3.1.8(h)	Information utilization
7.1.3.1.9	DIV shall be capable of importing data on ITS Physical Characteristics of Transportation Infrastructure to include:
7.1.3.1.9(a)	Roadway network attributes.
7.1.3.1.9(b)	Transit network attributes.
7.1.3.1.9(c)	Equipment maintenance status
7.1.3.1.9(d)	Transportation facilities.
7.1.3.1.9(e)	GIS map of network.
7.1.3.1.9(f)	Infrastructure maintenance data
7.1.3.1.10	DIV shall be capable of importing ITS Parking Management data.
7.1.3.1.11	DIV shall be capable of importing Intermodal Operational data.
7.1.3.2	DIV shall be capable of accepting pre-defined data inputs from transportation or other sources.
7.1.3.3	DIV shall be capable of applying pre-defined quality control verification on the imported ITS data and annotating results in the appropriate meta files.
7.1.3.4	DIV shall be capable of formatting the data to conform to the archive schema.
7.1.3.5	DIV shall be capable of cleansing imported data
7.1.3.5.1	Cleansing shall include the removal of source privacy attributes.
7.1.3.5.2	Cleansing shall be capable of assigning unique system-developed anonymous identifiers to data during archiving.
7.1.3.6	DIV shall be capable of performing pre-defined data mining functions to import data.
7.1.3.7	DIV shall be capable of performing pre-defined data fusion on imported data near real-time.
7.1.3.8	DIV shall be capable of assigning meta attributes to ITS operational data if data modification is required during the historical archive process.
7.1.3.9	DIV shall be capable of notifying source system owners of potential data or equipment errors.
7.1.4	The Archived Data function shall provide the Automatic Data Historical Archive (ADHA) function for permanently archiving the data.
7.1.4.1	ADHA shall provide an archive schema for all ITS data entering the archives.
7.1.4.1.1	The archive schema shall preclude the possibility of identifying or tracking either individual citizens or private firms.
7.1.4.1.2	ADHA shall strip all identifiers of individual citizens or private firms from all data before archiving.
7.1.4.1.3	ADHA shall be capable of assigning unique system-developed anonymous identifiers to data during archiving.
7.1.4.2	ADHA shall manage the ITS historical data archiving processes for all functional areas as follows:
7.1.4.2(a)	Format data to archive schema conformance.
7.1.4.2(b)	Maintain a centralized meta schema to specify how data is archived.
7.1.4.2(c)	Maintain data quality meta attributes.
7.1.4.2(d)	Schedule archiving of data.
7.1.4.3	ADHA shall permanently store historical archives and only provide data replicates to users.
7.1.4.4	ADHA shall be capable of supporting user-specified data archiving procedures as follows:

7.1.4.4(a)	When specified by a user, archive operational data as received in the user's storage files.
7.1.4.4(b)	When specified by a user, archive edited data in the User's storage files.
7.1.4.4(c)	When specified by a user, perform pre-defined data fusion before archiving in User's storage files.
7.1.4.5	ADHA shall be capable of assigning meta attributes to ITS operational data if data modification is required during the historical archive process.
7.1.5	The Archived Data Function shall provide a Data Warehouse Distribution (DWD) function as the ITS data source to support the ITS community user functions.
7.1.5.1	DWD shall be capable of supporting the generation of data products for the following transportation agencies:
7.1.5.1(a)	Planning
7.1.5.1(b)	Operations
7.1.5.1(c)	Safety
7.1.5.1(d)	Research
7.1.5.2	DWD shall include a User Data Products (UDP) function.
7.1.5.2.1	UDP shall provide an online analytical functionality to generate pre-defined data products for ITS users, to include:
7.1.5.2.1(a)	Reports
7.1.5.2.1(b)	Analyses
7.1.5.2.1(c)	Aggregations or summaries.
7.1.5.2.1(d)	User defined archiving of data concepts.
7.1.5.2.2	UDP shall be capable of recreating ITS operational data formats from the historical archives.
7.1.5.2.3	UDP shall be capable of providing user defined data mining functions on ITS data sources.
7.1.5.2.4	UDP shall be capable of performing user defined data fusion functions on data extracted from ITS Archives.
7.1.5.2.5	UDP shall be capable of supporting the Federal data system with user-defined data products, when the necessary data is available, to include the following systems:
7.1.5.2.5(a)	Highway Performance Monitoring System (HPMS)
7.1.5.2.5(b)	Truck Weight Study/VTRIS
7.1.5.2.5(c)	National Bridge Inventory
7.1.5.2.5(d)	Fatal Accident Reporting System (FARS)
7.1.5.2.5(e)	Highway Safety Information System (HSIS)
7.1.5.2.5(f)	Section 15 Transit Data
7.1.5.2.5(g)	Motor Carrier Management Information System (MCMIS)
7.1.5.2.5(h)	Hazardous Materials Incident Reporting System
7.1.5.2.5(i)	Grade Crossing Inventory System (GCIS)
7.1.5.2.5(j)	Railroad Accident/Incident Reporting System (RAIRS; grade crossing portion)
7.1.5.3	DWD shall have the single point of administration for the archived data system.
7.1.6	The Archived Data Function shall provide users with an ITS Community Interface (ICI) including all ITS users for the specification and retrieval of data products.
7.1.6.1	ICI shall be the common data interface for all ITS users to access the ITS Data Archives.
7.1.6.1.1	ICI shall provide users' systems with the data interface functionality.
7.1.6.2	ICI shall manage user access and security across the interface.
7.1.6.2.1	ICI shall be capable of cleansing data to remove source privacy attributes before archiving data.
7.1.6.2.2	ICI shall be capable of cleansing data to remove source privacy attributes before exporting data to users.
7.1.6.3	ICI shall provide a user-interface functionality to existing data warehouse data schema for users to define their data products.
7.1.6.3.1	The user-interface shall permit users to define access to multiple databases as data sources for their data products.
7.1.6.3.2	The user-interface shall permit users to select online analytical functions to produce their data products.
7.1.6.3.3	The user-interface shall permit the user to view sample data products.
7.1.6.4	ICI shall provide the user interface for ITS Transportation Agencies.

7.1.6.4.1	Transportation agencies shall include the following planning functions:
7.1.6.4.1(a)	Metropolitan Planning Organizations (MPO) and State Transportation Planning
7.1.6.4.1(b)	Transportation System Monitoring
7.1.6.4.1(c)	Air Quality Analysis
7.1.6.4.1(d)	MPO/State Freight and Intermodal Planning
7.1.6.4.1(e)	Land Use Regulation and Growth Management
7.1.6.4.1(f)	Transportation Administration and Policy Analysis.
7.1.6.4.1(g)	Transit Planning
7.1.6.4.2	Transportation agencies shall include the following ITS Operations functions:
7.1.6.4.2(a)	Traffic Management.
7.1.6.4.2(b)	Transit Management.
7.1.6.4.2(c)	Construction and Maintenance.
7.1.6.4.2(d)	The Private Sector.
7.1.6.4.3	Transportation functions shall include the following safety agencies:
7.1.6.4.3(a)	Safety Planning and Administration.
7.1.6.4.3(b)	Commercial Vehicle Operations.
7.1.6.4.3(c)	Emergency Management.
7.1.6.4.4	Transportation agencies shall include research agencies.
8.0	MAINTENANCE AND CONSTRUCTION MANAGEMENT
8.1	MAINTENANCE AND CONSTRUCTION OPERATIONS
8.1.0	ITS shall provide Maintenance and Construction Operations (MCO) functions to support monitoring, operating, maintaining, improving and managing the physical condition of roadways, the associated infrastructure equipment, and the required resources. MCO shall focus on four major functions: 1) the Maintenance Vehicle Fleet Management function, to monitor and track locations and conditions of fleets of maintenance, construction, and specialized service vehicles; 2) the Roadway Management function, to monitor and forecast conditions and manage treatment of roadways during various travel conditions; 3) the Work Zone Management and Safety function, to support effective and efficient roadway operations during work zone activities; and 4) the Roadway Maintenance Conditions and Work Plan Dissemination function, to coordinate work plans and to communicate conditions. This User Service will utilize ITS systems and processes to support interchange of information among diverse groups of users, to improve efficiency and effectiveness of operational, maintenance, and managerial activities.
8.1.1	Maintenance and Construction Operations shall provide a Maintenance Vehicle Fleet Management (MVFM) function to schedule and dispatch, monitor and track location, and monitor operational condition and maintenance requirements of public and contracted fleets of maintenance, construction, and specialized service vehicles. This function includes interactions among Traffic Managers, Supervisors, Dispatchers, Field Crews, Construction Crews, Vehicle Maintenance Crews, Equipment Maintenance Crews, Weather Services Organizations, and Information Service Providers.
8.1.1.1	MVFM shall be capable of monitoring and tracking the locations of public and contracted fleets of maintenance, construction, and specialized service vehicles to provide current location and status information.
8.1.1.1.1	MVFM shall be capable of monitoring and tracking the locations of fleets of maintenance, construction, and specialized service vehicles, including but not limited to:
8.1.1.1.1(a)	Roadway maintenance trucks
8.1.1.1.1(b)	Other motorized roadway maintenance equipment
8.1.1.1.1(c)	Roadway construction trucks
8.1.1.1.1(d)	Other motorized roadway construction equipment
8.1.1.1.1(e)	Roadway service patrols
8.1.1.1.1(f)	Snow plows
8.1.1.1.1(g)	Salt / sand trucks
8.1.1.1.1(h)	Bucket trucks
8.1.1.1.1(i)	Vegetation Control and Grass cutting equipment
8.1.1.1.1(j)	Traffic control vehicles

8.1.1.1.1(k)	Street and drainage cleaning vehicles
8.1.1.1.2	MVFM shall be capable of monitoring information regarding fleets of maintenance, construction, and specialized service vehicles, including but not limited to:
8.1.1.1.2(a)	Location
8.1.1.1.2(b)	Speed
8.1.1.1.3	MVFM shall be capable of tracking the past location and movement of maintenance, construction, and specialized vehicles.
8.1.1.2	MVFM shall be capable of supporting route scheduling and dispatching of public and contracted fleets of maintenance, construction, and specialized service vehicles.
8.1.1.3	MVFM shall be capable of supporting interactive data communications between dispatchers and operators of public and contracted maintenance, construction, and specialized service vehicles.
8.1.1.3.1	MVFM shall be capable of communicating information to vehicle operators, including but not limited to:
8.1.1.3.1(a)	Routing information
8.1.1.3.1(b)	Scheduling data
8.1.1.3.1(c)	Dispatch instructions
8.1.1.3.1(d)	Corrective actions
8.1.1.3.1(e)	Environmental information (road and weather conditions)
8.1.1.3.2	MVFM shall be capable of communicating information from vehicle operators, including but not limited to:
8.1.1.3.2(a)	Work data
8.1.1.3.2(b)	Operator status
8.1.1.3.2(c)	Crew status
8.1.1.3.2(d)	Equipment status
8.1.1.4	MVFM shall be capable of using on-board vehicle sensors to monitor the vehicle diagnostics and operating conditions of public and contracted fleets of maintenance, construction, and specialized service vehicles.
8.1.1.4.1	MVFM shall be capable of collecting information on the operating conditions of vehicles, including but not limited to:
8.1.1.4.1(a)	System status (e.g. status of brake system, oil pressure, etc.)
8.1.1.4.1(b)	Engine temperature
8.1.1.4.1(c)	Mileage
8.1.1.4.1(d)	Tire wear
8.1.1.4.1(e)	Brake wear
8.1.1.4.1(f)	Belt wear
8.1.1.4.2	MVFM shall be capable of automatically scheduling preventive and corrective vehicle maintenance.
8.1.1.5	MVFM shall be capable of using on-board vehicle sensors to monitor roadway conditions and vehicle functions, including but not limited to:
8.1.1.5(a)	Environmental conditions
8.1.1.5(b)	Operating status (e.g. materials stored, materials usage, plow blade up/down, etc.)
8.1.1.6	MVFM shall be capable of providing dispatchers and operators of maintenance, construction, and specialized service vehicles with information regarding potential and actual roadway problems.
8.1.1.6.1	MVFM shall provide information to dispatchers and vehicle operators, including but not limited to:
8.1.1.6.1(a)	Congestion
8.1.1.6.1(b)	Incidents
8.1.1.6.1(c)	Roadway restrictions
8.1.1.6.1(d)	Environmental conditions
8.1.1.6.2	MVFM shall be capable of filtering, fusing, processing, and presenting data from multiple weather and environmental sources.
8.1.1.6.3	MVFM shall be capable of receiving fused weather and roadway information from external sources, including but not limited to:
8.1.1.6.3(a)	Surface transportation sources
8.1.1.6.3(b)	Weather service organizations
8.1.1.6.4	MVFM shall be capable of using fused weather and roadway information from external sources to aid in

	scheduling roadway maintenance and construction activities.
8.1.1.6.5	MVFM shall provide information to the vehicle operators concerning roadway problem spots and alternate routes because of potential or actual roadway problems.
8.1.1.6.6	MVFM shall support transmission of fleet operations data to other Operations centers.
8.1.1.6.7	MVFM shall support transmission of fleet operations data to archives.
8.1.1.6.8	MVFM shall support the comparison of incident data with scheduled fleet activities.
8.1.1.7	MVFM shall be capable of communicating status information to other maintenance, construction or specialized service vehicles.
8.1.2	Maintenance and Construction Operations shall provide a Roadway Management (RWM) function to monitor traffic, road surface, and environmental conditions and forecast traffic and road surface conditions to support management of routine and hazardous road condition remediation and to communicate changes in conditions. This function includes interactions among Traffic Managers, Supervisors, Dispatchers, Field Crews, Construction Crews, Asset Managers, Planning Agencies, and Weather Services Organizations.
8.1.2.1	RWM shall support a number of different services, including but not limited to:
8.1.2.1(a)	Winter maintenance (plowing, treating, anti-icing, de-icing, etc.)
8.1.2.1(b)	Hazard removal (removing trash, animals, etc.)
8.1.2.1(c)	Emergency activities (incident response, planning, alternate routing, etc.)
8.1.2.1(d)	Routine maintenance activities (cleaning, cutting, etc.)
8.1.2.1(e)	Repair activities
8.1.2.1(f)	Other weather related activities (fog dispersion, etc.)
8.1.2.2	RWM shall support provision of efficient and effective roadway operations during normal and severe weather or adverse travel conditions.
8.1.2.3	RWM shall plan and forecast, proactive and reactive, year-round roadway management activities.
8.1.2.4	RWM shall determine the need for forecasted and scheduled roadway treatment.
8.1.2.4.1	RWM shall be capable of filtering, fusing, processing and presenting data from multiple weather and environmental sources.
8.1.2.4.2	RWM shall be capable of receiving and fusing weather and roadway information from external sources, including but not limited to:
8.1.2.4.2(a)	Surface transportation sources
8.1.2.4.2(b)	Weather service organizations
8.1.2.4.3	RWM shall make use of information on current and forecast weather.
8.1.2.4.4	RWM shall make use of information on usage of treatments and materials.
8.1.2.4.5	RWM shall support short-term weather prediction for winter maintenance.
8.1.2.5	RWM shall support management of resources to perform hazardous road condition remediation.
8.1.2.5.1	RWM shall support application of materials, plowing, and other means to counteract adverse winter weather conditions.
8.1.2.5.2	RWM shall support appropriate responses to other environmental conditions that effect travel.
8.1.2.6	RWM shall track the amount of materials applied to the roadway for comparison to planned / forecasted requirements.
8.1.2.7	RWM shall monitor the amount and availability of materials at storage facilities.
8.1.2.8	RWM shall support maintenance crew dispatching.
8.1.2.9	RWM shall monitor, manage, and control remotely located, automated systems, that affect the roadway surface (e.g. de-icing/anti-icing applications).
8.1.2.10	RWM shall archive data for use in performance monitoring activities.
8.1.3	Maintenance and Construction Operations shall provide a Work Zone Management and Safety (WZMS) function, which provides support for the effectiveness, safety, and efficiency of roadway operations during all work zone activities. This function includes interactions among Traffic Managers, Supervisors, Dispatchers, Field Crews, Construction Crews, Public Safety Organizations, Information Service Providers, and Travelers.
8.1.3.1	WZMS shall monitor, control, and direct activity in the vicinity of work zones.
8.1.3.1.1	WZMS shall provide information about work zones, including but not limited to:
8.1.3.1.1(a)	Anticipated delays
8.1.3.1.1(b)	Alternate routes

8.1.3.1.1(c)	Suggested speed limit
8.1.3.1.2	WZMS shall provide support for automated speed enforcement around work zones.
8.1.3.1.3	WZMS shall be able to divert vehicles around work zones via automated lane changing techniques.
8.1.3.1.3.1	WZMS shall collect information used to support automated lane changing, including but not limited to:
8.1.3.1.3.1(a)	Volume
8.1.3.1.3.1(b)	Occupancy
8.1.3.1.3.1(c)	Speed
8.1.3.1.3.1(d)	Headways
8.1.3.1.3.1(e)	Vehicle characteristics
8.1.3.1.3.1(f)	Merging distance
8.1.3.1.3.2	WZMS shall support archiving of field data.
8.1.3.1.3.3	WZMS shall support use of field data for developing AHS-merging strategies.
8.1.3.2	WZMS shall support the management of data about work zones.
8.1.3.2.1	WZMS shall collect information concerning work zone activities, including but not limited to:
8.1.3.2.1(a)	Location
8.1.3.2.1(b)	Nature / type
8.1.3.2.1(c)	Scheduled start time
8.1.3.2.1(d)	Duration
8.1.3.2.1(e)	Lane shifts
8.1.3.2.1(f)	Staging areas
8.1.3.2.1(g)	Length of work zone
8.1.3.2.1(h)	Scheduled phases of work zone configuration
8.1.3.2.1(i)	Alternate routes
8.1.3.2.1(j)	Anticipated delays for travel route
8.1.3.2.1(k)	Anticipated delays for diversion route
8.1.3.2.2	WZMS shall correlate planned activities with actual work.
8.1.3.2.3	WZMS shall support preparation of reports on work zone activities.
8.1.3.2.4	WZMS shall provide information on work zone activities to other agencies, including but not limited to:
8.1.3.2.4(a)	Other maintenance and construction operations systems
8.1.3.2.4(b)	Commercial vehicle fleets
8.1.3.2.4(c)	Emergency vehicle fleets
8.1.3.2.4(d)	Traveler information systems
8.1.3.2.4(e)	Traffic management systems
8.1.3.3	WZMS shall provide systems that communicate reliable, accurate, and timely traveler information, including but not limited to:
8.1.3.3(a)	Location, including lane closure information
8.1.3.3(b)	Alternate route / detour
8.1.3.3(c)	Work zone speed limit
8.1.3.3(d)	Delay
8.1.3.4	WZMS shall support the provision of vehicle intrusion warnings.
8.1.3.5	WZMS shall be capable of tracking individual crew movements.
8.1.4	Maintenance and Construction Operations shall provide a Roadway Maintenance Conditions and Work Plan Dissemination (RMCWPD) function to provide Intra- and Inter-agency coordination of work plans. This function includes interactions among Traffic Managers, Supervisors, Planning Agencies, Public Safety Organizations, and Information Service Providers.
8.1.4.1	RMCWPD shall coordinate information on planned maintenance and construction activities, including work zone information, and unplanned remediation activities, such as inclement weather responses, so that routing, scheduling, and resource allocation can be accomplished.
8.1.4.2	RMCWP shall support inter-agency coordination of response and scheduling of resources for significant events with broad impact, like natural disasters, major incidents, and large planned or seasonal events.

8.1.4.3	RMCWPD shall coordinate information with other transportation agencies, including but not limited to:
8.1.4.3(a)	Public Safety
8.1.4.3(b)	Emergency Medical Management
8.1.4.3(c)	Transit
8.1.4.3(d)	Traffic Management
8.1.4.3(e)	Railroads
8.1.4.3(f)	Airports
8.1.4.3(g)	Information Service Providers
8.1.4.3(h)	Transportation Asset Management (Pavement management, bridge management, etc)

D.0 Data Tree

LOGICAL ARCHITECTURE - VOLUME I
APPENDIX D: DATA TREE

ITS National Architecture

Document Control Information
CASE Model: 02/12/02 @ 5:16:15 PM
Extracted: 02/12/02 @ 5:38:34 PM
Logical Database: 02/12/02 @ 17:41:07

See Report on Following Pages…

Appendix D: Data Tree

actuator_commands
. brake_commands
. lane_steering_commands
. steering_commands
. throttle_commands
admin_catalog_request
admin_check_specification
admin_cleansing_parameters
admin_data_format_parameters
admin_data_product_request
admin_permission_update
admin_quality_metrics
admin_schema_update
admin_status_request
administration_archive_schema
. global_schema
. local_schema
administration_archive_status
advanced_charge_transactions
. credit_identity
. date
. parking_lot_cost
. . cost
. stored_credit
. time
. vehicle_identity
advanced_charges
. credit_identity
. parking_lot_identity
. . location_identity
. . unit_number
. parking_space_details
. . date
. . duration
. . time
. stored_credit
. traveler_identity
. vehicle_identity
advanced_charges_billing_needed
. confirmation_flag
advanced_charges_confirm
. confirmation_flag
. credit_identity
. parking_lot_cost
. . cost
. stored_credit
advanced_charges_needed
. credit_identity
. parking_space_details
. . date
. . duration
. . time
. stored_credit
. vehicle_identity
advanced_charges_payment_list
. credit_identity
. list_size
. parking_lot_cost
. . cost
. parking_space_details
. . date
. . duration
. . time
. vehicle_identity
advanced_fare_billing
. credit_identity
. stored_credit
. transit_fare
. traveler_identity
advanced_fare_billing_needed
. confirmation_flag
advanced_fare_details
. credit_identity
. stored_credit
. transit_journey_date
. . date
. . time
. transit_route_destination
. transit_route_origin
advanced_fare_payment_list
. credit_identity
. list_size
. transit_journey_date
. . date
. . time
. transit_route_destination
. transit_route_origin
. traveler_identity
advanced_fare_transactions
. credit_identity
. date
. stored_credit
. time
. transit_fare
. traveler_identity
advanced_fares_and_charges_request
. advanced_fare_details
. . credit_identity
. . stored_credit
. . transit_journey_date
. . . date
. . . time
. . transit_route_destination
. . transit_route_origin
. advanced_parking_lot_charges
. . credit_identity
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_space_details
. . . date
. . . duration
. . . time
. . stored_credit
. . vehicle_identity
advanced_fares_and_charges_response
. confirmation_flag
. credit_identity
. parking_lot_cost
. . cost
. stored_credit
. transit_fare
advanced_fares_confirm
. confirmation_flag
advanced_fares_needed
. credit_identity
. stored_credit
. transit_journey_date
. . date
. . time
. transit_route_destination
. transit_route_origin
. traveler_identity
advanced_other_charges_confirm
. confirmation_flag
. credit_identity
. parking_lot_cost
. . cost
. stored_credit
. vehicle_identity
advanced_other_charges_request
. credit_identity
. parking_lot_identity
. . location_identity
. . unit_number
. parking_space_details
. . date
. . duration

Appendix D: Data Tree

. . time
. stored_credit
. vehicle_identity
advanced_other_fares_confirm
. confirmation_flag
. credit_identity
. stored_credit
. transit_fare
. traveler_identity
advanced_other_fares_request
. credit_identity
. stored_credit
. transit_journey_date
. . date
. . time
. transit_route_destination
. transit_route_origin
. traveler_identity
advanced_other_tolls_confirm
. confirmation_flag
. credit_identity
. stored_credit
. toll_cost
. vehicle_identity
advanced_other_tolls_request
. credit_identity
. stored_credit
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
advanced_parking_lot_billing
. credit_identity
. parking_lot_cost
. . cost
. stored_credit
. vehicle_identity
advanced_parking_lot_charges
. credit_identity
. parking_lot_identity
. . location_identity
. . unit_number
. parking_space_details
. . date
. . duration
. . time
. stored_credit
. vehicle_identity
advanced_parking_lot_prices
. parking_lot_prices
. . list_size
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
advanced_parking_payment_update
. credit_identity
. list_size
. parking_lot_cost
. . cost
. parking_space_details
. . date
. . duration
. . time
. vehicle_identity
advanced_toll_billing
. credit_identity
. stored_credit
. toll_cost
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
advanced_toll_billing_needed
. confirmation_flag
advanced_toll_needed
. credit_identity
. stored_credit
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
advanced_toll_payment_list
. credit_identity
. list_size
. toll_cost
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
advanced_toll_payment_update
. credit_identity
. list_size
. toll_cost
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
advanced_toll_transactions
. credit_identity
. cv_carrier_number
. cv_vehicle_number
. date
. stored_credit
. time
. toll_cost
. toll_plaza_identity
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
advanced_tolls
. credit_identity
. stored_credit
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
advanced_tolls_and_charges_roadside_confirm
. advanced_charges_confirm
. . confirmation_flag
. . credit_identity
. . parking_lot_cost
. . . cost
. . stored_credit
. advanced_tolls_confirm
. . confirmation_flag
. . credit_identity
. . stored_credit
. . toll_cost
. confirmation_flag
advanced_tolls_and_charges_roadside_request
. advanced_charges
. . credit_identity
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_space_details
. . . date

. . . duration
. . . time
. . stored_credit
. . traveler_identity
. . vehicle_identity
. advanced_tolls
. . credit_identity
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
advanced_tolls_and_charges_vehicle_confirm
. advanced_charges_confirm
. . confirmation_flag
. . credit_identity
. . parking_lot_cost
. . . cost
. . stored_credit
. advanced_tolls_confirm
. . confirmation_flag
. . credit_identity
. . stored_credit
. . toll_cost
. confirmation_flag
advanced_tolls_and_charges_vehicle_request
. advanced_charges
. . credit_identity
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_space_details
. . . date
. . . duration
. . . time
. . stored_credit
. . traveler_identity
. . vehicle_identity
. advanced_tolls
. . credit_identity
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
advanced_tolls_and_fares_request
. advanced_fare_details
. . credit_identity
. . stored_credit
. . transit_journey_date
. . . date
. . . time
. . transit_route_destination
. . transit_route_origin
. advanced_tolls
. . credit_identity
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
advanced_tolls_and_fares_response
. confirmation_flag
. credit_identity
. stored_credit
. toll_cost
. transit_fare
advanced_tolls_confirm
. confirmation_flag
. credit_identity
. stored_credit
. toll_cost
advanced_traveler_charges_confirm
. confirmation_flag
. parking_lot_cost
. . cost
. stored_credit
. traveler_identity
advanced_traveler_charges_request
. credit_identity
. parking_space_details
. . date
. . duration
. . time
. stored_credit
. vehicle_identity
advanced_traveler_fares_confirm
. confirmation_flag
. stored_credit
. transit_fare
. traveler_identity
advanced_traveler_fares_request
. credit_identity
. stored_credit
. transit_journey_date
. . date
. . time
. transit_route_destination
. transit_route_origin
. traveler_identity
advanced_traveler_tolls_confirm
. confirmation_flag
. stored_credit
. toll_cost
. traveler_identity
advanced_traveler_tolls_request
. credit_identity
. stored_credit
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
advisory_data
. planned_events_for_advisories
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. prediction_data_for_advisories
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_occupancy_predictions
. . route_segment_queue_delay_predictions
. . route_segment_volume_delay_predictions
. traffic_data_for_advisories
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number

. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . hov_lane_vehicle_count
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . tmc_identity
. transit_running_data_for_advisories
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_services_for_advisories
advisory_data_request
. advisory_data_scope
. transit_route_number
. transit_vehicle_identity
. vehicle_location_for_advisories
. . location_identity
advisory_data_request_for_archive
. advisory_data_request
. . advisory_data_scope
. . transit_route_number
. . transit_vehicle_identity
. . vehicle_location_for_advisories
. . . location_identity
advisory_data_scope
advisory_display_type
advisory_requests_for_archive
. advisory_data_request_for_archive
. . advisory_data_request
. . . advisory_data_scope
. . . transit_route_number
. . . transit_vehicle_identity
. . . vehicle_location_for_advisories
. . . . location_identity
. . . yellow_pages_advisory_requests_for_archive
. . yellow_pages_advisory_requests
. . . advisory_data_scope
. . . transit_route_number
. . . transit_vehicle_identity
. . . vehicle_location_for_advisories
. . . . location_identity
. . . yellow_pages_dining_reservation
. . . yellow_pages_lodging_reservation
. . . yellow_pages_non_motorized_reservation
. . . yellow_pages_ticket_purchase
agency_incident_response_procedures
ahs_accel_decel_profile
. vehicle_accel_decel_data
ahs_check_identity
. location_identity
. unit_number
ahs_check_parameters
ahs_check_response
. ahs_control_data_update
. . ahs_demand_accel_decel_profile
. . . vehicle_accel_decel_profile
. . . . vehicle_accel_decel_data
. . ahs_demand_headway
. . . vehicle_headway_data
. confirmation_flag
ahs_checking_data
. confirmation_flag
ahs_checking_details
. ahs_failed_checks_count
. ahs_successful_checks_count
ahs_checking_records
. ahs_check_identity
. . location_identity
. . unit_number
. ahs_failed_checks_count
. ahs_successful_checks_count
. list_size
ahs_control_data
. ahs_demand_accel_decel_profile
. . vehicle_accel_decel_profile
. . . vehicle_accel_decel_data
. ahs_demand_headway
. . vehicle_headway_data
ahs_control_data_changes
. ahs_demand_accel_decel_profile
. . vehicle_accel_decel_profile
. . . vehicle_accel_decel_data
. ahs_demand_headway
. . vehicle_headway_data
ahs_control_data_update
. ahs_demand_accel_decel_profile
. . vehicle_accel_decel_profile
. . . vehicle_accel_decel_data
. ahs_demand_headway
. . vehicle_headway_data
ahs_control_information
. ahs_check_parameters
. ahs_control_data
. . ahs_demand_accel_decel_profile
. . . vehicle_accel_decel_profile
. . . . vehicle_accel_decel_data
. . ahs_demand_headway
. . . vehicle_headway_data
ahs_data_input
ahs_demand_accel_decel_profile
. vehicle_accel_decel_profile
. . vehicle_accel_decel_data
ahs_demand_headway
. vehicle_headway_data
ahs_failed_checks_count
ahs_headway

Appendix D: Data Tree

. vehicle_headway_data
ahs_lane_use_data
. ahs_vehicle_count
. list_size
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
ahs_operational_data
. ahs_checking_records
. . ahs_check_identity
. . . location_identity
. . . unit_number
. . ahs_failed_checks_count
. . ahs_successful_checks_count
. . list_size
. ahs_lane_use_data
. . ahs_vehicle_count
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. date
. list_size
. time
ahs_operational_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
ahs_route
. route_segment
. . route_segment_data
. . . route_segment_description
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_arrival_time
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_report_position_points
. . . . list_size
. . . . route_segment_way_point
. . . . . location_identity
. . . route_segment_start_point
. . . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_mode
ahs_route_data
. list_size
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
ahs_route_request
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_special_needs
. constraint_on_urban
. constraint_on_vehicle_type
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. preferred_weather_conditions
ahs_status
ahs_successful_checks_count
ahs_usage_data
. ahs_checking_records
. . ahs_check_identity
. . . location_identity
. . . unit_number
. . ahs_failed_checks_count
. . ahs_successful_checks_count
. . list_size
. ahs_lane_use_data
. . ahs_vehicle_count
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
ahs_vehicle_checking_parameters
. ahs_check_parameters
. ahs_control_data
. . ahs_demand_accel_decel_profile
. . . vehicle_accel_decel_profile
. . . . vehicle_accel_decel_data
. . ahs_demand_headway
. . . vehicle_headway_data
ahs_vehicle_condition
ahs_vehicle_count
ahs_vehicle_data
. ahs_data_input
. ahs_vehicle_condition
air_services_costs
. cost
air_services_destination
. route_point
air_services_destination_arrival_time
. time
air_services_details
. air_services_costs
. . cost
. air_services_routes
. . air_services_route_details
. . . air_services_destination

. . . . route_point
. . . air_services_intermediate_point
. . . . route_point
. . . air_services_origin
. . . . route_point
. air_services_schedules
. . air_services_schedule_details
. . . air_services_destination_arrival_time
. . . . time
. . . air_services_intermediate_arrival_time
. . . . time
. . . air_services_intermediate_depart_time
. . . . time
. . . air_services_origin_depart_time
. . . . time
air_services_intermediate_arrival_time
. time
air_services_intermediate_depart_time
. time
air_services_intermediate_point
. route_point
air_services_origin
. route_point
air_services_origin_depart_time
. time
air_services_route_details
. air_services_destination
. . route_point
. air_services_intermediate_point
. . route_point
. air_services_origin
. . route_point
air_services_routes
. air_services_route_details
. . air_services_destination
. . . route_point
. . air_services_intermediate_point
. . . route_point
. . air_services_origin
. . . route_point
air_services_schedule_details
. air_services_destination_arrival_time
. . time
. air_services_intermediate_arrival_time
. . time
. air_services_intermediate_depart_time
. . time
. air_services_origin_depart_time
. . time
air_services_schedules
. air_services_schedule_details
. . air_services_destination_arrival_time
. . . time
. . air_services_intermediate_arrival_time
. . . time
. . air_services_intermediate_depart_time
. . . time
. . air_services_origin_depart_time
. . . time
analyze_archive_data_request
analyzed_env_and_weather_data
. env_and_weather_data
. . env_probe_info
. . . env_probe_info_from_emergency
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_isp
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_transit
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . environmental_sensor_data
. . . environmental_sensor_data_from_mcv
. . . . environmental_sensor_data_from_mcv_sensors
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . . environmental_sensor_data_from_roadway
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . environmental_sensor_data_from_roadway_sensors
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions

Appendix D: Data Tree

. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . . date
. . . . . . time
. . . . . date_created
. . . . . . date
. . . . . . time
. . . . . date_published
. . . . . . date
. . . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . . date
. . . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . .
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . . date
. . . . . . time
. . . . . date_created
. . . . . . date
. . . . . . time
. . . . . date_published
. . . . . . date
. . . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . . date
. . . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fomcm_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . . date
. . . . . . time
. . . . . date_created
. . . . . . date
. . . . . . time
. . . . . date_published
. . . . . . date
. . . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . . date
. . . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fws_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . . date

. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . surface_trans_weather_information
. . . fstws_surface_trans_weather_forecasts
. . . . climatic_scale_surface_trans_weather_forecasts
. . . . meso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . micro_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . miso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . .
. . . . synoptic_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . fstws_surface_trans_weather_observations
. . . . surface_trans_weather_observations
. . . . weather_observation_attributes
. . weather_service_information
. . . fws_current_weather_observations
. . . . current_weather_observations
. . . . weather_observation_attributes
. . . fws_weather_forecasts
. . . . climatic_scale_weather_forecasts
. . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . weather_scale_forecast_data_attributes
. source_reliability_information

approach_warning

approaching_train_announcement

approaching_train_data

. train_alert
. train_direction
. train_dynamics
. . arrival_time
. . . time
. . location_identity
. . train_length
. . train_speed
. . train_stopping_distance
. train_id

approved_corrective_plan

. transit_changes_in_speed
. transit_changes_in_stops
. transit_route_corrections

archive_administration_data

. administration_archive_schema
. . global_schema
. . local_schema
. administration_archive_status

archive_administration_request

. admin_permission_update
. admin_schema_update
. admin_status_request

archive_data

. archive_permissions
. formatted_archive_catalog
. . cv_archive_catalog
. . em_archive_catalog
. . emissions_archive_catalog
. . intermodal_archive_catalog
. . m_and_c_archive_catalog
. . map_archive_catalog
. . multimodal_archive_catalog
. . other_data_source_catalog
. . parking_archive_catalog
. . toll_archive_catalog
. . traffic_archive_catalog
. . transit_archive_catalog
. . traveler_archive_catalog
. . weather_archive_catalog
. formatted_archive_data
. . formatted_cv_data
. . . cv_credentials_enrollment_data
. . . . cv_update_new_credentials_request
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_route_details
. . . . . cv_route_data
. . . . . cv_route_number
. . . . . cv_taxes_and_duties
. . . . . route_type
. . . . . cv_trip_classification_data
. . . . . cv_cargo_class
. . . . . cv_vehicle_class
. . . . . cv_weight_class
. . . . . cv_trip_identity
. . . . . hazmat_load_data
. . . cv_daily_logs
. . . . cv_roadside_daily_log
. . . . . cv_roadside_facility_identity
. . . . . cv_roadside_record
. . . . . cv_archived_inspection_data
. . . . . cv_archived_safety_data
. . . . . cv_screening_record
. . . . . list_size
. . . . . date
. . . . cvo_border_clearance
. . . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_pull_in_output
. . . . . list_size
. . . . . cv_roadside_facility_identity
. . . . . date
. . formatted_em_data
. . . em_operational_data
. . . . archive_manage_emergency_vehicle_data
. . . . . emergency_vehicle_status_data
. . . . . emergency_vehicle_status_details
. . . . . list_size
. . . .
. . . . emergency_service_log_for_archive
. . . . . emergency_service_action_log

. . . . . emergency_service_action_details
. . . . . incident_action_time
. . . . . list_size
. . formatted_emissions_data
. . . archive_pollution_reference_data
. . . . pollution_area_acceptance_data
. . . . pollution_area_acceptance_times
. . . . pollution_area_tolerance_data
. . . . pollution_area_tolerance_times
. . . . pollution_roadside_acceptance_data
. . . . pollution_roadside_acceptance_times
. . . . pollution_roadside_tolerance_data
. . . . pollution_roadside_tolerance_times
. . . . pollution_vehicle_acceptance_conditions
. . . . pollution_vehicle_acceptance_data
. . . archive_pollution_state_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_vehicle_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_sulfur_dioxide_pollution
. . . . . vehicle_type
. . . pollution_archive_data_log
. . . . pollution_state_static_log_data
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_vehicle_log_data
. . . . . pollution_state_vehicle_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_sulfur_dioxide_pollution
. . . . . vehicle_type
. . formatted_intermodal_data
. . . intermodal_data
. . formatted_m_and_c_data
. . . auto_treatment_system_status_for_archive
. . . . auto_treatment_activation_data
. . . . device_identity
. . . . list_size
. . . . station_id
. . . field_device_status_for_archive
. . . . auto_treat_equip_status_for_m_and_c
. . . . . device_identity
. . . . . list_size
. . . . . roadside_device_status
. . . . . station_id
. . . . dms_equip_status_for_m_and_c
. . . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . . dms_fault
. . . . . dms_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . env_sensor_equip_status_for_m_and_c
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . . . har_equip_status_for_m_and_c
. . . . . har_fault
. . . . . har_identity
. . . . hov_sensor_equip_status_for_m_and_c
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . . .
. . . . . indicator_fault
. . . . . indicator_type
. . . . . list_size
. . . . indicator_equip_status_from_roads_for_m_and_c
. . . . . indicator_fault
. . . . . indicator_type
. . . . . list_size
. . . . infrastructure_sensor_equip_status_for_m_and_c
. . . . . infrastructure_sensor_status_for_m_and_c
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . infrastructure_sensor_status_for_mcv
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . smart_probe_equip_status_for_m_and_c
. . . . . device_identity
. . . . . list_size
. . . . . roadside_device_status
. . . . . station_id
. . . . traffic_sensor_equip_status_for_m_and_c
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . . . vehicle_sign_equip_status_for_m_and_c
. . . . . device_identity
. . . . . list_size
. . . . . roadside_device_status
. . . . . station_id
. . . . video_device_equip_status_for_m_and_c
. . . . . device_identity
. . . . . list_size
. . . . . roadside_device_status
. . . . . station_id

Appendix D: Data Tree

. . . infrastructure_data_for_archive
. . . . infrastructure_sensor_data_for_m_and_c
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . . infrastructure_sensor_output
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . mcv_infrastructure_sensor_data
. . . . . infrastructure_sensor_data_for_mcv
. . . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_data_from_onboard_devices
. . . . . . infrastructure_sensor_output
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . vehicle_id_for_mcv
. . . . processed_infrastructure_sensor_data
. . . . . infrastructure_sensor_data_for_m_and_c
. . . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . mcv_infrastructure_sensor_data
. . . . . . infrastructure_sensor_data_for_mcv
. . . . . . infrastructure_sensor_data_from_onboard_devices
. . . m_and_c_activity_schedule_for_archive
. . . . m_and_c_activity_schedule
. . . . . fleet_activity_schedule
. . . . . m_and_c_work_plans
. . . . . work_zone_activity_plan
. . . m_and_c_activity_status_for_archive
. . . . m_and_c_activity_status
. . . . . m_and_c_fleet_manager_status
. . . . . . m_and_c_fleet_status
. . . . . . m_and_c_view_of_road_network
. . . . . m_and_c_work_performance
. . . . . materials_availability_for_status
. . . . . . materials_status
. . . . . . storage_facility_id
. . . . . work_zone_data_for_status
. . . . . . fomcm_work_zone_info
. . . . . . work_zone_device_status
. . . . . . work_zone_intrusion_warning_data
. . . . . . work_zone_resource_status
. . . . . . work_zone_status_from_mcv
. . . m_and_c_maint_resource_needs_for_archive
. . . . m_and_c_resource_request_from_emerg
. . . . m_and_c_resource_request_from_traffic
. . . . resource_needs_from_scheduler
. . . . . date
. . . . . list_size
. . . . . m_and_c_equipment_quantity
. . . . . m_and_c_equipment_type
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . mcv_vehicle_type
. . . . . time
. . . m_and_c_roadway_maint_needs_for_archive
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . mcv_vehicle_type
. . . . need_date
. . . . need_time
. . . . roadway_maint_plan
. . . m_and_c_winter_maint_needs_for_archive
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . mcv_vehicle_type
. . . . need_date
. . . . need_time
. . . . winter_treatment_plan
. . . work_zone_data_for_archive
. . . . work_zone_data_for_status
. . . . . fomcm_work_zone_info
. . . . . work_zone_device_status
. . . . . . device_fault
. . . . . . device_identity
. . . . . . device_status
. . . . . . list_size
. . . . . work_zone_intrusion_warning_data
. . . . . . roadside_crew_warning_given
. . . . . . work_zone_intrusion_alert
. . . . . . work_zone_intrusion_detected
. . . . . . work_zone_intrusion_video_image
. . . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_resource_status
. . . . . . work_zone_equipment_status
. . . . . . work_zone_identifier
. . . . . . work_zone_personnel_status
. . . . . . work_zone_vehicle_status
. . . . . work_zone_status_from_mcv
. . formatted_map_data
. . . imported_map_data_for_archive
. . formatted_multimodal_data
. . . multimodal_data
. . formatted_parking_data
. . . parking_charge_response_for_archive
. . . . list_size
. . . . parking_lot_availability
. . . . . handicap_access_information
. . . . . parking_lot_hours_of_operation
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_lot_spaces
. . . . . traveler_identity
. . . . parking_lot_charge_application_time
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_price
. . . . vehicle_type_for_charges
. . . parking_lot_state_for_archive
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . formatted_roadside_data
. . . archive_environmental_sensor_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . environment_sensor_fault_data
. . . . environmental_sensor_status
. . . . . environment_sensor_fault_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . fault_data
. . . . sensor_fault_data
. . . sensor_data_archive_input
. . . . hov_sensor_data
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . local_sensor_data_for_highways

Appendix D: Data Tree

. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . list_size
. . . . . traffic_video_image
. . . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . local_sensor_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . pedestrian_demand
. . . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . list_size
. . . . . traffic_video_image
. . . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . multimodal_crossing_sensor_data
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . crossing_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . sensor_data_for_reversible_lanes
. . . . . traffic_video_image
. . . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . sensor_status
. . . . traffic_sensor_status
. . formatted_toll_data
. . . toll_operational_data
. . . . date
. . . . list_size
. . . . time
. . . . toll_cost
. . . . toll_segment_identity
. . . . . unit_number
. . . . toll_segment_users
. . . toll_prices_for_archive
. . . . list_size
. . . . toll_price
. . . . toll_price_application_time
. . . . toll_segment_identity
. . . . . unit_number
. . . . vehicle_type_for_tolls
. . . . . cv_tag_data
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_vehicle_characteristics
. . . . . cv_vehicle_configuration
. . . . . cv_vehicle_size
. . . . . cv_vehicle_weight
. . . . . vehicle_identity
. . . . . vehicle_type
. . formatted_traffic_data
. . . ahs_operational_data
. . . . ahs_checking_records
. . . . . ahs_check_identity
. . . . . location_identity
. . . . . unit_number
. . . . . ahs_failed_checks_count
. . . . . ahs_successful_checks_count
. . . . . list_size
. . . . ahs_lane_use_data
. . . . . ahs_vehicle_count
. . . . . list_size
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . date
. . . . list_size
. . . . time
. . . static_data_for_archive
. . . . static_data_for_traffic_control
. . . . . background_strategy
. . . . . list_size
. . . . . selected_strategy_data
. . . . . selected_strategy_type
. . . . . strategy_date
. . . . . strategy_day
. . . . . strategy_end_time
. . . . . strategy_start_time
. . . . . coordination_rules_for_highways
. . . . . coordination_rule_data_for_highways
. . . . . coordination_rule_highway_data_description
. . . . . coordination_rule_highway_data_number
. . . . . list_size
. . . . . coordination_rules_for_roads
. . . . . coordination_rule_data_for_roads
. . . . . coordination_rule_road_data_description
. . . . . coordination_rule_road_data_number
. . . . . list_size
. . . . . dms_allocation
. . . . . indicator_identity
. . . . . list_size
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . highway_control_devices
. . . . . crossing_equipment_data_for_highways
. . . . . highway_equipment_data
. . . . . highway_network
. . . . . list_size
. . . . . route_segment_downstream_identity
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . route_segment_upstream_identity

Appendix D: Data Tree

. . . . . indicator_highway_control_static_data
. . . . . highway_sign_setting_data
. . . . . highway_sign_setting_plans
. . . . . indicator_road_control_static_data
. . . . . indicator_road_adaptive_plans
. . . . . indicator_road_fixed_plans
. . . . . link_data
. . . . . link_attributes
. . . . . link_identity
. . . . . link_TMC_identity
. . . . . parking_lot_static_data
. . . . . list_size
. . . . . parking_lot_dms_allocation
. . . . . parking_lot_identity
. . . . . parking_lot_sensor_allocation
. . . . . parking_lot_state_thresholds
. . . . . ramp_devices
. . . . . list_size
. . . . . ramp_identity
. . . . . ramp_phase_data
. . . . . road_control_devices
. . . . . crossing_equipment_data_for_roads
. . . . . hri_data_for_roads
. . . . . intersection_equipment_data
. . . . . pedestrian_equipment_data
. . . . . road_network
. . . . . list_size
. . . . . route_segment_downstream_identity
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . route_segment_upstream_identity
. . . . . roadway_characteristics
. . . . . link_speed_limit
. . . . . median_type
. . . . . number_of_lanes
. . . . . pavement_type
. . . . . shoulder_width
. . . . . sensor_allocation
. . . . . sensor_allocation_for_controllers
. . . . . sensor_allocation_for_hov_lanes
. . . . . sensor_allocation_for_probes
. . . . . sensor_allocation_for_tags
. . . . . vehicle_signage_output_identity
. . . . . location_identity
. . . . . unit_number
. . . traffic_data_for_deployment
. . . . current_data
. . . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . roadway_traffic_conditions
. . . . . strategy_data
. . . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . hri_sensor_data
. . . . . pedestrian_sensor_data
. . . . . traffic_sensor_data
. . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . current_incident_data
. . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_avl
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . pollution_state_roadside_collection
. . . . long_term_data
. . . . . historical_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . historical_parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . historical_processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . strategy_data
. . . . . historical_stored_incident_data
. . . . . historical_incident_details
. . . . . list_size
. . . . . historical_traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . historical_traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . historical_vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . historical_wide_area_pollution_data
. . . . . historical_pollution_state_area_collection
. . . . . historical_pollution_state_roadside_collection
. . . . . list_size
. . . . . o_d_matrix
. . . . predictive_model_data
. . . . . predicted_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_occupancy
. . . . . link_speed
. . . . . predicted_hov_lane_data

Appendix D: Data Tree

. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . predicted_o_d_matrix
. . . . . predicted_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . predicted_parking_lot_data
. . . . . list_size
. . . . . parking_lot_identity
. . . . . parking_lot_occupancy
. . . . . parking_lot_state
. . . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_occupancy
. . . . . link_speed
. . . . . predicted_road_network_use
. . . . . route_segment_guided_vehicles
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . formatted_transit_data
. . . bad_transit_collected_fare_payment
. . . . enforcement_agency_contact
. . . . enforcement_agency_details
. . . . . enforcement_agency_address
. . . . . enforcement_agency_computer
. . . . . enforcement_agency_email
. . . . . enforcement_agency_fax
. . . . . enforcement_agency_name
. . . . . enforcement_agency_phone
. . . . . enforcement_agency_responsibility
. . . . fare_violation_information
. . . . . credit_identity
. . . . . transit_fare
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_roadside_image
. . . . . transit_user_vehicle_image
. . . . . traveler_identity
. . . bad_transit_roadside_fare_payment
. . . . enforcement_agency_contact
. . . . enforcement_agency_details
. . . . . enforcement_agency_address
. . . . . enforcement_agency_computer
. . . . . enforcement_agency_email
. . . . . enforcement_agency_fax
. . . . . enforcement_agency_name
. . . . . enforcement_agency_phone
. . . . . enforcement_agency_responsibility
. . . . fare_collection_roadside_violation_information
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_user_roadside_image
. . . . . transit_user_roadside_tag_identity
. . . . . credit_identity
. . . . . traveler_identity
. . . bad_transit_vehicle_fare_payment
. . . . enforcement_agency_contact
. . . . enforcement_agency_details
. . . . . enforcement_agency_address
. . . . . enforcement_agency_computer
. . . . . enforcement_agency_email
. . . . . enforcement_agency_fax
. . . . . enforcement_agency_name
. . . . . enforcement_agency_phone
. . . . . enforcement_agency_responsibility
. . . . fare_collection_vehicle_violation_information
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_user_vehicle_image
. . . . . transit_user_vehicle_tag_identity
. . . . . credit_identity
. . . . . stored_credit
. . . . . traveler_identity
. . . paratransit_service_data_for_archive
. . . . paratransit_personal_schedule
. . . . . paratransit_service_cost
. . . . . cost
. . . . . paratransit_service_details
. . . . . paratransit_arrival_time
. . . . . paratransit_availability_time
. . . . . paratransit_destination
. . . . . paratransit_pickup_location
. . . . . paratransit_pickup_time
. . . . . paratransit_service_identity
. . . . . traveler_identity
. . . . traveler_identity
. . . transit_driver_info_for_archive
. . . . list_size
. . . . transit_driver_details
. . . . . transit_driver_availability
. . . . . transit_driver_availability_considerations
. . . . . transit_driver_cost_effectiveness
. . . . . transit_driver_cost_effectiveness_considerations
. . . . . transit_driver_eligibility
. . . . . transit_driver_eligibility_considerations
. . . . . transit_driver_identity
. . . . . transit_driver_performance
. . . . . transit_driver_performance_considerations
. . . . . transit_driver_route_assignment_considerations
. . . . . transit_driver_route_details
. . . transit_emergency_data_for_archive
. . . . transit_emergency_data
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . transit_emergency_details
. . . . . transit_driver_emergency_request
. . . . . transit_user_emergency_request
. . . . . transit_vehicle_location
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_location_data
. . . . transit_media_emergency_interface_parameters
. . . transit_fare_transactions
. . . . advanced_fare_transactions
. . . . . credit_identity
. . . . . date
. . . . . stored_credit
. . . . . time
. . . . . transit_fare
. . . . . traveler_identity
. . . . current_fare_transactions
. . . . . credit_identity
. . . . . date
. . . . . time
. . . . . transit_fare
. . . . . traveler_identity
. . . . list_size
. . . transit_incident_info_for_archive
. . . . emergency_request_transit_details
. . . . . date
. . . . . time
. . . . . transit_emergency_request
. . . . . traveler_identity
. . . . . traveler_location_for_emergencies
. . . . transit_area_surveillance_information
. . . . transit_incident_details

Appendix D: Data Tree

. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . transit_media_incident_interface_parameters
. . . . transit_operator_security_action
. . . . . transit_incident_extra_data
. . . . . transit_incident_required_action
. . . . . transit_video_camera_command
. . . transit_operational_data_for_archive
. . . . transit_operational_data
. . . . . date
. . . . . list_size
. . . . . time
. . . . . transit_passenger_operational_data
. . . . . . date
. . . . . . list_size
. . . . . . time
. . . . . . transit_roadside_operational_data
. . . . . . transit_route_operational_data
. . . . . transit_roadside_operational_data
. . . . . . list_size
. . . . . . transit_roadside_passenger_data
. . . . . transit_vehicle_operational_data
. . . . . . list_size
. . . . . . transit_vehicle_availability
. . . . . . transit_vehicle_data
. . . . . . transit_vehicle_passenger_data
. . . transit_route_assign_for_archive
. . . . list_size
. . . . paratransit_services_for_transit_drivers
. . . . . transit_route
. . . . . . route_cost
. . . . . . route_segment_end_point
. . . . . . route_segment_estimated_travel_time
. . . . . . route_segment_report_position_points
. . . . . . route_segment_start_point
. . . . . transit_schedules
. . . . . . transit_schedule_data
. . . . . transit_stop_locations
. . . . . . list_size
. . . . . . location_identity
. . . . . . transit_route_number
. . . . . . transit_route_stop_number
. . . . transit_services_for_transit_drivers
. . . . . list_size
. . . . . transit_services
. . . . . . map_transit_data
. . . . . . transit_routes_data
. . . . . . transit_schedule_data
. . . . transit_vehicle_availability
. . . . transit_vehicle_identity
. . . transit_services_for_deployment
. . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . . list_size
. . . . . . transit_route_number
. . . . . . transit_route_segment_list
. . . . . . transit_route_stop_number
. . . . . transit_schedule_data
. . . . . . list_size
. . . . . . transit_route_number
. . . . . . transit_route_segment_list
. . . . . . transit_route_stop_list
. . . . . . transit_schedule_identity
. . . transit_technician_info
. . . . list_size
. . . . transit_technician_detail
. . . . . transit_technician_identity
. . . . . transit_technician_seniority
. . . . . transit_technician_work_assignment
. . . . . . transit_technician_identity
. . . . . . transit_vehicle_identity
. . . . . . transit_vehicle_maintenance_work
. . . . . transit_technician_work_hours
. . . . . transit_technician_work_log
. . . . . . date
. . . . . . list_size
. . . . . . time
. . . . . . transit_vehicle_identity
. . . . . . transit_vehicle_maintenance_work
. . . . . transit_technician_work_preferences
. . . . . transit_technician_work_skills
. . . transit_user_payments_transactions
. . . transit_vehicle_data_for_archive
. . . . transit_vehicle_data
. . . . . list_size
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passenger_loading
. . . . . . list_size
. . . . . . transit_route_number
. . . . . . transit_route_segment_number
. . . . . . transit_vehicle_identity
. . . . . . transit_vehicle_passengers
. . . . transit_vehicle_information
. . . . . transit_vehicle_collected_maintenance_data
. . . . . . transit_vehicle_mileage_accumulated
. . . . . . transit_vehicle_operating_condition
. . . . . transit_vehicle_collected_trip_data
. . . . . . transit_vehicle_passenger_loading
. . . . . . transit_vehicle_running_times
. . . . . transit_vehicle_deviation_update
. . . . . . list_size
. . . . . . list_size
. . . . . . transit_route_number
. . . . . . transit_route_segment_number
. . . . . . transit_vehicle_identity
. . . . . . transit_vehicle_time
. . . . . transit_vehicle_eta
. . . . . . transit_route_number
. . . . . . transit_vehicle_identity
. . . . . . transit_vehicle_time
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_location
. . . . . . transit_vehicle_identity
. . . . . . transit_vehicle_location_data
. . . . . transit_vehicle_schedule_deviations
. . . . . . list_size
. . . . . . transit_route_number
. . . . . . transit_route_segment_number
. . . . . . transit_vehicle_achieved_time
. . . . . . transit_vehicle_identity
. . . transit_vehicle_maintenance_info
. . . . list_size
. . . . transit_vehicle_identity
. . . . transit_vehicle_operations_details
. . . . . transit_vehicle_maintenance
. . . . . . transit_vehicle_maintenance_date
. . . . . . transit_vehicle_maintenance_mileage
. . . . . . transit_vehicle_maintenance_required
. . . . . transit_vehicle_maintenance_log
. . . . . . transit_vehicle_maintenance_log_activity
. . . . . . transit_vehicle_maintenance_log_date
. . . . . . transit_vehicle_maintenance_log_mileage
. . . . . . transit_vehicle_maintenance_log_time
. . . . . transit_vehicle_maintenance_schedule
. . . . . . transit_vehicle_maintenance_schedule_activity
. . . . . . transit_vehicle_maintenance_schedule_date
. . . . . . transit_vehicle_maintenance_schedule_mileage
. . . . . transit_vehicle_maintenance_specs
. . . . . . transit_vehicle_identity
. . . . . . transit_vehicle_maintenance_details
. . . . . . transit_vehicle_type
. . formatted_traveler_data

Appendix D: Data Tree

. . . guidance_data_for_archive
. . . . route_guidance_data_for_archive
. . . . . list_size
. . . . . vehicle_guidance_stored_data
. . . . . . route_identity
. . . . . . route_segment_description
. . . . . . route_segment_end_point
. . . . . . route_segment_estimated_travel_time
. . . . . . route_segment_report_position_points
. . . . . . route_segment_start_point
. . . . vehicle_guidance_probe_data_for_archive
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . time
. . . . . vehicle_identity
. . . parking_lot_data_for_archive
. . . . parking_lot_bookings_request
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_space_details
. . . . . . date
. . . . . . duration
. . . . . . time
. . . . . vehicle_identity
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_spaces
. . . rideshare_for_archive
. . . . rideshare_data_for_archive
. . . . . rideshare_confirmation_data
. . . . . . reservation_status
. . . . . . rideshare_selection_number
. . . . . rideshare_details
. . . . . rideshare_eligibility_data
. . . . traveler_rideshare_request_for_archive
. . . . . traveler_rideshare_request
. . . . . . traveler_identity
. . . . . . traveler_rideshare_constraints
. . . . . . traveler_rideshare_data
. . . . . . traveler_rideshare_preferences
. . . service_req_and_confirm_for_archive
. . . . service_req_and_confirm_data
. . . . . advisory_data_request_for_archive
. . . . . . advisory_data_request
. . . . . event_information_requests_for_archive
. . . . . . event_information_advisory_requests_for_archive
. . . . . . traveler_event_information_request_for_archive
. . . . . .
. . . . . traffic_data_kiosk_request_for_archive
. . . . . . traffic_data_kiosk_request
. . . . . traffic_data_personal_request_for_archive
. . . . . . traffic_data_personal_request
. . . . . transit_deviation_kiosk_request_for_archive
. . . . . . transit_deviation_kiosk_request
. . . . . transit_deviations_personal_request_for_archive
. . . . . . transit_deviations_personal_request
. . . . . traveler_confirm_for_archive
. . . . . . traveler_personal_trip_confirmation_for_archive
. . . . . . traveler_trip_confirmation_for_archive
. . . . . traveler_route_accepted_for_archive
. . . . . . traveler_route_accepted
. . . . . traveler_route_request_for_archive
. . . . . . traveler_route_request
. . . . . traveler_trip_and_cond_requests_for_archive
. . . . . . traveler_current_condition_request_for_archive
. . . . . .
. . . . . . traveler_personal_trip_request_for_archive
. . . . . . traveler_trip_request_for_archive
. . . . . traveler_yellow_pages_requests_for_archive
. . . . . . traveler_personal_transaction_request_for_archive
. . . . . .
. . . . . . traveler_transaction_request_for_archive
. . . . . .
. . . . . vehicle_guidance_route_accepted_for_archive
. . . . . . vehicle_guidance_route_accepted
. . . . . vehicle_route_request_for_archive
. . . . . . vehicle_route_request
. . . . . yellow_pages_advisory_requests_for_archive
. . . . . . yellow_pages_advisory_requests
. . . traveler_info_payments_transactions
. . . . driver_map_update_payments_transactions
. . . . traveler_map_update_payments_transactions
. . . . traveler_rideshare_payments_transactions
. . . . traveler_trip_payments_transactions
. . . . yellow_pages_provider_payments_transactions
. . . trip_request_for_archive
. . . . constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_load_classification
. . . . . constraint_on_number_of_mode_changes
. . . . . constraint_on_number_of_transfers
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . . preferences
. . . . . modes
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . preferred_transit_options
. . . . . preferred_weather_conditions
. . . usage_for_archive
. . . . current_other_routes_use_for_archive
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . current_road_network_use_for_archive
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . formatted_user_defined_data
. . . user_defined_data
. . formatted_weather_data
. . . weather_data
. formatted_archive_data_attributes
. . formatted_cv_data_attributes
. . . cv_credentials_enrollment_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions

. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . cv_daily_logs_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_em_data_attributes
. . . em_operational_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_emissions_data_attributes
. . . archive_pollution_reference_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . archive_pollution_state_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security

. . . . standard_data_attribute
. . . . standard_message_attribute
. . . pollution_archive_data_log_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_intermodal_data_attributes
. . . intermodal_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_m_and_c_data_attributes
. . . auto_treatment_system_status_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . field_device_status_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . infrastructure_data_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling

. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . m_and_c_activity_schedule_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . m_and_c_activity_status_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . .
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . m_and_c_winter_maint_needs_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created

. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . work_zone_data_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_map_data_attributes
. . . imported_map_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_multimodal_data_attributes
. . . multimodal_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_parking_data_attributes
. . . parking_charge_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . parking_lot_state_attributes
. . . . authorization_to_use
. . . . collection_conditions

Appendix D: Data Tree

. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_roadside_data_attributes
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . fault_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status

. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_toll_data_attributes
. . . toll_operational_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . toll_prices_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_traffic_data_attributes
. . . ahs_operational_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . static_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . traffic_deployment_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date

. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_transit_data_attributes
. . . transit_operational_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_traveler_data_attributes
. . . guidance_data_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . parking_lot_data_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . rideshare_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . service_req_and_confirm_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision

. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . traveler_info_payments_transactions_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . trip_request_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . usage_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_user_defined_data_attributes
. . . user_defined_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute

. . formatted_weather_data_attributes
. . . weather_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
archive_data_for_analysis
archive_data_product
archive_data_product_request
archive_environmental_sensor_data
. environment_sensor_data
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. environment_sensor_fault_data
. environmental_sensor_status
. . environment_sensor_fault_data
. . list_size
. . sensor_identity
. . station_id
archive_manage_emergency_vehicle_data
. emergency_vehicle_status_data
. . emergency_vehicle_status_details
. . . date
. . . emergency_vehicle_identity
. . . emergency_vehicle_status_code
. . . emergency_vehicle_tracking_data
. . . . emergency_vehicle_operational_data
. . . . vehicle_identity
. . . . vehicle_location_for_emergency_services
. . . . . location_identity
. . . . . time
. . . emergency_vehicle_type
. . . incident_number
. . . time
. . list_size
archive_permissions
archive_pollution_data
. pollution_state_roadside_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_static_acceptance_criteria
. . pollution_area_acceptance_data
. . pollution_area_acceptance_times
. . pollution_area_tolerance_data
. . pollution_area_tolerance_times
. . pollution_roadside_acceptance_data
. . pollution_roadside_acceptance_times
. . pollution_roadside_tolerance_data
. . pollution_roadside_tolerance_times
archive_pollution_reference_data
. pollution_area_acceptance_data
. pollution_area_acceptance_times
. pollution_area_tolerance_data
. pollution_area_tolerance_times
. pollution_roadside_acceptance_data
. pollution_roadside_acceptance_times
. pollution_roadside_tolerance_data
. pollution_roadside_tolerance_times
. pollution_vehicle_acceptance_conditions
. pollution_vehicle_acceptance_data
archive_pollution_reference_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
archive_pollution_state_data
. list_size
. pollution_state_area_collection
. . area_air_quality_index
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_roadside_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_vehicle_collection
. . current_carbon_monoxide_pollution

. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_sulfur_dioxide_pollution
. . vehicle_type
archive_pollution_state_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
archive_provide_emergency_service_allocation_data
archive_request_confirmation
area_air_quality_index
arrival_time
. time
asset_archive_catalog
asset_archive_catalog_request
asset_archive_data_request
asset_data
asset_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
asset_data_for_archive
. asset_data
. asset_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
asset_restrictions_for_com_veh
. current_asset_restrictions
asset_restrictions_for_emerg
. current_asset_restrictions
asset_restrictions_for_info_provider
. current_asset_restrictions
asset_restrictions_for_traffic
. current_asset_restrictions
asset_restrictions_for_transit
. current_asset_restrictions
ats_advisory
ats_alert
ats_status
ats_warning_notification
authorization_code
authorization_to_use
auto_treat_equip_status_for_m_and_c
. device_identity
. list_size
. roadside_device_status
. station_id
auto_treatment_activation_data
auto_treatment_device_control
auto_treatment_system_control
. auto_treatment_device_control
. dms_auto_treat_data_from_maint
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . list_size
. env_sensor_control_by_roadway_treatment_device

Appendix D: Data Tree

auto_treatment_system_status
. auto_treatment_activation_data
. device_identity
. list_size
. station_id
auto_treatment_system_status_for_archive
. auto_treatment_activation_data
. device_identity
. list_size
. station_id
auto_treatment_system_status_for_archive_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
auto_treatment_system_status_for_personnel
. auto_treatment_activation_data
. device_identity
. list_size
. station_id
automated_lane_changing_control_data
autonomous_traveler_guidance_accepted
autonomous_traveler_guidance_data
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_cost
autonomous_traveler_guidance_data_request
. constraint_on_acceptable_travel_time
. constraint_on_eta_change
. constraint_on_number_of_mode_changes
. constraint_on_number_of_transfers
. constraint_on_special_needs
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_ridesharing_options
. preferred_route_segments
. preferred_routes
. preferred_transit_options
autonomous_vehicle_guidance_accepted
autonomous_vehicle_guidance_data
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_cost
autonomous_vehicle_guidance_data_request
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_special_needs
. constraint_on_urban
. constraint_on_vehicle_type
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
background_strategy
. list_size
. selected_strategy_data

. selected_strategy_type
. strategy_date
. strategy_day
. strategy_end_time
. . time
. strategy_start_time
. . time
bad_charge_payment_list
. credit_identity
. list_size
bad_fare_payment_list
. credit_identity
. list_size
bad_tag_list_request
. transit_vehicle_identity
bad_tag_list_update
. credit_identity
. list_size
. transit_vehicle_identity
bad_toll_payment_list
. credit_identity
. cv_carrier_number
. list_size
bad_transit_collected_fare_payment
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
. fare_violation_information
. . credit_identity
. . transit_fare
. . transit_route_number
. . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
. . transit_user_roadside_image
. . transit_user_vehicle_image
. . traveler_identity
bad_transit_fare_payment_data
. bad_transit_collected_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_violation_information
. . . credit_identity
. . . transit_fare
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
. . . transit_user_roadside_image
. . . transit_user_vehicle_image
. . . traveler_identity
. bad_transit_roadside_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_collection_roadside_violation_information
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_user_roadside_image
. . . transit_user_roadside_tag_identity
. . . . credit_identity
. . . . traveler_identity
. bad_transit_vehicle_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_collection_vehicle_violation_information
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_user_vehicle_image
. . . transit_user_vehicle_tag_identity
. . . . credit_identity
. . . . stored_credit
. . . . traveler_identity
bad_transit_roadside_fare_payment
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
. fare_collection_roadside_violation_information
. . transit_route_number
. . transit_route_segment_number
. . transit_user_roadside_image
. . transit_user_roadside_tag_identity
. . . credit_identity
. . . traveler_identity
bad_transit_tag_data
. credit_identity
. list_size
bad_transit_vehicle_fare_payment
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
. fare_collection_vehicle_violation_information
. . transit_route_number
. . transit_route_segment_number
. . transit_user_vehicle_image
. . transit_user_vehicle_tag_identity
. . . credit_identity
. . . stored_credit
. . . traveler_identity
barrier_control_request
barrier_device_control
barrier_device_control_state
basic_mcv_measures_for_maint_sched
. vehicle_id_for_mcv
. vehicle_system_status
basic_mcv_measures_for_mcv_operator
. vehicle_system_status
bike_route_information
billing_for_charges_needed
. advanced_charges_billing_needed

. . confirmation_flag
. parking_lot_cost
. . cost
. parking_lot_tag_data
. . credit_identity
. . date
. . parking_lot_entry_lane_number
. . stored_credit
. . time
. vehicle_identity
billing_for_fares_needed
. advanced_fare_billing_needed
. . confirmation_flag
. credit_identity
. stored_credit
. transit_fare
. transit_route_number
. transit_route_segment_number
. transit_route_use_time
. transit_user_category
. traveler_identity
billing_for_tolls_needed
. advanced_toll_billing_needed
. . confirmation_flag
. cv_carrier_number
. cv_vehicle_number
. toll_cost
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. toll_tag_data
. . credit_identity
. . stored_credit
. . toll_segment_identity
. . . unit_number
. vehicle_identity
border_crossing_request
border_database
. cvo_border_clearance_info
. . cvo_border_clearance
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_roadside_facility_identity
. . . date
. cvo_border_status_from_other_cvas
. . cvo_border_clearance_info
. . . cvo_border_clearance
. . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_credentials_details
. . . . . time
. . . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . time
. . . . . list_size
. . . . cv_roadside_facility_identity
. . . . date
. cvo_declaration_info
. cvo_domestic_transportation_info_from_trade
. list_size
brake_commands
broadcast_data
. planned_events_for_broadcast
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. prediction_data_for_broadcast
. . link_delay
. . link_journey_time
. . link_list_for_highways
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_list_for_roads
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_speed
. traffic_data_for_broadcast
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . link_state_data_for_broadcast
. . . link_list
. . . . link_identity

. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . . list_size
. . . vehicle_occupancy
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . source_identity
. transit_running_data_for_broadcast
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_services_for_broadcast
broadcast_parameters_data
call_back_information
cargo_data_request
carrier_identity
center_control_of_on_board_work_zone_devices
cf_driver_instructions
. cf_driver_load_details
. cf_driver_route
. . cv_route_data
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment_commercial_details
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_start_point
. . . . . location_identity
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . cv_route_number
. cv_driver_number
cf_driver_instructions_request
. cv_driver_number
. cv_route_number
cf_driver_load_data
. cf_driver_load_details
. cv_driver_number
. cv_route_number
cf_driver_load_details
cf_driver_route
. cv_route_data
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment_commercial_details
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_start_point
. . . . location_identity
. . route_start_time
. . . date
. . . time
. . route_statistics
. cv_route_number
cf_driver_route_instructions
. cf_driver_load_details
. cf_driver_route
. . cv_route_data
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment_commercial_details
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_start_point
. . . . . location_identity
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . cv_route_number
cf_driver_route_instructions_output
. cf_driver_load_details
. cv_driver_number
. cv_route_number
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
cf_driver_route_instructions_request
. cv_driver_number
. cv_route_number
cf_enrollment_information

Appendix D: Data Tree

. cv_border_enrollments
. cv_route_number
. cv_special_vehicle_enrollments
. cv_taxes_and_duties
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_type
cf_enrollment_payment_confirmation
. cv_account_number
. cv_amount_billed
. cv_route_number
cf_enrollment_request
. border_crossing_request
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_route_data
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment_commercial_details
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_start_point
. . . . location_identity
. . route_start_time
. . . date
. . . time
. . route_statistics
. cv_route_number
. cv_trip_classification_data
. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
. cv_trip_identity
. route_type
. special_vehicle_application
. . hazmat_load_data
cf_hazmat_request
cf_hazmat_route_information
. cv_route_number
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
cf_hazmat_vehicle_information
. hazmat_load_data
. hazmat_vehicle_data
cf_manager_activity_report
. cf_retained_activity_report_data
. . cv_retained_roadside_activity_data
. . . cv_roadside_activity_details
. . . . cv_archived_inspection_data
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_driver_details
. . . . . cv_driver_credentials
. . . . . cv_driver_license_citations
. . . . . cv_inspection_data
. . . . . cv_inspector_safety_data_input
. . . . . cv_not_pulled_in
. . . . . cv_roadside_report
. . . . . cv_safety_status_code
. . . . . cv_vehicle_details
. . . . . cv_credentials
. . . . . cv_fuel_purchase_data
. . . . . cv_inspection_activities_data
. . . . . cv_log_data
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . list_size
. . . . . time
. . . . cv_archived_safety_data
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . cv_safety_override_code
. . . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_safety_problem
. . . . . time
. . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_credentials_details
. . . . . time
. . . . . cv_border_pull_in_output
. . . . . cv_border_problem

. . . . . cv_credentials_details
. . . . . time
. . . . list_size
. . . . cv_screening_record
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_screening_override_code
. . . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_credentials_problem
. . . . time
. . . . date
. . . list_size
. . cv_roadside_facility_identity
. . list_size

cf_manager_activity_report_request
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_roadside_activity_report_frequency
. cv_roadside_facility_identity
. list_size

cf_manager_credit_identity
. credit_identity

cf_manager_enrollment_cost
. cv_amount_billed

cf_manager_enrollment_information
. cv_route_number
. cv_taxes_and_duties

cf_manager_enrollment_payment_confirmation
. cf_manager_credit_identity
. . credit_identity
. confirmation_flag
. cv_account_number
. cv_amount_billed
. cv_route_number

cf_manager_enrollment_payment_request
. cf_manager_credit_identity
. . credit_identity
. cv_route_number

cf_manager_enrollment_request
. cv_cargo_class
. cv_route_number
. cv_trip_identity
. cv_vehicle_class
. cv_weight_class

cf_manager_route_data
. cv_route_data
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment_commercial_details
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_start_point
. . . . location_identity
. . route_start_time
. . . date
. . . time
. . route_statistics
. cv_route_number
. route_type

cf_manager_route_request
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_urban
. constraint_on_vehicle_type
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. preferred_weather_conditions
. route_type

cf_manager_storage_request
. cv_route_number
. cv_storage_action_flag

cf_on_board_vehicle_data
. cv_general_output_message
. cv_on_board_data
. . cv_credentials
. . cv_driver_credentials
. . cv_driver_license_citations
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_identity_details
. . . carrier_identity
. . . driver_identity
. . . vehicle_identity
. . cv_inspection_activities_data
. . cv_inspection_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_not_pulled_in
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
. vehicle_location_for_cv
. . location_identity

cf_periodic_activity_report
. cv_roadside_facility_identity
. cv_roadside_periodic_activity_data
. . cv_roadside_activity_details
. . . cv_archived_inspection_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_driver_details
. . . . . cv_driver_credentials
. . . . . cv_driver_license_citations
. . . . cv_inspection_data
. . . . cv_inspector_safety_data_input
. . . . cv_not_pulled_in
. . . . cv_roadside_report
. . . . cv_safety_status_code
. . . . cv_vehicle_details
. . . . . cv_credentials
. . . . . cv_fuel_purchase_data

Appendix D: Data Tree

. . . . . cv_fuel_purchase_cost
. . . . . cv_fuel_purchase_quantity
. . . . . cv_inspection_activities_data
. . . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . cv_log_entry_location
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . . list_size
. . . . time
. . . cv_archived_safety_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_override_code
. . . . . cv_operator_override
. . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_problem
. . . . time
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_screening_record
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_screening_override_code
. . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . time
. . . date
. . list_size
. list_size

cf_reports
. cf_periodic_activity_report
. . cv_roadside_facility_identity
. . cv_roadside_periodic_activity_data
. . . cv_roadside_activity_details
. . . . cv_archived_inspection_data
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_driver_details
. . . . . cv_driver_credentials
. . . . . cv_driver_license_citations
. . . . . cv_inspection_data
. . . . . cv_inspector_safety_data_input
. . . . . cv_not_pulled_in
. . . . . cv_roadside_report
. . . . . cv_safety_status_code
. . . . . cv_vehicle_details
. . . . . cv_credentials
. . . . . cv_fuel_purchase_data
. . . . . cv_inspection_activities_data
. . . . . cv_log_data
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . list_size
. . . . . time
. . . . cv_archived_safety_data
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . cv_safety_override_code
. . . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_safety_problem
. . . . . time
. . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_credentials_details
. . . . . time
. . . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . time
. . . . . list_size
. . . . cv_screening_record
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_screening_override_code
. . . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_credentials_problem
. . . . . time
. . . . date
. . . list_size
. . list_size
. cf_roadside_activity_report
. . cv_roadside_facility_identity
. . cv_roadside_single_activity_data
. . . cv_roadside_activity_details
. . . . cv_archived_inspection_data
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number

Appendix D: Data Tree

. . . . . cv_driver_details
. . . . . . cv_driver_credentials
. . . . . . cv_driver_license_citations
. . . . . cv_inspection_data
. . . . . cv_inspector_safety_data_input
. . . . . cv_not_pulled_in
. . . . . cv_roadside_report
. . . . . cv_safety_status_code
. . . . . cv_vehicle_details
. . . . . . cv_credentials
. . . . . . cv_fuel_purchase_data
. . . . . . cv_inspection_activities_data
. . . . . . cv_log_data
. . . . . . cv_repairs_and_service_records
. . . . . . cv_safety_systems_diagnostics_results
. . . . . . cv_vehicle_log
. . . . . . list_size
. . . . . time
. . . . cv_archived_safety_data
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_safety_override
. . . . . . cv_credentials_details
. . . . . . cv_safety_override_code
. . . . . cv_safety_pull_in_output
. . . . . . cv_credentials_details
. . . . . . cv_safety_problem
. . . . . time
. . . . cv_border_record
. . . . . cv_border_override
. . . . . . cv_border_override_code
. . . . . . cv_credentials_details
. . . . . . time
. . . . . cv_border_pull_in_output
. . . . . . cv_border_problem
. . . . . . cv_credentials_details
. . . . . . time
. . . . . list_size
. . . . cv_screening_record
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_screening_override
. . . . . . cv_credentials_details
. . . . . . cv_screening_override_code
. . . . . cv_screening_pull_in_output
. . . . . . cv_credentials_details
. . . . . . cv_credentials_problem
. . . . . time
. . . . date
. . . list_size
. . list_size
cf_request_vehicle_data
cf_retained_activity_report_data
. cv_retained_roadside_activity_data
. . cv_roadside_activity_details
. . . cv_archived_inspection_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_driver_details
. . . . . cv_driver_credentials
. . . . . cv_driver_license_citations
. . . . cv_inspection_data
. . . . cv_inspector_safety_data_input
. . . . cv_not_pulled_in
. . . . cv_roadside_report
. . . . cv_safety_status_code
. . . . cv_vehicle_details
. . . . . cv_credentials
. . . . . cv_fuel_purchase_data
. . . . . . cv_fuel_purchase_cost
. . . . . . cv_fuel_purchase_quantity
. . . . . cv_inspection_activities_data
. . . . . cv_log_data
. . . . . . cv_driver_number
. . . . . . cv_log_entry_date
. . . . . . cv_log_entry_location
. . . . . . cv_log_entry_mileage
. . . . . . cv_log_entry_time
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . . cv_cargo_discharged
. . . . . . cv_cargo_loaded
. . . . . list_size
. . . . time
. . . cv_archived_safety_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_safety_override_code
. . . . . . cv_operator_override
. . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_safety_problem
. . . . time
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_screening_record
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_screening_override_code
. . . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . time
. . . date
. . list_size

Appendix D: Data Tree

. cv_roadside_facility_identity
. list_size
cf_retained_data
. cf_retained_activity_report_data
. . cv_retained_roadside_activity_data
. . . cv_roadside_activity_details
. . . . cv_archived_inspection_data
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_driver_details
. . . . . . cv_driver_credentials
. . . . . . cv_driver_license_citations
. . . . . cv_inspection_data
. . . . . cv_inspector_safety_data_input
. . . . . cv_not_pulled_in
. . . . . cv_roadside_report
. . . . . cv_safety_status_code
. . . . . cv_vehicle_details
. . . . . . cv_credentials
. . . . . . cv_fuel_purchase_data
. . . . . . cv_inspection_activities_data
. . . . . . cv_log_data
. . . . . . cv_repairs_and_service_records
. . . . . . cv_safety_systems_diagnostics_results
. . . . . . cv_vehicle_log
. . . . . . list_size
. . . . . time
. . . . cv_archived_safety_data
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_safety_override
. . . . . . cv_credentials_details
. . . . . . cv_safety_override_code
. . . . . cv_safety_pull_in_output
. . . . . . cv_credentials_details
. . . . . . cv_safety_problem
. . . . . time
. . . . cv_border_record
. . . . . cv_border_override
. . . . . . cv_border_override_code
. . . . . . cv_credentials_details
. . . . . . time
. . . . . cv_border_pull_in_output
. . . . . . cv_border_problem
. . . . . . cv_credentials_details
. . . . . . time
. . . . . list_size
. . . . cv_screening_record
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_screening_override
. . . . . . cv_credentials_details
. . . . . . cv_screening_override_code
. . . . . cv_screening_pull_in_output
. . . . . . cv_credentials_details
. . . . . . cv_credentials_problem
. . . . . time
. . . . date
. . . list_size
. . cv_roadside_facility_identity
. . list_size
. cf_retained_tag_initialization_data
. . cf_tag_initialization_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_trip_identity
. . . tag_identity
. . list_size
cf_retained_tag_initialization_data
. cf_tag_initialization_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_trip_identity
. . tag_identity
. list_size
cf_retrieved_vehicle_data
. cv_general_input_message
. cv_on_board_data
. . cv_credentials
. . cv_driver_credentials
. . cv_driver_license_citations
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_identity_details
. . . carrier_identity
. . . driver_identity
. . . vehicle_identity
. . cv_inspection_activities_data
. . cv_inspection_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_not_pulled_in
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
. vehicle_identity
. vehicle_location_for_cv
. . location_identity
cf_roadside_activity_report
. cv_roadside_facility_identity
. cv_roadside_single_activity_data
. . cv_roadside_activity_details
. . . cv_archived_inspection_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_driver_details
. . . . . cv_driver_credentials
. . . . . cv_driver_license_citations
. . . . cv_inspection_data
. . . . cv_inspector_safety_data_input
. . . . cv_not_pulled_in
. . . . cv_roadside_report
. . . . cv_safety_status_code
. . . . cv_vehicle_details
. . . . . cv_credentials
. . . . . cv_fuel_purchase_data
. . . . . . cv_fuel_purchase_cost
. . . . . . cv_fuel_purchase_quantity
. . . . . cv_inspection_activities_data
. . . . . cv_log_data
. . . . . . cv_driver_number
. . . . . . cv_log_entry_date
. . . . . . cv_log_entry_location
. . . . . . cv_log_entry_mileage

. . . . . cv_log_entry_time
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . . list_size
. . . . time
. . . cv_archived_safety_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_override_code
. . . . . cv_operator_override
. . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_problem
. . . . time
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_screening_record
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_screening_override_code
. . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . time
. . . date
. . list_size
. list_size

cf_route

. cv_route_data
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment_commercial_details
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_start_point
. . . . location_identity
. . route_start_time
. . . date
. . . time
. . route_statistics
. cv_route_number

cf_route_details

. cv_route_number
. cv_taxes_and_duties
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_type

cf_route_request

. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_urban
. constraint_on_vehicle_type
. cv_route_number
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. preferred_weather_conditions

cf_static_route_data

cf_static_route_request

. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_urban
. constraint_on_vehicle_type
. departure_time

. . time
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. preferred_weather_conditions
cf_tag_data
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_trip_identity
cf_tag_data_store_output
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_trip_identity
cf_tag_data_store_request
cf_tag_data_store_write
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_trip_identity
. tag_identity
cf_tag_initialization_data
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_trip_identity
. tag_identity
cf_tax_data
cf_vehicle_data
. cv_general_input_message
. cv_on_board_data
. . cv_credentials
. . cv_driver_credentials
. . cv_driver_license_citations
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_identity_details
. . . carrier_identity
. . . driver_identity
. . . vehicle_identity
. . cv_inspection_activities_data
. . cv_inspection_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_not_pulled_in
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
. vehicle_identity
. vehicle_location_for_cv
. . location_identity
charge_payment_violator_data
. credit_identity
. parking_lot_cost
. . cost
. vehicle_identity
climatic_scale_surface_trans_weather_forecasts
climatic_scale_weather_forecasts
close_hri
closure_event_data
collected_roadside_data
. collected_roadside_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. roadside_archive_catalog
. roadside_data_for_archive
. . archive_environmental_sensor_data
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . environment_sensor_fault_data
. . . environmental_sensor_status
. . . . environment_sensor_fault_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time

Appendix D: Data Tree

. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . fault_data
. . . sensor_fault_data
. . fault_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . sensor_data_archive_input
. . . hov_sensor_data
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . private_vehicle_occupants
. . . local_sensor_data_for_highways
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . traffic_video_image
. . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . local_sensor_data_for_roads
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . pedestrian_demand
. . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . traffic_video_image
. . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity

Appendix D: Data Tree

. . . . . station_id
. . . . . traffic_sensor_output
. . . multimodal_crossing_sensor_data
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . . pedestrian_sensor_data
. . . . node_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . . . pedestrian_demand
. . . sensor_data_for_reversible_lanes
. . . . traffic_video_image
. . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . traffic_sensor_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . sensor_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . sensor_status
. . . traffic_sensor_status
collected_roadside_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
collected_roadside_data_status
collection_administration_request
collection_administration_status
collection_conditions
collection_equipment
collision_data
. vehicle_attitude_data
. vehicle_motion_data
. vehicle_proximity_data
confirm_advanced_charges_payment
. confirmation_flag
. credit_identity
. parking_lot_cost
. . cost
. stored_credit
. traveler_identity
confirm_advanced_fares_payment
. confirmation_flag
. credit_identity
. stored_credit
. transit_fare
. traveler_identity
confirm_advanced_tolls_payment
. confirmation_flag
. credit_identity
. stored_credit
. toll_cost
. traveler_identity
confirm_roadside_fare_payment
. confirmation_flag
. transit_roadside_fare_collection_identity
confirm_vehicle_fare_payment
. confirmation_flag
. transit_user_vehicle_tag_identity
. . credit_identity
. . stored_credit
. . traveler_identity
. transit_vehicle_identity
confirmation_flag
constraint_on_acceptable_travel_time
constraint_on_ahs_lanes
constraint_on_eta_change
constraint_on_interstate
constraint_on_load_classification
constraint_on_number_of_mode_changes
constraint_on_number_of_transfers
constraint_on_special_needs
constraint_on_urban
constraint_on_vehicle_type

Appendix D: Data Tree

constraints
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_number_of_mode_changes
. constraint_on_number_of_transfers
. constraint_on_special_needs
. constraint_on_urban
. constraint_on_vehicle_type
control_data_for_highways
. dms_data
. . indicator_sign_control_data
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . parking_lot_dms_controls
. . . pollution_output_message
. . . . dms_pollution_message
. . . . vehicle_identity
. . indicator_sign_control_data_for_hri
. . . crossing_id
. . . hri_sign_control_data
. . . list_size
. har_data
. . har_identity
. . har_management_data
. . . har_mode
. . . har_schedule
. . har_program
. indicator_highway_requested_state
. . indicator_control_data_for_highways
. . . indicator_crossing_control_data_for_highways
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_ramp_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . ramp_controls
. . list_size
control_data_for_roads
. indicator_control_data_for_roads
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size
control_parameters
. environmental_data_for_signage
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. existing_sensor_static_data
. . static_data_for_sensor_processing
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . dms_hri_allocation
. . . . crossing_id
. . . . list_size
. . . highway_control_devices
. . . . crossing_equipment_data_for_highways
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . crossing_phase_data
. . . . . list_size
. . . . highway_equipment_data
. . . . . dms_allocation
. . . . . indicator_identity
. . . . . list_size
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . list_size
. . . highway_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . ramp_devices
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type

. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . . ramp_phase_data
. . . road_control_devices
. . . . crossing_equipment_data_for_roads
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . crossing_phase_data
. . . . . list_size
. . . . hri_data_for_roads
. . . . . crossing_id
. . . . . hri_phase_data
. . . . . list_size
. . . . intersection_equipment_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . intersection_phase_data
. . . . . intersection_phase_number
. . . . . list_size
. . . . pedestrian_equipment_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . pedestrian_phase_data
. . . road_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . sensor_allocation
. . . . sensor_allocation_for_controllers
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . sensor_allocation_for_hov_lanes
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . sensor_allocation_for_probes
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . . sensor_allocation_for_tags
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . . vehicle_tag_data_source_location
. . . . . location_identity
. local_sensor_data
. . local_sensor_data_for_highways
. . . crossing_close_duration
. . . crossing_close_time
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . roadside_conditions
. . . . link_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . local_sensor_data_for_roads
. . . crossing_close_duration
. . . crossing_close_time
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . pedestrian_demand
. . . roadside_conditions
. . . . link_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id

Appendix D: Data Tree

. . . . traffic_sensor_output
. other_control_data_for_highways
. . other_indicator_highway_requested_state
. . . indicator_control_data_for_highways
. . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . ramp_controls
. . . list_size
. other_control_data_for_roads
. . other_indicator_control_data_for_roads
. . . indicator_crossing_control_data_for_roads
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_junction_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_junction_controls
. . . . list_size
. . . indicator_pedestrian_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_pedestrian_controls
. . . . list_size
. other_roadway_information_data
. . other_dms_data
. . . other_indicator_sign_control_data_for_hri
. . . . crossing_id
. . . . hri_sign_control_data
. . . . list_size
. . . other_indicator_sign_control_data_for_roads
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_sign_control_data
. . . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . lane_dms_controls
. . . . . parking_lot_dms_controls
. . . . . pollution_output_message
. . . . . dms_pollution_message
. . . . . vehicle_identity
. . . . list_size
. . other_har_data
. . . har_identity
. . . har_management_data
. . . . har_mode
. . . . har_schedule
. . . har_program
. other_TMC_cv_incidents
. . permit_route_plan
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . load_description
. . permit_traffic_controls
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. . permit_type
. other_TMC_emergency_data
. . emergency_traffic_control_request
. . . date
. . . list_size
. . . route_segment_estimated_arrival_time
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . time
. . selected_emergency_vehicle_strategy
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_emergency_strategy
. other_TMC_strategy_data
. . strategy_data
. . . strategy_data_for_highways
. . . . crossing_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . list_size

Appendix D: Data Tree

. . . . . list_size
. . . . . list_size
. . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . link_strategy_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . strategy_data_for_roads
. . . . crossing_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . link_strategy_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . pedestrian_data
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. parking_lot_input_data
. . list_size
. . parking_lot_list
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . vehicle_count
. . vehicle_queue_length
. prediction_data
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_occupancy_predictions
. . route_segment_queue_delay_predictions
. . route_segment_speed_predictions
. . . vehicle_speed
. . route_segment_volume_delay_predictions
. ramp_data
. . list_size
. . private_vehicle_occupants
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_speed
. roadway_information_status
. . dms_status
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . dms_updates
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . har_status
. . . device_status
. . . har_fault
. . . . har_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. status_data_for_highways
. . indicator_highway_requested_state
. . . indicator_control_data_for_highways
. . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . ramp_controls
. . . list_size
. status_data_for_roads
. . indicator_input_state_for_roads
. . . indicator_data
. . . indicator_type
. . . list_size

Appendix D: Data Tree

. strategy_data
. . strategy_data_for_highways
. . . crossing_data_for_highways
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_strategy_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . strategy_data_for_roads
. . . crossing_data_for_roads
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_strategy_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . pedestrian_data
. . . . indicator_list
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . pedestrian_demand
. traffic_data_for_signage
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. vehicle_smart_probe_data_indication
control_status
coordination_data_freeways_to_roads
. coordination_rule_data_for_highways
. . highway_sign_plan_number
. . indicator_road_adaptive_plan_number
. . indicator_road_fixed_plan_number
. coordination_rule_highway_data_description
. coordination_rule_highway_data_number
coordination_data_ramps_to_roads
. ramp_signal_state
. . list_size
. . ramp_controls
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
coordination_data_roads_to_freeways
. coordination_rule_data_for_roads
. . highway_sign_plan_number
. . indicator_road_adaptive_plan_number
. . indicator_road_fixed_plan_number
. coordination_rule_road_data_description
. coordination_rule_road_data_number
coordination_data_roads_to_ramps
. link_identity
. . link_type
. . location_identity
. . unit_number
. link_journey_time
. link_queue_time
. list_size
coordination_rule_data_for_highways
. highway_sign_plan_number
. indicator_road_adaptive_plan_number
. indicator_road_fixed_plan_number
coordination_rule_data_for_roads
. highway_sign_plan_number
. indicator_road_adaptive_plan_number
. indicator_road_fixed_plan_number
coordination_rule_highway_data_description
coordination_rule_highway_data_number
coordination_rule_road_data_description
coordination_rule_road_data_number
coordination_rules_for_highways
. coordination_rule_data_for_highways
. . highway_sign_plan_number
. . indicator_road_adaptive_plan_number
. . indicator_road_fixed_plan_number
. coordination_rule_highway_data_description
. coordination_rule_highway_data_number
. list_size
coordination_rules_for_roads
. coordination_rule_data_for_roads
. . highway_sign_plan_number

. . indicator_road_adaptive_plan_number
. . indicator_road_fixed_plan_number
. coordination_rule_road_data_description
. coordination_rule_road_data_number
. list_size
cost
credit_identity
crossing_adaptive_data
crossing_close_duration
crossing_close_time
crossing_closure_schedule
crossing_control_commands
crossing_cycle_time
crossing_data_for_highways
. crossing_close_duration
. crossing_close_time
. crossing_list
. . crossing_identity
. . . location_identity
. . . unit_number
. . list_size
. list_size
crossing_data_for_roads
. crossing_close_duration
. crossing_close_time
. crossing_list
. . crossing_identity
. . . location_identity
. . . unit_number
. . list_size
. list_size
crossing_equipment_data_for_highways
. crossing_identity
. . location_identity
. . unit_number
. crossing_phase_data
. list_size
crossing_equipment_data_for_roads
. crossing_identity
. . location_identity
. . unit_number
. crossing_phase_data
. list_size
crossing_fixed_time_data
. crossing_control_commands
. crossing_cycle_time
. crossing_offset_time
crossing_id
crossing_identity
. location_identity
. unit_number
crossing_list
. crossing_identity
. . location_identity
. . unit_number
. list_size
crossing_offset_time
crossing_phase_data
current_asset_restrictions
current_carbon_monoxide_pollution
current_charge_transactions
. credit_identity
. date
. parking_lot_cost
. . cost
. time
. vehicle_identity
current_conditions
. fws_current_weather_observations
. . current_weather_observations
. . weather_observation_attributes
. fws_weather_forecasts
. . climatic_scale_weather_forecasts
. . meso_scale_weather_forecasts
. . . weather_advisories
. . . weather_forecast_details
. . . weather_warnings
. . . weather_watches
. . miso_scale_weather_forecasts
. . . weather_advisories
. . . weather_forecast_details
. . . weather_warnings
. . synoptic_scale_weather_forecasts
. . . weather_forecast_details
. . . weather_watches
. . weather_scale_forecast_data_attributes
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_start_time
. . time
. incident_type
current_data
. current_other_routes_use
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. parking_lot_storage_data
. . list_size
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. processed_data
. . hri_state_data
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . o_d_matrix
. . parking_lot_input_data
. . . list_size
. . . parking_lot_list
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . vehicle_count
. . . vehicle_queue_length
. . private_vehicle_occupants
. . ramp_data
. . . list_size
. . . private_vehicle_occupants
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity

Appendix D: Data Tree

. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . roadway_traffic_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_traffic_conditions
. . strategy_data
. . . strategy_data_for_highways
. . . . crossing_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . link_strategy_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . strategy_data_for_roads
. . . . crossing_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . link_strategy_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . pedestrian_data
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. sensor_output_data
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . hri_sensor_data
. . . closure_event_data
. . . hri_status
. . . . hri_closure_data_response
. . . . hri_state
. . . intersection_blocked
. . . rail_schedules_data
. . pedestrian_sensor_data
. . . node_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . pedestrian_demand
. . traffic_sensor_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. . traffic_video_image
. stored_incident_data
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . planned_event_data
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. traffic_flow_state
. . current_road_network_use
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number

Appendix D: Data Tree

. . . route_segment_journey_time
. . . route_segment_total_number
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . link_data_from_avl
. . . link_journey_time
. . . link_queue_time
. . . link_speed
. . . list_size
. . link_data_from_tags
. . . link_journey_time
. . . link_queue_time
. . . list_size
. . ramp_signal_state
. . . list_size
. . . ramp_controls
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. traffic_management_storage_data
. . indicator_control_storage_data
. . . indicator_control_storage_data_for_highways
. . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_crossing_controls
. . . . . . indicator_identity
. . . . . . list_size
. . . . . indicator_ramp_control_data
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . ramp_controls
. . . indicator_control_storage_data_for_roads
. . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_crossing_controls
. . . . . . indicator_identity
. . . . . . list_size
. . . . . indicator_junction_control_data
. . . . . . indicator_identity
. . . . . . indicator_junction_controls
. . . . . . list_size
. . . . . indicator_pedestrian_control_data
. . . . . . indicator_identity
. . . . . . indicator_pedestrian_controls
. . . . . . list_size
. . indicator_input_storage_data
. . . indicator_input_storage_data_for_highways
. . . . indicator_response_state
. . . . indicator_type
. . . . list_size
. . . indicator_input_storage_data_for_roads
. . . . indicator_response_state
. . . . indicator_type
. . . . list_size
. . selected_strategy
. . . selected_emergency_vehicle_strategy
. . . . indicator_list
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_emergency_strategy
. . . selected_parking_lot_control_strategy
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_parking_lot_strategy_type
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. traffic_video_image_data
. . list_size
. . traffic_video_camera_number
. . . location_identity
. . . unit_number
. . traffic_video_image
. vehicle_smart_probe_stored_data
. . list_size
. . vehicle_smart_probe_data_for_storage
. . . vehicle_smart_probe_data_indication
. . . vehicle_smart_probe_data_source
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. wide_area_pollution_data
. . list_size

Appendix D: Data Tree

. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
current_data_for_broadcast
. area_air_quality_index
. current_incident_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. . list_size
. current_roadway_network_data
. . current_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . current_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. link_state_data_for_broadcast
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
. . list_size
. . vehicle_occupancy
. . vehicle_speed
. parking_lot_storage_data
. . list_size
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. roadway_environment_conditions
. . link_environment_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
current_data_for_retrieval
. area_air_quality_index
. current_incident_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. . list_size
. current_other_routes_use
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. link_state_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_queue_length
. . vehicle_speed
. parking_lot_storage_data
. . list_size
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. traffic_flow_state
. . current_road_network_use
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay

. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . link_data_from_avl
. . . link_journey_time
. . . link_queue_time
. . . link_speed
. . . list_size
. . link_data_from_tags
. . . link_journey_time
. . . link_queue_time
. . . list_size
. . ramp_signal_state
. . . list_size
. . . ramp_controls
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number

current_fare_transactions
. credit_identity
. date
. time
. transit_fare
. traveler_identity

current_fleet_maintenance_status

current_highway_network_data
. link_delay
. link_journey_time
. link_list_for_highways
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size

current_highway_network_state
. link_delay
. link_identity
. . link_type
. . location_identity
. . unit_number
. link_journey_time
. link_level_of_service
. link_status
. . lane_closure
. . lane_open
. list_size

current_hri_state

current_hydrocarbon_pollution

current_incident_data
. current_incident_details
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . incident_vehicles_involved
. list_size

current_incident_data_for_vehicle_signage
. current_incident_details
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . incident_vehicles_involved

current_incident_details
. incident_description
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
. incident_vehicles_involved

current_incident_static_data
. static_data_for_incident_management
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number

. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . road_segment_location
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity

current_incidents
. current_incidents_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved

current_incidents_data
. current_incident_details
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . incident_vehicles_involved

current_incidents_data_output
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
. incident_vehicles_involved

current_incidents_data_request
. incident_location
. . location_identity
. incident_type

current_incidents_data_update
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type

current_incidents_new_data
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
. incident_vehicles_involved

current_incidents_request
. incident_oldest_time
. . time
. incident_type

current_incidents_store
. current_incident_details
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . incident_vehicles_involved
. list_size

current_nitrous_oxide_pollution

current_other_routes_use
. route_segment_guided_travelers
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time
. route_segment_total_number

current_other_routes_use_for_archive
. route_segment_guided_travelers
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time
. route_segment_total_number

current_ozone_pollution

current_particulate_pollution

current_pollution_location
. location_identity

current_ramp_state

current_road_network_data
. link_delay
. link_journey_time
. link_list_for_roads
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size

current_road_network_state
. link_delay
. link_identity
. . link_type
. . location_identity
. . unit_number
. link_journey_time
. link_status
. . lane_closure
. . lane_open
. list_size

current_road_network_use
. route_segment_identity

. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time
. route_segment_total_number
. route_segment_use_prediction
. . route_segment_guided_vehicles
current_road_network_use_for_archive
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time
. route_segment_total_number
. route_segment_use_prediction
. . route_segment_guided_vehicles
current_roadside_pollution_location
. location_identity
current_roadway_maintenance_status
current_roadway_network_data
. current_highway_network_data
. . link_delay
. . link_journey_time
. . link_list_for_highways
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. current_road_network_data
. . link_delay
. . link_journey_time
. . link_list_for_roads
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
current_roadway_network_state
. current_highway_network_state
. . link_delay
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . link_journey_time
. . link_level_of_service
. . link_status
. . . lane_closure
. . . lane_open
. . list_size
. current_road_network_state
. . link_delay
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . link_journey_time
. . link_status
. . . lane_closure
. . . lane_open
. . list_size
current_sulfur_dioxide_pollution
current_toll_transactions
. credit_identity
. cv_carrier_number
. cv_vehicle_number
. date
. stored_credit
. time
. toll_cost
. toll_plaza_identity
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
current_traffic_pollution_data
. list_size
. pollution_state_area_collection
. . area_air_quality_index
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_roadside_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
current_transit_routes_use
. list_size
. transit_route_current_use
. transit_route_number
current_weather_observations
cv_account_number
cv_admin_data_for_roadside
. cv_border_database_update
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_trip_identity
. cv_credentials_database_update
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_credentials_status_code
. . cv_trip_classification_data
. . . cv_cargo_class
. . . cv_vehicle_class
. . . cv_weight_class
. cv_credentials_information_response
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_credentials_status_code
. cv_safety_database_update
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_roadside_safety_data
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . date

. . . . . cv_log_entry_location
. . . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. cv_safety_information_response
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_roadside_safety_data
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . date
. . . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. cvo_border_agency_clearance_results
. . cvo_border_results
. cvo_transportation_border_clearance
. . cvo_transportation_border_results
cv_amount_billed
cv_archive_catalog
cv_archive_catalog_request
cv_archive_data
. cv_archive_catalog
. cv_data_for_archive
. . cv_credentials_enrollment_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . cv_credentials_enrollment_data
. . . cv_update_new_credentials_request
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_route_details
. . . . . cv_route_data
. . . . . route_cost
. . . . . route_list
. . . . . route_segment_commercial_details
. . . . . route_start_time
. . . . . route_statistics
. . . . . cv_route_number
. . . . . cv_taxes_and_duties
. . . . . route_type
. . . . cv_trip_classification_data
. . . . . cv_cargo_class
. . . . . cv_vehicle_class
. . . . . cv_weight_class
. . . . cv_trip_identity
. . . . hazmat_load_data
. . cv_daily_logs
. . . cv_roadside_daily_log
. . . . cv_roadside_facility_identity
. . . . cv_roadside_record
. . . . . cv_archived_inspection_data
. . . . . cv_credentials_details
. . . . . cv_driver_details
. . . . . cv_inspection_data
. . . . . cv_inspector_safety_data_input
. . . . . cv_not_pulled_in
. . . . . cv_roadside_report
. . . . . cv_safety_status_code
. . . . . cv_vehicle_details
. . . . . time
. . . . . cv_archived_safety_data
. . . . . cv_credentials_details
. . . . . cv_safety_override
. . . . . cv_safety_pull_in_output
. . . . . time
. . . . . cv_screening_record
. . . . . cv_credentials_details
. . . . . cv_screening_override
. . . . . cv_screening_pull_in_output
. . . . . time
. . . . . list_size
. . . . date
. . . cvo_border_clearance
. . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_credentials_details
. . . . . time
. . . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . time
. . . . . list_size
. . . . cv_roadside_facility_identity
. . . . date
. . cv_daily_logs_attributes
. . . authorization_to_use
. . . collection_conditions

Appendix D: Data Tree

. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
cv_archive_data_request
cv_archive_input
. cv_archive_request
. . cv_archive_catalog_request
. . cv_archive_data_request
. cv_archive_status
cv_archive_request
. cv_archive_catalog_request
. cv_archive_data_request
cv_archive_status
cv_archived_inspection_data
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_driver_details
. . cv_driver_credentials
. . cv_driver_license_citations
. cv_inspection_data
. cv_inspector_safety_data_input
. cv_not_pulled_in
. cv_roadside_report
. cv_safety_status_code
. cv_vehicle_details
. . cv_credentials
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_inspection_activities_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
. . list_size
. time
cv_archived_safety_data
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_safety_override
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_safety_override_code
. . . cv_operator_override
. cv_safety_pull_in_output
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_safety_problem
. time
cv_border_data
. cv_lock_tag_data
. . cv_customs_inspector_identity
. . date
. . time
. cv_on_board_border_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_on_board_border_details
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_roadside_facility_identity
. . . cv_vehicle_weight
. . . time
. . list_size
. cv_trip_identity
. cv_vehicle_characteristics
. . cv_vehicle_configuration
. . cv_vehicle_size
. . cv_vehicle_weight
cv_border_database_update
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_trip_identity
cv_border_decision
. cv_border_pull_in_output
. . cv_border_problem
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . time
cv_border_enrollments
cv_border_override
. cv_border_override_code
. . cv_operator_override
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. time
cv_border_override_code
. cv_operator_override
cv_border_problem
cv_border_pull_in_output

Appendix D: Data Tree

. cv_border_problem
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. time
cv_border_record
. cv_border_override
. . cv_border_override_code
. . . cv_operator_override
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . time
. cv_border_pull_in_output
. . cv_border_problem
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . time
. list_size
cv_cargo_class
cv_cargo_discharged
cv_cargo_loaded
cv_cargo_status
cv_carrier_number
cv_check_credentials_request
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
cv_check_credentials_response
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_credentials_status_code
cv_commit_local_enrollment
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_route_details
. . cv_route_data
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment_commercial_details
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_start_point
. . . . . location_identity
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . cv_route_number
. . cv_taxes_and_duties
. . route_type
. cv_trip_classification_data
. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
. cv_trip_identity
cv_commit_remote_enrollment
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_route_details
. . cv_route_data
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment_commercial_details
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_start_point
. . . . . location_identity
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . cv_route_number
. . cv_taxes_and_duties
. . route_type
. cv_trip_classification_data
. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
cv_confirmed_enrollment
. cv_account_number
. cv_payment_confirmed
cv_credentials
cv_credentials_data_output
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_credentials_information
. . information_datapage
. cv_credentials_status_code
cv_credentials_data_request
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
cv_credentials_database_update
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_credentials_status_code
. cv_trip_classification_data
. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
cv_credentials_details
. cv_carrier_number
. cv_driver_number
. cv_vehicle_number
cv_credentials_enrollment_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time

Appendix D: Data Tree

. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
cv_credentials_enrollment_data
. cv_update_new_credentials_request
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_route_details
. . . cv_route_data
. . . . route_cost
. . . . route_list
. . . . . route_segment_number
. . . . route_segment_commercial_details
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_start_time
. . . . . date
. . . . . time
. . . . route_statistics
. . . cv_route_number
. . . cv_taxes_and_duties
. . . route_type
. . cv_trip_classification_data
. . . cv_cargo_class
. . . cv_vehicle_class
. . . cv_weight_class
. . cv_trip_identity
. . hazmat_load_data
cv_credentials_information
. information_datapage
cv_credentials_information_response
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_credentials_status_code
cv_credentials_problem
cv_credentials_status_code
cv_critical_safety_problem
cv_customs_inspector_identity
cv_daily_logs
. cv_roadside_daily_log
. . cv_roadside_facility_identity
. . cv_roadside_record
. . . cv_archived_inspection_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_driver_details
. . . . . cv_driver_credentials
. . . . . cv_driver_license_citations
. . . . cv_inspection_data
. . . . cv_inspector_safety_data_input
. . . . cv_not_pulled_in
. . . . cv_roadside_report
. . . . cv_safety_status_code
. . . . cv_vehicle_details
. . . . . cv_credentials
. . . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cv_fuel_purchase_quantity
. . . . . cv_inspection_activities_data
. . . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . cv_log_entry_location
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . . list_size
. . . . time
. . . cv_archived_safety_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_override_code
. . . . . cv_operator_override
. . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_problem
. . . . time
. . . cv_screening_record
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_screening_override_code
. . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . time
. . . list_size
. . date
. cvo_border_clearance
. . cv_border_record
. . . cv_border_override
. . . . cv_border_override_code
. . . . . cv_operator_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number

. . . . . cv_vehicle_number
. . . . time
. . . list_size
. . cv_roadside_facility_identity
. . date
cv_daily_logs_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
cv_data_archive
. cv_archive_catalog
. cv_data_for_archive
. . cv_credentials_enrollment_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . cv_credentials_enrollment_data
. . . cv_update_new_credentials_request
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_route_details
. . . . . cv_route_data
. . . . . route_cost
. . . . . route_list
. . . . . route_segment_commercial_details
. . . . . route_start_time
. . . . . route_statistics
. . . . . cv_route_number
. . . . . cv_taxes_and_duties
. . . . . route_type
. . . . cv_trip_classification_data
. . . . . cv_cargo_class
. . . . . cv_vehicle_class
. . . . . cv_weight_class
. . . . cv_trip_identity
. . . . hazmat_load_data
. . cv_daily_logs
. . . cv_roadside_daily_log
. . . . cv_roadside_facility_identity
. . . . cv_roadside_record
. . . . . cv_archived_inspection_data
. . . . . cv_credentials_details
. . . . . cv_driver_details
. . . . . cv_inspection_data
. . . . . cv_inspector_safety_data_input
. . . . . cv_not_pulled_in
. . . . . cv_roadside_report
. . . . . cv_safety_status_code
. . . . . cv_vehicle_details
. . . . . time
. . . . . cv_archived_safety_data
. . . . . cv_credentials_details
. . . . . cv_safety_override
. . . . . cv_safety_pull_in_output
. . . . . time
. . . . . cv_screening_record
. . . . . cv_credentials_details
. . . . . cv_screening_override
. . . . . cv_screening_pull_in_output
. . . . . time
. . . . . list_size
. . . . date
. . . cvo_border_clearance
. . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_credentials_details
. . . . . time
. . . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . time
. . . . . list_size
. . . . cv_roadside_facility_identity
. . . . date
. . cv_daily_logs_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date

. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
cv_data_for_archive
. cv_credentials_enrollment_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. cv_credentials_enrollment_data
. . cv_update_new_credentials_request
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_route_details
. . . . cv_route_data
. . . . . route_cost
. . . . . route_list
. . . . . route_segment_number
. . . . . route_segment_commercial_details
. . . . . route_segment_end_point
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_start_point
. . . . . route_start_time
. . . . . date
. . . . . time
. . . . . route_statistics
. . . . cv_route_number
. . . . cv_taxes_and_duties
. . . . route_type
. . . cv_trip_classification_data
. . . . cv_cargo_class
. . . . cv_vehicle_class
. . . . cv_weight_class
. . . cv_trip_identity
. . . hazmat_load_data
. cv_daily_logs
. . cv_roadside_daily_log
. . . cv_roadside_facility_identity
. . . cv_roadside_record
. . . . cv_archived_inspection_data
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_driver_details
. . . . . cv_driver_credentials
. . . . . cv_driver_license_citations
. . . . . cv_inspection_data
. . . . . cv_inspector_safety_data_input
. . . . . cv_not_pulled_in
. . . . . cv_roadside_report
. . . . . cv_safety_status_code
. . . . . cv_vehicle_details
. . . . . cv_credentials
. . . . . cv_fuel_purchase_data
. . . . . cv_inspection_activities_data
. . . . . cv_log_data
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . list_size
. . . . . time
. . . . cv_archived_safety_data
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . cv_safety_override_code
. . . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_safety_problem
. . . . . time
. . . . cv_screening_record
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_screening_override_code
. . . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_credentials_problem
. . . . . time
. . . . list_size
. . . date
. . cvo_border_clearance
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_roadside_facility_identity

Appendix D: Data Tree

. . . date
. cv_daily_logs_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
cv_data_for_payments
. financial_request
. . cf_manager_enrollment_cost
. . . cv_amount_billed
. . cv_driver_enrollment_cost
. . . cv_amount_billed
. . . stored_credit
. . duty_cost
. . . cost
. . permit_cost
. . . cost
cv_database
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_credentials_status_code
. cv_trip_classification_data
. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
. cv_trip_identity
. cvo_border_results
. cvo_transportation_border_results
. list_size
cv_driver_credentials
cv_driver_credit_identity
. credit_identity
. stored_credit
cv_driver_data_input
. cv_driver_credentials
. cv_driver_license_citations
. cv_driver_number
. cv_fuel_purchase_data
. . cv_fuel_purchase_cost
. . . cost
. . cv_fuel_purchase_quantity
. cv_repairs_and_service_records
. cvo_cargo_data_from_driver
. . cv_cargo_discharged
. . cv_cargo_loaded
cv_driver_data_output
cv_driver_details
. cv_driver_credentials
. cv_driver_license_citations
cv_driver_enrollment_cost
. cv_amount_billed
. stored_credit
cv_driver_enrollment_information
. cv_route_number
. cv_taxes_and_duties
cv_driver_enrollment_payment_confirmation
. cv_account_number
. cv_amount_billed
. cv_driver_credit_identity
. . credit_identity
. . stored_credit
. cv_route_number
cv_driver_enrollment_payment_request
. cv_account_number
. cv_driver_credit_identity
. . credit_identity
. . stored_credit
. cv_route_number
cv_driver_enrollment_request
. cv_cargo_class
. cv_route_number
. cv_trip_identity
. cv_vehicle_class
. cv_weight_class
cv_driver_license_citations
cv_driver_number
cv_driver_route_data
. cv_route_data
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment_commercial_details
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_start_point
. . . . location_identity
. . route_start_time
. . . date
. . . time
. . route_statistics
. cv_route_number
. route_type
cv_driver_route_request
. route_type
. trip_request
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes

. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions
cv_driver_storage_request
. cv_route_number
. cv_storage_action_flag
cv_electronic_clearance_data
. cv_lock_tag_data
. . cv_customs_inspector_identity
. . date
. . time
cv_electronic_screening_data
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_on_board_screening_data
. . cv_on_board_screening_details
. . . cv_cargo_status
. . . cv_out_of_service_status
. . . cv_roadside_facility_identity
. . . cv_screening_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override_code
. . . . . cv_operator_override
. . . cv_screening_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_credentials_problem
. . . cv_vehicle_axle_weight_data
. . . cv_vehicle_weight
. . . time
. . list_size
cv_emergency_data
. cf_hazmat_route_information
. . cv_route_number
. . route
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment
. . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_mode
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. cf_hazmat_vehicle_information
. . hazmat_load_data
. . hazmat_vehicle_data
. cv_violation_data
. . cvo_citation_data
. . cvo_violation
. cvo_accident
. . cvo_accident_data
cv_enrollment_information
. cv_border_enrollments
. cv_route_number
. cv_special_vehicle_enrollments
. cv_taxes_and_duties
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_type
cv_enrollment_list
. cf_manager_credit_identity
. . credit_identity
. cv_account_number
. cv_taxes_and_duties
cv_enrollment_payment_confirmation
. cv_account_number
. cv_amount_billed
. cv_driver_credit_identity
. . credit_identity
. . stored_credit
. cv_route_number
cv_enrollment_request
. border_crossing_request
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_route_data
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment_commercial_details
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_start_point
. . . . location_identity
. . route_start_time
. . . date
. . . time
. . route_statistics
. cv_route_number
. cv_trip_classification_data

Appendix D: Data Tree

. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
. cv_trip_identity
. route_type
. special_vehicle_application
. . hazmat_load_data
cv_facility_log
. cv_roadside_daily_log
. . cv_roadside_facility_identity
. . cv_roadside_record
. . . cv_archived_inspection_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_driver_details
. . . . . cv_driver_credentials
. . . . . cv_driver_license_citations
. . . . cv_inspection_data
. . . . cv_inspector_safety_data_input
. . . . cv_not_pulled_in
. . . . cv_roadside_report
. . . . cv_safety_status_code
. . . . cv_vehicle_details
. . . . . cv_credentials
. . . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cv_fuel_purchase_quantity
. . . . . cv_inspection_activities_data
. . . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . cv_log_entry_location
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . . list_size
. . . . time
. . . cv_archived_safety_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_override_code
. . . . . cv_operator_override
. . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_problem
. . . . time
. . . cv_screening_record
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_screening_override_code
. . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . time
. . . list_size
. . date
. cvo_border_clearance
. . cv_border_record
. . . cv_border_override
. . . . cv_border_override_code
. . . . . cv_operator_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . list_size
. . cv_roadside_facility_identity
. . date
. cvo_citation_data
. cvo_violation
. list_size
cv_fuel_purchase_cost
. cost
cv_fuel_purchase_data
. cv_fuel_purchase_cost
. . cost
. cv_fuel_purchase_quantity
cv_fuel_purchase_quantity
cv_general_decision
. cv_general_pull_in
cv_general_input_message
cv_general_output_message
cv_general_override
. cv_general_pull_in
cv_general_pull_in
cv_general_pull_in_output
. cv_general_pull_in
. cv_vehicle_number
cv_get_on_board_data
cv_identity_details
. carrier_identity
. driver_identity
. vehicle_identity
cv_incident_override
. permit_route_plan
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . load_description
. permit_traffic_controls
. . selected_ramp_control_strategy
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number

. . . selected_ramp_strategy_type
. . selected_roadway_control_strategy
. . . selected_highway_control_strategy
. . . . highway_sign_plan_number
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . selected_strategy_type
. . . selected_road_control_strategy
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . . list_size
. . . . selected_strategy_type
. permit_type
cv_incidents_for_other_TMC
. permit_route_plan
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . load_description
. permit_traffic_controls
. . selected_ramp_control_strategy
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_ramp_strategy_type
. . selected_roadway_control_strategy
. . . selected_highway_control_strategy
. . . . highway_sign_plan_number
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . selected_strategy_type
. . . selected_road_control_strategy
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . . list_size
. . . . selected_strategy_type
. permit_type
cv_inspection_activities_data
cv_inspection_data
cv_inspection_data_output
cv_inspection_data_update
cv_inspection_results
. cv_roadside_report
. vehicle_identity
cv_inspector_safety_data_input
cv_lock_tag_data
. cv_customs_inspector_identity
. date
. time
cv_log_data
. cv_driver_number
. cv_log_entry_date
. . date
. cv_log_entry_location
. . vehicle_location_for_cv
. . . location_identity
. cv_log_entry_mileage
. cv_log_entry_time
. . time
cv_log_entry_date
. date
cv_log_entry_location
. vehicle_location_for_cv
. . location_identity
cv_log_entry_mileage
cv_log_entry_time
. time
cv_manual_pull_in
cv_not_pulled_in
cv_on_board_border_data
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_on_board_border_details
. . cv_border_pull_in_output
. . . cv_border_problem
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . time
. . cv_roadside_facility_identity
. . cv_vehicle_weight
. . time
. list_size
cv_on_board_border_details
. cv_border_pull_in_output
. . cv_border_problem
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . time
. cv_roadside_facility_identity
. cv_vehicle_weight
. time
cv_on_board_border_record
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_on_board_border_details
. . cv_border_pull_in_output
. . . cv_border_problem
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . time
. . cv_roadside_facility_identity
. . cv_vehicle_weight
. . time
cv_on_board_data
. cv_credentials
. cv_driver_credentials
. cv_driver_license_citations
. cv_fuel_purchase_data
. . cv_fuel_purchase_cost
. . . cost
. . cv_fuel_purchase_quantity
. cv_identity_details
. . carrier_identity
. . driver_identity
. . vehicle_identity

. cv_inspection_activities_data
. cv_inspection_data
. cv_log_data
. . cv_driver_number
. . cv_log_entry_date
. . . date
. . cv_log_entry_location
. . . vehicle_location_for_cv
. . . . location_identity
. . cv_log_entry_mileage
. . cv_log_entry_time
. . . time
. cv_not_pulled_in
. cv_repairs_and_service_records
. cv_safety_systems_diagnostics_results
. cv_vehicle_log
. . cv_cargo_discharged
. . cv_cargo_loaded
cv_on_board_data_current_copy
. cv_on_board_data
. . cv_credentials
. . cv_driver_credentials
. . cv_driver_license_citations
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_identity_details
. . . carrier_identity
. . . driver_identity
. . . vehicle_identity
. . cv_inspection_activities_data
. . cv_inspection_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_not_pulled_in
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
cv_on_board_data_needed
cv_on_board_data_output
. cv_on_board_data
. . cv_credentials
. . cv_driver_credentials
. . cv_driver_license_citations
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_identity_details
. . . carrier_identity
. . . driver_identity
. . . vehicle_identity
. . cv_inspection_activities_data
. . cv_inspection_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_not_pulled_in
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
cv_on_board_data_required
cv_on_board_data_update
. cv_fuel_purchase_data
. . cv_fuel_purchase_cost
. . . cost
. . cv_fuel_purchase_quantity
. cv_inspection_activities_data
. cv_inspection_data
. cv_log_data
. . cv_driver_number
. . cv_log_entry_date
. . . date
. . cv_log_entry_location
. . . vehicle_location_for_cv
. . . . location_identity
. . cv_log_entry_mileage
. . cv_log_entry_time
. . . time
. cv_repairs_and_service_records
. cv_safety_systems_diagnostics_results
. cv_vehicle_log
. . cv_cargo_discharged
. . cv_cargo_loaded
cv_on_board_pull_in_output
. cv_border_pull_in_output
. . cv_border_problem
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . time
. cv_general_pull_in
. cv_safety_pull_in_output
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_safety_problem
. cv_screening_pull_in_output
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_credentials_problem
cv_on_board_screening_data
. cv_on_board_screening_details
. . cv_cargo_status
. . cv_out_of_service_status
. . cv_roadside_facility_identity
. . cv_screening_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override_code
. . . . cv_operator_override
. . cv_screening_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_credentials_problem
. . cv_vehicle_axle_weight_data
. . cv_vehicle_weight
. . time
. list_size
cv_on_board_screening_details

Appendix D: Data Tree

. cv_cargo_status
. cv_out_of_service_status
. cv_roadside_facility_identity
. cv_screening_override
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_screening_override_code
. . . cv_operator_override
. cv_screening_pull_in_output
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_credentials_problem
. cv_vehicle_axle_weight_data
. cv_vehicle_weight
. time

cv_on_board_screening_record

. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_on_board_screening_details
. . cv_cargo_status
. . cv_out_of_service_status
. . cv_roadside_facility_identity
. . cv_screening_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override_code
. . . . cv_operator_override
. . cv_screening_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_credentials_problem
. . cv_vehicle_axle_weight_data
. . cv_vehicle_weight
. . time

cv_on_board_stored_data

. cv_credentials
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_driver_credentials
. cv_driver_license_citations
. cv_fuel_purchase_data
. . cv_fuel_purchase_cost
. . . cost
. . cv_fuel_purchase_quantity
. cv_identity_details
. . carrier_identity
. . driver_identity
. . vehicle_identity
. cv_inspection_activities_data
. cv_inspection_data
. cv_log_data
. . cv_driver_number
. . cv_log_entry_date
. . . date
. . cv_log_entry_location
. . . vehicle_location_for_cv
. . . . location_identity
. . cv_log_entry_mileage
. . cv_log_entry_time
. . . time
. cv_not_pulled_in
. cv_repairs_and_service_records
. cv_safety_systems_diagnostics_results
. cv_vehicle_log
. . cv_cargo_discharged
. . cv_cargo_loaded

cv_on_board_stored_sensor_data

. cv_cargo_status
. cv_safety_systems_diagnostics_results

cv_on_board_tag_data

. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_on_board_border_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_on_board_border_details
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_roadside_facility_identity
. . . cv_vehicle_weight
. . . time
. . list_size
. cv_on_board_screening_data
. . cv_on_board_screening_details
. . . cv_cargo_status
. . . cv_out_of_service_status
. . . cv_roadside_facility_identity
. . . cv_screening_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override_code
. . . . . cv_operator_override
. . . cv_screening_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_credentials_problem
. . . cv_vehicle_axle_weight_data
. . . cv_vehicle_weight
. . . time
. . list_size
. cv_trip_identity
. tag_identity

cv_on_board_vehicle_data

. cv_on_board_data
. . cv_credentials
. . cv_driver_credentials
. . cv_driver_license_citations
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_identity_details
. . . carrier_identity
. . . driver_identity
. . . vehicle_identity
. . cv_inspection_activities_data
. . cv_inspection_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv

. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_not_pulled_in
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
. vehicle_location_for_cv
. . location_identity
cv_operator_override
cv_out_of_service_status
cv_output_on_board_vehicle_data
cv_payment_confirmed
cv_payments_results_data
. financial_response
. . authorization_code
. . cf_manager_credit_identity
. . . credit_identity
. . cv_driver_credit_identity
. . . credit_identity
. . . stored_credit
cv_provide_credentials_data_for_inspections
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
cv_provide_enrollment_data
cv_received_vehicle_data
. cv_general_input_message
. cv_on_board_data
. . cv_credentials
. . cv_driver_credentials
. . cv_driver_license_citations
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_identity_details
. . . carrier_identity
. . . driver_identity
. . . vehicle_identity
. . cv_inspection_activities_data
. . cv_inspection_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_not_pulled_in
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
cv_remote_enrollment_confirmation
cv_remote_enrollment_request
cv_repairs_and_service_records
cv_request_electronic_clearance_data
cv_request_electronic_screening_data
cv_request_enrollment_data
cv_request_lock_tag_data
cv_request_on_board_data
. cv_roadside_facility_address
. cv_roadside_facility_identity
cv_request_on_board_vehicle_data
. cv_on_board_data_required
cv_request_vehicle_data
cv_retained_roadside_activity_data
. cv_roadside_activity_details
. . cv_archived_inspection_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_inspection_data
. . . cv_inspector_safety_data_input
. . . cv_not_pulled_in
. . . cv_roadside_report
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . . date
. . . . . cv_log_entry_location
. . . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. . . time
. . cv_archived_safety_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override_code
. . . . . cv_operator_override
. . . cv_safety_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_problem
. . . time
. . cv_border_record
. . . cv_border_override
. . . . cv_border_override_code
. . . . . cv_operator_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time

. . . list_size
. . cv_screening_record
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override_code
. . . . . cv_operator_override
. . . cv_screening_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_credentials_problem
. . . time
. . date
. list_size
cv_roadside_activity_details
. cv_archived_inspection_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_inspection_data
. . cv_inspector_safety_data_input
. . cv_not_pulled_in
. . cv_roadside_report
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
. . time
. cv_archived_safety_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_safety_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_override_code
. . . . cv_operator_override
. . cv_safety_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_problem
. . time
. cv_border_record
. . cv_border_override
. . . cv_border_override_code
. . . . cv_operator_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . time
. . cv_border_pull_in_output
. . . cv_border_problem
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . time
. . list_size
. cv_screening_record
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_screening_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override_code
. . . . cv_operator_override
. . cv_screening_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_credentials_problem
. . time
. date
cv_roadside_activity_report_frequency
cv_roadside_border_database
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_trip_identity
. cvo_border_agency_clearance_results
. . cvo_border_results
. cvo_transportation_border_clearance
. . cvo_transportation_border_results
. list_size
cv_roadside_collected_data
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_driver_details
. . cv_driver_credentials
. . cv_driver_license_citations
. cv_not_pulled_in
. cv_safety_status_code
. cv_vehicle_details
. . cv_credentials
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_inspection_activities_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date

. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
. . list_size
cv_roadside_credentials_database
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_credentials_status_code
. cv_trip_classification_data
. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
. list_size
cv_roadside_daily_log
. cv_roadside_facility_identity
. cv_roadside_record
. . cv_archived_inspection_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_inspection_data
. . . cv_inspector_safety_data_input
. . . cv_not_pulled_in
. . . cv_roadside_report
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . date
. . . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. . . time
. . cv_archived_safety_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override_code
. . . . . cv_operator_override
. . . cv_safety_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_problem
. . . time
. . cv_screening_record
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override_code
. . . . . cv_operator_override
. . . cv_screening_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_credentials_problem
. . . time
. . list_size
. date
cv_roadside_data_for_admin
. cv_roadside_daily_log
. . cv_roadside_facility_identity
. . cv_roadside_record
. . . cv_archived_inspection_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_driver_details
. . . . . cv_driver_credentials
. . . . . cv_driver_license_citations
. . . . cv_inspection_data
. . . . cv_inspector_safety_data_input
. . . . cv_not_pulled_in
. . . . cv_roadside_report
. . . . cv_safety_status_code
. . . . cv_vehicle_details
. . . . . cv_credentials
. . . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cv_fuel_purchase_quantity
. . . . . cv_inspection_activities_data
. . . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . cv_log_entry_location
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . . list_size
. . . . time
. . . cv_archived_safety_data
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number

. . . . . cv_vehicle_number
. . . . . cv_safety_override_code
. . . . . cv_operator_override
. . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_problem
. . . . time
. . . cv_screening_record
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_screening_override_code
. . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . time
. . . list_size
. . date
. cvo_border_clearance
. . cv_border_record
. . . cv_border_override
. . . . cv_border_override_code
. . . . . cv_operator_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . list_size
. . cv_roadside_facility_identity
. . date
. cvo_citation_data
cv_roadside_data_for_vehicle
. cv_on_board_border_record
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_on_board_border_details
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_roadside_facility_identity
. . . cv_vehicle_weight
. . . time
. cv_on_board_screening_record
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_on_board_screening_details
. . . cv_cargo_status
. . . cv_out_of_service_status
. . . cv_roadside_facility_identity
. . . cv_screening_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override_code
. . . . . cv_operator_override
. . . cv_screening_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_credentials_problem
. . . cv_vehicle_axle_weight_data
. . . cv_vehicle_weight
. . . time
. cv_request_electronic_clearance_data
. cv_request_electronic_screening_data
. cvo_border_clearance_request
. cvo_request_tag_data
. cvo_safety_inspection_request
cv_roadside_facility_address
cv_roadside_facility_identity
cv_roadside_facility_locations
. cv_roadside_facility_locations_data
. . cv_roadside_facility_identity
. . list_size
. . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
cv_roadside_facility_locations_data
. cv_roadside_facility_identity
. list_size
. location_identity
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
cv_roadside_facility_log
. cv_archived_inspection_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_inspection_data
. . cv_inspector_safety_data_input
. . cv_not_pulled_in
. . cv_roadside_report
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time

. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
. . time
. cv_archived_safety_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_safety_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_override_code
. . . . cv_operator_override
. . cv_safety_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_problem
. . time
. cv_border_record
. . cv_border_override
. . . cv_border_override_code
. . . . cv_operator_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . time
. . cv_border_pull_in_output
. . . cv_border_problem
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . time
. . list_size
. cv_screening_record
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_screening_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override_code
. . . . cv_operator_override
. . cv_screening_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_credentials_problem
. . time
. date
. list_size
. time
cv_roadside_operator_data_request
cv_roadside_operator_output
. cv_roadside_facility_log
. . cv_archived_inspection_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_inspection_data
. . . cv_inspector_safety_data_input
. . . cv_not_pulled_in
. . . cv_roadside_report
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . date
. . . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. . . time
. . cv_archived_safety_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override_code
. . . . . cv_operator_override
. . . cv_safety_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_problem
. . . time
. . cv_border_record
. . . cv_border_override
. . . . cv_border_override_code
. . . . . cv_operator_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . list_size
. . cv_screening_record
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override
. . . . cv_credentials_details

. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override_code
. . . . . cv_operator_override
. . . cv_screening_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_credentials_problem
. . . time
. . date
. . list_size
. . time
cv_roadside_periodic_activity_data
. cv_roadside_activity_details
. . cv_archived_inspection_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_inspection_data
. . . cv_inspector_safety_data_input
. . . cv_not_pulled_in
. . . cv_roadside_report
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . date
. . . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. . . time
. . cv_archived_safety_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override_code
. . . . . cv_operator_override
. . . cv_safety_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_problem
. . . time
. . cv_border_record
. . . cv_border_override
. . . . cv_border_override_code
. . . . . cv_operator_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . list_size
. . cv_screening_record
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override_code
. . . . . cv_operator_override
. . . cv_screening_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_credentials_problem
. . . time
. . date
. list_size
cv_roadside_record
. cv_archived_inspection_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_inspection_data
. . cv_inspector_safety_data_input
. . cv_not_pulled_in
. . cv_roadside_report
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
. . time

Appendix D: Data Tree

. cv_archived_safety_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_safety_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_override_code
. . . . cv_operator_override
. . cv_safety_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_problem
. . time
. cv_screening_record
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_screening_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override_code
. . . . cv_operator_override
. . cv_screening_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_credentials_problem
. . time
. list_size

cv_roadside_report

cv_roadside_safety_data

. cv_driver_details
. . cv_driver_credentials
. . cv_driver_license_citations
. cv_safety_status_code
. cv_vehicle_details
. . cv_credentials
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_inspection_activities_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
. . list_size

cv_roadside_safety_database

. cv_roadside_safety_data
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
. list_size

cv_roadside_safety_database_output

. cv_roadside_safety_data
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size

cv_roadside_safety_database_read

. cv_roadside_safety_data
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage

. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
cv_roadside_safety_database_update
. cv_roadside_safety_data
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
cv_roadside_safety_database_write
. cv_roadside_safety_data
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
cv_roadside_single_activity_data
. cv_roadside_activity_details
. . cv_archived_inspection_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_inspection_data
. . . cv_inspector_safety_data_input
. . . cv_not_pulled_in
. . . cv_roadside_report
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . . date
. . . . . cv_log_entry_location
. . . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. . . time
. . cv_archived_safety_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_override_code
. . . . . cv_operator_override
. . . cv_safety_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_safety_problem
. . . time
. . cv_border_record
. . . cv_border_override
. . . . cv_border_override_code
. . . . . cv_operator_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . list_size
. . cv_screening_record
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override
. . . . cv_credentials_details
. . . . . cv_carrier_number

. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override_code
. . . . . cv_operator_override
. . . cv_screening_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_credentials_problem
. . . time
. . date
. list_size
cv_route
. cv_route_data
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment_commercial_details
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_start_point
. . . . location_identity
. . route_start_time
. . . date
. . . time
. . route_statistics
. vehicle_identity
cv_route_data
. route_cost
. route_list
. . route_segment_number
. route_segment_commercial_details
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_condition
. . route_segment_estimated_travel_time
. . route_segment_predicted_weather
. . route_segment_start_point
. . . location_identity
. route_start_time
. . date
. . time
. route_statistics
cv_route_details
. cv_route_data
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment_commercial_details
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_start_point
. . . . location_identity
. . route_start_time
. . . date
. . . time
. . route_statistics
. cv_route_number
. cv_taxes_and_duties
. route_type
cv_route_input
. cf_route_request
. . constraint_on_acceptable_travel_time
. . constraint_on_ahs_lanes
. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_load_classification
. . constraint_on_urban
. . constraint_on_vehicle_type
. . cv_route_number
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . modes
. . origin
. . . route_point
. . preferred_alternate_routes
. . preferred_route_segments
. . preferred_routes
. . preferred_weather_conditions
. cv_route_request
. . constraint_on_acceptable_travel_time
. . constraint_on_ahs_lanes
. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_load_classification
. . constraint_on_urban
. . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . modes
. . origin
. . . route_point
. . preferred_alternate_routes
. . preferred_route_segments
. . preferred_routes
. . preferred_weather_conditions
. . vehicle_identity
cv_route_number
cv_route_outputs
. cf_route
. . cv_route_data
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment_commercial_details
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_start_point
. . . . . location_identity
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . cv_route_number
. cv_route
. . cv_route_data
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment_commercial_details
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_start_point
. . . . . location_identity
. . . route_start_time
. . . . date
. . . . time

. . . route_statistics
. . vehicle_identity
. vehicle_location_for_cv
. . location_identity
cv_route_request
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_urban
. constraint_on_vehicle_type
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. preferred_weather_conditions
. vehicle_identity
cv_safety_data
. cv_electronic_screening_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_on_board_screening_data
. . . cv_on_board_screening_details
. . . . cv_cargo_status
. . . . cv_out_of_service_status
. . . . cv_roadside_facility_identity
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_screening_override_code
. . . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . cv_vehicle_axle_weight_data
. . . . cv_vehicle_weight
. . . . time
. . . list_size
. cv_vehicle_characteristics
. . cv_vehicle_configuration
. . cv_vehicle_size
. . cv_vehicle_weight
. cvo_safety_inspection
cv_safety_data_request
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_safety_information_request_type
cv_safety_data_response
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_safety_information
. . information_datapage
cv_safety_database_update
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_roadside_safety_data
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
cv_safety_decision
. cv_safety_pull_in_output
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_safety_problem
cv_safety_history
. cv_safety_history_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_roadside_facility_identity
. . cv_roadside_safety_data
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . date
. . . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. . list_size
cv_safety_history_data

Appendix D: Data Tree

. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_roadside_facility_identity
. cv_roadside_safety_data
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
. list_size

cv_safety_history_read

. cv_safety_history_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_roadside_facility_identity
. . cv_roadside_safety_data
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . date
. . . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. . list_size

cv_safety_history_write

. cv_safety_history_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_roadside_facility_identity
. . cv_roadside_safety_data
. . . cv_driver_details
. . . . cv_driver_credentials
. . . . cv_driver_license_citations
. . . cv_safety_status_code
. . . cv_vehicle_details
. . . . cv_credentials
. . . . cv_fuel_purchase_data
. . . . . cv_fuel_purchase_cost
. . . . . cost
. . . . . cv_fuel_purchase_quantity
. . . . cv_inspection_activities_data
. . . . cv_log_data
. . . . . cv_driver_number
. . . . . cv_log_entry_date
. . . . . date
. . . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . cv_log_entry_mileage
. . . . . cv_log_entry_time
. . . . . time
. . . . cv_repairs_and_service_records
. . . . cv_safety_systems_diagnostics_results
. . . . cv_vehicle_log
. . . . . cv_cargo_discharged
. . . . . cv_cargo_loaded
. . . . list_size
. . list_size

cv_safety_information

. information_datapage

cv_safety_information_request_type

cv_safety_information_response

. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_roadside_safety_data
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size

cv_safety_override

. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_safety_override_code
. . cv_operator_override

cv_safety_override_code

. cv_operator_override
cv_safety_problem
cv_safety_pull_in_output
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_safety_problem
cv_safety_status_code
cv_safety_systems_diagnostics_results
cv_screening_data
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_on_board_screening_data
. . cv_on_board_screening_details
. . . cv_cargo_status
. . . cv_out_of_service_status
. . . cv_roadside_facility_identity
. . . cv_screening_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_screening_override_code
. . . . . cv_operator_override
. . . cv_screening_pull_in_output
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_credentials_problem
. . . cv_vehicle_axle_weight_data
. . . cv_vehicle_weight
. . . time
. . list_size
. cv_vehicle_characteristics
. . cv_vehicle_configuration
. . cv_vehicle_size
. . cv_vehicle_weight
cv_screening_decision
. cv_screening_pull_in_output
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_credentials_problem
cv_screening_override
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_screening_override_code
. . cv_operator_override
cv_screening_override_code
. cv_operator_override
cv_screening_pull_in_output
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_credentials_problem
cv_screening_record
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_screening_override
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_screening_override_code
. . . cv_operator_override
. cv_screening_pull_in_output
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_credentials_problem
. time
cv_special_vehicle_enrollments
cv_start_inspection
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
cv_static_route_data
cv_static_route_request
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_urban
. constraint_on_vehicle_type
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. preferred_weather_conditions
cv_storage_action_flag
cv_tag_data
. cv_carrier_number
. cv_driver_number
. cv_vehicle_number
cv_tag_data_store
. cv_on_board_tag_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_on_board_border_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_on_board_border_details
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_roadside_facility_identity
. . . . cv_vehicle_weight
. . . . time
. . . list_size
. . cv_on_board_screening_data
. . . cv_on_board_screening_details
. . . . cv_cargo_status
. . . . cv_out_of_service_status
. . . . cv_roadside_facility_identity
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number

. . . . . cv_screening_override_code
. . . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . cv_vehicle_axle_weight_data
. . . . cv_vehicle_weight
. . . . time
. . . list_size
. . cv_trip_identity
. . tag_identity
cv_tag_data_store_needed
cv_tag_data_store_output
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_trip_identity
cv_tag_data_store_read
. cv_on_board_tag_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_on_board_border_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_on_board_border_details
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . time
. . . . cv_roadside_facility_identity
. . . . cv_vehicle_weight
. . . . time
. . . list_size
. . cv_on_board_screening_data
. . . cv_on_board_screening_details
. . . . cv_cargo_status
. . . . cv_out_of_service_status
. . . . cv_roadside_facility_identity
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_screening_override_code
. . . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . cv_vehicle_axle_weight_data
. . . . cv_vehicle_weight
. . . . time
. . . list_size
. . cv_trip_identity
. . tag_identity
cv_tag_data_store_request
cv_tag_data_store_update
. cv_on_board_border_details
. . cv_border_pull_in_output
. . . cv_border_problem
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . time
. . cv_roadside_facility_identity
. . cv_vehicle_weight
. . time
. cv_on_board_screening_details
. . cv_cargo_status
. . cv_out_of_service_status
. . cv_roadside_facility_identity
. . cv_screening_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_screening_override_code
. . . . cv_operator_override
. . cv_screening_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_credentials_problem
. . cv_vehicle_axle_weight_data
. . cv_vehicle_weight
. . time
cv_tag_data_store_write
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_trip_identity
. tag_identity
cv_tax_and_credential_fees
cv_taxes_and_duties
cv_trip_classification_data
. cv_cargo_class
. cv_vehicle_class
. cv_weight_class
cv_trip_identity
cv_update_new_credentials_request
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_route_details
. . cv_route_data
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment_commercial_details
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_start_point
. . . . . location_identity
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . cv_route_number
. . cv_taxes_and_duties
. . route_type
. cv_trip_classification_data
. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
. cv_trip_identity
. hazmat_load_data
cv_update_new_credentials_response
. confirmation_flag

Appendix D: Data Tree

. cv_route_number
cv_vehicle_axle_weight_data
cv_vehicle_characteristics
. cv_vehicle_configuration
. cv_vehicle_size
. cv_vehicle_weight
cv_vehicle_class
cv_vehicle_configuration
cv_vehicle_data
. cv_general_input_message
. cv_on_board_data
. . cv_credentials
. . cv_driver_credentials
. . cv_driver_license_citations
. . cv_fuel_purchase_data
. . . cv_fuel_purchase_cost
. . . . cost
. . . cv_fuel_purchase_quantity
. . cv_identity_details
. . . carrier_identity
. . . driver_identity
. . . vehicle_identity
. . cv_inspection_activities_data
. . cv_inspection_data
. . cv_log_data
. . . cv_driver_number
. . . cv_log_entry_date
. . . . date
. . . cv_log_entry_location
. . . . vehicle_location_for_cv
. . . . . location_identity
. . . cv_log_entry_mileage
. . . cv_log_entry_time
. . . . time
. . cv_not_pulled_in
. . cv_repairs_and_service_records
. . cv_safety_systems_diagnostics_results
. . cv_vehicle_log
. . . cv_cargo_discharged
. . . cv_cargo_loaded
cv_vehicle_data_for_roadside
. cv_electronic_clearance_data
. . cv_lock_tag_data
. . . cv_customs_inspector_identity
. . . date
. . . time
. cv_electronic_screening_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_on_board_screening_data
. . . cv_on_board_screening_details
. . . . cv_cargo_status
. . . . cv_out_of_service_status
. . . . cv_roadside_facility_identity
. . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_screening_override_code
. . . . . . cv_operator_override
. . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_credentials_problem
. . . . cv_vehicle_axle_weight_data
. . . . cv_vehicle_weight
. . . . time
. . . list_size
. cvo_border_clearance_data
. . cv_on_board_border_data
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_on_board_border_details
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . time
. . . . cv_roadside_facility_identity
. . . . cv_vehicle_weight
. . . . time
. . . list_size
. . cv_trip_identity
. . date
. cvo_safety_inspection
. cvo_tag_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_trip_identity
. . tag_identity
cv_vehicle_details
. cv_credentials
. cv_fuel_purchase_data
. . cv_fuel_purchase_cost
. . . cost
. . cv_fuel_purchase_quantity
. cv_inspection_activities_data
. cv_log_data
. . cv_driver_number
. . cv_log_entry_date
. . . date
. . cv_log_entry_location
. . . vehicle_location_for_cv
. . . . location_identity
. . cv_log_entry_mileage
. . cv_log_entry_time
. . . time
. cv_repairs_and_service_records
. cv_safety_systems_diagnostics_results
. cv_vehicle_log
. . cv_cargo_discharged
. . cv_cargo_loaded
. list_size
cv_vehicle_log
. cv_cargo_discharged
. cv_cargo_loaded
cv_vehicle_number
cv_vehicle_size
cv_vehicle_weight
cv_violation_data
. cvo_citation_data
. cvo_violation
cv_weight_class
cvo_accident
. cvo_accident_data
cvo_accident_data
cvo_accident_data_for_fleet
. cvo_accident_data
cvo_advanced_payments_request
. credit_identity
. stored_credit
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
cvo_advanced_toll_confirmation

. confirmation_flag
. stored_credit
. toll_cost
. traveler_identity
cvo_advanced_toll_payment_information
. confirmation_flag
. stored_credit
. toll_cost
. traveler_identity
cvo_advanced_toll_request
. credit_identity
. stored_credit
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
cvo_audit_data
cvo_border_agency_clearance_results
. cvo_border_results
cvo_border_clearance
. cv_border_record
. . cv_border_override
. . . cv_border_override_code
. . . . cv_operator_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . time
. . cv_border_pull_in_output
. . . cv_border_problem
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . time
. . list_size
. cv_roadside_facility_identity
. date
cvo_border_clearance_data
. cv_on_board_border_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_on_board_border_details
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_roadside_facility_identity
. . . cv_vehicle_weight
. . . time
. . list_size
. cv_trip_identity
. date
cvo_border_clearance_for_fleet
. cvo_border_clearance_info
. . cvo_border_clearance
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_roadside_facility_identity
. . . date
. cvo_border_status_from_other_cvas
. . cvo_border_clearance_info
. . . cvo_border_clearance
. . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_override_code
. . . . . . cv_credentials_details
. . . . . time
. . . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . time
. . . . . list_size
. . . . cv_roadside_facility_identity
. . . . date
cvo_border_clearance_info
. cvo_border_clearance
. . cv_border_record
. . . cv_border_override
. . . . cv_border_override_code
. . . . . cv_operator_override
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . cv_border_pull_in_output
. . . . cv_border_problem
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . time
. . . list_size
. . cv_roadside_facility_identity
. . date
cvo_border_clearance_request
cvo_border_results
cvo_border_status_for_other_cvas
. cvo_border_clearance_info
. . cvo_border_clearance
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_roadside_facility_identity
. . . date
cvo_border_status_for_trade
. cvo_border_clearance_info
. . cvo_border_clearance
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code

. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_roadside_facility_identity
. . . date
. cvo_border_status_from_other_cvas
. . cvo_border_clearance_info
. . . cvo_border_clearance
. . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_credentials_details
. . . . . time
. . . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . time
. . . . . list_size
. . . . cv_roadside_facility_identity
. . . . date
cvo_border_status_from_other_cvas
. cvo_border_clearance_info
. . cvo_border_clearance
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_roadside_facility_identity
. . . date
cvo_cargo_data_from_driver
. cv_cargo_discharged
. cv_cargo_loaded
cvo_citation
. cvo_citation_data
cvo_citation_data
cvo_credential_status
cvo_database_info
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_credentials_status_code
. cv_trip_classification_data
. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
. cv_trip_identity
. cvo_border_results
. cvo_transportation_border_results
. list_size
cvo_database_info_request
cvo_database_update
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_credentials_status_code
. cv_trip_classification_data
. . cv_cargo_class
. . cv_vehicle_class
. . cv_weight_class
. cv_trip_identity
. cvo_border_results
. cvo_transportation_border_results
. list_size
cvo_declaration_info
cvo_domestic_transportation_info_for_trade
cvo_domestic_transportation_info_from_trade
cvo_driver_log
. cv_log_data
. . cv_driver_number
. . cv_log_entry_date
. . . date
. . cv_log_entry_location
. . . vehicle_location_for_cv
. . . . location_identity
. . cv_log_entry_mileage
. . cv_log_entry_time
. . . time
cvo_driver_log_request
cvo_general_message
. cv_general_input_message
cvo_hazmat_spill_data
cvo_on_board_safety_data
cvo_on_board_safety_data_request
cvo_on_board_sensor_data
. cv_cargo_status
. cv_safety_systems_diagnostics_results
cvo_on_board_vehicle_data_request
. cv_on_board_data_required
cvo_payments_data
. cvo_advanced_toll_payment_information
. . confirmation_flag
. . stored_credit
. . toll_cost
. . traveler_identity
. toll_price_for_cvo
. . toll_price
. . toll_price_application_time
. . toll_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
cvo_payments_request
. cvo_advanced_payments_request
. . credit_identity
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
. toll_price_for_cvo_request
cvo_request_tag_data
cvo_safety_inspection
cvo_safety_inspection_data
. cv_archived_inspection_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_driver_details
. . . cv_driver_credentials
. . . cv_driver_license_citations

Appendix D: Data Tree

. . cv_inspection_data
. . cv_inspector_safety_data_input
. . cv_not_pulled_in
. . cv_roadside_report
. . cv_safety_status_code
. . cv_vehicle_details
. . . cv_credentials
. . . cv_fuel_purchase_data
. . . . cv_fuel_purchase_cost
. . . . . cost
. . . . cv_fuel_purchase_quantity
. . . cv_inspection_activities_data
. . . cv_log_data
. . . . cv_driver_number
. . . . cv_log_entry_date
. . . . . date
. . . . cv_log_entry_location
. . . . . vehicle_location_for_cv
. . . . . location_identity
. . . . cv_log_entry_mileage
. . . . cv_log_entry_time
. . . . . time
. . . cv_repairs_and_service_records
. . . cv_safety_systems_diagnostics_results
. . . cv_vehicle_log
. . . . cv_cargo_discharged
. . . . cv_cargo_loaded
. . . list_size
. . time
. cv_archived_safety_data
. . cv_credentials_details
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_safety_override
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_override_code
. . . . cv_operator_override
. . cv_safety_pull_in_output
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_safety_problem
. . time
cvo_safety_inspection_request
cvo_safety_status
cvo_stored_on_board_sensor_data
. cv_cargo_status
. cv_safety_systems_diagnostics_results
cvo_tag_data
. cv_credentials_details
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_trip_identity
. tag_identity
cvo_tag_data_store_request
cvo_tag_safety_data
cvo_tag_safety_data_request
cvo_to_toll
. cvo_payments_request
. . cvo_advanced_payments_request
. . . credit_identity
. . . stored_credit
. . . toll_route_segments
. . . . list_size
. . . . toll_segment_identity
. . . . . unit_number
. . . vehicle_identity
. . toll_price_for_cvo_request
. cvo_toll_data_request
. . cvo_advanced_toll_request
. . . credit_identity
. . . stored_credit
. . . toll_route_segments
. . . . list_size
. . . . toll_segment_identity
. . . . . unit_number
. . . vehicle_identity
. . cvo_toll_price_request
cvo_toll_data_request
. cvo_advanced_toll_request
. . credit_identity
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
. cvo_toll_price_request
cvo_toll_payments
. cvo_advanced_toll_confirmation
. . confirmation_flag
. . stored_credit
. . toll_cost
. . traveler_identity
. cvo_toll_price
. . toll_price
. . toll_price_application_time
. . toll_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
cvo_toll_price
. toll_price
. toll_price_application_time
. toll_segments
. . list_size
. . toll_segment_identity
. . . unit_number
cvo_toll_price_request
cvo_transportation_border_clearance
. cvo_transportation_border_results
cvo_transportation_border_results
cvo_trip_identification_number
. cv_trip_identity
cvo_trip_log_data
cvo_trip_log_data_request
cvo_violation
data_aggregation
data_concept_identifier
data_from_front_vehicle
. platoon_accel_decel_profile
. . vehicle_accel_decel_data
. platoon_ahead_vehicle_status
. . vehicle_status_details
. . . vehicle_security_status
. . . vehicle_system_status
. platoon_headway
. . vehicle_headway_data
data_from_rear_vehicle
. platoon_accel_decel_profile
. . vehicle_accel_decel_data
. platoon_headway
. . vehicle_headway_data
. platoon_rear_vehicle_status
. . vehicle_status_details
. . . vehicle_security_status
. . . vehicle_system_status
data_reductions
data_revision
data_to_front_vehicle
. platoon_accel_decel_profile
. . vehicle_accel_decel_data

. platoon_headway
. . vehicle_headway_data
. platoon_rear_vehicle_status
. . vehicle_status_details
. . . vehicle_security_status
. . . vehicle_system_status
data_to_rear_vehicle
. platoon_accel_decel_profile
. . vehicle_accel_decel_data
. platoon_ahead_vehicle_status
. . vehicle_status_details
. . . vehicle_security_status
. . . vehicle_system_status
. platoon_headway
. . vehicle_headway_data
data_version
date
date_archived
. date
. time
date_created
. date
. time
date_published
. date
. time
defined_incident_response_changes
. incident_info_template
. planned_incident_response
. . agency_incident_response_procedures
. . dms_displays
. . traffic_control_strategy_alterations
defined_incident_response_data
. incident_info_template
. planned_incident_response
. . agency_incident_response_procedures
. . dms_displays
. . traffic_control_strategy_alterations
defined_incident_response_data_request
defined_incident_response_update_request
. possible_defined_response_identity
defined_incident_response_updates
. incident_info_template
. planned_incident_response
. . agency_incident_response_procedures
. . dms_displays
. . traffic_control_strategy_alterations
defined_responses_data
. incident_info_template
. incident_type
. planned_incident_response
. . agency_incident_response_procedures
. . dms_displays
. . traffic_control_strategy_alterations
. traffic_impact_criteria
demand_data_update_request
demand_forecast_data
demand_forecast_request
demand_forecast_result
demand_input_data
demand_management_activate
demand_management_result
demand_overrides
demand_policy_data
departure_time
. time
desired_arrival_time
. time
destination
. route_point
detailed_emergency_status
. cf_hazmat_vehicle_information
. . hazmat_load_data
. . hazmat_vehicle_data
. incident_number
. incident_severity
. incident_status
. . incident_vehicles_involved
. incident_vehicle_status
device_control_state
. barrier_device_control_state
. hsr_device_control_state
. ssr_device_control_state
. traffic_device_control_state
device_data_for_incidents
. supply_incident_static_data
. . static_data_for_incident_management
. . . highway_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . road_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . road_segment_location
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. video_camera_control_strategy
device_fault
device_identity
device_setting
device_status
device_status_to_roadway_m_and_c
. dms_equip_status_for_m_and_c
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning

. . . dms_weather_warning
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. har_equip_status_for_m_and_c
. . har_fault
. . . har_identity
. indicator_equip_status_from_highways_for_m_and_c
. . indicator_fault
. . indicator_type
. . list_size
. indicator_equip_status_from_roads_for_m_and_c
. . indicator_fault
. . indicator_type
. . list_size
. signal_override_equip_status_for_m_and_c
. . emergency_vehicle_preemptions
. . . emergency_vehicle_junction_preemption
. . . emergency_vehicle_pedestrian_preemption
. . . emergency_vehicle_ramp_preemption
. . . emergency_vehicle_sign_preemption
. . transit_vehicle_roadway_priorities
. . . transit_vehicle_junction_priority
. . . transit_vehicle_pedestrian_priority
. . . transit_vehicle_ramp_priority
. . . transit_vehicle_sign_priority
. smart_probe_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id
. vehicle_sign_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id

direction_commands

dispatch_info_for_m_and_c_fleet

dispatch_orders_to_mcv

. date
. m_and_c_center_identity
. mcv_dispatch_instructions
. time
. vehicle_id_for_mcv

dispatch_response_from_mcv

display_map_traveler_update_cost

dms_advisory_text

. dms_auto_treat_info
. dms_highway_open_close
. dms_incident_warning
. dms_weather_warning

dms_allocation

. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
. route_segment_end_point
. . location_identity
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_start_point
. . location_identity

dms_auto_treat_data_from_maint

. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. lane_dms_controls
. list_size

dms_auto_treat_data_from_roadway

. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. lane_dms_controls
. list_size

dms_auto_treat_info

dms_auto_treat_status_to_maint

. device_status
. dms_fault
. . dms_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size

dms_data

. indicator_sign_control_data
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . parking_lot_dms_controls
. . pollution_output_message
. . . dms_pollution_message
. . . vehicle_identity
. indicator_sign_control_data_for_hri
. . crossing_id
. . hri_sign_control_data
. . list_size

dms_data_from_m_and_c

. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. lane_dms_controls
. list_size

dms_data_from_mcv

. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. lane_dms_controls
. list_size

dms_displays

Appendix D: Data Tree

dms_downstream_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
dms_equip_status_for_m_and_c
. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. dms_fault
. . dms_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
dms_fault
. dms_identity
dms_highway_open_close
dms_hri_allocation
. crossing_id
. list_size
dms_identity
dms_incident_warning
dms_pollution_message
dms_status
. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. dms_fault
. . dms_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
dms_status_for_m_and_c
. device_status
. dms_fault
. . dms_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
dms_status_for_mcv
. dms_fault
. . dms_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
dms_updates
. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
dms_upstream_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
dms_weather_warning
driver_advanced_payment_at_lot
. parking_lot_cost
. . cost
. stored_credit
. toll_cost
. transit_fare
driver_advanced_payment_at_toll
. parking_lot_cost
. . cost
. stored_credit
. toll_cost
. transit_fare
driver_advanced_payment_for_map
. navigable_map_vehicle_update_cost
. . cost
. stored_credit
driver_advisory_information
. advisory_data
. . planned_events_for_advisories
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . prediction_data_for_advisories
. . . list_size
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_occupancy_predictions
. . . route_segment_queue_delay_predictions
. . . route_segment_volume_delay_predictions
. . traffic_data_for_advisories
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . hov_lane_vehicle_count
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity

. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . tmc_identity
. . transit_running_data_for_advisories
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_services_for_advisories
. emergency_message_auto_output
. emergency_message_driver_output
. event_information_advisory_data
. position_warnings
. . position_warning_to_front
. . . position_advisory_message
. . . position_critical_state
. . position_warning_to_rear
. . . position_advisory_message
. . . position_critical_state
. . position_warning_to_side
. . . position_advisory_message
. . . position_critical_state
. safety_warnings
. . safety_warning_for_driver_condition
. . . safety_advisory_message
. . . safety_state_for_driver
. . safety_warning_for_road_condition
. . . safety_advisory_message
. . . safety_state_for_driver
. . safety_warning_for_vehicle_condition
. . . safety_advisory_message
. . . safety_state_for_driver
. vehicle_control_status
. vehicle_signage_data
. . vehicle_sign_data_output_location
. . . location_identity
. . vehicle_signage_output_data
. . . environmental_data_for_signage
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . vehicle_signage_current_data
. . . vehicle_signage_dms_data
. . . vehicle_signage_fixed_data
. . . vehicle_signage_incident_details
. . vehicle_signage_traffic_data
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . vehicle_occupancy
. . . vehicle_speed
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
. vision_data
. yellow_pages_advisory_data
. . yellow_pages_cost
. . . cost
. . yellow_pages_data_for_advisories
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . yellow_pages_dining_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_lodging_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_ticket_purchase_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number

driver_advisory_information_request

. advisory_data_scope
. advisory_display_type
. event_information_advisory_requests
. yellow_pages_advisory_requests
. . advisory_data_scope
. . transit_route_number
. . transit_vehicle_identity
. . vehicle_location_for_advisories
. . . location_identity
. . yellow_pages_dining_reservation
. . yellow_pages_lodging_reservation
. . yellow_pages_non_motorized_reservation
. . yellow_pages_ticket_purchase

driver_ahs_input

driver_broadcast_information

. broadcast_data
. . planned_events_for_broadcast
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . prediction_data_for_broadcast
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size

. . . link_speed
. . traffic_data_for_broadcast
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . link_state_data_for_broadcast
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . . list_size
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . source_identity
. . transit_running_data_for_broadcast
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_services_for_broadcast
. emergency_message_auto_output
. emergency_message_driver_output
. position_warnings
. . position_warning_to_front
. . . position_advisory_message
. . . position_critical_state
. . position_warning_to_rear
. . . position_advisory_message
. . . position_critical_state
. . position_warning_to_side
. . . position_advisory_message
. . . position_critical_state
. safety_warnings
. . safety_warning_for_driver_condition
. . . safety_advisory_message
. . . safety_state_for_driver
. . safety_warning_for_road_condition
. . . safety_advisory_message
. . . safety_state_for_driver
. . safety_warning_for_vehicle_condition
. . . safety_advisory_message
. . . safety_state_for_driver
. vehicle_control_status
. vehicle_signage_data
. . vehicle_sign_data_output_location
. . . location_identity
. . vehicle_signage_output_data
. . . environmental_data_for_signage
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . vehicle_signage_current_data
. . . vehicle_signage_dms_data
. . . vehicle_signage_fixed_data
. . . vehicle_signage_incident_details
. . vehicle_signage_traffic_data
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . vehicle_occupancy
. . . vehicle_speed
. vehicle_smart_probe_data_output
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
. vision_data
driver_commands
. select_headway
. select_lane_hold
. select_speed
driver_credit_identity
. credit_identity
. stored_credit
driver_guidance_accepted
driver_guidance_data
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_special_needs
. constraint_on_urban
. constraint_on_vehicle_type
. desired_arrival_time
. . time
. destination

. . route_point
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
driver_guidance_request
driver_identity
driver_information
driver_input
driver_input_request
driver_manual_input
driver_map_update_payment_request
. credit_identity
. navigable_map_vehicle_update_cost
. . cost
. vehicle_identity
driver_map_update_payment_response
. confirmation_flag
. credit_identity
. vehicle_identity
driver_map_update_payments_transactions
driver_map_update_request
. credit_identity
. stored_credit
. vehicle_identity
driver_map_update_response
. confirmation_flag
. navigable_map_vehicle_update_cost
. . cost
. stored_credit
. vehicle_identity
driver_parking_payment_credit_identity
. credit_identity
. stored_credit
driver_personal_emergency_request
. call_back_information
. driver_information
. vehicle_identity
. vehicle_location_for_emergencies
. . location_identity
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
driver_safety_status
driver_selection
driver_status_update
driver_toll_payment_credit_identity
. credit_identity
. stored_credit
driving_guidance_instructions
duration
duty_cost
. cost
dynamic_traveler_guidance_data
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_cost
dynamic_traveler_guidance_data_request
. constraint_on_acceptable_travel_time
. constraint_on_eta_change
. constraint_on_number_of_mode_changes
. constraint_on_number_of_transfers
. constraint_on_special_needs
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_ridesharing_options
. preferred_route_segments
. preferred_routes
. preferred_transit_options
dynamic_vehicle_guidance_data
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_cost
dynamic_vehicle_guidance_data_request
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_special_needs
. constraint_on_urban
. constraint_on_vehicle_type
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
. preferred_alternate_routes

. preferred_route_segments
. preferred_routes
em_archive_catalog
em_archive_catalog_request
em_archive_data
. em_archive_catalog
. em_data_for_archive
. . em_operational_data
. . . archive_manage_emergency_vehicle_data
. . . . emergency_vehicle_status_data
. . . . . emergency_vehicle_status_details
. . . . . . date
. . . . . emergency_vehicle_identity
. . . . . emergency_vehicle_status_code
. . . . . emergency_vehicle_tracking_data
. . . . . emergency_vehicle_type
. . . . . incident_number
. . . . . time
. . . . . list_size
. . . archive_provide_emergency_service_allocation_data
. . . emergency_service_log_for_archive
. . . . emergency_service_action_log
. . . . . emergency_service_action_details
. . . . . emergency_service_allocations
. . . . . emergency_service_type_override
. . . . . emergency_service_type_requested
. . . . . emergency_vehicle_arrival_time
. . . . . emergency_vehicle_route
. . . . . identified_emergency_details
. . . . . incident_action_time
. . . . . time
. . . . . list_size
. . em_operational_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
em_archive_data_request
em_archive_input
. em_archive_request
. . em_archive_catalog_request
. . em_archive_data_request
. em_archive_status
em_archive_request
. em_archive_catalog_request
. em_archive_data_request
em_archive_status
em_data_for_archive
. em_operational_data
. . archive_manage_emergency_vehicle_data
. . . emergency_vehicle_status_data
. . . . emergency_vehicle_status_details
. . . . . date
. . . . . emergency_vehicle_identity
. . . . . emergency_vehicle_status_code
. . . . . emergency_vehicle_tracking_data
. . . . . emergency_vehicle_operational_data
. . . . . vehicle_identity
. . . . . vehicle_location_for_emergency_services
. . . . . emergency_vehicle_type
. . . . . incident_number
. . . . . time
. . . . list_size
. . archive_provide_emergency_service_allocation_data
. . emergency_service_log_for_archive
. . . emergency_service_action_log
. . . . emergency_service_action_details
. . . . . emergency_service_allocations
. . . . . emergency_service_type_override
. . . . . emergency_service_type_requested
. . . . . emergency_vehicle_arrival_time
. . . . . time
. . . . . emergency_vehicle_route
. . . . . emergency_request
. . . . . route
. . . . . vehicle_identity
. . . . . identified_emergency_details
. . . . . incident_confidence_level
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_report_source
. . . . . incident_reported_time
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_status
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . incident_action_time
. . . . . time
. . . . list_size
. em_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute

. . standard_message_attribute
em_operational_data
. archive_manage_emergency_vehicle_data
. . emergency_vehicle_status_data
. . . emergency_vehicle_status_details
. . . . date
. . . . emergency_vehicle_identity
. . . . emergency_vehicle_status_code
. . . . emergency_vehicle_tracking_data
. . . . . emergency_vehicle_operational_data
. . . . . vehicle_identity
. . . . . vehicle_location_for_emergency_services
. . . . . location_identity
. . . . . time
. . . . emergency_vehicle_type
. . . . incident_number
. . . . time
. . . list_size
. archive_provide_emergency_service_allocation_data
. emergency_service_log_for_archive
. . emergency_service_action_log
. . . emergency_service_action_details
. . . . emergency_service_allocations
. . . . emergency_service_type_override
. . . . emergency_service_type_requested
. . . . emergency_vehicle_arrival_time
. . . . . time
. . . . emergency_vehicle_route
. . . . . emergency_request
. . . . . route
. . . . . route_cost
. . . . . route_list
. . . . . route_segment
. . . . . route_start_time
. . . . . route_statistics
. . . . . vehicle_identity
. . . . identified_emergency_details
. . . . . incident_confidence_level
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_report_source
. . . . . incident_reported_time
. . . . . time
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_status
. . . . . incident_vehicles_involved
. . . . . incident_traffic_impact
. . . . . incident_type
. . . incident_action_time
. . . . time
. . . list_size
em_operational_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
emergency_acknowledge_transit_details
. confirmation_flag
emergency_center_identity
emergency_data_archive
. em_archive_catalog
. em_operational_data
. . archive_manage_emergency_vehicle_data
. . . emergency_vehicle_status_data
. . . . emergency_vehicle_status_details
. . . . . date
. . . . . emergency_vehicle_identity
. . . . . emergency_vehicle_status_code
. . . . . emergency_vehicle_tracking_data
. . . . . emergency_vehicle_operational_data
. . . . . vehicle_identity
. . . . . vehicle_location_for_emergency_services
. . . . . emergency_vehicle_type
. . . . . incident_number
. . . . . time
. . . . list_size
. . archive_provide_emergency_service_allocation_data
. . emergency_service_log_for_archive
. . . emergency_service_action_log
. . . . emergency_service_action_details
. . . . . emergency_service_allocations
. . . . . emergency_service_type_override
. . . . . emergency_service_type_requested
. . . . . emergency_vehicle_arrival_time
. . . . . time
. . . . . emergency_vehicle_route
. . . . . emergency_request
. . . . . route
. . . . . vehicle_identity
. . . . . identified_emergency_details
. . . . . incident_confidence_level
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_report_source
. . . . . incident_reported_time
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_status
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . incident_action_time
. . . . . time
. . . . list_size
. em_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date

. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
emergency_data_for_other_TMC
. emergency_traffic_control_request
. . date
. . list_size
. . route_segment_estimated_arrival_time
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . time
. selected_emergency_vehicle_strategy
. . indicator_list
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . selected_emergency_strategy
emergency_data_request
. request_for_additional_data
emergency_message_auto_output
emergency_message_driver_output
emergency_message_traveler_output
emergency_request
emergency_request_driver_acknowledge
emergency_request_driver_details
. date
. driver_personal_emergency_request
. . call_back_information
. . driver_information
. . vehicle_identity
. . vehicle_location_for_emergencies
. . . location_identity
. . vehicle_status_details
. . . vehicle_security_status
. . . vehicle_system_status
. time
emergency_request_personal_traveler_acknowledge
. confirmation_flag
emergency_request_personal_traveler_details
. date
. time
. traveler_personal_emergency_request
. . traveler_identity
. . traveler_location_for_emergencies
. . . location_identity
emergency_request_transit_details
. date
. time
. transit_emergency_request
. . traveler_identity
. . traveler_location_for_emergencies
. . . location_identity
emergency_request_traveler_acknowledge
. confirmation_flag
emergency_request_traveler_details
. date
. time
. traveler_personal_emergency_request
. . traveler_identity
. . traveler_location_for_emergencies
. . . location_identity
emergency_request_vehicle_acknowledge
emergency_request_vehicle_details
. date
. time
. vehicle_emergency_request
. . processed_cargo_data
. . vehicle_crash_sensor_data
. . vehicle_identity
. . vehicle_location_for_incidents
. . . location_identity
. . vehicle_status_details
. . . vehicle_security_status
. . . vehicle_system_status
emergency_response_data_for_communications
. emergency_data_request
. . request_for_additional_data
. emergency_response_plan_data
. identified_emergency_details
. . incident_confidence_level
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_report_source
. . incident_reported_time
. . . time
. . incident_severity
. . incident_start_time
. . . time
. . incident_status
. . . incident_vehicles_involved
. . incident_traffic_impact
. . incident_type
emergency_response_data_for_management
. emergency_response_plan_data
. identified_emergency_details
. . incident_confidence_level
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_report_source
. . incident_reported_time
. . . time
. . incident_severity
. . incident_start_time
. . . time
. . incident_status
. . . incident_vehicles_involved
. . incident_traffic_impact
. . incident_type
emergency_response_plan_data
emergency_service_action_details

Appendix D: Data Tree

. emergency_service_allocations
. emergency_service_type_override
. emergency_service_type_requested
. emergency_vehicle_arrival_time
. . time
. emergency_vehicle_route
. . emergency_request
. . route
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment
. . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_mode
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . vehicle_identity
. identified_emergency_details
. . incident_confidence_level
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_report_source
. . incident_reported_time
. . . time
. . incident_severity
. . incident_start_time
. . . time
. . incident_status
. . . incident_vehicles_involved
. . incident_traffic_impact
. . incident_type

emergency_service_action_log

. emergency_service_action_details
. . emergency_service_allocations
. . emergency_service_type_override
. . emergency_service_type_requested
. . emergency_vehicle_arrival_time
. . . time
. . emergency_vehicle_route
. . . emergency_request
. . . route
. . . . route_cost
. . . . route_list
. . . . . route_segment_number
. . . . route_segment
. . . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . route_segment_start_point
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_mode
. . . . route_start_time
. . . . . date
. . . . . time
. . . . route_statistics
. . . vehicle_identity
. . identified_emergency_details
. . . incident_confidence_level
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_report_source
. . . incident_reported_time
. . . . time
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_status
. . . . incident_vehicles_involved
. . . incident_traffic_impact
. . . incident_type
. incident_action_time
. . time
. list_size

emergency_service_allocation_criteria

. emergency_service_allocations
. enforcement_agency_allocations
. incident_type
. violation_type

emergency_service_allocation_data

. emergency_service_allocations

emergency_service_allocation_data_output

emergency_service_allocation_data_output_request

. violation_type

emergency_service_allocation_data_request

. incident_type

emergency_service_allocation_data_updates

. emergency_service_allocations
. incident_type

emergency_service_allocation_override

. emergency_service_type_override
. incident_number

emergency_service_allocations

emergency_service_log_for_archive

. emergency_service_action_log
. . emergency_service_action_details
. . . emergency_service_allocations
. . . emergency_service_type_override
. . . emergency_service_type_requested
. . . emergency_vehicle_arrival_time
. . . . time
. . . emergency_vehicle_route
. . . . emergency_request
. . . . route
. . . . . route_cost
. . . . . route_list
. . . . . route_segment_number
. . . . . route_segment
. . . . . route_segment_data
. . . . . route_segment_identity
. . . . . route_segment_mode
. . . . . route_start_time
. . . . . date
. . . . . time
. . . . . route_statistics

. . . . vehicle_identity
. . . identified_emergency_details
. . . . incident_confidence_level
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_report_source
. . . . incident_reported_time
. . . . . time
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_status
. . . . . incident_vehicles_involved
. . . . incident_traffic_impact
. . . . incident_type
. . incident_action_time
. . . time
. . list_size
emergency_service_log_output
. emergency_service_action_log
. . emergency_service_action_details
. . . emergency_service_allocations
. . . emergency_service_type_override
. . . emergency_service_type_requested
. . . emergency_vehicle_arrival_time
. . . . time
. . . emergency_vehicle_route
. . . . emergency_request
. . . . route
. . . . . route_cost
. . . . . route_list
. . . . . route_segment_number
. . . . . route_segment
. . . . . route_segment_data
. . . . . route_segment_identity
. . . . . route_segment_mode
. . . . . route_start_time
. . . . . date
. . . . . time
. . . . . route_statistics
. . . . vehicle_identity
. . . identified_emergency_details
. . . . incident_confidence_level
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_report_source
. . . . incident_reported_time
. . . . . time
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_status
. . . . . incident_vehicles_involved
. . . . incident_traffic_impact
. . . . incident_type
. . incident_action_time
. . . time
. . list_size
emergency_service_log_output_request
emergency_service_type_override
emergency_service_type_requested
emergency_to_m_and_c
. env_probe_info_from_emergency
. . env_probe_data
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_total_number
. incident_info_from_emerg
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. incident_response_status_from_emerg
. m_and_c_plan_feedback_from_emerg
. . m_and_c_plan_feedback
. m_and_c_resource_request_from_emerg
. roadway_maint_action_req_from_emerg
emergency_traffic_control_request
. date
. list_size
. route_segment_estimated_arrival_time
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. time
emergency_traffic_control_response
. date
. list_size
. route_segment_estimated_arrival_time
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. selected_emergency_vehicle_strategy
. . indicator_list
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . selected_emergency_strategy
. time
emergency_vehicle_acknowledge
. emergency_vehicle_arrival_time
. . time
. emergency_vehicle_route
. . emergency_request
. . route
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment
. . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . list_size

. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_mode
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . vehicle_identity
emergency_vehicle_arrival_time
. time
emergency_vehicle_dispatch_data
. emergency_vehicle_identity
. emergency_vehicle_incident_details
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_type
. emergency_vehicle_response_request
. . date
. . emergency_center_identity
. . emergency_vehicle_identity
. . emergency_vehicle_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_type
. . emergency_vehicle_status_code
. . time
. . traffic_data_for_emergency_services
. . . emergency_traffic_control_response
. . . . date
. . . . list_size
. . . . route_segment_estimated_arrival_time
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . time
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . weather_service_emergency_information
. emergency_vehicle_type
emergency_vehicle_dispatch_failure
. emergency_vehicle_number
. emergency_vehicle_type
. incident_number
emergency_vehicle_dispatch_request
. date
. emergency_center_identity
. emergency_vehicle_identity
. emergency_vehicle_incident_details
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_type
. emergency_vehicle_status_code
. time
emergency_vehicle_dispatch_response
emergency_vehicle_dispatch_status
. confirmation_flag
. emergency_vehicle_number
. emergency_vehicle_type
. incident_number
emergency_vehicle_identity
emergency_vehicle_incident_details
. incident_description
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_type
emergency_vehicle_junction_preemption
emergency_vehicle_number
emergency_vehicle_operational_data
emergency_vehicle_pedestrian_preemption
emergency_vehicle_preemptions
. emergency_vehicle_junction_preemption
. emergency_vehicle_pedestrian_preemption
. emergency_vehicle_ramp_preemption
. emergency_vehicle_sign_preemption
emergency_vehicle_ramp_preemption
emergency_vehicle_response_request
. date
. emergency_center_identity
. emergency_vehicle_identity
. emergency_vehicle_incident_details
. . incident_description
. . incident_duration
. . . duration

. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_type
. emergency_vehicle_status_code
. time
. traffic_data_for_emergency_services
. . emergency_traffic_control_response
. . . date
. . . list_size
. . . route_segment_estimated_arrival_time
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . selected_emergency_vehicle_strategy
. . . . indicator_list
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . selected_emergency_strategy
. . . time
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. weather_service_emergency_information

emergency_vehicle_route

. emergency_request
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. vehicle_identity

emergency_vehicle_route_assignment

. emergency_request
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. vehicle_identity

emergency_vehicle_route_request

. emergency_request
. emergency_vehicle_response_request
. . date
. . emergency_center_identity
. . emergency_vehicle_identity
. . emergency_vehicle_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_type
. . emergency_vehicle_status_code
. . time
. . traffic_data_for_emergency_services
. . . emergency_traffic_control_response
. . . . date
. . . . list_size
. . . . route_segment_estimated_arrival_time
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . indicator_identity

. . . . . list_size
. . . . . list_size
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . time
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . weather_service_emergency_information
. trip_request
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions
. vehicle_identity
. vehicle_location_for_emergency_services
. . location_identity
. . time

emergency_vehicle_sign_preemption

emergency_vehicle_status_code

emergency_vehicle_status_data

. emergency_vehicle_status_details
. . date
. . emergency_vehicle_identity
. . emergency_vehicle_status_code
. . emergency_vehicle_tracking_data
. . . emergency_vehicle_operational_data
. . . vehicle_identity
. . . vehicle_location_for_emergency_services
. . . . location_identity
. . . . time
. . emergency_vehicle_type
. . incident_number
. . time
. list_size

emergency_vehicle_status_data_change

. emergency_vehicle_status_details
. . date
. . emergency_vehicle_identity
. . emergency_vehicle_status_code
. . emergency_vehicle_tracking_data
. . . emergency_vehicle_operational_data
. . . vehicle_identity
. . . vehicle_location_for_emergency_services
. . . . location_identity
. . . . time
. . emergency_vehicle_type
. . incident_number
. . time

emergency_vehicle_status_data_for_assessment

. emergency_vehicle_status_details
. . date
. . emergency_vehicle_identity
. . emergency_vehicle_status_code
. . emergency_vehicle_tracking_data
. . . emergency_vehicle_operational_data
. . . vehicle_identity
. . . vehicle_location_for_emergency_services
. . . . location_identity
. . . . time
. . emergency_vehicle_type
. . incident_number
. . time

emergency_vehicle_status_data_for_dispatch

. emergency_vehicle_status_details
. . date
. . emergency_vehicle_identity
. . emergency_vehicle_status_code
. . emergency_vehicle_tracking_data
. . . emergency_vehicle_operational_data
. . . vehicle_identity
. . . vehicle_location_for_emergency_services
. . . . location_identity
. . . . time
. . emergency_vehicle_type
. . incident_number
. . time

emergency_vehicle_status_data_for_responses

. emergency_vehicle_status_details
. . date
. . emergency_vehicle_identity
. . emergency_vehicle_status_code
. . emergency_vehicle_tracking_data
. . . emergency_vehicle_operational_data
. . . vehicle_identity
. . . vehicle_location_for_emergency_services
. . . . location_identity
. . . . time
. . emergency_vehicle_type
. . incident_number
. . time

emergency_vehicle_status_data_needed

. emergency_vehicle_identity

emergency_vehicle_status_data_request

. emergency_vehicle_type

emergency_vehicle_status_data_update

. emergency_vehicle_status_details
. . date
. . emergency_vehicle_identity
. . emergency_vehicle_status_code
. . emergency_vehicle_tracking_data

. . . emergency_vehicle_operational_data
. . . vehicle_identity
. . . vehicle_location_for_emergency_services
. . . . location_identity
. . . . time
. . emergency_vehicle_type
. . incident_number
. . time
emergency_vehicle_status_details
. date
. emergency_vehicle_identity
. emergency_vehicle_status_code
. emergency_vehicle_tracking_data
. . emergency_vehicle_operational_data
. . vehicle_identity
. . vehicle_location_for_emergency_services
. . . location_identity
. . . time
. emergency_vehicle_type
. incident_number
. time
emergency_vehicle_suggested_route
emergency_vehicle_tracking_data
. emergency_vehicle_operational_data
. vehicle_identity
. vehicle_location_for_emergency_services
. . location_identity
. . time
emergency_vehicle_type
emissions_archive_catalog
emissions_archive_catalog_request
emissions_archive_data
. emissions_archive_catalog
. emissions_data_for_archive
. . archive_pollution_reference_data
. . . pollution_area_acceptance_data
. . . pollution_area_acceptance_times
. . . pollution_area_tolerance_data
. . . pollution_area_tolerance_times
. . . pollution_roadside_acceptance_data
. . . pollution_roadside_acceptance_times
. . . pollution_roadside_tolerance_data
. . . pollution_roadside_tolerance_times
. . . pollution_vehicle_acceptance_conditions
. . . pollution_vehicle_acceptance_data
. . archive_pollution_reference_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . archive_pollution_state_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_vehicle_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_sulfur_dioxide_pollution
. . . . vehicle_type
. . archive_pollution_state_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . pollution_archive_data_log
. . . pollution_state_static_log_data
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution

. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . pollution_state_vehicle_log_data
. . . . pollution_state_vehicle_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_sulfur_dioxide_pollution
. . . . . vehicle_type
. . pollution_archive_data_log_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
emissions_archive_data_request
emissions_archive_request
. emissions_archive_catalog_request
. emissions_archive_data_request
emissions_archive_status
emissions_data_archive
. archive_pollution_reference_data
. . pollution_area_acceptance_data
. . pollution_area_acceptance_times
. . pollution_area_tolerance_data
. . pollution_area_tolerance_times
. . pollution_roadside_acceptance_data
. . pollution_roadside_acceptance_times
. . pollution_roadside_tolerance_data
. . pollution_roadside_tolerance_times
. . pollution_vehicle_acceptance_conditions
. . pollution_vehicle_acceptance_data
. archive_pollution_reference_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. archive_pollution_state_data
. . list_size
. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_vehicle_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_sulfur_dioxide_pollution
. . . vehicle_type
. archive_pollution_state_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities

. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. emissions_archive_catalog
. pollution_archive_data_log
. . pollution_state_static_log_data
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . pollution_state_vehicle_log_data
. . . pollution_state_vehicle_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_sulfur_dioxide_pollution
. . . . vehicle_type
. pollution_archive_data_log_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
emissions_data_for_archive
. archive_pollution_reference_data
. . pollution_area_acceptance_data
. . pollution_area_acceptance_times
. . pollution_area_tolerance_data
. . pollution_area_tolerance_times
. . pollution_roadside_acceptance_data
. . pollution_roadside_acceptance_times
. . pollution_roadside_tolerance_data
. . pollution_roadside_tolerance_times
. . pollution_vehicle_acceptance_conditions
. . pollution_vehicle_acceptance_data
. archive_pollution_reference_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. archive_pollution_state_data
. . list_size
. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_vehicle_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_sulfur_dioxide_pollution
. . . vehicle_type
. archive_pollution_state_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation

. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. pollution_archive_data_log
. . pollution_state_static_log_data
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . pollution_state_vehicle_log_data
. . . pollution_state_vehicle_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_sulfur_dioxide_pollution
. . . . vehicle_type
. pollution_archive_data_log_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
enforcement_agency_address
enforcement_agency_allocations
enforcement_agency_computer
enforcement_agency_contact
enforcement_agency_details
. enforcement_agency_address
. enforcement_agency_computer
. enforcement_agency_email
. enforcement_agency_fax
. enforcement_agency_name
. enforcement_agency_phone
. enforcement_agency_responsibility
enforcement_agency_email
enforcement_agency_fax
enforcement_agency_name
enforcement_agency_phone
enforcement_agency_responsibility
enforcement_data_for_cv
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
. state_contact_data
. . state_contact_details
. . . state_contact_address
. . . state_contact_computer
. . . state_contact_email
. . . state_contact_fax
. . . state_contact_name
. . . state_contact_phone
. . state_contact_identity
. . state_contact_method
enforcement_data_for_fare_payment
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
enforcement_data_for_parking
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
. state_contact_data
. . state_contact_details
. . . state_contact_address
. . . state_contact_computer

. . . state_contact_email
. . . state_contact_fax
. . . state_contact_name
. . . state_contact_phone
. . state_contact_identity
. . state_contact_method
enforcement_data_for_roadside_fare_collection
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
enforcement_data_for_TM
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
. state_contact_data
. . state_contact_details
. . . state_contact_address
. . . state_contact_computer
. . . state_contact_email
. . . state_contact_fax
. . . state_contact_name
. . . state_contact_phone
. . state_contact_identity
. . state_contact_method
enforcement_data_for_tolls
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
. state_contact_data
. . state_contact_details
. . . state_contact_address
. . . state_contact_computer
. . . state_contact_email
. . . state_contact_fax
. . . state_contact_name
. . . state_contact_phone
. . state_contact_identity
. . state_contact_method
enforcement_data_for_vehicle_fare_collection
. enforcement_agency_contact
. enforcement_agency_details
. . enforcement_agency_address
. . enforcement_agency_computer
. . enforcement_agency_email
. . enforcement_agency_fax
. . enforcement_agency_name
. . enforcement_agency_phone
. . enforcement_agency_responsibility
env_and_weather_data
. env_probe_info
. . env_probe_info_from_emergency
. . . env_probe_data
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_total_number
. . env_probe_info_from_isp
. . . env_probe_data
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_total_number
. . env_probe_info_from_transit
. . . env_probe_data
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_total_number
. environmental_sensor_data
. . environmental_sensor_data_from_mcv
. . . environmental_sensor_data_from_mcv_sensors
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . sensor_identity
. . . . station_id
. . . environmental_sensor_data_from_roadway
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied

. . . . . owner_entities
. . . . . perishability_date
. . . . . . date
. . . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . sensor_identity
. . . . station_id
. . environmental_sensor_data_from_roadway_sensors
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . environmental_sensor_data_from_traffic_management
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . fomcm_env_sensor_data
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . fstws_env_sensor_data
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status

. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . fws_env_sensor_data
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. surface_trans_weather_information
. . fstws_surface_trans_weather_forecasts
. . . climatic_scale_surface_trans_weather_forecasts
. . . meso_scale_surface_trans_weather_forecasts
. . . . surface_trans_weather_advisories
. . . . surface_trans_weather_forecast_details
. . . micro_scale_surface_trans_weather_forecasts
. . . . surface_trans_weather_forecast_details
. . . miso_scale_surface_trans_weather_forecasts
. . . . surface_trans_weather_advisories
. . . . surface_trans_weather_forecast_details
. . . surface_trans_weather_scale_forecast_data_attributes
. . . synoptic_scale_surface_trans_weather_forecasts
. . . . surface_trans_weather_forecast_details
. . fstws_surface_trans_weather_observations
. . . surface_trans_weather_observations
. . . weather_observation_attributes
. weather_service_information
. . fws_current_weather_observations
. . . current_weather_observations
. . . weather_observation_attributes
. . fws_weather_forecasts
. . . climatic_scale_weather_forecasts
. . . meso_scale_weather_forecasts
. . . . weather_advisories
. . . . weather_forecast_details
. . . . weather_warnings
. . . miso_scale_weather_forecasts
. . . . weather_advisories
. . . . weather_forecast_details
. . . . weather_warnings
. . . synoptic_scale_weather_forecasts
. . . . weather_forecast_details
. . . . weather_watches
. . . weather_scale_forecast_data_attributes

env_and_weather_data_for_decision_support

. env_and_weather_data
. . env_probe_info
. . . env_probe_info_from_emergency
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_isp
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_transit
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . environmental_sensor_data
. . . environmental_sensor_data_from_mcv
. . . . environmental_sensor_data_from_mcv_sensors
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . . environmental_sensor_data_from_roadway
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status

. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . environmental_sensor_data_from_roadway_sensors
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . .
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fomcm_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fstws_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status

. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fws_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . . date
. . . . . . time
. . . . . date_created
. . . . . . date
. . . . . . time
. . . . . date_published
. . . . . . date
. . . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . . date
. . . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . surface_trans_weather_information
. . . fstws_surface_trans_weather_forecasts
. . . . climatic_scale_surface_trans_weather_forecasts
. . . . meso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . micro_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . miso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . .
. . . . synoptic_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . fstws_surface_trans_weather_observations
. . . . surface_trans_weather_observations
. . . . weather_observation_attributes
. . weather_service_information
. . . fws_current_weather_observations
. . . . current_weather_observations
. . . . weather_observation_attributes
. . . fws_weather_forecasts
. . . . climatic_scale_weather_forecasts
. . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . weather_scale_forecast_data_attributes

env_and_weather_data_for_display

. env_and_weather_data
. . env_probe_info
. . . env_probe_info_from_emergency
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_isp
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_transit
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . environmental_sensor_data
. . . environmental_sensor_data_from_mcv
. . . . environmental_sensor_data_from_mcv_sensors
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . . environmental_sensor_data_from_roadway
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status

. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . environmental_sensor_data_from_roadway_sensors
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . .
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fomcm_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fstws_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status

. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fws_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . . date
. . . . . . time
. . . . . date_created
. . . . . . date
. . . . . . time
. . . . . date_published
. . . . . . date
. . . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . . date
. . . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . surface_trans_weather_information
. . . fstws_surface_trans_weather_forecasts
. . . . climatic_scale_surface_trans_weather_forecasts
. . . . meso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . micro_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . miso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . .
. . . . synoptic_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . fstws_surface_trans_weather_observations
. . . . surface_trans_weather_observations
. . . . weather_observation_attributes
. . weather_service_information
. . . fws_current_weather_observations
. . . . current_weather_observations
. . . . weather_observation_attributes
. . . fws_weather_forecasts
. . . . climatic_scale_weather_forecasts
. . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . weather_scale_forecast_data_attributes

env_and_weather_data_for_dissemination

. env_and_weather_data
. . env_probe_info
. . . env_probe_info_from_emergency
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_isp
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_transit
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . environmental_sensor_data
. . . environmental_sensor_data_from_mcv
. . . . environmental_sensor_data_from_mcv_sensors
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . . environmental_sensor_data_from_roadway
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status

. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . environmental_sensor_data_from_roadway_sensors
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . .
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date

. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fomcm_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fstws_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status

. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fws_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . . date
. . . . . . time
. . . . . date_created
. . . . . . date
. . . . . . time
. . . . . date_published
. . . . . . date
. . . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . . date
. . . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . surface_trans_weather_information
. . . fstws_surface_trans_weather_forecasts
. . . . climatic_scale_surface_trans_weather_forecasts
. . . . meso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . micro_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . miso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . .
. . . . synoptic_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . fstws_surface_trans_weather_observations
. . . . surface_trans_weather_observations
. . . . weather_observation_attributes
. . weather_service_information
. . . fws_current_weather_observations
. . . . current_weather_observations
. . . . weather_observation_attributes
. . . fws_weather_forecasts
. . . . climatic_scale_weather_forecasts
. . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . weather_scale_forecast_data_attributes
env_data_collection_parameters
env_data_processing_parameters
env_info_dissemination_parameters
env_info_for_decision_support
. analyzed_env_and_weather_data
. . env_and_weather_data
. . . env_probe_info
. . . . env_probe_info_from_emergency
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_total_number
. . . . env_probe_info_from_isp
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_total_number
. . . . env_probe_info_from_transit
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_total_number
. . . environmental_sensor_data
. . . . environmental_sensor_data_from_mcv
. . . . . environmental_sensor_data_from_mcv_sensors
. . . . . . environment_sensor_attributes
. . . . . . environment_sensor_output
. . . . . . sensor_identity
. . . . . . station_id
. . . . . environmental_sensor_data_from_roadway
. . . . . . environment_sensor_attributes
. . . . . . environment_sensor_output
. . . . . . sensor_identity
. . . . . . station_id
. . . . environmental_sensor_data_from_roadway_sensors
. . . . . environment_sensor_attributes
. . . . . . authorization_to_use
. . . . . . collection_conditions
. . . . . . collection_equipment
. . . . . . data_aggregation
. . . . . . data_concept_identifier
. . . . . . data_reductions
. . . . . . data_revision
. . . . . . data_version
. . . . . . date_archived
. . . . . . date_created
. . . . . . date_published
. . . . . . equipment_status
. . . . . . error_handling
. . . . . . methods_applied
. . . . . . owner_entities
. . . . . . perishability_date
. . . . . . personal_identification_status
. . . . . . quality_control_attribute
. . . . . . record_size
. . . . . . security
. . . . . . standard_data_attribute
. . . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity

Appendix D: Data Tree

. . . . . station_id
. . . .
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . fomcm_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . fstws_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . fws_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . surface_trans_weather_information
. . . . fstws_surface_trans_weather_forecasts
. . . . . climatic_scale_surface_trans_weather_forecasts
. . . . . meso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . . micro_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . . miso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . .
. . . . . synoptic_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . fstws_surface_trans_weather_observations
. . . . . surface_trans_weather_observations
. . . . . weather_observation_attributes
. . . weather_service_information
. . . . fws_current_weather_observations
. . . . . current_weather_observations
. . . . . weather_observation_attributes
. . . . fws_weather_forecasts
. . . . . climatic_scale_weather_forecasts
. . . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches

. . . . . weather_scale_forecast_data_attributes
. . source_reliability_information
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
env_info_for_display
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
env_info_for_maint_needs
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
env_info_for_mcv_mgmt
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
env_info_for_road_network
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
env_info_for_scheduling
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
env_info_to_manage_mcv
. env_info_for_mcv_mgmt
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. env_info_for_road_network
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. environmental_sensor_data_on_board
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time

. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. environmental_sensor_fault_data_on_board
. . sensor_fault_data
. . sensor_identity
. environmental_sensor_status_on_board
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
env_info_to_roadway_m_and_c
. env_and_weather_data_for_decision_support
. . env_and_weather_data
. . . env_probe_info
. . . . env_probe_info_from_emergency
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_total_number
. . . . env_probe_info_from_isp
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_total_number
. . . . env_probe_info_from_transit
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_total_number
. . . environmental_sensor_data
. . . . environmental_sensor_data_from_mcv
. . . . . environmental_sensor_data_from_mcv_sensors
. . . . . environment_sensor_attributes
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . . . environmental_sensor_data_from_roadway
. . . . . environment_sensor_attributes
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . . environmental_sensor_data_from_roadway_sensors
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . .
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . fomcm_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . fstws_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created

Appendix D: Data Tree

. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . fws_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . surface_trans_weather_information
. . . . fstws_surface_trans_weather_forecasts
. . . . . climatic_scale_surface_trans_weather_forecasts
. . . . . meso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . . micro_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . . miso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . .
. . . . . synoptic_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . fstws_surface_trans_weather_observations
. . . . . surface_trans_weather_observations
. . . . . weather_observation_attributes
. . . weather_service_information
. . . . fws_current_weather_observations
. . . . . current_weather_observations
. . . . . weather_observation_attributes
. . . . fws_weather_forecasts
. . . . . climatic_scale_weather_forecasts
. . . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . . weather_scale_forecast_data_attributes
. env_info_for_decision_support
. . analyzed_env_and_weather_data
. . . env_and_weather_data
. . . . env_probe_info
. . . . . env_probe_info_from_emergency
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . route_segment_total_number
. . . . . env_probe_info_from_isp
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . route_segment_total_number
. . . . . env_probe_info_from_transit
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . route_segment_total_number
. . . . environmental_sensor_data
. . . . . environmental_sensor_data_from_mcv
. . . . . environmental_sensor_data_from_mcv_sensors
. . . . . environmental_sensor_data_from_roadway
. . . . . environmental_sensor_data_from_roadway_sensors
. . . . . environment_sensor_attributes
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . .
. . . . . environment_sensor_attributes
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . fomcm_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . fstws_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . fws_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . surface_trans_weather_information
. . . . . fstws_surface_trans_weather_forecasts
. . . . . climatic_scale_surface_trans_weather_forecasts
. . . . . meso_scale_surface_trans_weather_forecasts
. . . . . micro_scale_surface_trans_weather_forecasts
. . . . . miso_scale_surface_trans_weather_forecasts
. . . . . .
. . . . . synoptic_scale_surface_trans_weather_forecasts
. . . . . fstws_surface_trans_weather_observations
. . . . . surface_trans_weather_observations
. . . . . weather_observation_attributes
. . . . weather_service_information
. . . . . fws_current_weather_observations
. . . . . current_weather_observations
. . . . . weather_observation_attributes
. . . . . fws_weather_forecasts
. . . . . climatic_scale_weather_forecasts
. . . . . meso_scale_weather_forecasts

. . . . . miso_scale_weather_forecasts
. . . . . synoptic_scale_weather_forecasts
. . . . . weather_scale_forecast_data_attributes
. . . source_reliability_information
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. env_info_for_maint_needs
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. env_info_for_scheduling
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. env_sensor_equip_status_for_m_and_c
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id

env_probe_data

env_probe_data_from_evs

. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity
. vehicle_identity

env_probe_data_from_transit_vehicle

. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity
. transit_vehicle_identity

env_probe_data_from_vehicle

. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities

. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity
. vehicle_identity
env_probe_info
. env_probe_info_from_emergency
. . env_probe_data
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_total_number
. env_probe_info_from_isp
. . env_probe_data
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_total_number
. env_probe_info_from_transit
. . env_probe_data
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_total_number
env_probe_info_from_emergency
. env_probe_data
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_total_number
env_probe_info_from_isp
. env_probe_data
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_total_number
env_probe_info_from_transit
. env_probe_data
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_total_number
env_sensor_control_by_auto_treat_device
. env_sensor_control_by_roadway_treatment_device
env_sensor_control_by_operator
. environmental_sensor_control
. sensor_identity
. station_id
env_sensor_control_by_roadway_treatment_device
env_sensor_data_for_auto_treat_device
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity
. station_id
env_sensor_data_for_m_and_c_speed_monitoring
. environment_sensor_output
. list_size
. sensor_identity
. station_id
env_sensor_data_for_speed_enforcement
. environment_sensor_output
. list_size
. sensor_identity
. station_id
env_sensor_data_for_traffic_speed_monitoring
. environment_sensor_output
. list_size
. sensor_identity
. station_id
env_sensor_equip_status_for_m_and_c
. list_size
. sensor_identity
. sensor_status
. . traffic_sensor_status
. station_id
environment_sensor_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute

. standard_message_attribute
environment_sensor_configuration_data
environment_sensor_data
. environment_sensor_output
. list_size
. sensor_identity
. station_id
environment_sensor_fault_data
environment_sensor_output
environmental_data_for_incidents
. environment_sensor_data
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
environmental_data_for_signage
. environment_sensor_data
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
environmental_sensor_control
environmental_sensor_control_for_mcv
environmental_sensor_control_for_roadway
. environmental_sensor_control
. sensor_identity
. station_id
environmental_sensor_control_for_roadway_sensors
. environmental_sensor_control
. list_size
. sensor_identity
. station_id
environmental_sensor_control_on_board
environmental_sensor_data
. environmental_sensor_data_from_mcv
. . environmental_sensor_data_from_mcv_sensors
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . sensor_identity
. . . station_id
. . environmental_sensor_data_from_roadway
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . sensor_identity
. . . station_id
. environmental_sensor_data_from_roadway_sensors
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. environmental_sensor_data_from_traffic_management
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier

. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. fomcm_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. fstws_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. fws_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
environmental_sensor_data_for_roadway
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived

. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity
. station_id

environmental_sensor_data_from_mcv

. environmental_sensor_data_from_mcv_sensors
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. . station_id
. environmental_sensor_data_from_roadway
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. . station_id

environmental_sensor_data_from_mcv_sensors

. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity
. station_id

environmental_sensor_data_from_roadway

. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date

. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity
. station_id

environmental_sensor_data_from_roadway_sensors

. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id

environmental_sensor_data_from_traffic_management

. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id

environmental_sensor_data_on_board

. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity

environmental_sensor_fault_data_from_mcv

. environmental_sensor_fault_data_from_mcv_sensors
. . sensor_fault_data
. . sensor_identity
. . station_id
. environmental_sensor_fault_data_from_roadway
. . sensor_fault_data
. . sensor_identity
. . station_id

environmental_sensor_fault_data_from_mcv_sensors

. sensor_fault_data
. sensor_identity
. station_id

environmental_sensor_fault_data_from_roadway

. sensor_fault_data
. sensor_identity
. station_id

environmental_sensor_fault_data_from_roadway_sens

. list_size
. sensor_fault_data
. sensor_identity
. station_id

environmental_sensor_fault_data_on_board

. sensor_fault_data
. sensor_identity

Appendix D: Data Tree

environmental_sensor_status
. environment_sensor_fault_data
. list_size
. sensor_identity
. station_id
environmental_sensor_status_from_mcv
. environmental_sensor_status_from_mcv_sensors
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
. environmental_sensor_status_from_roadway
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
environmental_sensor_status_from_mcv_sensors
. sensor_identity
. sensor_status
. . traffic_sensor_status
. station_id
environmental_sensor_status_from_roadway
. sensor_identity
. sensor_status
. . traffic_sensor_status
. station_id
environmental_sensor_status_from_roadway_sensors
. list_size
. sensor_device_status
. sensor_identity
. station_id
environmental_sensor_status_on_board
. sensor_identity
. sensor_status
. . traffic_sensor_status
equipment_availability
. date
. list_size
. m_and_c_equipment_quantity
. m_and_c_equipment_status
. m_and_c_equipment_type
. time
equipment_status
erms_incidents
. emergency_traffic_control_request
. . date
. . list_size
. . route_segment_estimated_arrival_time
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . time
. emergency_vehicle_preemptions
. . emergency_vehicle_junction_preemption
. . emergency_vehicle_pedestrian_preemption
. . emergency_vehicle_ramp_preemption
. . emergency_vehicle_sign_preemption
. incident_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_type
. . incident_vehicles_involved
. incident_response_status
. traffic_probe_info_from_evs_for_traffic
. . emergency_vehicle_tracking_data
. . . emergency_vehicle_operational_data
. . . vehicle_identity
. . . vehicle_location_for_emergency_services
. . . . location_identity
. . . . time
error_handling
event_attendance_expected
event_duration
event_information_advisory_data
event_information_advisory_requests
event_information_advisory_requests_for_archive
. event_information_advisory_requests
event_information_for_travelers
event_information_request
event_information_requests_for_archive
. event_information_advisory_requests_for_archive
. . event_information_advisory_requests
. traveler_event_information_request_for_archive
. . traveler_event_information_request
.
. . traveler_personal_event_information_request
event_location
. location_identity
event_name
event_notice
event_start_time
existing_sensor_static_data
. static_data_for_sensor_processing
. . dms_allocation
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . dms_hri_allocation
. . . crossing_id
. . . list_size
. . highway_control_devices
. . . crossing_equipment_data_for_highways
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . highway_equipment_data
. . . . dms_allocation
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . . location_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_start_point
. . . . . . location_identity
. . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity

. . . . . unit_number
. . . . list_size
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . ramp_devices
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . . ramp_phase_data
. . road_control_devices
. . . crossing_equipment_data_for_roads
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . hri_data_for_roads
. . . . crossing_id
. . . . hri_phase_data
. . . . list_size
. . . intersection_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . intersection_phase_data
. . . . intersection_phase_number
. . . . list_size
. . . pedestrian_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . pedestrian_phase_data
. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . sensor_allocation
. . . sensor_allocation_for_controllers
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . . sensor_allocation_for_hov_lanes
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . . sensor_allocation_for_probes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . sensor_allocation_for_tags
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . vehicle_tag_data_source_location
. . . . . location_identity
f_other_rw_dms_auto_treat_data_from_roadway
. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. lane_dms_controls
. list_size
f_other_rw_env_sensor_control_by_auto_treat_device
. env_sensor_control_by_roadway_treatment_device
f_other_rw_env_sensor_data_for_auto_treat_device
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date

Appendix D: Data Tree

. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity
. station_id
f_other_rw_env_sensor_data_to_dms
. environment_sensor_output
. list_size
. sensor_identity
. station_id
f_other_rw_fc_control_to_fc
. indicator_crossing_control_data_for_highways
. . indicator_crossing_controls
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. indicator_ramp_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . ramp_controls
f_other_rw_fc_control_to_traffic_sensor
f_other_rw_fc_status_to_fc
. indicator_fault
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_response_state
. list_size
f_other_rw_fc_to_fc
. f_other_rw_fc_control_to_fc
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls
. f_other_rw_fc_status_to_fc
. . indicator_fault
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
f_other_rw_ic_control_to_ic
. indicator_crossing_control_data_for_roads
. . indicator_crossing_controls
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. indicator_junction_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_junction_controls
. . list_size
. indicator_pedestrian_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_pedestrian_controls
. . list_size
f_other_rw_ic_control_to_traffic_sensor
f_other_rw_ic_status_to_ic
. indicator_fault
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_response_state
. list_size
f_other_rw_ic_to_ic
. f_other_rw_ic_control_to_ic
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size
. f_other_rw_ic_status_to_ic
. . indicator_fault
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
f_other_rw_individual_vehicle_speed_to_dms
f_other_rw_roadway_info_data
. f_other_rw_dms_auto_treat_data_from_roadway
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type

. . . location_identity
. . . unit_number
. . lane_dms_controls
. . list_size
. f_other_rw_env_sensor_data_to_dms
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. f_other_rw_individual_vehicle_speed_to_dms
. f_other_rw_speed_warning_to_dms
f_other_rw_sensor_to_fc
. f_other_rw_traffic_sensor_data_to_fc
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. f_other_rw_traffic_sensor_status_to_fc
. . sensor_status
. . . traffic_sensor_status
f_other_rw_sensor_to_ic
. f_other_rw_traffic_sensor_data_to_ic
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. f_other_rw_traffic_sensor_status_to_ic
. . sensor_status
. . . traffic_sensor_status
f_other_rw_speed_warning_to_dms
f_other_rw_traffic_sensor_data_to_fc
. vehicle_detection_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
f_other_rw_traffic_sensor_data_to_ic
. vehicle_detection_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
f_other_rw_traffic_sensor_status_to_fc
. sensor_status
. . traffic_sensor_status
f_other_rw_traffic_sensor_status_to_ic
. sensor_status
. . traffic_sensor_status
f_other_rw_work_zone_intrusion_detection
. work_zone_intrusion_detection
fada_archive_administration_requests
fadu_archive_analysis_request
fadu_archive_data_product_request
fadu_on_demand_archive_request
fam_asset_archive_data
. asset_archive_catalog
. asset_data_for_archive
. . asset_data
. . asset_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
fam_asset_inventory
fam_asset_maint_and_repair_needs
fam_asset_restrictions
fare_collection_roadside_violation_information
. transit_route_number
. transit_route_segment_number
. transit_user_roadside_image
. transit_user_roadside_tag_identity
. . credit_identity
. . traveler_identity
fare_collection_vehicle_violation_information
. transit_route_number
. transit_route_segment_number
. transit_user_vehicle_image
. transit_user_vehicle_tag_identity
. . credit_identity
. . stored_credit
. . traveler_identity
fare_payment_violator_data
. credit_identity
. transit_fare
fare_violation_information
. credit_identity
. transit_fare
. transit_route_number
. transit_route_segment_number
. transit_route_use_time
. transit_user_category
. transit_user_roadside_image
. transit_user_vehicle_image
. traveler_identity
fault_data
. sensor_fault_data
fault_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date

Appendix D: Data Tree

. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
fbcv_brake_condition
fbcv_cargo_data
fbcv_cargo_safety_status
fbcv_distance_traveled
fbcv_driver_safety_status
fbcv_driver_status
fbcv_lock_tag_data
fbcv_vehicle_characteristics
fbcv_vehicle_identification
fbcv_vehicle_safety_status
fbcv_weight
fbmcv_basic_mcv_measures
. vehicle_system_status
fbmcv_materials_status
fbtv_availability
fbtv_vehicle_maintenance_data
fbtv_vehicle_trip_data
fbv_brake_servo_response
fbv_crash_sensor_data
fbv_diagnostics_data
fbv_driver_safety_status
fbv_steering_servo_response
fbv_throttle_servo_response
fbv_vehicle_attitude_data
fbv_vehicle_condition
fbv_vehicle_headway
fbv_vehicle_identity
fbv_vehicle_lane_position
fbv_vehicle_motion_data
fbv_vehicle_on_ahs_lane
fbv_vehicle_proximity_data
fbv_vehicle_safety_status
fbv_vehicle_security_status
fbv_vehicle_speed
fcf_care_facility_status_response
fcf_care_facility_vehicle_status_response
fci_credentials_data_request
fci_inspection_data_input
fci_pull_in_action
fci_request_log_report
fci_safety_data_request
fci_start_inspection
fcvd_activity_request
fcvd_carrier_number
fcvd_driver_data_input
fcvd_driver_general_message
fcvd_driver_input_type
fcvd_driver_number
fcvd_enrollment_payment_request
fcvd_enrollment_request
fcvd_other_data_input
fcvd_request_routing_instructions
fcvd_request_tag_data_output
fcvd_route_data
fcvd_route_request
fcvd_trip_identification_number
fcvd_vehicle_number
fcvm_carrier_number
fcvm_driver_number
fcvm_enrollment_payment_request
fcvm_enrollment_request
fcvm_other_data_input
fcvm_preclearance_data
fcvm_request_driver_route_instructions
fcvm_request_on_board_vehicle_data
fcvm_request_tag_data_output
fcvm_roadside_activity_report_request
fcvm_route_data
fcvm_route_function_request
fcvm_trip_identity
fcvm_update_driver_route_instructions
fcvm_vehicle_number
fd_activate_vehicle_control
fd_emergency_request
fd_guidance_data
fd_guidance_map_update_request
fd_guidance_request
fd_guidance_route_accepted
fd_other_services_parking_request
fd_other_services_toll_request
fd_request_advisory_information
fdmv_parking_lot_violation_state_identity
fdmv_parking_lot_violation_vehicle_registration
fdmv_toll_violation_state_identity
fdmv_toll_violation_vehicle_registration
fdmv_traffic_violation_state_identity
fdmv_traffic_violation_vehicle_registration
fe_area_pollutant_levels
fe_roadside_pollutant_levels
fea_cv_enforcement_agency_response
fea_enforcement_parameters
fea_speed_sensor_control
. list_size
. sensor_identity
. speed_sensor_control
fea_violator_information
feedback_actuator_response
. manual_brake_input_detected
. manual_steering_input_detected
. manual_throttle_input_detected
feedback_actuator_status
feedback_change_lane_servo_status
feedback_headway_servo_status
feedback_lane_servo_status
feedback_platoon_status
feedback_sensor_status
feedback_servo_status
. feedback_change_lane_servo_status
. feedback_headway_servo_status
. feedback_lane_servo_status
. feedback_speed_servo_status
feedback_speed_servo_status
fep_emergency_dispatch_acknowledge
fep_incident_command_request
fep_incident_status
ferf_current_fleet_maintenance_status
ferf_equipment_repair_status
ferf_equipment_status_for_tracking
ferf_fleet_maintenance_record
ferry_services_costs
. cost
ferry_services_destination
. route_point
ferry_services_destination_arrival_time
. time
ferry_services_details
. ferry_services_costs
. . cost
. ferry_services_routes
. . ferry_services_route_details
. . . ferry_services_destination
. . . . route_point
. . . ferry_services_intermediate_point
. . . . route_point
. . . ferry_services_origin
. . . . route_point
. ferry_services_schedules
. . ferry_services_schedule_details
. . . ferry_services_destination_arrival_time
. . . . time
. . . ferry_services_intermediate_arrival_time

. . . . time
. . . ferry_services_intermediate_depart_time
. . . . time
. . . ferry_services_origin_depart_time
. . . . time
ferry_services_intermediate_arrival_time
. time
ferry_services_intermediate_depart_time
. time
ferry_services_intermediate_point
. route_point
ferry_services_origin
. route_point
ferry_services_origin_depart_time
. time
ferry_services_route_details
. ferry_services_destination
. . route_point
. ferry_services_intermediate_point
. . route_point
. ferry_services_origin
. . route_point
ferry_services_routes
. ferry_services_route_details
. . ferry_services_destination
. . . route_point
. . ferry_services_intermediate_point
. . . route_point
. . ferry_services_origin
. . . route_point
ferry_services_schedule_details
. ferry_services_destination_arrival_time
. . time
. ferry_services_intermediate_arrival_time
. . time
. ferry_services_intermediate_depart_time
. . time
. ferry_services_origin_depart_time
. . time
ferry_services_schedules
. ferry_services_schedule_details
. . ferry_services_destination_arrival_time
. . . time
. . ferry_services_intermediate_arrival_time
. . . time
. . ferry_services_intermediate_depart_time
. . . time
. . ferry_services_origin_depart_time
. . . time
feso_archive_commands
feso_emergency_action_log_request
feso_emergency_allocation_override
feso_emergency_data_input
feso_emergency_data_output_request
feso_emergency_display_update_request
fets_caller_information
fets_incident_data_FB
. fets_caller_information
. fets_incident_information
. . incident_description
. . incident_location
. . . location_identity
. . incident_severity
. . incident_type
fets_incident_information
. incident_description
. incident_location
. . location_identity
. incident_severity
. incident_type
fevp_event_information
fevp_event_information_for_travelers
fevp_planned_event_data
ffi_archive_analysis_payment_confirm
ffi_archive_payment_confirm
ffi_bad_charges_payment_updates
ffi_bad_fare_payment_updates
ffi_bad_toll_payment_updates
ffi_confirm_charges_payment
ffi_confirm_fare_payment
ffi_confirm_toll_payment
ffi_cv_payment_confirm
ffi_driver_map_payment_confirm
ffi_other_services_payment_confirm
ffi_registration_payment_confirm
ffi_traveler_display_payment_confirm
ffi_traveler_map_payment_confirm
ffi_traveler_other_services_payments_confirm
ffi_traveler_rideshare_payment_confirm
fgrs_government_data_report_request
field_device_status_for_archive
. auto_treat_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id
. dms_equip_status_for_m_and_c
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. env_sensor_equip_status_for_m_and_c
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
. har_equip_status_for_m_and_c
. . har_fault
. . . har_identity
. hov_sensor_equip_status_for_m_and_c
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
. indicator_equip_status_from_highways_for_m_and_c
. . indicator_fault
. . indicator_type
. . list_size
. indicator_equip_status_from_roads_for_m_and_c
. . indicator_fault
. . indicator_type
. . list_size
. infrastructure_sensor_equip_status_for_m_and_c
. . infrastructure_sensor_status_for_m_and_c
. . . infrastructure_sensor_status_of_roadside_devices
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . infrastructure_sensor_status_for_mcv
. . . infrastructure_sensor_status_of_roadside_devices
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. smart_probe_equip_status_for_m_and_c

. . device_identity
. . list_size
. . roadside_device_status
. . station_id
. traffic_sensor_equip_status_for_m_and_c
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
. vehicle_sign_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id
. video_device_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id

field_device_status_for_archive_attributes

. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute

field_device_status_from_roadway

. auto_treat_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id
. dms_equip_status_for_m_and_c
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. env_sensor_equip_status_for_m_and_c
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
. har_equip_status_for_m_and_c
. . har_fault
. . . har_identity
. hov_sensor_equip_status_for_m_and_c
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
. indicator_equip_status_from_highways_for_m_and_c
. . indicator_fault
. . indicator_type
. . list_size
. indicator_equip_status_from_roads_for_m_and_c
. . indicator_fault
. . indicator_type
. . list_size
. infrastructure_sensor_equip_status_for_m_and_c
. . infrastructure_sensor_status_for_m_and_c
. . . infrastructure_sensor_status_of_roadside_devices
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . infrastructure_sensor_status_for_mcv
. . . infrastructure_sensor_status_of_roadside_devices
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. smart_probe_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id
. traffic_sensor_equip_status_for_m_and_c
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
. vehicle_sign_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id
. video_device_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id

field_equip_maint_status

. device_identity
. list_size
. roadside_device_status
. station_id

field_equip_status_from_mcv_operator

. device_identity
. list_size
. roadside_device_status
. station_id

field_equipment_status_from_traffic

. device_identity
. list_size
. roadside_device_status
. station_id

field_status

. dms_status
. . dms_advisory_text
. . . dms_auto_treat_info

. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. har_status
. . device_status
. . har_fault
. . . har_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. indicator_data_fault_for_highways
. . indicator_fault
. . indicator_type
. . list_size
. indicator_data_fault_for_roads
. . indicator_fault
. . indicator_type
. . list_size
. smart_probe_reader_status
. . device_status
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. traffic_control_device_status
. . indicator_fault_data
. . . indicator_fault
. . . indicator_type
. . smart_probe_reader_status
. . . device_status
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . traffic_sensor_status
. . vehicle_sign_data_status
. vehicle_sign_data_status
. video_device_status
fifd_freight_data
fifd_intermodal_archive_data
. intermodal_archive_catalog
. intermodal_data_for_archive
. . intermodal_data
. . intermodal_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
fifs_trip_identification_number
financial_request
. cf_manager_enrollment_cost
. . cv_amount_billed
. cv_driver_enrollment_cost
. . cv_amount_billed
. . stored_credit
. duty_cost
. . cost
. permit_cost
. . cost
financial_response
. authorization_code
. cf_manager_credit_identity
. . credit_identity
. cv_driver_credit_identity
. . credit_identity
. . stored_credit
fispo_archive_commands
fispo_broadcast_data_parameters_request
fispo_broadcast_data_parameters_update
fispo_request_other_routes_selection_map_data_upda
fispo_request_route_selection_map_data_update
fispo_route_selection_parameters_request
fispo_route_selection_parameters_update
fispo_trip_planning_parameters_request
fispo_trip_planning_parameters_update
fleet_activity_schedule
fleet_maintenance_availability
fleet_maintenance_record
fleet_management_dispatch_input
. dispatch_info_for_m_and_c_fleet
. fleet_activity_schedule
. routing_parameters_for_m_and_c_fleet
fleet_management_status
. m_and_c_fleet_manager_status
. . m_and_c_fleet_status
. . . current_fleet_maintenance_status
. . . date
. . . fleet_maintenance_record
. . . list_size
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . mcv_crew_status
. . . mcv_equipment_configuration
. . . mcv_operator_status
. . . mcv_vehicle_type
. . . mcv_work_activity_status
. . . operational_data_for_mcv
. . . safety_data_for_mcv
. . . . driver_safety_status
. . . . vehicle_attitude_data
. . . . vehicle_motion_data
. . . . vehicle_proximity_data
. . . . vehicle_safety_status
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv

Appendix D: Data Tree

. . . . location_identity
. . . vehicle_location_for_mcv_tracking
. . . . date
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . m_and_c_view_of_road_network
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . . parking_lot_calculated_occupancy
. . . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . . list_size
. . . . . . parking_lot_list
. . . . . . vehicle_count
. . . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . . list_size
. . . . . . private_vehicle_occupants
. . . . . . ramp_list
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . . link_environment_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . . strategy_data_for_highways
. . . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . . environment_sensor_output
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . hri_sensor_data
. . . . . . closure_event_data
. . . . . . hri_status
. . . . . . intersection_blocked
. . . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . . node_list
. . . . . . node_list
. . . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . . list_size
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . . current_incident_details
. . . . . . list_size
. . . . . planned_event_data
. . . . . . list_size
. . . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . . route_segment_identity
. . . . . . route_segment_journey_time
. . . . . . route_segment_total_number
. . . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . . current_highway_network_data
. . . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . link_data_from_avl
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . link_speed
. . . . . . list_size
. . . . . link_data_from_tags
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . list_size
. . . . . ramp_signal_state
. . . . . . list_size
. . . . . . ramp_controls
. . . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . . selected_emergency_vehicle_strategy
. . . . . . selected_parking_lot_control_strategy
. . . . . . selected_ramp_control_strategy
. . . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . . location_identity
. . . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . . vehicle_smart_probe_data_indication
. . . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . . area_air_quality_index
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution

Appendix D: Data Tree

. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . env_info_for_road_network
. . . . road_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_conditions
. . . . road_weather_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_response_status_from_emerg
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. vehicle_fleet_status_for_personnel
. . m_and_c_fleet_status
. . . current_fleet_maintenance_status
. . . date
. . . fleet_maintenance_record
. . . list_size
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . mcv_crew_status
. . . mcv_equipment_configuration
. . . mcv_operator_status
. . . mcv_vehicle_type
. . . mcv_work_activity_status
. . . operational_data_for_mcv
. . . safety_data_for_mcv
. . . . driver_safety_status
. . . . vehicle_attitude_data
. . . . vehicle_motion_data
. . . . vehicle_proximity_data
. . . . vehicle_safety_status
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. . . vehicle_location_for_mcv_tracking
. . . . date
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . m_and_c_view_of_road_network
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy

Appendix D: Data Tree

. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_list
. . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . node_list
. . . . . node_list
. . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . list_size
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . current_incident_details
. . . . . list_size
. . . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . env_info_for_road_network
. . . . road_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_conditions
. . . . road_weather_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_response_status_from_emerg
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed

. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. vehicle_fleet_status_for_scheduler
. . m_and_c_fleet_status
. . . current_fleet_maintenance_status
. . . date
. . . fleet_maintenance_record
. . . list_size
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . mcv_crew_status
. . . mcv_equipment_configuration
. . . mcv_operator_status
. . . mcv_vehicle_type
. . . mcv_work_activity_status
. . . operational_data_for_mcv
. . . safety_data_for_mcv
. . . . driver_safety_status
. . . . vehicle_attitude_data
. . . . vehicle_motion_data
. . . . vehicle_proximity_data
. . . . vehicle_safety_status
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. . . vehicle_location_for_mcv_tracking
. . . . date
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity

fleet_resource_request
. date
. list_size
. mcv_vehicle_type
. time

fleet_resource_response
. fleet_vehicle_available
. . date
. . list_size
. . mcv_equipment_configuration
. . mcv_vehicle_type
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity

fleet_vehicle_available
. date
. list_size
. mcv_equipment_configuration
. mcv_vehicle_type
. time
. vehicle_id_for_mcv
. vehicle_location_for_mcv
. . location_identity

fleet_vehicle_request_for_maint_needs
. fleet_resource_request
. . date
. . list_size
. . mcv_vehicle_type
. . time
. fleet_vehicle_request_for_roadway_maint
. . date
. . list_size
. . mcv_vehicle_type
. . time
. fleet_vehicle_request_for_winter_maint
. . date
. . list_size
. . mcv_vehicle_type
. . time

fleet_vehicle_request_for_roadway_maint
. date
. list_size
. mcv_vehicle_type
. time

fleet_vehicle_request_for_winter_maint
. date
. list_size
. mcv_vehicle_type
. time

fleet_vehicle_response_to_maint_needs
. fleet_resource_response
. . fleet_vehicle_available
. . . date
. . . list_size
. . . mcv_equipment_configuration
. . . mcv_vehicle_type
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. fleet_vehicle_response_to_roadway_maint
. . fleet_vehicle_available
. . . date
. . . list_size
. . . mcv_equipment_configuration
. . . mcv_vehicle_type
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. fleet_vehicle_response_to_winter_maint
. . fleet_vehicle_available
. . . date
. . . list_size
. . . mcv_equipment_configuration
. . . mcv_vehicle_type
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity

fleet_vehicle_response_to_roadway_maint
. fleet_vehicle_available
. . date
. . list_size
. . mcv_equipment_configuration
. . mcv_vehicle_type
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity

fleet_vehicle_response_to_winter_maint
. fleet_vehicle_available
. . date
. . list_size
. . mcv_equipment_configuration
. . mcv_vehicle_type
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity
fm_emergency_information_request
fm_incident_data_request
fm_incident_details
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_type
. media_identity
fm_incident_information
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_type
. media_identity
fm_incident_information_request
fm_traffic_data_request
fm_traffic_information_request
fm_transit_incident_information_request
fm_transit_schedule_deviations_request
fm_transit_vehicle_deviations_request
fm_traveler_information
fmcas_m_and_c_administrative_information
fmcas_m_and_c_personnel_information
fmcas_m_and_c_regulations
fmcas_resupply_response
fmccp_archive_commands
fmccp_dispatch_and_routing_info
. dispatch_info_for_m_and_c_fleet
. routing_parameters_for_m_and_c_fleet
fmccp_env_data_collection_inputs
fmccp_env_data_processing_inputs
fmccp_env_info_dissemination_inputs
fmccp_env_sensor_control_inputs
. environmental_sensor_control
. sensor_identity
. station_id
fmccp_mdss_parameter_input
fmccp_request_for_schedule
fmccp_resource_response
fmccp_wz_device_control
fmcfp_crew_movements
fmcfp_dispatch_response
fmcfp_field_equip_repair_status
fmcfp_m_and_c_activity_status
fmcfp_work_zone_status_inputs
fmmc_crossing_close_duration
fmmc_crossing_close_time
fmmc_crossing_closure_schedule
. crossing_closure_schedule
fmmc_crossing_status_for_highways
fmmc_crossing_status_for_roads
fmtsp_air_services
fmtsp_ferry_services
fmtsp_multimodal_archive_data
. multimodal_archive_catalog
. multimodal_data_for_archive
. . multimodal_data
. . multimodal_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
fmtsp_multimodal_service_confirmation
fmtsp_non_motorized_services
. bike_route_information
. multi_use_trail_information
. skyway_information
. walkway_information
fmtsp_rail_services
fmtsp_transit_service_data
fmup_demand_display_update
fmup_emergency_display_update
fmup_emergency_route_map_update
fmup_incident_display_update
fmup_m_and_c_display_update
fmup_m_and_c_route_map_update
fmup_map_archive_data
. map_archive_catalog
. map_data_for_archive
. . imported_map_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time

. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . imported_map_data_for_archive
fmup_other_routes_map_data
fmup_pollution_display_update
fmup_route_selection_map_data
fmup_traffic_display_update
fmup_transit_map_update
fmup_traveler_display_update
fmup_traveler_map_update
fmup_traveler_map_update_cost
fmup_traveler_personal_display_update
fmup_traveler_personal_display_update_cost
fmup_vehicle_map_update
fmup_vehicle_map_update_cost
foa_archive_coordination_data
focvas_border_clearance
focvas_credentials
focvas_credentials_status
focvas_data_table
focvas_safety_inspection
focvas_safety_status
fods_other_data_source_archive_data
. other_data_source_catalog
. user_defined_data_for_archive
. . user_defined_data
. . user_defined_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
foec_emergency_center_identity
. emergency_center_identity
foec_incident_data_FB
. foec_emergency_center_identity
. . emergency_center_identity
. foec_incident_details
. . incident_confidence_level
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_report_source
. . incident_reported_time
. . . time
. . incident_severity
. . incident_start_time
. . . time
. . incident_status
. . . incident_vehicles_involved
. . incident_traffic_impact
. . incident_type
. foec_incident_response_coordination
. . agency_incident_response_procedures
. . hand_off_coordination
. . incident_resource_coordination
. . incident_response_status
. . staging_area
foec_incident_details
. incident_confidence_level
. incident_description
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_report_source
. incident_reported_time
. . time
. incident_severity
. incident_start_time
. . time
. incident_status
. . incident_vehicles_involved
. incident_traffic_impact
. incident_type
foec_incident_response_coordination
. agency_incident_response_procedures
. hand_off_coordination
. incident_resource_coordination
. incident_response_status
. staging_area
foec_mayday_emergency_data
. driver_status_update
. emergency_request_driver_details
. . date
. . driver_personal_emergency_request
. . . call_back_information
. . . driver_information
. . . vehicle_identity
. . . vehicle_location_for_emergencies
. . . . location_identity
. . . vehicle_status_details
. . . . vehicle_security_status
. . . . vehicle_system_status
. . time
. emergency_request_vehicle_details
. . date
. . time
. . vehicle_emergency_request
. . . processed_cargo_data
. . . vehicle_crash_sensor_data
. . . vehicle_identity
. . . vehicle_location_for_incidents
. . . . location_identity
. . . vehicle_status_details
. . . . vehicle_security_status
. . . . vehicle_system_status
. mayday_agency_ID
. vehicle_status_update
foisp_data_supply
. road_data
foisp_request_data
foisp_traffic_data
. current_data_for_retrieval
. . area_air_quality_index

Appendix D: Data Tree

. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. long_term_data_for_retrieval
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data

. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. planned_events
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. predictive_model_data_for_retrieval
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . predicted_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_road_network_use
. . . route_segment_guided_vehicles
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. source_identity
foisp_traffic_information_request
foisp_transit_data
. transit_incident_data
. transit_running_data_for_advisory_output
. . list_size
. . transit_vehicle_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. . transit_vehicle_running_times
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time

. . . . time
. . . transit_vehicle_identity
. traveler_transit_information_advisory_data
. . traveler_transit_information_data
. . . transit_running_data_for_advisory_output
. . . . list_size
. . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . time
. . . . . transit_vehicle_identity
. . . transit_services_for_advisory_data
. . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_number
. . . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_list
. . . . . transit_schedule_identity
. traveler_transit_information_broadcast_data
. . traveler_transit_information_data
. . . transit_running_data_for_advisory_output
. . . . list_size
. . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . time
. . . . . transit_vehicle_identity
. . . transit_services_for_advisory_data
. . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_number
. . . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_list
. . . . . transit_schedule_identity
foisp_transit_information_request
fomcm_env_sensor_data
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
fomcm_m_and_c_plan_feedback
fomcm_m_and_c_work_plans
. m_and_c_work_plans
fomcm_resource_coordination_data
fomcm_road_weather_info
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
fomcm_roadway_maint_status
. current_roadway_maintenance_status
fomcm_work_zone_images
fomcm_work_zone_info
fomcv_crew_movements
fomcv_env_conditions
. environment_sensor_output
. sensor_identity

Appendix D: Data Tree

fomcv_vehicle_operational_data
. operational_data_for_mcv
. vehicle_id_for_mcv
fomcv_work_zone_intrusion_alert_on_board
fomcv_work_zone_intrusion_detection_on_board
fomcv_work_zone_intrusion_warning_to_crew
fop_parking_coordination_data
formatted_archive_catalog
. cv_archive_catalog
. em_archive_catalog
. emissions_archive_catalog
. intermodal_archive_catalog
. m_and_c_archive_catalog
. map_archive_catalog
. multimodal_archive_catalog
. other_data_source_catalog
. parking_archive_catalog
. toll_archive_catalog
. traffic_archive_catalog
. transit_archive_catalog
. traveler_archive_catalog
. weather_archive_catalog
formatted_archive_data
. formatted_cv_data
. . cv_credentials_enrollment_data
. . . cv_update_new_credentials_request
. . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_route_details
. . . . . cv_route_data
. . . . . route_cost
. . . . . route_list
. . . . . route_segment_commercial_details
. . . . . route_start_time
. . . . . route_statistics
. . . . . cv_route_number
. . . . . cv_taxes_and_duties
. . . . . route_type
. . . . cv_trip_classification_data
. . . . . cv_cargo_class
. . . . . cv_vehicle_class
. . . . . cv_weight_class
. . . . cv_trip_identity
. . . . hazmat_load_data
. . cv_daily_logs
. . . cv_roadside_daily_log
. . . . cv_roadside_facility_identity
. . . . cv_roadside_record
. . . . . cv_archived_inspection_data
. . . . . cv_credentials_details
. . . . . cv_driver_details
. . . . . cv_inspection_data
. . . . . cv_inspector_safety_data_input
. . . . . cv_not_pulled_in
. . . . . cv_roadside_report
. . . . . cv_safety_status_code
. . . . . cv_vehicle_details
. . . . . time
. . . . . cv_archived_safety_data
. . . . . cv_credentials_details
. . . . . cv_safety_override
. . . . . cv_safety_pull_in_output
. . . . . time
. . . . . cv_screening_record
. . . . . cv_credentials_details
. . . . . cv_screening_override
. . . . . cv_screening_pull_in_output
. . . . . time
. . . . . list_size
. . . . date
. . . cvo_border_clearance
. . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_credentials_details
. . . . . time
. . . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . time
. . . . . list_size
. . . . cv_roadside_facility_identity
. . . . date
. formatted_em_data
. . em_operational_data
. . . archive_manage_emergency_vehicle_data
. . . . emergency_vehicle_status_data
. . . . . emergency_vehicle_status_details
. . . . . date
. . . . . emergency_vehicle_identity
. . . . . emergency_vehicle_status_code
. . . . . emergency_vehicle_tracking_data
. . . . . emergency_vehicle_type
. . . . . incident_number
. . . . . time
. . . . . list_size
. . . archive_provide_emergency_service_allocation_data
. . . emergency_service_log_for_archive
. . . . emergency_service_action_log
. . . . . emergency_service_action_details
. . . . . emergency_service_allocations
. . . . . emergency_service_type_override
. . . . . emergency_service_type_requested
. . . . . emergency_vehicle_arrival_time
. . . . . emergency_vehicle_route
. . . . . identified_emergency_details
. . . . . incident_action_time
. . . . . time
. . . . . list_size
. formatted_emissions_data
. . archive_pollution_reference_data
. . . pollution_area_acceptance_data
. . . pollution_area_acceptance_times
. . . pollution_area_tolerance_data
. . . pollution_area_tolerance_times
. . . pollution_roadside_acceptance_data
. . . pollution_roadside_acceptance_times
. . . pollution_roadside_tolerance_data
. . . pollution_roadside_tolerance_times
. . . pollution_vehicle_acceptance_conditions
. . . pollution_vehicle_acceptance_data
. . archive_pollution_state_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_vehicle_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution

Appendix D: Data Tree

. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_sulfur_dioxide_pollution
. . . . vehicle_type
. . pollution_archive_data_log
. . . pollution_state_static_log_data
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . pollution_state_vehicle_log_data
. . . . pollution_state_vehicle_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_sulfur_dioxide_pollution
. . . . . vehicle_type
. formatted_intermodal_data
. . intermodal_data
. formatted_m_and_c_data
. . auto_treatment_system_status_for_archive
. . . auto_treatment_activation_data
. . . device_identity
. . . list_size
. . . station_id
. . field_device_status_for_archive
. . . auto_treat_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . dms_equip_status_for_m_and_c
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . dms_fault
. . . . . dms_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . env_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . har_equip_status_for_m_and_c
. . . . har_fault
. . . . . har_identity
. . . hov_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . indicator_equip_status_from_highways_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . indicator_equip_status_from_roads_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . infrastructure_sensor_equip_status_for_m_and_c
. . . . infrastructure_sensor_status_for_m_and_c
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . station_id
. . . . infrastructure_sensor_status_for_mcv
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . station_id
. . . smart_probe_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . traffic_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . vehicle_sign_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . video_device_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . infrastructure_data_for_archive
. . . infrastructure_sensor_data_for_m_and_c
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . mcv_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. . . processed_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_m_and_c
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . mcv_infrastructure_sensor_data
. . . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_data_from_onboard_devices

Appendix D: Data Tree

. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. . m_and_c_activity_schedule_for_archive
. . . m_and_c_activity_schedule
. . . . fleet_activity_schedule
. . . . m_and_c_work_plans
. . . . work_zone_activity_plan
. . m_and_c_activity_status_for_archive
. . . m_and_c_activity_status
. . . . m_and_c_fleet_manager_status
. . . . . m_and_c_fleet_status
. . . . . current_fleet_maintenance_status
. . . . . date
. . . . . fleet_maintenance_record
. . . . . list_size
. . . . . materials_status
. . . . . mcv_crew_status
. . . . . mcv_equipment_configuration
. . . . . mcv_operator_status
. . . . . mcv_vehicle_type
. . . . . mcv_work_activity_status
. . . . . operational_data_for_mcv
. . . . . safety_data_for_mcv
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . vehicle_location_for_mcv_tracking
. . . . . m_and_c_view_of_road_network
. . . . . current_data
. . . . . env_info_for_road_network
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_response_status_from_emerg
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . link_state_data
. . . . . predicted_road_network_data
. . . . . roadway_environment_conditions
. . . . m_and_c_work_performance
. . . . materials_availability_for_status
. . . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . . storage_facility_id
. . . . work_zone_data_for_status
. . . . . fomcm_work_zone_info
. . . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . . work_zone_status_from_mcv
. . m_and_c_maint_resource_needs_for_archive
. . . m_and_c_resource_request_from_emerg
. . . m_and_c_resource_request_from_traffic
. . . resource_needs_from_scheduler
. . . . date
. . . . list_size
. . . . m_and_c_equipment_quantity
. . . . m_and_c_equipment_type
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . mcv_vehicle_type
. . . . time
. . m_and_c_roadway_maint_needs_for_archive
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . need_date
. . . need_time
. . . roadway_maint_plan
. . m_and_c_winter_maint_needs_for_archive
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . need_date
. . . need_time
. . . winter_treatment_plan
. . work_zone_data_for_archive
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv
. formatted_map_data
. . imported_map_data_for_archive
. formatted_multimodal_data
. . multimodal_data
. formatted_parking_data
. . parking_charge_response_for_archive
. . . list_size
. . . parking_lot_availability
. . . . handicap_access_information
. . . . parking_lot_hours_of_operation
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_spaces
. . . . traveler_identity
. . . parking_lot_charge_application_time
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_price
. . . vehicle_type_for_charges
. . parking_lot_state_for_archive
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy

. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. formatted_roadside_data
. . archive_environmental_sensor_data
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . environment_sensor_fault_data
. . . environmental_sensor_status
. . . . environment_sensor_fault_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . fault_data
. . . sensor_fault_data
. . sensor_data_archive_input
. . . hov_sensor_data
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . private_vehicle_occupants
. . . local_sensor_data_for_highways
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . traffic_video_image
. . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . local_sensor_data_for_roads
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . pedestrian_demand
. . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . traffic_video_image
. . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . multimodal_crossing_sensor_data
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . pedestrian_sensor_data
. . . . node_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . pedestrian_demand
. . . sensor_data_for_reversible_lanes
. . . . traffic_video_image
. . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . traffic_sensor_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . sensor_status
. . . traffic_sensor_status
. formatted_toll_data
. . toll_operational_data
. . . date
. . . list_size
. . . time
. . . toll_cost
. . . toll_segment_identity
. . . . unit_number
. . . toll_segment_users
. . toll_prices_for_archive
. . . list_size
. . . toll_price
. . . toll_price_application_time
. . . toll_segment_identity
. . . . unit_number
. . . vehicle_type_for_tolls
. . . . cv_tag_data
. . . . . cv_carrier_number

. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_vehicle_characteristics
. . . . . cv_vehicle_configuration
. . . . . cv_vehicle_size
. . . . . cv_vehicle_weight
. . . . vehicle_identity
. . . . vehicle_type
. formatted_traffic_data
. . ahs_operational_data
. . . ahs_checking_records
. . . . ahs_check_identity
. . . . . location_identity
. . . . . unit_number
. . . . ahs_failed_checks_count
. . . . ahs_successful_checks_count
. . . . list_size
. . . ahs_lane_use_data
. . . . ahs_vehicle_count
. . . . list_size
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . date
. . . list_size
. . . time
. . static_data_for_archive
. . . static_data_for_traffic_control
. . . . background_strategy
. . . . . list_size
. . . . . selected_strategy_data
. . . . . selected_strategy_type
. . . . . strategy_date
. . . . . strategy_day
. . . . . strategy_end_time
. . . . . time
. . . . . strategy_start_time
. . . . . time
. . . . coordination_rules_for_highways
. . . . . coordination_rule_data_for_highways
. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . coordination_rule_highway_data_description
. . . . . coordination_rule_highway_data_number
. . . . . list_size
. . . . coordination_rules_for_roads
. . . . . coordination_rule_data_for_roads
. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . coordination_rule_road_data_description
. . . . . coordination_rule_road_data_number
. . . . . list_size
. . . . dms_allocation
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_start_point
. . . . . location_identity
. . . . highway_control_devices
. . . . . crossing_equipment_data_for_highways
. . . . . crossing_identity
. . . . . crossing_phase_data
. . . . . list_size
. . . . . highway_equipment_data
. . . . . dms_allocation
. . . . . dms_downstream_identity
. . . . . dms_upstream_identity
. . . . . list_size
. . . . highway_network
. . . . . list_size
. . . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_start_point
. . . . . location_identity
. . . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . indicator_highway_control_static_data
. . . . . highway_sign_setting_data
. . . . . highway_sign_sequence_data
. . . . . list_size
. . . . . highway_sign_setting_plans
. . . . . highway_sign_plan_data
. . . . . highway_sign_plan_number
. . . . . list_size
. . . . indicator_road_control_static_data
. . . . . indicator_road_adaptive_plans
. . . . . crossing_adaptive_data
. . . . . indicator_road_adaptive_plan_number
. . . . . intersection_adaptive_data
. . . . . list_size
. . . . . pedestrian_adaptive_data
. . . . . indicator_road_fixed_plans
. . . . . crossing_fixed_time_data
. . . . . indicator_road_fixed_plan_number
. . . . . intersection_fixed_time_data
. . . . . list_size
. . . . . pedestrian_fixed_time_data
. . . . link_data
. . . . . link_attributes
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . link_TMC_identity
. . . . parking_lot_static_data
. . . . . list_size
. . . . . parking_lot_dms_allocation
. . . . . list_size
. . . . . unit_number
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_sensor_allocation
. . . . . list_size
. . . . . parking_lot_sensor_type
. . . . . unit_number
. . . . . parking_lot_state_thresholds
. . . . . parking_lot_decreasing_threshold
. . . . . parking_lot_increasing_threshold
. . . . ramp_devices
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . . ramp_phase_data
. . . . road_control_devices
. . . . . crossing_equipment_data_for_roads
. . . . . crossing_identity
. . . . . crossing_phase_data
. . . . . list_size

Appendix D: Data Tree

. . . . . hri_data_for_roads
. . . . . . crossing_id
. . . . . . hri_phase_data
. . . . . . list_size
. . . . . intersection_equipment_data
. . . . . . indicator_identity
. . . . . . intersection_phase_data
. . . . . . intersection_phase_number
. . . . . . list_size
. . . . . pedestrian_equipment_data
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . pedestrian_phase_data
. . . . road_network
. . . . . list_size
. . . . . route_segment_downstream_identity
. . . . . . route_segment_identity
. . . . . route_segment_end_point
. . . . . . location_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_start_point
. . . . . . location_identity
. . . . . route_segment_upstream_identity
. . . . . . route_segment_identity
. . . . roadway_characteristics
. . . . . link_speed_limit
. . . . . . special_vehicle_speed_limit
. . . . . . speed_limit
. . . . . median_type
. . . . . number_of_lanes
. . . . . pavement_type
. . . . . shoulder_width
. . . . sensor_allocation
. . . . . sensor_allocation_for_controllers
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . sensor_list
. . . . . sensor_allocation_for_hov_lanes
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . sensor_list
. . . . . sensor_allocation_for_probes
. . . . . . link_identity
. . . . . . list_size
. . . . . . vehicle_smart_probe_data_source_identity
. . . . . . vehicle_smart_probe_data_source_location
. . . . . sensor_allocation_for_tags
. . . . . . link_identity
. . . . . . list_size
. . . . . . vehicle_tag_data_source_identity
. . . . . . vehicle_tag_data_source_location
. . . . vehicle_signage_output_identity
. . . . . location_identity
. . . . . unit_number
. . traffic_data_for_deployment
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . . parking_lot_calculated_occupancy
. . . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . . list_size
. . . . . . parking_lot_list
. . . . . . vehicle_count
. . . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . . list_size
. . . . . . private_vehicle_occupants
. . . . . . ramp_list
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . . link_environment_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . . strategy_data_for_highways
. . . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . . environment_sensor_output
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . hri_sensor_data
. . . . . . closure_event_data
. . . . . . hri_status
. . . . . . intersection_blocked
. . . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . . node_list
. . . . . . node_list
. . . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . . list_size
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . . current_incident_details
. . . . . . list_size
. . . . . planned_event_data
. . . . . . list_size
. . . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . . route_segment_identity
. . . . . . route_segment_journey_time
. . . . . . route_segment_total_number
. . . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . . current_highway_network_data

Appendix D: Data Tree

. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . long_term_data
. . . . historical_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . historical_parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . historical_processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . historical_stored_incident_data
. . . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . list_size
. . . . historical_traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . historical_traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads

Appendix D: Data Tree

. . . . . selected_strategy
. . . . . . selected_emergency_vehicle_strategy
. . . . . . selected_parking_lot_control_strategy
. . . . . . selected_ramp_control_strategy
. . . . . . selected_roadway_control_strategy
. . . . historical_vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . . vehicle_smart_probe_data_indication
. . . . . . vehicle_smart_probe_data_source
. . . . historical_wide_area_pollution_data
. . . . . historical_pollution_state_area_collection
. . . . . . area_air_quality_index
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . . . historical_pollution_state_roadside_collection
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_roadside_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . . . list_size
. . . . o_d_matrix
. . . predictive_model_data
. . . . predicted_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . predicted_hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . predicted_o_d_matrix
. . . . predicted_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . predicted_parking_lot_data
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_occupancy
. . . . . parking_lot_state
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . predicted_road_network_use
. . . . . route_segment_guided_vehicles
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. formatted_transit_data
. . bad_transit_collected_fare_payment
. . . enforcement_agency_contact
. . . enforcement_agency_details
. . . . enforcement_agency_address
. . . . enforcement_agency_computer
. . . . enforcement_agency_email
. . . . enforcement_agency_fax
. . . . enforcement_agency_name
. . . . enforcement_agency_phone
. . . . enforcement_agency_responsibility
. . . fare_violation_information
. . . . credit_identity
. . . . transit_fare
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_route_use_time
. . . . transit_user_category
. . . . transit_user_roadside_image
. . . . transit_user_vehicle_image
. . . . traveler_identity
. . bad_transit_roadside_fare_payment
. . . enforcement_agency_contact
. . . enforcement_agency_details
. . . . enforcement_agency_address
. . . . enforcement_agency_computer
. . . . enforcement_agency_email
. . . . enforcement_agency_fax
. . . . enforcement_agency_name
. . . . enforcement_agency_phone
. . . . enforcement_agency_responsibility
. . . fare_collection_roadside_violation_information
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_user_roadside_image
. . . . transit_user_roadside_tag_identity
. . . . . credit_identity
. . . . . traveler_identity
. . bad_transit_vehicle_fare_payment
. . . enforcement_agency_contact
. . . enforcement_agency_details
. . . . enforcement_agency_address
. . . . enforcement_agency_computer
. . . . enforcement_agency_email
. . . . enforcement_agency_fax
. . . . enforcement_agency_name
. . . . enforcement_agency_phone
. . . . enforcement_agency_responsibility
. . . fare_collection_vehicle_violation_information
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_user_vehicle_image
. . . . transit_user_vehicle_tag_identity
. . . . . credit_identity
. . . . . stored_credit
. . . . . traveler_identity
. . paratransit_service_data_for_archive
. . . paratransit_personal_schedule
. . . . paratransit_service_cost
. . . . . cost
. . . . paratransit_service_details
. . . . . paratransit_arrival_time
. . . . . time
. . . . . paratransit_availability_time
. . . . . paratransit_destination
. . . . . paratransit_pickup_location
. . . . . location_identity
. . . . . paratransit_pickup_time
. . . . . paratransit_service_identity
. . . . traveler_identity
. . . traveler_identity

Appendix D: Data Tree

. . transit_driver_info_for_archive
. . . list_size
. . . transit_driver_details
. . . . transit_driver_availability
. . . . transit_driver_availability_considerations
. . . . transit_driver_cost_effectiveness
. . . . transit_driver_cost_effectiveness_considerations
. . . . transit_driver_eligibility
. . . . transit_driver_eligibility_considerations
. . . . transit_driver_identity
. . . . transit_driver_performance
. . . . transit_driver_performance_considerations
. . . . transit_driver_route_assignment_considerations
. . . . transit_driver_route_details
. . transit_emergency_data_for_archive
. . . transit_emergency_data
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . transit_emergency_details
. . . . transit_driver_emergency_request
. . . . transit_user_emergency_request
. . . . transit_vehicle_location
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_location_data
. . . . . location_identity
. . . transit_media_emergency_interface_parameters
. . transit_fare_transactions
. . . advanced_fare_transactions
. . . . credit_identity
. . . . date
. . . . stored_credit
. . . . time
. . . . transit_fare
. . . . traveler_identity
. . . current_fare_transactions
. . . . credit_identity
. . . . date
. . . . time
. . . . transit_fare
. . . . traveler_identity
. . . list_size
. . transit_incident_info_for_archive
. . . emergency_request_transit_details
. . . . date
. . . . time
. . . . transit_emergency_request
. . . . . traveler_identity
. . . . . traveler_location_for_emergencies
. . . . . location_identity
. . . transit_area_surveillance_information
. . . transit_incident_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . transit_media_incident_interface_parameters
. . . transit_operator_security_action
. . . . transit_incident_extra_data
. . . . transit_incident_required_action
. . . . transit_video_camera_command
. . transit_operational_data_for_archive
. . . transit_operational_data
. . . . date
. . . . list_size
. . . . time
. . . . transit_passenger_operational_data
. . . . . date
. . . . . list_size
. . . . . time
. . . . . transit_roadside_operational_data
. . . . . list_size
. . . . . transit_roadside_passenger_data
. . . . . transit_route_operational_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_vehicle_passenger_operational_data
. . . . transit_roadside_operational_data
. . . . . list_size
. . . . . transit_roadside_passenger_data
. . . . . list_size
. . . . . transit_passenger_numbers
. . . . . transit_roadside_fare_collection_data
. . . . . transit_route_stop_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_user_journey_start
. . . . transit_vehicle_operational_data
. . . . . list_size
. . . . . transit_vehicle_availability
. . . . . transit_vehicle_data
. . . . . list_size
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passenger_loading
. . . . . transit_vehicle_passenger_data
. . . . . transit_passenger_numbers
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_vehicle_fare_collection_data
. . . . . transit_vehicle_identity
. . transit_route_assign_for_archive
. . . list_size
. . . paratransit_services_for_transit_drivers
. . . . transit_route
. . . . . route_cost
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . transit_schedules
. . . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_list
. . . . . transit_schedule_identity
. . . . transit_stop_locations
. . . . . list_size
. . . . . location_identity
. . . . . transit_route_number
. . . . . transit_route_stop_number
. . . transit_services_for_transit_drivers
. . . . list_size
. . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_number
. . . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list

. . . . . transit_route_stop_list
. . . . . transit_schedule_identity
. . . transit_vehicle_availability
. . . transit_vehicle_identity
. . transit_services_for_deployment
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . transit_technician_info
. . . list_size
. . . transit_technician_detail
. . . . transit_technician_identity
. . . . transit_technician_seniority
. . . . transit_technician_work_assignment
. . . . . transit_technician_identity
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_maintenance_work
. . . . transit_technician_work_hours
. . . . transit_technician_work_log
. . . . . date
. . . . . list_size
. . . . . time
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_maintenance_work
. . . . transit_technician_work_preferences
. . . . transit_technician_work_skills
. . transit_user_payments_transactions
. . transit_vehicle_data_for_archive
. . . transit_vehicle_data
. . . . list_size
. . . . transit_vehicle_identity
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . transit_vehicle_information
. . . . transit_vehicle_collected_maintenance_data
. . . . . transit_vehicle_mileage_accumulated
. . . . . transit_vehicle_operating_condition
. . . . transit_vehicle_collected_trip_data
. . . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . transit_vehicle_deviation_update
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . transit_vehicle_identity
. . . . transit_vehicle_location
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_location_data
. . . . . location_identity
. . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . time
. . . . . transit_vehicle_identity
. . transit_vehicle_maintenance_info
. . . list_size
. . . transit_vehicle_identity
. . . transit_vehicle_operations_details
. . . . transit_vehicle_maintenance
. . . . . transit_vehicle_maintenance_date
. . . . . date
. . . . . transit_vehicle_maintenance_mileage
. . . . . transit_vehicle_maintenance_required
. . . . transit_vehicle_maintenance_log
. . . . . transit_vehicle_maintenance_log_activity
. . . . . transit_vehicle_maintenance_log_date
. . . . . date
. . . . . transit_vehicle_maintenance_log_mileage
. . . . . transit_vehicle_maintenance_log_time
. . . . . time
. . . . transit_vehicle_maintenance_schedule
. . . . . transit_vehicle_maintenance_schedule_activity
. . . . . transit_vehicle_maintenance_schedule_date
. . . . . date
. . . . . transit_vehicle_maintenance_schedule_mileage
. . . . transit_vehicle_maintenance_specs
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_maintenance_details
. . . . . transit_vehicle_type
. formatted_traveler_data
. . guidance_data_for_archive
. . . route_guidance_data_for_archive
. . . . list_size
. . . . vehicle_guidance_stored_data
. . . . . route_identity
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . vehicle_guidance_probe_data_for_archive
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . time
. . . . vehicle_identity
. . parking_lot_data_for_archive
. . . parking_lot_bookings_request
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number

. . . . parking_space_details
. . . . . date
. . . . . duration
. . . . . time
. . . . vehicle_identity
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_spaces
. . rideshare_for_archive
. . . rideshare_data_for_archive
. . . . rideshare_confirmation_data
. . . . . reservation_status
. . . . . confirmation_flag
. . . . . rideshare_selection_number
. . . . rideshare_details
. . . . rideshare_eligibility_data
. . . traveler_rideshare_request_for_archive
. . . . traveler_rideshare_request
. . . . . traveler_identity
. . . . . traveler_rideshare_constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . traveler_rideshare_data
. . . . . departure_time
. . . . . desired_arrival_time
. . . . . destination
. . . . . origin
. . . . . traveler_rideshare_preferences
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . service_req_and_confirm_for_archive
. . . service_req_and_confirm_data
. . . . advisory_data_request_for_archive
. . . . . advisory_data_request
. . . . . advisory_data_scope
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . vehicle_location_for_advisories
. . . . event_information_requests_for_archive
. . . . . event_information_advisory_requests_for_archive
. . . . . event_information_advisory_requests
. . . . . traveler_event_information_request_for_archive
. . . . . traveler_event_information_request
. . . . .
. . . . . traveler_personal_event_information_request
. . . . traffic_data_kiosk_request_for_archive
. . . . . traffic_data_kiosk_request
. . . . . kiosk_identity
. . . . . traffic_data_request
. . . . traffic_data_personal_request_for_archive
. . . . . traffic_data_personal_request
. . . . . traffic_data_request
. . . . . traveler_identity
. . . . transit_deviation_kiosk_request_for_archive
. . . . . transit_deviation_kiosk_request
. . . . . kiosk_identity
. . . . . transit_vehicle_deviation_request
. . . . transit_deviations_personal_request_for_archive
. . . . . transit_deviations_personal_request
. . . . . transit_route_number
. . . . . transit_vehicle_deviation_request
. . . . . traveler_identity
. . . . traveler_confirm_for_archive
. . . . . traveler_personal_trip_confirmation_for_archive
. . . . . traveler_personal_trip_confirmation
. . . . . traveler_trip_confirmation_for_archive
. . . . . traveler_trip_confirmation
. . . . traveler_route_accepted_for_archive
. . . . . traveler_route_accepted
. . . . . route_identity
. . . . traveler_route_request_for_archive
. . . . . traveler_route_request
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_eta_change
. . . . . constraint_on_number_of_mode_changes
. . . . . constraint_on_number_of_transfers
. . . . . constraint_on_special_needs
. . . . . desired_arrival_time
. . . . . destination
. . . . . modes
. . . . . origin
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . preferred_transit_options
. . . . . traveler_identity
. . . . . traveler_location
. . . . . traveler_route_accepted
. . . . traveler_trip_and_cond_requests_for_archive
. . . . . traveler_current_condition_request_for_archive
. . . . . traveler_current_condition_request
. . . . .
. . . . . traveler_personal_current_condition_request
. . . . . traveler_personal_trip_request_for_archive
. . . . . traveler_personal_trip_request
. . . . . traveler_trip_request_for_archive
. . . . . traveler_trip_request
. . . . traveler_yellow_pages_requests_for_archive
. . . . . traveler_personal_transaction_request_for_archive
. . . . . traveler_personal_transaction_request
. . . . .
. . . . . .
. . . . . traveler_transaction_request_for_archive
. . . . . traveler_transaction_request
. . . . .
. . . . . traveler_yellow_pages_information_request
. . . . vehicle_guidance_route_accepted_for_archive
. . . . . vehicle_guidance_route_accepted
. . . . . route_identity
. . . . vehicle_route_request_for_archive
. . . . . vehicle_route_request
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_load_classification
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . departure_time
. . . . . desired_arrival_time
. . . . . destination
. . . . . origin
. . . . . preferred_alternate_routes
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . vehicle_identity
. . . . . vehicle_location_for_dynamic_guidance
. . . . yellow_pages_advisory_requests_for_archive
. . . . . yellow_pages_advisory_requests
. . . . . advisory_data_scope
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . vehicle_location_for_advisories
. . . . . yellow_pages_dining_reservation
. . . . . yellow_pages_lodging_reservation
. . . . . yellow_pages_non_motorized_reservation
. . . . . yellow_pages_ticket_purchase
. . traveler_info_payments_transactions

. . . driver_map_update_payments_transactions
. . . traveler_map_update_payments_transactions
. . . traveler_rideshare_payments_transactions
. . . traveler_trip_payments_transactions
. . . yellow_pages_provider_payments_transactions
. . trip_request_for_archive
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions
. . usage_for_archive
. . . current_other_routes_use_for_archive
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . current_road_network_use_for_archive
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. formatted_user_defined_data
. . user_defined_data
. formatted_weather_data
. . weather_data
formatted_archive_data_attributes
. formatted_cv_data_attributes
. . cv_credentials_enrollment_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . cv_daily_logs_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_em_data_attributes
. . em_operational_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size

. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_emissions_data_attributes
. . archive_pollution_reference_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . archive_pollution_state_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . pollution_archive_data_log_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_intermodal_data_attributes
. . intermodal_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_m_and_c_data_attributes
. . auto_treatment_system_status_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time

. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . field_device_status_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . infrastructure_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_activity_schedule_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_activity_status_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. .
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date

. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. .
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_winter_maint_needs_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_map_data_attributes
. . imported_map_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_multimodal_data_attributes
. . multimodal_data_attributes
. . . authorization_to_use

. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_parking_data_attributes
. . parking_charge_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . parking_lot_state_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_roadside_data_attributes
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . fault_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date

Appendix D: Data Tree

. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . sensor_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_toll_data_attributes
. . toll_operational_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_traffic_data_attributes
. . ahs_operational_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time

. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . static_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . traffic_deployment_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_transit_data_attributes
. . transit_operational_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_traveler_data_attributes
. . guidance_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . parking_lot_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier

Appendix D: Data Tree

. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . rideshare_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . service_req_and_confirm_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . traveler_info_payments_transactions_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . trip_request_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute

. . . standard_message_attribute
. . usage_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_user_defined_data_attributes
. . user_defined_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. formatted_weather_data_attributes
. . weather_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
formatted_cv_data
. cv_credentials_enrollment_data
. . cv_update_new_credentials_request
. . . cv_credentials_details
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_route_details
. . . . cv_route_data
. . . . . route_cost
. . . . . route_list
. . . . . . route_segment_number
. . . . . route_segment_commercial_details
. . . . . . route_segment_end_point
. . . . . . route_segment_estimated_condition
. . . . . . route_segment_estimated_travel_time
. . . . . . route_segment_predicted_weather
. . . . . . route_segment_start_point
. . . . . route_start_time
. . . . . . date
. . . . . . time
. . . . . route_statistics
. . . . cv_route_number
. . . . cv_taxes_and_duties
. . . . route_type
. . . cv_trip_classification_data
. . . . cv_cargo_class
. . . . cv_vehicle_class
. . . . cv_weight_class
. . . cv_trip_identity
. . . hazmat_load_data
. cv_daily_logs
. . cv_roadside_daily_log
. . . cv_roadside_facility_identity
. . . cv_roadside_record
. . . . cv_archived_inspection_data
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_driver_details
. . . . . . cv_driver_credentials
. . . . . . cv_driver_license_citations
. . . . . cv_inspection_data
. . . . . cv_inspector_safety_data_input
. . . . . cv_not_pulled_in
. . . . . cv_roadside_report
. . . . . cv_safety_status_code
. . . . . cv_vehicle_details
. . . . . . cv_credentials
. . . . . . cv_fuel_purchase_data
. . . . . . cv_inspection_activities_data

. . . . . cv_log_data
. . . . . cv_repairs_and_service_records
. . . . . cv_safety_systems_diagnostics_results
. . . . . cv_vehicle_log
. . . . . list_size
. . . . . time
. . . . cv_archived_safety_data
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_safety_override
. . . . . cv_credentials_details
. . . . . cv_safety_override_code
. . . . . cv_safety_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_safety_problem
. . . . . time
. . . . cv_screening_record
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_screening_override
. . . . . cv_credentials_details
. . . . . cv_screening_override_code
. . . . . cv_screening_pull_in_output
. . . . . cv_credentials_details
. . . . . cv_credentials_problem
. . . . . time
. . . . list_size
. . . date
. . cvo_border_clearance
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size
. . . cv_roadside_facility_identity
. . . date
formatted_cv_data_attributes
. cv_credentials_enrollment_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. cv_daily_logs_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_em_data
. em_operational_data
. . archive_manage_emergency_vehicle_data
. . . emergency_vehicle_status_data
. . . . emergency_vehicle_status_details
. . . . . date
. . . . . emergency_vehicle_identity
. . . . . emergency_vehicle_status_code
. . . . . emergency_vehicle_tracking_data
. . . . . emergency_vehicle_operational_data
. . . . . vehicle_identity
. . . . . vehicle_location_for_emergency_services
. . . . . emergency_vehicle_type
. . . . . incident_number
. . . . . time
. . . . list_size
. . archive_provide_emergency_service_allocation_data
. . emergency_service_log_for_archive
. . . emergency_service_action_log
. . . . emergency_service_action_details
. . . . . emergency_service_allocations
. . . . . emergency_service_type_override
. . . . . emergency_service_type_requested
. . . . . emergency_vehicle_arrival_time
. . . . . time
. . . . . emergency_vehicle_route
. . . . . emergency_request
. . . . . route
. . . . . vehicle_identity
. . . . . identified_emergency_details
. . . . . incident_confidence_level
. . . . . incident_description
. . . . . incident_duration

. . . . . incident_location
. . . . . incident_number
. . . . . incident_report_source
. . . . . incident_reported_time
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_status
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . incident_action_time
. . . . . time
. . . . list_size
formatted_em_data_attributes
. em_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_emissions_data
. archive_pollution_reference_data
. . pollution_area_acceptance_data
. . pollution_area_acceptance_times
. . pollution_area_tolerance_data
. . pollution_area_tolerance_times
. . pollution_roadside_acceptance_data
. . pollution_roadside_acceptance_times
. . pollution_roadside_tolerance_data
. . pollution_roadside_tolerance_times
. . pollution_vehicle_acceptance_conditions
. . pollution_vehicle_acceptance_data
. archive_pollution_state_data
. . list_size
. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_vehicle_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_vehicle_log_data
. . . pollution_state_vehicle_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_sulfur_dioxide_pollution
. . . . vehicle_type
. pollution_archive_data_log
. . pollution_state_static_log_data
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . pollution_state_vehicle_log_data
. . . pollution_state_vehicle_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_sulfur_dioxide_pollution
. . . . vehicle_type
formatted_emissions_data_attributes
. archive_pollution_reference_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. archive_pollution_state_data_attributes

. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. pollution_archive_data_log_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_intermodal_data
. intermodal_data
formatted_intermodal_data_attributes
. intermodal_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_m_and_c_data
. auto_treatment_system_status_for_archive
. . auto_treatment_activation_data
. . device_identity
. . list_size
. . station_id
. field_device_status_for_archive
. . auto_treat_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . dms_equip_status_for_m_and_c
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . env_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . har_equip_status_for_m_and_c
. . . har_fault
. . . . har_identity
. . hov_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . indicator_equip_status_from_highways_for_m_and_c
. . . indicator_fault
. . . indicator_type
. . . list_size
. . indicator_equip_status_from_roads_for_m_and_c
. . . indicator_fault
. . . indicator_type
. . . list_size
. . infrastructure_sensor_equip_status_for_m_and_c
. . . infrastructure_sensor_status_for_m_and_c
. . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity

Appendix D: Data Tree

. . . . . sensor_status
. . . . . . traffic_sensor_status
. . . . . station_id
. . . infrastructure_sensor_status_for_mcv
. . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . . traffic_sensor_status
. . . . . station_id
. . smart_probe_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . traffic_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . vehicle_sign_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . video_device_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. infrastructure_data_for_archive
. . infrastructure_sensor_data_for_m_and_c
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . mcv_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_mcv
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . infrastructure_sensor_data_from_onboard_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . vehicle_id_for_mcv
. . processed_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_m_and_c
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . mcv_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. m_and_c_activity_schedule_for_archive
. . m_and_c_activity_schedule
. . . fleet_activity_schedule
. . . m_and_c_work_plans
. . . work_zone_activity_plan
. m_and_c_activity_status_for_archive
. . m_and_c_activity_status
. . . m_and_c_fleet_manager_status
. . . . m_and_c_fleet_status
. . . . . current_fleet_maintenance_status
. . . . . date
. . . . . fleet_maintenance_record
. . . . . list_size
. . . . . materials_status
. . . . . . date
. . . . . . list_size
. . . . . . m_and_c_materials_quantity
. . . . . . m_and_c_materials_type
. . . . . . m_and_c_materials_usage_rate
. . . . . . time
. . . . . mcv_crew_status
. . . . . mcv_equipment_configuration
. . . . . mcv_operator_status
. . . . . mcv_vehicle_type
. . . . . mcv_work_activity_status
. . . . . operational_data_for_mcv
. . . . . safety_data_for_mcv
. . . . . . driver_safety_status
. . . . . . vehicle_attitude_data
. . . . . . vehicle_motion_data
. . . . . . vehicle_proximity_data
. . . . . . vehicle_safety_status
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . . location_identity
. . . . . vehicle_location_for_mcv_tracking
. . . . . . date
. . . . . . time
. . . . . . vehicle_id_for_mcv
. . . . . . vehicle_location_for_mcv
. . . . m_and_c_view_of_road_network
. . . . . current_data
. . . . . . current_other_routes_use
. . . . . . parking_lot_storage_data
. . . . . . processed_data
. . . . . . sensor_output_data
. . . . . . stored_incident_data
. . . . . . traffic_flow_state
. . . . . . traffic_management_storage_data
. . . . . . traffic_video_image_data
. . . . . . vehicle_smart_probe_stored_data
. . . . . . wide_area_pollution_data
. . . . . env_info_for_road_network
. . . . . . road_conditions
. . . . . . road_weather_conditions
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_response_status_from_emerg
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . link_state_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . . vehicle_speed
. . . . . predicted_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads

. . . . . link_occupancy
. . . . . link_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . m_and_c_work_performance
. . . materials_availability_for_status
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . storage_facility_id
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv
. m_and_c_maint_resource_needs_for_archive
. . m_and_c_resource_request_from_emerg
. . m_and_c_resource_request_from_traffic
. . resource_needs_from_scheduler
. . . date
. . . list_size
. . . m_and_c_equipment_quantity
. . . m_and_c_equipment_type
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . time
. m_and_c_roadway_maint_needs_for_archive
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . mcv_vehicle_type
. . need_date
. . need_time
. . roadway_maint_plan
. m_and_c_winter_maint_needs_for_archive
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . mcv_vehicle_type
. . need_date
. . need_time
. . winter_treatment_plan
. work_zone_data_for_archive
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
formatted_m_and_c_data_attributes
. auto_treatment_system_status_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. field_device_status_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time

. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. infrastructure_data_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_activity_schedule_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_activity_status_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_maint_resource_needs_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_roadway_maint_needs_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time

. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_winter_maint_needs_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. work_zone_data_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_map_data
. imported_map_data_for_archive
formatted_map_data_attributes
. imported_map_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_multimodal_data
. multimodal_data
formatted_multimodal_data_attributes
. multimodal_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_parking_data
. parking_charge_response_for_archive
. . list_size
. . parking_lot_availability
. . . handicap_access_information

. . . parking_lot_hours_of_operation
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_spaces
. . . traveler_identity
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. parking_lot_state_for_archive
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
formatted_parking_data_attributes
. parking_charge_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. parking_lot_state_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_roadside_data
. archive_environmental_sensor_data
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . environment_sensor_fault_data
. . environmental_sensor_status
. . . environment_sensor_fault_data
. . . list_size
. . . sensor_identity
. . . station_id
. fault_data
. . sensor_fault_data
. sensor_data_archive_input
. . hov_sensor_data
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . private_vehicle_occupants
. . local_sensor_data_for_highways
. . . crossing_close_duration
. . . crossing_close_time
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . roadside_conditions
. . . . link_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity

. . . . station_id
. . . . traffic_sensor_output
. . local_sensor_data_for_roads
. . . crossing_close_duration
. . . crossing_close_time
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . pedestrian_demand
. . . roadside_conditions
. . . . link_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . multimodal_crossing_sensor_data
. . . crossing_close_duration
. . . crossing_close_time
. . . crossing_list
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . pedestrian_sensor_data
. . . node_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . pedestrian_demand
. . sensor_data_for_reversible_lanes
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . traffic_sensor_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. sensor_status
. . traffic_sensor_status
formatted_roadside_data_attributes
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. fault_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date

Appendix D: Data Tree

. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. sensor_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_toll_data
. toll_operational_data
. . date
. . list_size
. . time
. . toll_cost
. . toll_segment_identity
. . . unit_number
. . toll_segment_users
. toll_prices_for_archive
. . list_size
. . toll_price
. . toll_price_application_time
. . toll_segment_identity
. . . unit_number
. . vehicle_type_for_tolls
. . . cv_tag_data
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_vehicle_characteristics
. . . . cv_vehicle_configuration
. . . . cv_vehicle_size
. . . . cv_vehicle_weight
. . . vehicle_identity
. . . vehicle_type
formatted_toll_data_attributes
. toll_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. toll_prices_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_traffic_data
. ahs_operational_data
. . ahs_checking_records
. . . ahs_check_identity
. . . . location_identity
. . . . unit_number
. . . ahs_failed_checks_count
. . . ahs_successful_checks_count
. . . list_size
. . ahs_lane_use_data
. . . ahs_vehicle_count
. . . list_size
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . date
. . list_size
. . time
. static_data_for_archive

. . static_data_for_traffic_control
. . . background_strategy
. . . . list_size
. . . . selected_strategy_data
. . . . selected_strategy_type
. . . . strategy_date
. . . . strategy_day
. . . . strategy_end_time
. . . . . time
. . . . strategy_start_time
. . . . . time
. . . coordination_rules_for_highways
. . . . coordination_rule_data_for_highways
. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . coordination_rule_highway_data_description
. . . . coordination_rule_highway_data_number
. . . . list_size
. . . coordination_rules_for_roads
. . . . coordination_rule_data_for_roads
. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . coordination_rule_road_data_description
. . . . coordination_rule_road_data_number
. . . . list_size
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . highway_control_devices
. . . . crossing_equipment_data_for_highways
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . crossing_phase_data
. . . . . list_size
. . . . highway_equipment_data
. . . . . dms_allocation
. . . . . indicator_identity
. . . . . list_size
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . list_size
. . . highway_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . indicator_highway_control_static_data
. . . . highway_sign_setting_data
. . . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . . list_size
. . . . highway_sign_setting_plans
. . . . . highway_sign_plan_data
. . . . . highway_sign_plan_priority
. . . . . highway_sign_plan_purpose
. . . . . highway_sign_sequence_data
. . . . . highway_sign_plan_number
. . . . . list_size
. . . indicator_road_control_static_data
. . . . indicator_road_adaptive_plans
. . . . . crossing_adaptive_data
. . . . . indicator_road_adaptive_plan_number
. . . . . intersection_adaptive_data
. . . . . list_size
. . . . . pedestrian_adaptive_data
. . . . indicator_road_fixed_plans
. . . . . crossing_fixed_time_data
. . . . . crossing_control_commands
. . . . . crossing_cycle_time
. . . . . crossing_offset_time
. . . . . indicator_road_fixed_plan_number
. . . . . intersection_fixed_time_data
. . . . . intersection_control_commands
. . . . . intersection_cycle_time
. . . . . intersection_offset_time
. . . . . list_size
. . . . . pedestrian_fixed_time_data
. . . . . pedestrian_control_commands
. . . . . pedestrian_cycle_time
. . . . . pedestrian_offset_time
. . . link_data
. . . . link_attributes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . link_TMC_identity
. . . parking_lot_static_data
. . . . list_size
. . . . parking_lot_dms_allocation
. . . . . list_size
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_sensor_allocation
. . . . . list_size
. . . . . parking_lot_sensor_type
. . . . . unit_number
. . . . parking_lot_state_thresholds
. . . . . parking_lot_decreasing_threshold
. . . . . parking_lot_increasing_threshold
. . . ramp_devices
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . . ramp_phase_data
. . . road_control_devices

Appendix D: Data Tree

. . . . crossing_equipment_data_for_roads
. . . . . crossing_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . crossing_phase_data
. . . . . list_size
. . . . hri_data_for_roads
. . . . . crossing_id
. . . . . hri_phase_data
. . . . . list_size
. . . . intersection_equipment_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . intersection_phase_data
. . . . . intersection_phase_number
. . . . . list_size
. . . . pedestrian_equipment_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . pedestrian_phase_data
. . . road_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . roadway_characteristics
. . . . link_speed_limit
. . . . . special_vehicle_speed_limit
. . . . . vehicle_class
. . . . . vehicle_type
. . . . . speed_limit
. . . . median_type
. . . . number_of_lanes
. . . . pavement_type
. . . . shoulder_width
. . . sensor_allocation
. . . . sensor_allocation_for_controllers
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . . list_size
. . . . . . sensor_description
. . . . sensor_allocation_for_hov_lanes
. . . . . hov_lane_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . . list_size
. . . . . . sensor_description
. . . . sensor_allocation_for_probes
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . . . sensor_allocation_for_tags
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . vehicle_tag_data_source_identity
. . . . . . unit_number
. . . . . vehicle_tag_data_source_location
. . . . . . location_identity
. . . vehicle_signage_output_identity
. . . . location_identity
. . . . unit_number
. traffic_data_for_deployment
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy

. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . . crossing_data_for_highways
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . . crossing_data_for_roads
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . . hri_closure_data_response
. . . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . . incident_description
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . . indicator_list
. . . . . . ramp_list
. . . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . . parking_lot_list
. . . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy

Appendix D: Data Tree

. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . long_term_data
. . . historical_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . historical_parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . historical_processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . historical_stored_incident_data
. . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . list_size
. . . historical_traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size

. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . historical_traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . . indicator_list
. . . . . . ramp_list
. . . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . . parking_lot_list
. . . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy
. . . historical_vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . . vehicle_smart_probe_data_source_identity
. . . . . . vehicle_smart_probe_data_source_location
. . . historical_wide_area_pollution_data
. . . . historical_pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . historical_pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . list_size
. . . o_d_matrix
. . predictive_model_data
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . predicted_o_d_matrix
. . . predicted_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_road_network_use
. . . . route_segment_guided_vehicles
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
formatted_traffic_data_attributes
. ahs_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. static_data_attributes
. . authorization_to_use

. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. traffic_deployment_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_transit_data
. bad_transit_collected_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_violation_information
. . . credit_identity
. . . transit_fare
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
. . . transit_user_roadside_image
. . . transit_user_vehicle_image
. . . traveler_identity
. bad_transit_roadside_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_collection_roadside_violation_information
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_user_roadside_image
. . . transit_user_roadside_tag_identity
. . . . credit_identity
. . . . traveler_identity
. bad_transit_vehicle_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_collection_vehicle_violation_information
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_user_vehicle_image
. . . transit_user_vehicle_tag_identity
. . . . credit_identity
. . . . stored_credit
. . . . traveler_identity
. paratransit_service_data_for_archive
. . paratransit_personal_schedule
. . . paratransit_service_cost
. . . . cost
. . . paratransit_service_details
. . . . paratransit_arrival_time
. . . . . time
. . . . paratransit_availability_time
. . . . paratransit_destination
. . . . paratransit_pickup_location
. . . . . location_identity
. . . . paratransit_pickup_time
. . . . paratransit_service_identity
. . . traveler_identity
. . traveler_identity
. transit_driver_info_for_archive
. . list_size
. . transit_driver_details
. . . transit_driver_availability
. . . transit_driver_availability_considerations
. . . transit_driver_cost_effectiveness
. . . transit_driver_cost_effectiveness_considerations
. . . transit_driver_eligibility
. . . transit_driver_eligibility_considerations
. . . transit_driver_identity
. . . transit_driver_performance
. . . transit_driver_performance_considerations
. . . transit_driver_route_assignment_considerations
. . . transit_driver_route_details
. transit_emergency_data_for_archive
. . transit_emergency_data
. . . incident_duration

. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_severity
. . . incident_start_time
. . . . time
. . transit_emergency_details
. . . transit_driver_emergency_request
. . . transit_user_emergency_request
. . . transit_vehicle_location
. . . . transit_vehicle_identity
. . . . transit_vehicle_location_data
. . . . . location_identity
. . transit_media_emergency_interface_parameters
. transit_fare_transactions
. . advanced_fare_transactions
. . . credit_identity
. . . date
. . . stored_credit
. . . time
. . . transit_fare
. . . traveler_identity
. . current_fare_transactions
. . . credit_identity
. . . date
. . . time
. . . transit_fare
. . . traveler_identity
. . list_size
. transit_incident_info_for_archive
. . emergency_request_transit_details
. . . date
. . . time
. . . transit_emergency_request
. . . . traveler_identity
. . . . traveler_location_for_emergencies
. . . . . location_identity
. . transit_area_surveillance_information
. . transit_incident_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_severity
. . . incident_start_time
. . . . time
. . transit_media_incident_interface_parameters
. . transit_operator_security_action
. . . transit_incident_extra_data
. . . transit_incident_required_action
. . . transit_video_camera_command
. transit_operational_data_for_archive
. . transit_operational_data
. . . date
. . . list_size
. . . time
. . . transit_passenger_operational_data
. . . . date
. . . . list_size
. . . . time
. . . . transit_roadside_operational_data
. . . . . list_size
. . . . . transit_roadside_passenger_data
. . . . . list_size
. . . . . transit_passenger_numbers
. . . . . transit_roadside_fare_collection_data
. . . . . transit_route_stop_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_user_journey_start
. . . . transit_route_operational_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_vehicle_passenger_operational_data
. . . . . list_size
. . . . . transit_route_segment_number
. . . . . transit_vehicle_passengers
. . . transit_roadside_operational_data
. . . . list_size
. . . . transit_roadside_passenger_data
. . . . . list_size
. . . . . transit_passenger_numbers
. . . . . transit_roadside_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_route_stop_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . transit_vehicle_operational_data
. . . . list_size
. . . . transit_vehicle_availability
. . . . transit_vehicle_data
. . . . . list_size
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_passenger_data
. . . . . transit_passenger_numbers
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_vehicle_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_vehicle_identity
. transit_route_assign_for_archive
. . list_size
. . paratransit_services_for_transit_drivers
. . . transit_route
. . . . route_cost
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_travel_time
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . transit_schedules
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . . transit_stop_locations
. . . . list_size
. . . . location_identity
. . . . transit_route_number
. . . . transit_route_stop_number

Appendix D: Data Tree

. . transit_services_for_transit_drivers
. . . list_size
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . . list_size
. . . . . . transit_route_stop_data
. . . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . transit_vehicle_availability
. . transit_vehicle_identity
. transit_services_for_deployment
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . . list_size
. . . . . . transit_route_schedule_number
. . . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. transit_technician_info
. . list_size
. . transit_technician_detail
. . . transit_technician_identity
. . . transit_technician_seniority
. . . transit_technician_work_assignment
. . . . transit_technician_identity
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_work
. . . transit_technician_work_hours
. . . transit_technician_work_log
. . . . date
. . . . list_size
. . . . time
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_work
. . . transit_technician_work_preferences
. . . transit_technician_work_skills
. transit_user_payments_transactions
. transit_vehicle_data_for_archive
. . transit_vehicle_data
. . . list_size
. . . transit_vehicle_identity
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . transit_vehicle_information
. . . transit_vehicle_collected_maintenance_data
. . . . transit_vehicle_mileage_accumulated
. . . . transit_vehicle_operating_condition
. . . transit_vehicle_collected_trip_data
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . . time
. . . transit_vehicle_deviation_update
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_identity
. . . transit_vehicle_location
. . . . transit_vehicle_identity
. . . . transit_vehicle_location_data
. . . . . location_identity
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. transit_vehicle_maintenance_info
. . list_size
. . transit_vehicle_identity
. . transit_vehicle_operations_details
. . . transit_vehicle_maintenance
. . . . transit_vehicle_maintenance_date
. . . . . date
. . . . transit_vehicle_maintenance_mileage
. . . . transit_vehicle_maintenance_required
. . . transit_vehicle_maintenance_log
. . . . transit_vehicle_maintenance_log_activity
. . . . transit_vehicle_maintenance_log_date
. . . . . date
. . . . transit_vehicle_maintenance_log_mileage
. . . . transit_vehicle_maintenance_log_time
. . . . . time
. . . transit_vehicle_maintenance_schedule
. . . . transit_vehicle_maintenance_schedule_activity
. . . . transit_vehicle_maintenance_schedule_date
. . . . . date

. . . . transit_vehicle_maintenance_schedule_mileage
. . . transit_vehicle_maintenance_specs
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_details
. . . . transit_vehicle_type
formatted_transit_data_attributes
. transit_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_traveler_data
. guidance_data_for_archive
. . route_guidance_data_for_archive
. . . list_size
. . . vehicle_guidance_stored_data
. . . . route_identity
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_travel_time
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . vehicle_guidance_probe_data_for_archive
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . time
. . . vehicle_identity
. parking_lot_data_for_archive
. . parking_lot_bookings_request
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_space_details
. . . . date
. . . . duration
. . . . time
. . . vehicle_identity
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_spaces
. rideshare_for_archive
. . rideshare_data_for_archive
. . . rideshare_confirmation_data
. . . . reservation_status
. . . . . confirmation_flag
. . . . rideshare_selection_number
. . . rideshare_details
. . . rideshare_eligibility_data
. . traveler_rideshare_request_for_archive
. . . traveler_rideshare_request
. . . . traveler_identity
. . . . traveler_rideshare_constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . traveler_rideshare_data
. . . . . departure_time
. . . . . time
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . origin
. . . . . route_point
. . . . traveler_rideshare_preferences
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. service_req_and_confirm_for_archive
. . service_req_and_confirm_data
. . . advisory_data_request_for_archive
. . . . advisory_data_request
. . . . . advisory_data_scope
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . vehicle_location_for_advisories
. . . . . location_identity
. . . event_information_requests_for_archive
. . . . event_information_advisory_requests_for_archive
. . . . . event_information_advisory_requests
. . . . traveler_event_information_request_for_archive
. . . . . traveler_event_information_request
. . . .
. . . . . traveler_personal_event_information_request
. . . traffic_data_kiosk_request_for_archive
. . . . traffic_data_kiosk_request
. . . . . kiosk_identity
. . . . . traffic_data_request
. . . traffic_data_personal_request_for_archive
. . . . traffic_data_personal_request
. . . . . traffic_data_request
. . . . . traveler_identity
. . . transit_deviation_kiosk_request_for_archive
. . . . transit_deviation_kiosk_request
. . . . . kiosk_identity
. . . . . transit_vehicle_deviation_request
. . . transit_deviations_personal_request_for_archive
. . . . transit_deviations_personal_request
. . . . . transit_route_number
. . . . . transit_vehicle_deviation_request
. . . . . traveler_identity
. . . traveler_confirm_for_archive
. . . . traveler_personal_trip_confirmation_for_archive
. . . . . traveler_personal_trip_confirmation
. . . . . paratransit_service_confirmation
. . . . . traveler_identity
. . . . . traveler_rideshare_confirmation
. . . . traveler_trip_confirmation_for_archive
. . . . . traveler_trip_confirmation

. . . . . paratransit_service_confirmation
. . . . . traveler_identity
. . . . . traveler_rideshare_confirmation
. . . traveler_route_accepted_for_archive
. . . . traveler_route_accepted
. . . . . route_identity
. . . traveler_route_request_for_archive
. . . . traveler_route_request
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_eta_change
. . . . . constraint_on_number_of_mode_changes
. . . . . constraint_on_number_of_transfers
. . . . . constraint_on_special_needs
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . modes
. . . . . origin
. . . . . route_point
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . preferred_transit_options
. . . . . traveler_identity
. . . . . traveler_location
. . . . . location_identity
. . . . . traveler_route_accepted
. . . . . route_identity
. . . traveler_trip_and_cond_requests_for_archive
. . . . traveler_current_condition_request_for_archive
. . . . . traveler_current_condition_request
. . . . . kiosk_identity
. . . .
. . . . . traveler_personal_current_condition_request
. . . . . traveler_identity
. . . . traveler_personal_trip_request_for_archive
. . . . . traveler_personal_trip_request
. . . . . traveler_identity
. . . . . traveler_rideshare_request
. . . . . trip_request
. . . . traveler_trip_request_for_archive
. . . . . traveler_trip_request
. . . . . traveler_identity
. . . . . traveler_rideshare_request
. . . . . trip_request
. . . traveler_yellow_pages_requests_for_archive
. . . . traveler_personal_transaction_request_for_archive
. . . . . traveler_personal_transaction_request
. . . . . yellow_pages_dining_reservation
. . . . . yellow_pages_lodging_reservation
. . . . . yellow_pages_ticket_purchase
. . . .
. . . . .
. . . . . traveler_identity
. . . . traveler_transaction_request_for_archive
. . . . . traveler_transaction_request
. . . . . yellow_pages_dining_reservation
. . . . . yellow_pages_lodging_reservation
. . . . . yellow_pages_ticket_purchase
. . . .
. . . . . traveler_yellow_pages_information_request
. . . . . kiosk_identity
. . . vehicle_guidance_route_accepted_for_archive
. . . . vehicle_guidance_route_accepted
. . . . . route_identity
. . . vehicle_route_request_for_archive
. . . . vehicle_route_request
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_load_classification
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . departure_time
. . . . . time
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . origin
. . . . . route_point
. . . . . preferred_alternate_routes
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . vehicle_identity
. . . . . vehicle_location_for_dynamic_guidance
. . . . . location_identity
. . . yellow_pages_advisory_requests_for_archive
. . . . yellow_pages_advisory_requests
. . . . . advisory_data_scope
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . vehicle_location_for_advisories
. . . . . location_identity
. . . . . yellow_pages_dining_reservation
. . . . . yellow_pages_lodging_reservation
. . . . . yellow_pages_non_motorized_reservation
. . . . . yellow_pages_ticket_purchase
. traveler_info_payments_transactions
. . driver_map_update_payments_transactions
. . traveler_map_update_payments_transactions
. . traveler_rideshare_payments_transactions
. . traveler_trip_payments_transactions
. . yellow_pages_provider_payments_transactions
. trip_request_for_archive
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions
. usage_for_archive
. . current_other_routes_use_for_archive
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . current_road_network_use_for_archive
. . . route_segment_identity
. . . . location_identity

. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
formatted_traveler_data_attributes
. guidance_data_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. parking_lot_data_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. rideshare_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. service_req_and_confirm_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. traveler_info_payments_transactions_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date

. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. trip_request_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. usage_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_user_defined_data
. user_defined_data
formatted_user_defined_data_attributes
. user_defined_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
formatted_weather_data
. weather_data
formatted_weather_data_attributes
. weather_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
fors_device_control
. f_other_rw_fc_control_to_fc
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls

. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls
. f_other_rw_ic_control_to_ic
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size

fors_device_status

. f_other_rw_fc_status_to_fc
. . indicator_fault
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
. f_other_rw_ic_status_to_ic
. . indicator_fault
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size

fors_roadway_info_data_from_devices

. f_other_rw_dms_auto_treat_data_from_roadway
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . list_size

fors_roadway_info_data_from_sensors

. f_other_rw_env_sensor_data_to_dms
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. f_other_rw_individual_vehicle_speed_to_dms
. f_other_rw_speed_warning_to_dms

fors_sensor_control

. f_other_rw_env_sensor_control_by_auto_treat_device
. . env_sensor_control_by_roadway_treatment_device
. f_other_rw_fc_control_to_traffic_sensor
. f_other_rw_ic_control_to_traffic_sensor

fors_sensor_data

. f_other_rw_env_sensor_data_for_auto_treat_device
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. . station_id
. f_other_rw_traffic_sensor_data_to_fc
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. f_other_rw_traffic_sensor_data_to_ic
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. f_other_rw_work_zone_intrusion_detection
. . work_zone_intrusion_detection

fors_sensor_status

. f_other_rw_traffic_sensor_status_to_fc
. . sensor_status
. . . traffic_sensor_status
. f_other_rw_traffic_sensor_status_to_ic
. . sensor_status
. . . traffic_sensor_status

fota_toll_charges_reconciliation_data

fota_toll_pricing_data

fotc_data_request

. local_TMC_incidents_request
. . request_local_current_incidents_data
. . request_local_planned_events_data
. other_TMC_data_request

fotc_identity

. tmc_identity

fotc_request_local_TMC_data_FB

. fotc_data_request
. . local_TMC_incidents_request
. . . request_local_current_incidents_data
. . . request_local_planned_events_data

. . other_TMC_data_request
. fotc_identity
. . tmc_identity
fotc_traffic_control_and_status
. other_control_data_for_highways
. . other_indicator_highway_requested_state
. . . indicator_control_data_for_highways
. . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . ramp_controls
. . . list_size
. other_control_data_for_roads
. . other_indicator_control_data_for_roads
. . . indicator_crossing_control_data_for_roads
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_junction_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_junction_controls
. . . . list_size
. . . indicator_pedestrian_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_pedestrian_controls
. . . . list_size
. other_roadway_information_data
. . other_dms_data
. . . other_indicator_sign_control_data_for_hri
. . . . crossing_id
. . . . hri_sign_control_data
. . . . list_size
. . . other_indicator_sign_control_data_for_roads
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_sign_control_data
. . . . . dms_advisory_text
. . . . . . dms_auto_treat_info
. . . . . . dms_highway_open_close
. . . . . . dms_incident_warning
. . . . . . dms_weather_warning
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . lane_dms_controls
. . . . . parking_lot_dms_controls
. . . . . pollution_output_message
. . . . . . dms_pollution_message
. . . . . . vehicle_identity
. . . . list_size
. . other_har_data
. . . har_identity
. . . har_management_data
. . . . har_mode
. . . . har_schedule
. . . har_program
. other_roadway_information_status
. . other_dms_status
. . . dms_status
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . dms_fault
. . . . . dms_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . dms_updates
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . other_har_status
. . . har_identity
. . . har_status
. . . . device_status
. . . . har_fault
. . . . . har_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. other_status_for_highways
. . other_indicator_input_data_from_highways
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_response_state
. . . list_size
. other_status_for_roads
. . other_indicator_input_state_for_roads
. . . indicator_data
. . . indicator_type
. . . list_size
fotc_transfer_data
. other_current_data
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number

Appendix D: Data Tree

. . . parking_lot_state
. . processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . roadway_traffic_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . link_traffic_conditions
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . . indicator_list
. . . . . . list_size
. . . . . . pedestrian_demand
. . sensor_output_data
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . hri_sensor_data
. . . . closure_event_data
. . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . intersection_blocked
. . . . rail_schedules_data
. . . pedestrian_sensor_data
. . . . node_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . pedestrian_demand
. . . traffic_sensor_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . . traffic_video_image
. . stored_incident_data
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . planned_event_data
. . . . list_size
. . . . planned_event_details
. . . . . incident_duration

. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . indicator_junction_control_data
. . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . traffic_video_image_data
. . . list_size
. . . traffic_video_camera_number
. . . . location_identity
. . . . unit_number
. . . traffic_video_image
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution

Appendix D: Data Tree

```
. other_long_term_data
. . historical_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
 . . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . historical_parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . historical_processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
 . . . . . . unit_number
. . . . . list_size
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . . indicator_list
. . . . . . list_size
. . . . . . pedestrian_demand
. . historical_stored_incident_data
. . . historical_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . list_size
. . historical_traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
 . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
```

. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . historical_traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_junction_control_data
. . . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . historical_vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . historical_wide_area_pollution_data
. . . historical_pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . historical_pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . list_size
. . o_d_matrix
. other_planned_events
. . list_size
. . planned_events_data
. . . crossing_closure_schedule
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . tmc_identity
. other_TMC_cv_incidents
. . permit_route_plan
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . load_description
. . permit_traffic_controls
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . . indicator_type

. . . . . location_identity
. . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. . permit_type
. other_TMC_emergency_data
. . emergency_traffic_control_request
. . . date
. . . list_size
. . . route_segment_estimated_arrival_time
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . time
. . selected_emergency_vehicle_strategy
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_emergency_strategy
. permit_coordination
. . date
. . permit_route_plan
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . load_description
. . permit_traffic_controls
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. . permit_type
. . time

fotc_transfer_other_TMC_data_FB

. fotc_identity
. . tmc_identity
. fotc_traffic_control_and_status
. . other_control_data_for_highways
. . . other_indicator_highway_requested_state
. . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . list_size
. . . . . ramp_controls
. . . . list_size
. . other_control_data_for_roads
. . . other_indicator_control_data_for_roads
. . . . indicator_crossing_control_data_for_roads
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_junction_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_junction_controls
. . . . . list_size
. . . . indicator_pedestrian_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_pedestrian_controls
. . . . . list_size
. . other_roadway_information_data
. . . other_dms_data
. . . . other_indicator_sign_control_data_for_hri
. . . . . crossing_id
. . . . . hri_sign_control_data
. . . . . list_size
. . . . other_indicator_sign_control_data_for_roads
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_sign_control_data
. . . . . dms_advisory_text
. . . . . indicator_identity
. . . . . lane_dms_controls
. . . . . parking_lot_dms_controls
. . . . . pollution_output_message
. . . . . list_size
. . . other_har_data
. . . . har_identity
. . . . har_management_data
. . . . . har_mode
. . . . . har_schedule
. . . . har_program
. . other_roadway_information_status
. . . other_dms_status
. . . . dms_status
. . . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . . dms_fault
. . . . . dms_identity
. . . . . indicator_identity
. . . . . indicator_type

Appendix D: Data Tree

. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . dms_updates
. . . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . other_har_status
. . . . har_identity
. . . . har_status
. . . . . device_status
. . . . . har_fault
. . . . . har_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . other_status_for_highways
. . . other_indicator_input_data_from_highways
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_response_state
. . . . list_size
. . other_status_for_roads
. . . other_indicator_input_state_for_roads
. . . . indicator_data
. . . . indicator_type
. . . . list_size
. fotc_transfer_data
. . other_current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data

Appendix D: Data Tree

. . . . current_incident_data
. . . . . current_incident_details
. . . . . . incident_description
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . . indicator_list
. . . . . . ramp_list
. . . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . . parking_lot_list
. . . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . other_long_term_data
. . . historical_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . historical_parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . historical_processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list

Appendix D: Data Tree

. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . historical_stored_incident_data
. . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . list_size
. . . historical_traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . historical_traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . historical_vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . historical_wide_area_pollution_data
. . . . historical_pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . historical_pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution

. . . . . current_roadside_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . list_size
. . . o_d_matrix
. . other_planned_events
. . . list_size
. . . planned_events_data
. . . . crossing_closure_schedule
. . . . list_size
. . . . planned_event_details
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . tmc_identity
. . other_TMC_cv_incidents
. . . permit_route_plan
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . load_description
. . . permit_traffic_controls
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . permit_type
. . other_TMC_emergency_data
. . . emergency_traffic_control_request
. . . . date
. . . . list_size
. . . . route_segment_estimated_arrival_time
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . time
. . . selected_emergency_vehicle_strategy
. . . . indicator_list
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_emergency_strategy
. . permit_coordination
. . . date
. . . permit_route_plan
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . load_description
. . . permit_traffic_controls
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . permit_type
. . . time

fotrm_transit_services

. traffic_incident_data_for_transit
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. transit_fare_data
. . list_size
. . transit_fares
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
. transit_services_for_advisory_data
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list

. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . . list_size
. . . . . . transit_route_schedule_number
. . . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. transit_vehicle_advisory_eta
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_deviations_details
. . transit_vehicle_collected_trip_data
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . . transit_vehicle_running_times
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_stop_scheduled_time
. . . . . time
. . transit_vehicle_deviation_update
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_location
. . . transit_vehicle_identity
. . . transit_vehicle_location_data
. . . . location_identity
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. transit_vehicle_passenger_data
. . transit_passenger_numbers
. . transit_route_number
. . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
. . transit_vehicle_fare_collection_data
. . . list_size
. . . transit_fare_collection_data
. . . . transit_fare
. . . . transit_route_use_time
. . . . transit_user_category
. . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . . transit_route_number
. . . . . . transit_route_segment_number
. . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . . . . transit_route_number
. . . . . . transit_route_segment_number
. . transit_vehicle_identity
fp_pedestrian_data
fp_pedestrian_images
fpo_archive_commands
fpo_confirm_advanced_parking_payment
fpo_current_lot_state
fpo_lot_occupancy
fpo_parking_lot_charge_change_response
fpo_parking_lot_data
fpo_parking_lot_hours_of_operation
fpo_transaction_reports_request
fre_environmental_conditions
fre_environmental_conditions_at_roadway
fre_physical_conditions
fre_roadside_data
fre_roadway_characteristics
fre_roadway_characteristics_for_mcv
fre_roadway_infrastructure_characteristics
freight_cargo_data
fro_incident_notification
fro_m_and_c_plan_feedback_from_rail
fro_maintenance_schedules
fro_railroad_schedules
fro_train_schedules
From_Archived_Data_Administrator
. fada_archive_administration_requests
From_Archived_Data_User_Systems
. fadu_archive_analysis_request
. fadu_archive_data_product_request
. fadu_on_demand_archive_request
From_Asset_Management
. fam_asset_archive_data
. . asset_archive_catalog
. . asset_data_for_archive
. . . asset_data
. . . asset_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security

. . . . standard_data_attribute
. . . . standard_message_attribute
. fam_asset_inventory
. fam_asset_maint_and_repair_needs
. fam_asset_restrictions
From_Basic_Commercial_Vehicle
. fbcv_brake_condition
. fbcv_cargo_data
. fbcv_cargo_safety_status
. fbcv_distance_traveled
. fbcv_driver_safety_status
. fbcv_driver_status
. fbcv_lock_tag_data
. fbcv_vehicle_characteristics
. fbcv_vehicle_identification
. fbcv_vehicle_safety_status
. fbcv_weight
From_Basic_MC_Vehicle
. fbmcv_basic_mcv_measures
. . vehicle_system_status
. fbmcv_materials_status
From_Basic_Transit_Vehicle
. fbtv_availability
. fbtv_vehicle_maintenance_data
. fbtv_vehicle_trip_data
From_Basic_Vehicle
. fbv_brake_servo_response
. fbv_crash_sensor_data
. fbv_diagnostics_data
. fbv_driver_safety_status
. fbv_steering_servo_response
. fbv_throttle_servo_response
. fbv_vehicle_attitude_data
. fbv_vehicle_condition
. fbv_vehicle_headway
. fbv_vehicle_identity
. fbv_vehicle_lane_position
. fbv_vehicle_motion_data
. fbv_vehicle_on_ahs_lane
. fbv_vehicle_proximity_data
. fbv_vehicle_safety_status
. fbv_vehicle_security_status
. fbv_vehicle_speed
From_Care_Facility
. fcf_care_facility_status_response
. fcf_care_facility_vehicle_status_response
From_Commercial_Vehicle_Driver
. fcvd_activity_request
. fcvd_carrier_number
. fcvd_driver_data_input
. fcvd_driver_general_message
. fcvd_driver_input_type
. fcvd_driver_number
. fcvd_enrollment_payment_request
. fcvd_enrollment_request
. fcvd_other_data_input
. fcvd_request_routing_instructions
. fcvd_request_tag_data_output
. fcvd_route_data
. fcvd_route_request
. fcvd_trip_identification_number
. fcvd_vehicle_number
From_Commercial_Vehicle_Manager
. fcvm_carrier_number
. fcvm_driver_number
. fcvm_enrollment_payment_request
. fcvm_enrollment_request
. fcvm_other_data_input
. fcvm_preclearance_data
. fcvm_request_driver_route_instructions
. fcvm_request_on_board_vehicle_data
. fcvm_request_tag_data_output
. fcvm_roadside_activity_report_request
. fcvm_route_data
. fcvm_route_function_request
. fcvm_trip_identity
. fcvm_update_driver_route_instructions
. fcvm_vehicle_number
From_CVO_Inspector
. fci_credentials_data_request
. fci_inspection_data_input
. fci_pull_in_action
. fci_request_log_report
. fci_safety_data_request
. fci_start_inspection
From_DMV
. fdmv_parking_lot_violation_state_identity
. fdmv_parking_lot_violation_vehicle_registration
. fdmv_toll_violation_state_identity
. fdmv_toll_violation_vehicle_registration
. fdmv_traffic_violation_state_identity
. fdmv_traffic_violation_vehicle_registration
From_Driver
. fd_activate_vehicle_control
. fd_emergency_request
. fd_guidance_data
. fd_guidance_map_update_request
. fd_guidance_request
. fd_guidance_route_accepted
. fd_other_services_parking_request
. fd_other_services_toll_request
. fd_request_advisory_information
From_Emergency_Personnel
. fep_emergency_dispatch_acknowledge
. fep_incident_command_request
. fep_incident_status
From_Emergency_System_Operator
. feso_archive_commands
. feso_emergency_action_log_request
. feso_emergency_allocation_override
. feso_emergency_data_input
. feso_emergency_data_output_request
. feso_emergency_display_update_request
From_Emergency_Telecommunications_System
. fets_incident_data_FB
. . fets_caller_information
. . fets_incident_information
. . . incident_description
. . . incident_location
. . . . location_identity
. . . incident_severity
. . . incident_type
From_Enforcement_Agency
. fea_cv_enforcement_agency_response
. fea_enforcement_parameters
. fea_speed_sensor_control
. . list_size
. . sensor_identity
. . speed_sensor_control
. fea_violator_information
From_Environment
. fe_area_pollutant_levels
. fe_roadside_pollutant_levels
From_Equipment_Repair_Facility
. ferf_current_fleet_maintenance_status
. ferf_equipment_repair_status
. ferf_equipment_status_for_tracking
. ferf_fleet_maintenance_record
From_Event_Promoters
. fevp_event_information
. fevp_event_information_for_travelers
. fevp_planned_event_data
From_Financial_Institution
. ffi_archive_analysis_payment_confirm
. ffi_archive_payment_confirm
. ffi_bad_charges_payment_updates
. ffi_bad_fare_payment_updates
. ffi_bad_toll_payment_updates

. ffi_confirm_charges_payment
. ffi_confirm_fare_payment
. ffi_confirm_toll_payment
. ffi_cv_payment_confirm
. ffi_driver_map_payment_confirm
. ffi_other_services_payment_confirm
. ffi_registration_payment_confirm
. ffi_traveler_display_payment_confirm
. ffi_traveler_map_payment_confirm
. ffi_traveler_other_services_payments_confirm
. ffi_traveler_rideshare_payment_confirm
From_Govt_Reporting_Systems
. fgrs_government_data_report_request
From_Intermodal_Freight_Depot
. fifd_freight_data
. fifd_intermodal_archive_data
. . intermodal_archive_catalog
. . intermodal_data_for_archive
. . . intermodal_data
. . . intermodal_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
From_Intermodal_Freight_Shipper
. fifs_trip_identification_number
From_ISP_Operator
. fispo_archive_commands
. fispo_broadcast_data_parameters_request
. fispo_broadcast_data_parameters_update
.
. fispo_request_route_selection_map_data_update
. fispo_route_selection_parameters_request
. fispo_route_selection_parameters_update
. fispo_trip_planning_parameters_request
. fispo_trip_planning_parameters_update
From_Location_Data_Source
From_Map_Update_Provider
. fmup_demand_display_update
. fmup_emergency_display_update
. fmup_emergency_route_map_update
. fmup_incident_display_update
. fmup_m_and_c_display_update
. fmup_m_and_c_route_map_update
. fmup_map_archive_data
. . map_archive_catalog
. . map_data_for_archive
. . . imported_map_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . imported_map_data_for_archive
. fmup_other_routes_map_data
. fmup_pollution_display_update
. fmup_route_selection_map_data
. fmup_traffic_display_update
. fmup_transit_map_update
. fmup_traveler_display_update
. fmup_traveler_map_update
. fmup_traveler_map_update_cost
. fmup_traveler_personal_display_update
. fmup_traveler_personal_display_update_cost
. fmup_vehicle_map_update
. fmup_vehicle_map_update_cost
From_MC_Administrative_Systems
. fmcas_m_and_c_administrative_information
. fmcas_m_and_c_personnel_information
. fmcas_m_and_c_regulations
. fmcas_resupply_response
From_MC_Center_Personnel
. fmccp_archive_commands
. fmccp_dispatch_and_routing_info
. . dispatch_info_for_m_and_c_fleet
. . routing_parameters_for_m_and_c_fleet
. fmccp_env_data_collection_inputs
. fmccp_env_data_processing_inputs
. fmccp_env_info_dissemination_inputs
. fmccp_env_sensor_control_inputs
. . environmental_sensor_control
. . sensor_identity
. . station_id
. fmccp_mdss_parameter_input
. fmccp_request_for_schedule
. fmccp_resource_response
. fmccp_wz_device_control
From_MC_Field_Personnel
. fmcfp_crew_movements
. fmcfp_dispatch_response
. fmcfp_field_equip_repair_status
. fmcfp_m_and_c_activity_status
. fmcfp_work_zone_status_inputs
From_Media
. fm_emergency_information_request
. fm_incident_data_request
. fm_incident_details

. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_severity
. . incident_start_time
. . . time
. . incident_type
. . media_identity
. fm_incident_information
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_severity
. . incident_start_time
. . . time
. . incident_type
. . media_identity
. fm_incident_information_request
. fm_traffic_data_request
. fm_traffic_information_request
. fm_transit_incident_information_request
. fm_transit_schedule_deviations_request
. fm_transit_vehicle_deviations_request
. fm_traveler_information
From_Multimodal_Crossings
. fmmc_crossing_close_duration
. fmmc_crossing_close_time
. fmmc_crossing_closure_schedule
. . crossing_closure_schedule
. fmmc_crossing_status_for_highways
. fmmc_crossing_status_for_roads
From_Multimodal_Transportation_Service_Provider
. fmtsp_air_services
. fmtsp_ferry_services
. fmtsp_multimodal_archive_data
. . multimodal_archive_catalog
. . multimodal_data_for_archive
. . . multimodal_data
. . . multimodal_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. fmtsp_multimodal_service_confirmation
. fmtsp_non_motorized_services
. . bike_route_information
. . multi_use_trail_information
. . skyway_information
. . walkway_information
. fmtsp_rail_services
. fmtsp_transit_service_data
From_Other_Archives
. foa_archive_coordination_data
From_Other_CVAS
. focvas_border_clearance
. focvas_credentials
. focvas_credentials_status
. focvas_data_table
. focvas_safety_inspection
. focvas_safety_status
From_Other_Data_Sources
. fods_other_data_source_archive_data
. . other_data_source_catalog
. . user_defined_data_for_archive
. . . user_defined_data
. . . user_defined_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
From_Other_EM
. foec_incident_data_FB
. . foec_emergency_center_identity
. . . emergency_center_identity
. . foec_incident_details
. . . incident_confidence_level
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_report_source
. . . incident_reported_time
. . . . time
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_status
. . . . incident_vehicles_involved
. . . incident_traffic_impact
. . . incident_type
. . foec_incident_response_coordination
. . . agency_incident_response_procedures

. . . hand_off_coordination
. . . incident_resource_coordination
. . . incident_response_status
. . . staging_area
. foec_mayday_emergency_data
. . driver_status_update
. . emergency_request_driver_details
. . . date
. . . driver_personal_emergency_request
. . . . call_back_information
. . . . driver_information
. . . . vehicle_identity
. . . . vehicle_location_for_emergencies
. . . . . location_identity
. . . . vehicle_status_details
. . . . . vehicle_security_status
. . . . . vehicle_system_status
. . . time
. . emergency_request_vehicle_details
. . . date
. . . time
. . . vehicle_emergency_request
. . . . processed_cargo_data
. . . . vehicle_crash_sensor_data
. . . . vehicle_identity
. . . . vehicle_location_for_incidents
. . . . . location_identity
. . . . vehicle_status_details
. . . . . vehicle_security_status
. . . . . vehicle_system_status
. . mayday_agency_ID
. . vehicle_status_update

From_Other_ISP

. foisp_data_supply
. . road_data
. foisp_request_data
. foisp_traffic_data
. . current_data_for_retrieval
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . long_term_data_for_retrieval
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time

. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . planned_events
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . predictive_model_data_for_retrieval
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . predicted_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_road_network_use
. . . . route_segment_guided_vehicles
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . source_identity
. foisp_traffic_information_request
. foisp_transit_data
. . transit_incident_data
. . transit_running_data_for_advisory_output
. . . list_size

Appendix D: Data Tree

. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . . transit_vehicle_running_times
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. . traveler_transit_information_advisory_data
. . . traveler_transit_information_data
. . . . transit_running_data_for_advisory_output
. . . . . list_size
. . . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . transit_vehicle_identity
. . . . transit_services_for_advisory_data
. . . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . transit_schedule_data
. . traveler_transit_information_broadcast_data
. . . traveler_transit_information_data
. . . . transit_running_data_for_advisory_output
. . . . . list_size
. . . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . transit_vehicle_identity
. . . . transit_services_for_advisory_data
. . . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . transit_schedule_data
. foisp_transit_information_request

From_Other_MCM

. fomcm_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. fomcm_m_and_c_plan_feedback
. fomcm_m_and_c_work_plans
. . m_and_c_work_plans
. fomcm_resource_coordination_data
. fomcm_road_weather_info
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. fomcm_roadway_maint_status
. . current_roadway_maintenance_status
. fomcm_work_zone_images
. fomcm_work_zone_info

From_Other_MCV

. fomcv_crew_movements
. fomcv_env_conditions
. . environment_sensor_output

. . sensor_identity
. fomcv_vehicle_operational_data
. . operational_data_for_mcv
. . vehicle_id_for_mcv
. fomcv_work_zone_intrusion_alert_on_board
. fomcv_work_zone_intrusion_detection_on_board
. fomcv_work_zone_intrusion_warning_to_crew
From_Other_Parking
. fop_parking_coordination_data
From_Other_RS
. fors_device_control
. . f_other_rw_fc_control_to_fc
. . . indicator_crossing_control_data_for_highways
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_ramp_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . ramp_controls
. . f_other_rw_ic_control_to_ic
. . . indicator_crossing_control_data_for_roads
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_junction_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_junction_controls
. . . . list_size
. . . indicator_pedestrian_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_pedestrian_controls
. . . . list_size
. fors_device_status
. . f_other_rw_fc_status_to_fc
. . . indicator_fault
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_response_state
. . . list_size
. . f_other_rw_ic_status_to_ic
. . . indicator_fault
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_response_state
. . . list_size
. fors_roadway_info_data_from_devices
. . f_other_rw_dms_auto_treat_data_from_roadway
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . list_size
. fors_roadway_info_data_from_sensors
. . f_other_rw_env_sensor_data_to_dms
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . f_other_rw_individual_vehicle_speed_to_dms
. . f_other_rw_speed_warning_to_dms
. fors_sensor_control
. . f_other_rw_env_sensor_control_by_auto_treat_device
. . . env_sensor_control_by_roadway_treatment_device
. . f_other_rw_fc_control_to_traffic_sensor
. . f_other_rw_ic_control_to_traffic_sensor
. fors_sensor_data
. . f_other_rw_env_sensor_data_for_auto_treat_device
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . sensor_identity
. . . station_id
. . f_other_rw_traffic_sensor_data_to_fc
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . f_other_rw_traffic_sensor_data_to_ic
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . f_other_rw_work_zone_intrusion_detection
. . . work_zone_intrusion_detection
. fors_sensor_status
. . f_other_rw_traffic_sensor_status_to_fc
. . . sensor_status
. . . . traffic_sensor_status
. . f_other_rw_traffic_sensor_status_to_ic
. . . sensor_status
. . . . traffic_sensor_status

Appendix D: Data Tree

From_Other_TM
. fotc_request_local_TMC_data_FB
. . fotc_data_request
. . . local_TMC_incidents_request
. . . . request_local_current_incidents_data
. . . . request_local_planned_events_data
. . . other_TMC_data_request
. . fotc_identity
. . . tmc_identity
. fotc_transfer_other_TMC_data_FB
. . fotc_identity
. . . tmc_identity
. . fotc_traffic_control_and_status
. . . other_control_data_for_highways
. . . . other_indicator_highway_requested_state
. . . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_ramp_control_data
. . . . . list_size
. . . other_control_data_for_roads
. . . . other_indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . list_size
. . . . . indicator_junction_control_data
. . . . . indicator_identity
. . . . . indicator_junction_controls
. . . . . list_size
. . . . . indicator_pedestrian_control_data
. . . . . indicator_identity
. . . . . indicator_pedestrian_controls
. . . . . list_size
. . . other_roadway_information_data
. . . . other_dms_data
. . . . . other_indicator_sign_control_data_for_hri
. . . . . crossing_id
. . . . . hri_sign_control_data
. . . . . list_size
. . . . . other_indicator_sign_control_data_for_roads
. . . . . indicator_identity
. . . . . indicator_sign_control_data
. . . . . list_size
. . . . other_har_data
. . . . . har_identity
. . . . . har_management_data
. . . . . har_mode
. . . . . har_schedule
. . . . . har_program
. . . other_roadway_information_status
. . . . other_dms_status
. . . . . dms_status
. . . . . dms_advisory_text
. . . . . dms_fault
. . . . . indicator_identity
. . . . . list_size
. . . . . dms_updates
. . . . . dms_advisory_text
. . . . . indicator_identity
. . . . . list_size
. . . . other_har_status
. . . . . har_identity
. . . . . har_status
. . . . . device_status
. . . . . har_fault
. . . . . indicator_identity
. . . . . list_size
. . . other_status_for_highways
. . . . other_indicator_input_data_from_highways
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_response_state
. . . . . list_size
. . . other_status_for_roads
. . . . other_indicator_input_state_for_roads
. . . . . indicator_data
. . . . . indicator_type
. . . . . list_size
. . fotc_transfer_data
. . . other_current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_list
. . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . node_list
. . . . . node_list

. . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . list_size
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . current_incident_details
. . . . . list_size
. . . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . other_long_term_data
. . . . historical_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . historical_parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . historical_processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . historical_stored_incident_data
. . . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . list_size
. . . . historical_traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number

. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . historical_traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . historical_vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . historical_wide_area_pollution_data
. . . . . historical_pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . historical_pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . list_size
. . . . o_d_matrix
. . . other_planned_events
. . . . list_size
. . . . planned_events_data
. . . . . crossing_closure_schedule
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . tmc_identity
. . . other_TMC_cv_incidents
. . . . permit_route_plan
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . load_description
. . . . permit_traffic_controls
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . . permit_type
. . . other_TMC_emergency_data
. . . . emergency_traffic_control_request
. . . . . date
. . . . . list_size
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . time
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . permit_coordination
. . . . date
. . . . permit_route_plan
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . load_description
. . . . permit_traffic_controls
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . . permit_type
. . . . time

From_Other_Toll_Administration

. fota_toll_charges_reconciliation_data
. fota_toll_pricing_data

From_Other_TRM

. fotrm_transit_services
. . traffic_incident_data_for_transit
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . transit_fare_data
. . . list_size
. . . transit_fares
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost

. . . . . transit_route_segment_number
. . . . transit_route_use_time
. . . . transit_user_category
. . transit_services_for_advisory_data
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . . list_size
. . . . . . transit_route_stop_data
. . . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . transit_vehicle_advisory_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_deviations_details
. . . transit_vehicle_collected_trip_data
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . transit_vehicle_deviation_update
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_location
. . . . transit_vehicle_identity
. . . . transit_vehicle_location_data
. . . . . location_identity
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. . transit_vehicle_passenger_data
. . . transit_passenger_numbers
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
. . . transit_vehicle_fare_collection_data
. . . . list_size
. . . . transit_fare_collection_data
. . . . . transit_fare
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . transit_vehicle_identity
From_Other_Vehicle
From_Parking_Operator
. fpo_archive_commands
. fpo_confirm_advanced_parking_payment
. fpo_current_lot_state
. fpo_lot_occupancy
. fpo_parking_lot_charge_change_response
. fpo_parking_lot_data
. fpo_parking_lot_hours_of_operation
. fpo_transaction_reports_request
From_Pedestrians
. fp_pedestrian_data
. fp_pedestrian_images
From_Potential_Obstacles
From_Rail_Operations
. fro_incident_notification
. fro_m_and_c_plan_feedback_from_rail
. fro_maintenance_schedules
. fro_railroad_schedules
. fro_train_schedules
From_Roadway_Environment
. fre_environmental_conditions
. fre_environmental_conditions_at_roadway
. fre_physical_conditions
. fre_roadside_data
. fre_roadway_characteristics
. fre_roadway_characteristics_for_mcv
. fre_roadway_infrastructure_characteristics
From_Secure_Area_Environment
. fsa_area_image
From_Storage_Facility
. fsf_equipment_availability
. fsf_equipment_availability_for_fleet_manager
. fsf_equipment_status_for_tracking
. fsf_materials_status
From_Surface_Transportation_Weather_Service
. fstws_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute

Appendix D: Data Tree

. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. fstws_env_sensor_data_for_traffic
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. fstws_roadway_env_sensor_control
. . environmental_sensor_control
. . list_size
. . sensor_identity
. . station_id
. fstws_surface_trans_weather_forecasts
. . climatic_scale_surface_trans_weather_forecasts
. . meso_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_advisories
. . . surface_trans_weather_forecast_details
. . micro_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_forecast_details
. . miso_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_advisories
. . . surface_trans_weather_forecast_details
. . surface_trans_weather_scale_forecast_data_attributes
. . synoptic_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_forecast_details
. fstws_surface_trans_weather_observations
. . surface_trans_weather_observations
. . weather_observation_attributes
. fstws_trans_weather_archive_data
. . surface_trans_weather_archive_catalog
. . surface_trans_weather_data_for_archive
. . . climatic_scale_surface_trans_weather_forecasts
. . . meso_scale_surface_trans_weather_forecasts
. . . . surface_trans_weather_advisories
. . . . surface_trans_weather_forecast_details
. . . micro_scale_surface_trans_weather_forecasts
. . . . surface_trans_weather_forecast_details
. . . miso_scale_surface_trans_weather_forecasts
. . . . surface_trans_weather_advisories
. . . . surface_trans_weather_forecast_details
. . . surface_trans_weather_observations
. . . surface_trans_weather_scale_forecast_data_attributes
. . . synoptic_scale_surface_trans_weather_forecasts
. . . . surface_trans_weather_forecast_details
. . . weather_observation_attributes

From_Toll_Administrator

. fta_archive_commands
. fta_confirm_advanced_toll
. fta_toll_price_changes_response
. fta_toll_price_data

From_Toll_Operator

. fto_local_toll_price_variations

From_Trade_Reg_Agencies

. ftra_declaration_information
. ftra_domestic_transportation_information

From_Traffic

. ftrf_traffic_data
. ftrf_traffic_images
. ftrf_vehicle_pollutant_levels
. ftrf_vehicle_presence

From_Traffic_Operations_Personnel

. ftop_archive_command
. ftop_demand_management_inputs_FB
. . ftop_demand_data_request
. . ftop_demand_data_update_request
. . ftop_demand_forecast_request
. . ftop_demand_policy_activation
. . ftop_demand_policy_information_request
. . ftop_demand_policy_updates
. ftop_incident_management_inputs_FB
. . ftop_defined_incident_response_data_request
. . ftop_defined_incident_response_data_update
. . ftop_incident_camera_action_request
. . ftop_incident_data_amendment
. . ftop_incident_information_requests
. . ftop_output_possible_defined_responses
. . ftop_request_possible_incidents_data
. . ftop_update_defined_incident_responses
. ftop_indicator_fault_data_input
. ftop_indicator_fault_data_request
. ftop_indicator_fault_data_update
. ftop_pollution_data_information_request
. ftop_pollution_parameter_updates
. ftop_resource_request
. ftop_roadway_characteristics
. . link_speed_limit
. . . special_vehicle_speed_limit
. . . . vehicle_class
. . . . vehicle_type
. . . speed_limit
. . median_type
. . number_of_lanes
. . pavement_type
. . shoulder_width
. ftop_sensor_fault_data_input
. ftop_static_data
. ftop_strategy_override
. ftop_traffic_data_parameter_updates
. ftop_traffic_information_requests
. ftop_video_camera_strategy_change
. ftop_weather_request_information

From_Transit_Driver

. ftd_emergency_request
. ftd_fare_transaction_mode_set_up
. ftd_information_updates
. ftd_request_batch_mode_data_transfer

From_Transit_Fleet_Manager

. ftfm_approved_corrections
. ftfm_coordination_data
. ftfm_initiate_service_updates
. ftfm_passenger_loading_updates

Appendix D: Data Tree

. ftfm_planning_parameters
. ftfm_planning_parameters_update_request
. ftfm_request_response_parameter_output
. ftfm_request_transit_vehicle_data
. ftfm_response_parameters
. ftfm_technician_information_request
. ftfm_technician_information_updates
. ftfm_transit_display_update_request
. ftfm_transit_driver_information_request
. ftfm_transit_driver_information_updates
. ftfm_transit_driver_route_preferences
. ftfm_transit_services_output_request
. ftfm_transit_vehicle_maintenance_information_request
. ftfm_transit_vehicle_maintenance_specs
From_Transit_Maintenance_Personnel
. ftmp_transit_vehicle_maintenance_updates
From_Transit_System_Operators
. ftso_archive_commands
. ftso_emergency_request_acknowledge
. ftso_fare_updates
. ftso_media_parameter_request
. ftso_media_parameter_updates
. ftso_request_fare_output
. ftso_security_action
. ftso_video_camera_action_request
From_Transit_User
. ftu_destination_at_roadside
. ftu_destination_on_vehicle
. ftu_emergency_request
. ftu_other_services_roadside_request
. ftu_other_services_vehicle_request
. ftu_request_advisory_information
. ftu_transit_information_request
. ftu_transit_user_roadside_image
. ftu_transit_user_vehicle_image
From_Traveler
. ft_extra_trip_data
. ft_guidance_data
. ft_guidance_map_update_request
. ft_guidance_request
. ft_guidance_route_accepted
. ft_personal_emergency_request
. ft_personal_extra_trip_data
. ft_personal_map_display_update_request
. ft_personal_trip_planning_requests
. ft_remote_emergency_request
. ft_trip_planning_requests
From_Traveler_Card
. ftc_confirm_fare_payment_at_roadside
. ftc_confirm_fare_payment_on_transit_vehicle
. ftc_confirm_payment_at_parking_lot
. ftc_confirm_payment_at_toll_plaza
. ftc_confirm_traveler_parking_payment
. ftc_driver_vehicle_input_credit_identity
. ftc_parking_tag_data
. ftc_toll_tag_data
. ftc_transit_roadside_tag_data
. ftc_transit_user_roadside_input_credit_identity
. ftc_transit_user_vehicle_input_credit_identity
. ftc_transit_vehicle_tag_data
. ftc_traveler_parking_input_credit_identity
. ftc_traveler_personal_information
. ftc_traveler_personal_input_credit_identity
. ftc_traveler_remote_personal_information
. ftc_traveler_roadside_input_credit_identity
From_Vehicle_Characteristics
From_Wayside_Equipment
. fwe_approaching_train_announcement
. fwe_train_data
. fwe_wayside_equipment_status
From_Weather_Service
. fws_current_weather_observations
. . current_weather_observations
. . weather_observation_attributes
. fws_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. fws_env_sensor_data_for_traffic
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. fws_roadway_env_sensor_control
. . environmental_sensor_control

. . list_size
. . sensor_identity
. . station_id
. fws_weather_archive_data
. . weather_archive_catalog
. . weather_data_for_archive
. . . weather_data
. . . weather_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. fws_weather_forecasts
. . climatic_scale_weather_forecasts
. . meso_scale_weather_forecasts
. . . weather_advisories
. . . weather_forecast_details
. . . weather_warnings
. . . weather_watches
. . miso_scale_weather_forecasts
. . . weather_advisories
. . . weather_forecast_details
. . . weather_warnings
. . synoptic_scale_weather_forecasts
. . . weather_forecast_details
. . . weather_watches
. . weather_scale_forecast_data_attributes
From_Yellow_Pages_Service_Providers
. fypsp_provider_profile_update
. fypsp_request_provider_registration
. fypsp_transaction_confirmation
. fypsp_yellow_pages_data
fsa_area_image
fsf_equipment_availability
fsf_equipment_availability_for_fleet_manager
fsf_equipment_status_for_tracking
fsf_materials_status
fstws_env_sensor_data
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
fstws_env_sensor_data_for_traffic
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
fstws_roadway_env_sensor_control
. environmental_sensor_control
. list_size
. sensor_identity
. station_id
fstws_surface_trans_weather_forecasts
. climatic_scale_surface_trans_weather_forecasts
. meso_scale_surface_trans_weather_forecasts
. . surface_trans_weather_advisories
. . surface_trans_weather_forecast_details
. micro_scale_surface_trans_weather_forecasts
. . surface_trans_weather_forecast_details
. miso_scale_surface_trans_weather_forecasts

. . surface_trans_weather_advisories
. . surface_trans_weather_forecast_details
. surface_trans_weather_scale_forecast_data_attributes
. synoptic_scale_surface_trans_weather_forecasts
. . surface_trans_weather_forecast_details
fstws_surface_trans_weather_observations
. surface_trans_weather_observations
. weather_observation_attributes
fstws_trans_weather_archive_data
. surface_trans_weather_archive_catalog
. surface_trans_weather_data_for_archive
. . climatic_scale_surface_trans_weather_forecasts
. . meso_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_advisories
. . . surface_trans_weather_forecast_details
. . micro_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_forecast_details
. . miso_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_advisories
. . . surface_trans_weather_forecast_details
. . surface_trans_weather_observations
. . surface_trans_weather_scale_forecast_data_attributes
. . synoptic_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_forecast_details
. . weather_observation_attributes
ft_extra_trip_data
ft_guidance_data
ft_guidance_map_update_request
ft_guidance_request
ft_guidance_route_accepted
ft_personal_emergency_request
ft_personal_extra_trip_data
ft_personal_map_display_update_request
ft_personal_trip_planning_requests
ft_remote_emergency_request
ft_trip_planning_requests
fta_archive_commands
fta_confirm_advanced_toll
fta_toll_price_changes_response
fta_toll_price_data
ftc_confirm_fare_payment_at_roadside
ftc_confirm_fare_payment_on_transit_vehicle
ftc_confirm_payment_at_parking_lot
ftc_confirm_payment_at_toll_plaza
ftc_confirm_traveler_parking_payment
ftc_driver_vehicle_input_credit_identity
ftc_parking_tag_data
ftc_toll_tag_data
ftc_transit_roadside_tag_data
ftc_transit_user_roadside_input_credit_identity
ftc_transit_user_vehicle_input_credit_identity
ftc_transit_vehicle_tag_data
ftc_traveler_parking_input_credit_identity
ftc_traveler_personal_information
ftc_traveler_personal_input_credit_identity
ftc_traveler_remote_personal_information
ftc_traveler_roadside_input_credit_identity
ftd_emergency_request
ftd_fare_transaction_mode_set_up
ftd_information_updates
ftd_request_batch_mode_data_transfer
ftfm_approved_corrections
ftfm_coordination_data
ftfm_initiate_service_updates
ftfm_passenger_loading_updates
ftfm_planning_parameters
ftfm_planning_parameters_update_request
ftfm_request_response_parameter_output
ftfm_request_transit_vehicle_data
ftfm_response_parameters
ftfm_technician_information_request
ftfm_technician_information_updates
ftfm_transit_display_update_request
ftfm_transit_driver_information_request
ftfm_transit_driver_information_updates
ftfm_transit_driver_route_preferences
ftfm_transit_services_output_request
ftfm_transit_vehicle_maintenance_information_request
ftfm_transit_vehicle_maintenance_specs
ftmp_transit_vehicle_maintenance_updates
fto_local_toll_price_variations
ftop_archive_command
ftop_defined_incident_response_data_request
ftop_defined_incident_response_data_update
ftop_demand_data_request
ftop_demand_data_update_request
ftop_demand_forecast_request
ftop_demand_management_inputs_FB
. ftop_demand_data_request
. ftop_demand_data_update_request
. ftop_demand_forecast_request
. ftop_demand_policy_activation
. ftop_demand_policy_information_request
. ftop_demand_policy_updates
ftop_demand_policy_activation
ftop_demand_policy_information_request
ftop_demand_policy_updates
ftop_incident_camera_action_request
ftop_incident_data_amendment
ftop_incident_information_requests
ftop_incident_management_inputs_FB
. ftop_defined_incident_response_data_request
. ftop_defined_incident_response_data_update
. ftop_incident_camera_action_request
. ftop_incident_data_amendment
. ftop_incident_information_requests
. ftop_output_possible_defined_responses
. ftop_request_possible_incidents_data
. ftop_update_defined_incident_responses
ftop_indicator_fault_data_input
ftop_indicator_fault_data_request
ftop_indicator_fault_data_update
ftop_output_possible_defined_responses
ftop_pollution_data_information_request
ftop_pollution_parameter_updates
ftop_request_possible_incidents_data
ftop_resource_request
ftop_roadway_characteristics
. link_speed_limit
. . special_vehicle_speed_limit
. . . vehicle_class
. . . vehicle_type
. . speed_limit
. median_type
. number_of_lanes
. pavement_type
. shoulder_width
ftop_sensor_fault_data_input
ftop_static_data
ftop_strategy_override
ftop_traffic_data_parameter_updates
ftop_traffic_information_requests
ftop_update_defined_incident_responses
ftop_video_camera_strategy_change
ftop_weather_request_information
ftra_declaration_information
ftra_domestic_transportation_information
ftrf_traffic_data
ftrf_traffic_images
ftrf_vehicle_pollutant_levels
ftrf_vehicle_presence
ftso_archive_commands
ftso_emergency_request_acknowledge
ftso_fare_updates
ftso_media_parameter_request
ftso_media_parameter_updates
ftso_request_fare_output
ftso_security_action

Appendix D: Data Tree

ftso_video_camera_action_request
ftu_destination_at_roadside
ftu_destination_on_vehicle
ftu_emergency_request
ftu_other_services_roadside_request
ftu_other_services_vehicle_request
ftu_request_advisory_information
ftu_transit_information_request
ftu_transit_user_roadside_image
ftu_transit_user_vehicle_image
fwe_approaching_train_announcement
fwe_train_data
fwe_wayside_equipment_status
fws_current_weather_observations
. current_weather_observations
. weather_observation_attributes
fws_env_sensor_data
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
fws_env_sensor_data_for_traffic
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
fws_roadway_env_sensor_control
. environmental_sensor_control
. list_size
. sensor_identity
. station_id
fws_weather_archive_data
. weather_archive_catalog
. weather_data_for_archive
. . weather_data
. . weather_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
fws_weather_forecasts
. climatic_scale_weather_forecasts
. meso_scale_weather_forecasts
. . weather_advisories
. . weather_forecast_details
. . weather_warnings
. . weather_watches
. miso_scale_weather_forecasts
. . weather_advisories
. . weather_forecast_details
. . weather_warnings
. synoptic_scale_weather_forecasts
. . weather_forecast_details
. . weather_watches
. weather_scale_forecast_data_attributes
fypsp_provider_profile_update
fypsp_request_provider_registration
fypsp_transaction_confirmation
fypsp_yellow_pages_data
get_charge_payment_violator_image

. credit_identity
. parking_lot_cost
. . cost
. vehicle_identity
get_fare_violator_payment_image
. credit_identity
. transit_fare
. transit_roadside_fare_collection_identity
. transit_route_number
. transit_route_segment_number
. transit_route_use_time
. transit_user_category
. transit_vehicle_fare_collection_method
. transit_vehicle_identity
. traveler_identity
get_other_route
. constraint_on_acceptable_travel_time
. constraint_on_eta_change
. constraint_on_special_needs
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. preferred_weather_conditions
get_parking_lot_tag_violator_image
get_toll_payment_violator_image
. credit_identity
. toll_cost
. vehicle_identity
get_toll_tag_violator_image
get_transit_route
. constraint_on_acceptable_travel_time
. constraint_on_eta_change
. constraint_on_number_of_mode_changes
. constraint_on_number_of_transfers
. constraint_on_special_needs
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. preferred_transit_options
. preferred_weather_conditions
get_vehicle_route
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_special_needs
. constraint_on_urban
. constraint_on_vehicle_type
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. preferred_weather_conditions
global_schema
government_report_data
government_report_data_request
guidance_data
. paratransit_route_response
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. . traveler_identity
. trip_request
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions
guidance_data_for_archive
. route_guidance_data_for_archive
. . list_size
. . vehicle_guidance_stored_data
. . . route_identity
. . . route_segment_description
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_travel_time
. . . route_segment_report_position_points
. . . . list_size
. . . . route_segment_way_point
. . . . . location_identity
. . . route_segment_start_point
. . . . location_identity
. vehicle_guidance_probe_data_for_archive
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . time
. . vehicle_identity
guidance_data_for_archive_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation

. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
hand_off_coordination
handicap_access_information
har_data
. har_identity
. har_management_data
. . har_mode
. . har_schedule
. har_program
har_data_from_m_and_c
. har_identity
. har_management_data
. . har_mode
. . har_schedule
. har_program
har_equip_status_for_m_and_c
. har_fault
. . har_identity
har_fault
. har_identity
har_identity
har_management_data
. har_mode
. har_schedule
har_mode
har_program
har_schedule
har_status
. device_status
. har_fault
. . har_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
har_status_for_m_and_c
. device_status
. har_fault
. . har_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
hazard_condition
hazmat_load_data
hazmat_vehicle_data
headway
highway_control_devices
. crossing_equipment_data_for_highways
. . crossing_identity
. . . location_identity
. . . unit_number
. . crossing_phase_data
. . list_size
. highway_equipment_data
. . dms_allocation
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . dms_downstream_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . dms_upstream_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . list_size
highway_equipment_data
. dms_allocation
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. dms_downstream_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. dms_upstream_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. list_size
highway_network
. list_size
. route_segment_downstream_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. route_segment_end_point
. . location_identity
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_start_point
. . location_identity

. route_segment_upstream_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
highway_sign_plan_data
. highway_sign_plan_priority
. highway_sign_plan_purpose
. highway_sign_sequence_data
. . highway_sign_sequence_purpose
. . indicator_list
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
highway_sign_plan_number
highway_sign_plan_priority
highway_sign_plan_purpose
highway_sign_sequence_data
. highway_sign_sequence_purpose
. indicator_list
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
highway_sign_sequence_purpose
highway_sign_setting_data
. highway_sign_sequence_data
. . highway_sign_sequence_purpose
. . indicator_list
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. list_size
highway_sign_setting_plans
. highway_sign_plan_data
. . highway_sign_plan_priority
. . highway_sign_plan_purpose
. . highway_sign_sequence_data
. . . highway_sign_sequence_purpose
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. highway_sign_plan_number
. list_size
historical_incident_details
. incident_description
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
historical_other_routes_use
. route_segment_guided_travelers
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time
. route_segment_total_number
historical_parking_lot_storage_data
. list_size
. parking_lot_current_occupancy
. . parking_lot_calculated_occupancy
. . parking_lot_identity
. . . location_identity
. . . unit_number
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_state
historical_pollution_state_area_collection
. area_air_quality_index
. current_carbon_monoxide_pollution
. current_hydrocarbon_pollution
. current_nitrous_oxide_pollution
. current_ozone_pollution
. current_particulate_pollution
. current_pollution_location
. . location_identity
. current_sulfur_dioxide_pollution
historical_pollution_state_roadside_collection
. current_carbon_monoxide_pollution
. current_hydrocarbon_pollution
. current_nitrous_oxide_pollution
. current_ozone_pollution
. current_particulate_pollution
. current_roadside_pollution_location
. . location_identity
. current_sulfur_dioxide_pollution
historical_processed_data
. hri_state_data
. link_state_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_queue_length
. . vehicle_speed
. o_d_matrix
. parking_lot_input_data
. . list_size
. . parking_lot_list
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . vehicle_count
. . vehicle_queue_length
. private_vehicle_occupants
. ramp_data
. . list_size
. . private_vehicle_occupants
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_speed
. roadway_environment_conditions
. . link_environment_conditions
. . link_list
. . . link_identity
. . . . link_type

Appendix D: Data Tree

. . . . location_identity
. . . . unit_number
. . . list_size
. strategy_data
. . strategy_data_for_highways
. . . crossing_data_for_highways
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_strategy_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . strategy_data_for_roads
. . . crossing_data_for_roads
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_strategy_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . pedestrian_data
. . . . indicator_list
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . pedestrian_demand

historical_stored_incident_data

. historical_incident_details
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. list_size

historical_traffic_flow_state

. current_road_network_use
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. . route_segment_use_prediction
. . . route_segment_guided_vehicles
. current_roadway_network_data
. . current_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . current_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. hov_lane_data
. . hov_lane_vehicle_count
. . hov_lane_violation_count
. . list_size
. link_data_from_tags
. . link_journey_time
. . link_queue_time
. . list_size
. ramp_signal_state
. . list_size
. . ramp_controls
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number

historical_traffic_management_storage_data

. indicator_control_storage_data
. . indicator_control_storage_data_for_highways
. . . indicator_control_data_for_highways
. . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . . indicator_type

. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . ramp_controls
. . indicator_control_storage_data_for_roads
. . . indicator_control_data_for_roads
. . . . indicator_crossing_control_data_for_roads
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_junction_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_junction_controls
. . . . . list_size
. . . . indicator_pedestrian_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_pedestrian_controls
. . . . . list_size
. indicator_input_storage_data
. . indicator_input_storage_data_for_highways
. . . indicator_response_state
. . . indicator_type
. . . list_size
. . indicator_input_storage_data_for_roads
. . . indicator_response_state
. . . indicator_type
. . . list_size
. selected_strategy
. . selected_emergency_vehicle_strategy
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_emergency_strategy
. . selected_parking_lot_control_strategy
. . . parking_lot_list
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . selected_parking_lot_strategy_type
. . selected_ramp_control_strategy
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_ramp_strategy_type
. . selected_roadway_control_strategy
. . . selected_highway_control_strategy
. . . . highway_sign_plan_number
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . selected_strategy_type
. . . selected_road_control_strategy
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . . list_size
. . . . selected_strategy_type
historical_vehicle_smart_probe_stored_data
. list_size
. vehicle_smart_probe_data_for_storage
. . vehicle_smart_probe_data_indication
. . vehicle_smart_probe_data_source
. . . vehicle_smart_probe_data_source_identity
. . . . unit_number
. . . vehicle_smart_probe_data_source_location
. . . . location_identity
historical_wide_area_pollution_data
. historical_pollution_state_area_collection
. . area_air_quality_index
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. historical_pollution_state_roadside_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. list_size
hov_lane_data
. hov_lane_vehicle_count
. hov_lane_violation_count
. list_size
hov_lane_data_input
. private_vehicle_occupants
. traffic_video_image
. vehicle_count
hov_lane_identity
. location_identity
. unit_number
hov_lane_list
. hov_lane_identity
. . location_identity
. . unit_number
. list_size
hov_lane_vehicle_count
hov_lane_violation
. private_vehicle_occupants
. vehicle_identity
. vehicle_license
hov_lane_violation_count

Appendix D: Data Tree

hov_priority
. hov_lane_data
. . hov_lane_vehicle_count
. . hov_lane_violation_count
. . list_size
. hov_lane_list
. . hov_lane_identity
. . . location_identity
. . . unit_number
. . list_size
. list_size
hov_sensor_data
. hov_priority
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . hov_lane_list
. . . hov_lane_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. link_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. list_size
. private_vehicle_occupants
hov_sensor_equip_status_for_m_and_c
. list_size
. sensor_identity
. sensor_status
. . traffic_sensor_status
. station_id
hri_advisory
hri_alert
hri_blockage
hri_closure_data
hri_closure_data_response
hri_control_message
hri_coordination_for_tms
. hri_traffic_data
. traffic_management_request
hri_data_for_roads
. crossing_id
. hri_phase_data
. list_size
hri_device_control
. barrier_device_control
. hsr_device_control
. ssr_device_control
. traffic_device_control
hri_device_control_data
. hri_device_sense
. indicator_sign_control_data_for_hri
. . crossing_id
. . hri_sign_control_data
. . list_size
hri_device_sense
hri_device_status
hri_guidance_for_beacon_message
hri_guidance_for_dms
hri_hazard
hri_incident_data
hri_phase_data
hri_predicted_collision
hri_priority_message
hri_rail_alert
hri_reporting_data
hri_request_for_device_control
. hri_device_control
. . barrier_device_control
. . hsr_device_control
. . ssr_device_control
. . traffic_device_control
. hri_roadway_message
. . hri_guidance_for_beacon_message
. . hri_guidance_for_dms
. train_sense_data
. . crossing_id
. . hri_sensor_data
. . . closure_event_data
. . . hri_status
. . . . hri_closure_data_response
. . . . hri_state
. . . intersection_blocked
. . . rail_schedules_data
hri_roadway_message
. hri_guidance_for_beacon_message
. hri_guidance_for_dms
hri_sensor_data
. closure_event_data
. hri_status
. . hri_closure_data_response
. . hri_state
. intersection_blocked
. rail_schedules_data
hri_sign_control_data
hri_state
hri_state_data
hri_status
. hri_closure_data_response
. hri_state
hri_status_for_traffic_demand
hri_strategy_override
hri_surveillance_data
. hri_sensor_data
. . closure_event_data
. . hri_status
. . . hri_closure_data_response
. . . hri_state
. . intersection_blocked
. . rail_schedules_data
hri_traffic_data
hri_traffic_surveillance
hsr_control_request
hsr_device_control
hsr_device_control_state
identified_emergency_details
. incident_confidence_level
. incident_description
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_report_source
. incident_reported_time
. . time
. incident_severity
. incident_start_time
. . time
. incident_status
. . incident_vehicles_involved
. incident_traffic_impact
. incident_type
import_administration_request
. admin_catalog_request
. admin_check_specification
. admin_cleansing_parameters
. admin_data_format_parameters
. admin_data_product_request
. admin_quality_metrics
import_administration_status
. import_archive_catalog

. import_archive_status
import_archive_catalog
import_archive_status
imported_map_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
imported_map_data_for_archive
incident_action_time
. time
incident_alert
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
incident_analysis_data
incident_command_request
incident_confidence_level
incident_data
. current_incident_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. . list_size
. incident_video_image
. planned_event_data
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. planned_events
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. planned_events_local_data
. . crossing_closure_schedule
. . list_size
. . planned_events_data
. . . crossing_closure_schedule
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . tmc_identity
. request_other_current_incidents_data
. request_other_planned_events_data
incident_data_flow
. emergency_request_driver_acknowledge
. emergency_request_personal_traveler_acknowledge
. . confirmation_flag
. incident_information
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
incident_data_for_work_zone
. work_zone_images
. work_zone_intrusion_video_image
incident_data_input
. environmental_data_for_incidents
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. incident_analysis_data
. other_current_incidents
. . current_incidents_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number

. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . list_size
. . tmc_identity
. other_planned_events
. . list_size
. . planned_events_data
. . . crossing_closure_schedule
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . tmc_identity
. request_local_current_incidents_data
. request_local_planned_events_data
. unusual_data
. . vehicle_count
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_queue_length
. . vehicle_speed
incident_data_request
. driver_status_update
. emergency_request_driver_acknowledge
. emergency_request_driver_details
. . date
. . driver_personal_emergency_request
. . . call_back_information
. . . driver_information
. . . vehicle_identity
. . . vehicle_location_for_emergencies
. . . . location_identity
. . . vehicle_status_details
. . . . vehicle_security_status
. . . . vehicle_system_status
. . time
. emergency_request_personal_traveler_details
. . date
. . time
. . traveler_personal_emergency_request
. . . traveler_identity
. . . traveler_location_for_emergencies
. . . . location_identity
. incident_information_request
. . incident_oldest_time
. . . time
. . incident_type
. vehicle_location_for_emergency_services
. . location_identity
. . time
. vehicle_status_update
incident_data_update
incident_description
incident_details
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_type
. incident_vehicles_involved
incident_details_from_media
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_type
incident_details_request
. incident_oldest_time
. . time
. incident_type
incident_duration
. duration
incident_info_for_emerg
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
incident_info_for_traffic
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
incident_info_from_emerg
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
incident_info_from_traffic
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
incident_info_template
incident_info_type
incident_information
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
incident_information_request

Appendix D: Data Tree

. incident_oldest_time
. . time
. incident_type
incident_location
. location_identity
incident_number
incident_oldest_time
. time
incident_overrides
. current_incident_data_for_vehicle_signage
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. current_incident_static_data
. . static_data_for_incident_management
. . . highway_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . road_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . road_segment_location
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. cv_incident_override
. . permit_route_plan
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . load_description
. . permit_traffic_controls
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. . permit_type
. dms_updates
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. incident_strategy_override
. . selected_ramp_control_strategy
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_ramp_strategy_type
. . selected_roadway_control_strategy
. . . selected_highway_control_strategy
. . . . highway_sign_plan_number
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . selected_strategy_type
. . . selected_road_control_strategy
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity

. . . . . unit_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . . list_size
. . . . selected_strategy_type
. planned_event_data_for_vehicle_signage
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
incident_report_source
incident_reported_time
. time
incident_resource_coordination
incident_response_clear
. incident_location
. . location_identity
. incident_type
incident_response_log
. incident_description
. incident_location
. . location_identity
. incident_severity
. incident_traffic_impact
. incident_type
. planned_incident_response
. . agency_incident_response_procedures
. . dms_displays
. . traffic_control_strategy_alterations
incident_response_status
incident_response_status_from_emerg
incident_severity
incident_start_time
. time
incident_status
. incident_vehicles_involved
incident_status_data
. incident_status_update
. . date
. . emergency_vehicle_identity
. . emergency_vehicle_status_code
. . incident_number
. . incident_status
. . . incident_vehicles_involved
. . time
incident_status_update
. date
. emergency_vehicle_identity
. emergency_vehicle_status_code
. incident_number
. incident_status
. . incident_vehicles_involved
. time
incident_strategy_override
. selected_ramp_control_strategy
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . selected_ramp_strategy_type
. selected_roadway_control_strategy
. . selected_highway_control_strategy
. . . highway_sign_plan_number
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . selected_strategy_type
. . selected_road_control_strategy
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_road_adaptive_plan_number
. . . indicator_road_fixed_plan_number
. . . list_size
. . . selected_strategy_type
incident_traffic_impact
incident_type
incident_vehicle_status
incident_vehicles_involved
incident_video_for_emergency_services
. incident_video_image
incident_video_image
incident_video_image_control
indicator_control_data
. dms_data
. . indicator_sign_control_data
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . parking_lot_dms_controls
. . . pollution_output_message
. . . . dms_pollution_message
. . . . vehicle_identity
. . indicator_sign_control_data_for_hri
. . . crossing_id
. . . hri_sign_control_data
. . . list_size
. har_data
. . har_identity
. . har_management_data
. . . har_mode
. . . har_schedule
. . har_program
. indicator_control_data_for_highways
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls
. indicator_control_data_for_roads
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size

. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size
indicator_control_data_for_highways
. indicator_crossing_control_data_for_highways
. . indicator_crossing_controls
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. indicator_ramp_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . ramp_controls
indicator_control_data_for_hri
. indicator_sign_control_data_for_hri
. . crossing_id
. . hri_sign_control_data
. . list_size
indicator_control_data_for_roads
. indicator_crossing_control_data_for_roads
. . indicator_crossing_controls
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. indicator_junction_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_junction_controls
. . list_size
. indicator_pedestrian_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_pedestrian_controls
. . list_size
indicator_control_monitoring_data
. indicator_control_monitoring_data_for_highways
. . indicator_control_data_for_highways
. . . indicator_crossing_control_data_for_highways
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_ramp_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . ramp_controls
. indicator_control_monitoring_data_for_roads
. . indicator_control_data_for_hri
. . . indicator_sign_control_data_for_hri
. . . . crossing_id
. . . . hri_sign_control_data
. . . . list_size
. . indicator_control_data_for_roads
. . . indicator_crossing_control_data_for_roads
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_junction_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_pedestrian_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
indicator_control_monitoring_data_for_highways
. indicator_control_data_for_highways
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls
indicator_control_monitoring_data_for_roads
. indicator_control_data_for_hri
. . indicator_sign_control_data_for_hri
. . . crossing_id
. . . hri_sign_control_data
. . . list_size
. indicator_control_data_for_roads
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size
indicator_control_storage_data
. indicator_control_storage_data_for_highways
. . indicator_control_data_for_highways

. . . indicator_crossing_control_data_for_highways
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_ramp_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . ramp_controls
. indicator_control_storage_data_for_roads
. . indicator_control_data_for_roads
. . . indicator_crossing_control_data_for_roads
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_junction_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_junction_controls
. . . . list_size
. . . indicator_pedestrian_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_pedestrian_controls
. . . . list_size

indicator_control_storage_data_for_highways
. indicator_control_data_for_highways
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls

indicator_control_storage_data_for_roads
. indicator_control_data_for_roads
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size

indicator_crossing_control_data_for_highways
. indicator_crossing_controls
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size

indicator_crossing_control_data_for_roads
. indicator_crossing_controls
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size

indicator_crossing_controls

indicator_current_fault_data
. indicator_fault
. indicator_fault_number
. indicator_type

indicator_current_fault_update
. indicator_fault
. indicator_fault_number
. indicator_type

indicator_current_faults_list
. indicator_fault
. indicator_fault_number
. indicator_type

indicator_data

indicator_data_fault
. indicator_data_fault_for_highways
. . indicator_fault
. . indicator_type
. . list_size
. indicator_data_fault_for_roads
. . indicator_fault
. . indicator_type
. . list_size

indicator_data_fault_for_highways
. indicator_fault
. indicator_type
. list_size

indicator_data_fault_for_roads
. indicator_fault
. indicator_type
. list_size

indicator_equip_status_from_highways_for_m_and_c
. indicator_fault
. indicator_type
. list_size

indicator_equip_status_from_roads_for_m_and_c
. indicator_fault
. indicator_type
. list_size

indicator_fault

indicator_fault_clearance_update
. indicator_fault_number

indicator_fault_data
. indicator_fault
. indicator_type

indicator_fault_number

indicator_fault_state
. indicator_fault
. indicator_type

indicator_highway_control_static_data
. highway_sign_setting_data
. . highway_sign_sequence_data
. . . highway_sign_sequence_purpose
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number

. . . . list_size
. . list_size
. highway_sign_setting_plans
. . highway_sign_plan_data
. . . highway_sign_plan_priority
. . . highway_sign_plan_purpose
. . . highway_sign_sequence_data
. . . . highway_sign_sequence_purpose
. . . . indicator_list
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . highway_sign_plan_number
. . list_size
indicator_highway_requested_state
. indicator_control_data_for_highways
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls
. list_size
indicator_identity
. indicator_type
. location_identity
. unit_number
indicator_input_data
. dms_status
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. har_status
. . device_status
. . har_fault
. . . har_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. indicator_input_data_from_highways
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
. indicator_input_data_from_roads
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
indicator_input_data_from_highways
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_response_state
. list_size
indicator_input_data_from_roads
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_response_state
. list_size
indicator_input_state_for_highways
. indicator_data
. indicator_type
. list_size
indicator_input_state_for_roads
. indicator_data
. indicator_type
. list_size
indicator_input_storage_data
. indicator_input_storage_data_for_highways
. . indicator_response_state
. . indicator_type
. . list_size
. indicator_input_storage_data_for_roads
. . indicator_response_state
. . indicator_type
. . list_size
indicator_input_storage_data_for_highways
. indicator_response_state
. indicator_type
. list_size
indicator_input_storage_data_for_roads
. indicator_response_state
. indicator_type
. list_size
indicator_junction_control_data
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_junction_controls
. list_size
indicator_junction_controls
indicator_list
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
indicator_monitoring_suspend
indicator_new_fault
. indicator_fault
. indicator_fault_number
. indicator_type
indicator_new_fault_data
. indicator_fault
. indicator_type
indicator_new_fault_update
. indicator_fault
. indicator_type
indicator_operating_condition
indicator_override_for_highways
indicator_override_for_roads
indicator_pedestrian_control_data
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_pedestrian_controls
. list_size

indicator_pedestrian_controls
indicator_ramp_control_data
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
. ramp_controls
indicator_requested_state
. indicator_highway_requested_state
. . indicator_control_data_for_highways
. . . indicator_crossing_control_data_for_highways
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_ramp_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . ramp_controls
. . list_size
. indicator_road_requested_state
. . indicator_control_data_for_roads
. . . indicator_crossing_control_data_for_roads
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_junction_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_junction_controls
. . . . list_size
. . . indicator_pedestrian_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_pedestrian_controls
. . . . list_size
. . list_size
indicator_response_data_for_highways
. indicator_response_state
. indicator_type
. list_size
indicator_response_data_for_roads
. indicator_response_state
. indicator_type
. list_size
indicator_response_state
indicator_road_adaptive_plan_number
indicator_road_adaptive_plans
. crossing_adaptive_data
. indicator_road_adaptive_plan_number
. intersection_adaptive_data
. list_size
. pedestrian_adaptive_data
indicator_road_control_static_data
. indicator_road_adaptive_plans
. . crossing_adaptive_data
. . indicator_road_adaptive_plan_number
. . intersection_adaptive_data
. . list_size
. . pedestrian_adaptive_data
. indicator_road_fixed_plans
. . crossing_fixed_time_data
. . . crossing_control_commands
. . . crossing_cycle_time
. . . crossing_offset_time
. . indicator_road_fixed_plan_number
. . intersection_fixed_time_data
. . . intersection_control_commands
. . . intersection_cycle_time
. . . intersection_offset_time
. . list_size
. . pedestrian_fixed_time_data
. . . pedestrian_control_commands
. . . pedestrian_cycle_time
. . . pedestrian_offset_time
indicator_road_fixed_plan_number
indicator_road_fixed_plans
. crossing_fixed_time_data
. . crossing_control_commands
. . crossing_cycle_time
. . crossing_offset_time
. indicator_road_fixed_plan_number
. intersection_fixed_time_data
. . intersection_control_commands
. . intersection_cycle_time
. . intersection_offset_time
. list_size
. pedestrian_fixed_time_data
. . pedestrian_control_commands
. . pedestrian_cycle_time
. . pedestrian_offset_time
indicator_road_requested_state
. indicator_control_data_for_roads
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size
. list_size
indicator_sign_control_data
. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. lane_dms_controls
. parking_lot_dms_controls
. pollution_output_message
. . dms_pollution_message
. . vehicle_identity
indicator_sign_control_data_for_hri
. crossing_id
. hri_sign_control_data
. list_size
indicator_type

Appendix D: Data Tree

individual_vehicle_speed
. list_size
. sensor_identity
. speed_sensor_data
. timestamp
. . date
. . time
individual_vehicle_speed_for_display
information_datapage
information_for_media
infrastructure_data_for_archive
. infrastructure_sensor_data_for_m_and_c
. . infrastructure_sensor_data_from_roadside_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. mcv_infrastructure_sensor_data
. . infrastructure_sensor_data_for_mcv
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . infrastructure_sensor_data_from_onboard_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . vehicle_id_for_mcv
. processed_infrastructure_sensor_data
. . infrastructure_sensor_data_for_m_and_c
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . mcv_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_mcv
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . infrastructure_sensor_data_from_onboard_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . vehicle_id_for_mcv
infrastructure_data_for_archive_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
infrastructure_processed_data_for_repair_needs
. processed_infrastructure_sensor_data
. . infrastructure_sensor_data_for_m_and_c
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . mcv_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_mcv
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . infrastructure_sensor_data_from_onboard_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . vehicle_id_for_mcv
infrastructure_sensor_control_from_m_and_c
. infrastructure_sensor_control_of_roadside_devices
infrastructure_sensor_control_from_mcv
. infrastructure_sensor_control_of_roadside_devices
infrastructure_sensor_control_of_onboard_devices
infrastructure_sensor_control_of_roadside_devices
infrastructure_sensor_data_for_m_and_c
. infrastructure_sensor_data_from_roadside_devices
. . infrastructure_sensor_output
. . list_size
. . sensor_identity
. . station_id
infrastructure_sensor_data_for_mcv
. infrastructure_sensor_data_from_roadside_devices
. . infrastructure_sensor_output
. . list_size
. . sensor_identity
. . station_id
infrastructure_sensor_data_from_onboard_devices
. infrastructure_sensor_output
. list_size
. sensor_identity
. vehicle_id_for_mcv
infrastructure_sensor_data_from_roadside_devices
. infrastructure_sensor_output
. list_size
. sensor_identity
. station_id
infrastructure_sensor_equip_status_for_m_and_c
. infrastructure_sensor_status_for_m_and_c
. . infrastructure_sensor_status_of_roadside_devices
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. infrastructure_sensor_status_for_mcv
. . infrastructure_sensor_status_of_roadside_devices
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
infrastructure_sensor_output
infrastructure_sensor_status_for_m_and_c
. infrastructure_sensor_status_of_roadside_devices
. . list_size
. . sensor_identity
. . sensor_status

. . . traffic_sensor_status
. . station_id
infrastructure_sensor_status_for_mcv
. infrastructure_sensor_status_of_roadside_devices
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
infrastructure_sensor_status_of_onboard_devices
. list_size
. sensor_identity
. sensor_status
. . traffic_sensor_status
. vehicle_id_for_mcv
infrastructure_sensor_status_of_roadside_devices
. list_size
. sensor_identity
. sensor_status
. . traffic_sensor_status
. station_id
intermodal_archive_catalog
intermodal_archive_catalog_request
intermodal_archive_data_request
intermodal_data
intermodal_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
intermodal_data_for_archive
. intermodal_data
. intermodal_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
intersection_adaptive_data
intersection_blocked
intersection_collision_avoidance_data
intersection_control_commands
intersection_cycle_time
intersection_equipment_data
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. intersection_phase_data
. intersection_phase_number
. list_size
intersection_fixed_time_data
. intersection_control_commands
. intersection_cycle_time
. intersection_offset_time
intersection_offset_time
intersection_phase_data
intersection_phase_number
intersection_state_data
. indicator_operating_condition
. indicator_response_state
intrusion_alert_device_control
intrusion_alert_device_control_on_board
intrusion_alert_device_status
. device_fault
. device_identity
. device_status
. list_size
intrusion_alert_device_status_on_board
. device_fault
. device_identity
. device_status
. list_size
intrusion_alert_for_in_vehicle_signing
intrusion_detection_device_control
intrusion_detection_device_output
intrusion_detection_device_status
. device_fault
. device_identity
. device_status
. list_size
kiosk_identity
lane_change_details
lane_change_strategy
lane_closure
lane_deviation
lane_dms_controls
lane_open
lane_steering_commands
link_and_queue_data
. link_identity
. . link_type
. . location_identity
. . unit_number
. link_journey_time
. link_queue_time
. link_state_data_for_broadcast

Appendix D: Data Tree

. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
. . list_size
. . vehicle_occupancy
. . vehicle_speed
. list_size
link_attributes
link_conditions
link_data
. link_attributes
. link_identity
. . link_type
. . location_identity
. . unit_number
. link_TMC_identity
link_data_for_guidance
. link_attributes
. link_identity
. . link_type
. . location_identity
. . unit_number
. link_ISP_identity
. link_speed_limit
. . special_vehicle_speed_limit
. . . vehicle_class
. . . vehicle_type
. . speed_limit
. list_size
link_data_from_avl
. link_journey_time
. link_queue_time
. link_speed
. list_size
link_data_from_tags
. link_journey_time
. link_queue_time
. list_size
link_data_store
. link_data_for_guidance
. . link_attributes
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . link_ISP_identity
. . link_speed_limit
. . . special_vehicle_speed_limit
. . . . vehicle_class
. . . . vehicle_type
. . . speed_limit
. . list_size
link_data_update
. link_attributes
. link_identity
. . link_type
. . location_identity
. . unit_number
. link_TMC_identity
link_delay
link_details
. link_attributes
. link_identity
. . link_type
. . location_identity
. . unit_number
. link_TMC_identity
link_environment_conditions
link_identity
. link_type
. location_identity
. unit_number
link_identity_list
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
link_ISP_identity
link_journey_time
link_level_of_service
link_list
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
link_list_for_highways
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
link_list_for_roads
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
link_occupancy
link_queue_time
link_speed
link_speed_limit
. special_vehicle_speed_limit
. . vehicle_class
. . vehicle_type
. speed_limit
link_state_data
. link_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. list_size
. vehicle_count
. vehicle_headway
. vehicle_occupancy
. vehicle_queue_length
. vehicle_speed
link_state_data_for_broadcast
. link_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. link_occupancy
. link_speed
. list_size
. vehicle_occupancy
. vehicle_speed
link_status
. lane_closure
. lane_open
link_strategy_data
. link_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. list_size

Appendix D: Data Tree

. vehicle_count
. vehicle_occupancy
. vehicle_queue_length
link_time_calculation_data
. date
. list_size
. time
. vehicle_tag_data
. . vehicle_tag_data_source_identity
. . . unit_number
. . vehicle_tag_input_data
link_time_calculation_store
. link_time_calculation_data
. . date
. . list_size
. . time
. . vehicle_tag_data
. . . vehicle_tag_data_source_identity
. . . . unit_number
. . . vehicle_tag_input_data
link_TMC_identity
link_traffic_conditions
link_type
list_size
load_description
local_control_plan
local_decision_support
local_schema
local_sensor_data
. local_sensor_data_for_highways
. . crossing_close_duration
. . crossing_close_time
. . hov_priority
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . hov_lane_list
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . roadside_conditions
. . . link_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . traffic_video_image
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. local_sensor_data_for_roads
. . crossing_close_duration
. . crossing_close_time
. . hov_priority
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . hov_lane_list
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . pedestrian_demand
. . roadside_conditions
. . . link_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . traffic_video_image
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
local_sensor_data_for_highways
. crossing_close_duration
. crossing_close_time
. hov_priority
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . hov_lane_list
. . . hov_lane_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. roadside_conditions
. . link_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. traffic_video_image
. vehicle_detection_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
local_sensor_data_for_roads
. crossing_close_duration
. crossing_close_time
. hov_priority
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . hov_lane_list
. . . hov_lane_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. pedestrian_demand
. roadside_conditions
. . link_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. traffic_video_image
. vehicle_detection_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
local_TMC_incidents_request

. request_local_current_incidents_data
. request_local_planned_events_data
location_identity
lock_tag_data_store
. cv_lock_tag_data
. . cv_customs_inspector_identity
. . date
. . time
logged_special_vehicle_route
. hazmat_load_data
. list_size
. route_segment_end_point
. . location_identity
. route_segment_estimated_arrival_time
. route_segment_estimated_travel_time
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_start_point
. . location_identity
long_term_data
. historical_other_routes_use
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. historical_parking_lot_storage_data
. . list_size
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. historical_processed_data
. . hri_state_data
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . o_d_matrix
. . parking_lot_input_data
. . . list_size
. . . parking_lot_list
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . vehicle_count
. . . vehicle_queue_length
. . private_vehicle_occupants
. . ramp_data
. . . list_size
. . . private_vehicle_occupants
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . strategy_data
. . . strategy_data_for_highways
. . . . crossing_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . link_strategy_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . strategy_data_for_roads
. . . . crossing_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . link_strategy_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . pedestrian_data

. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. historical_stored_incident_data
. . historical_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . list_size
. historical_traffic_flow_state
. . current_road_network_use
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . link_data_from_tags
. . . link_journey_time
. . . link_queue_time
. . . list_size
. . ramp_signal_state
. . . list_size
. . . ramp_controls
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. historical_traffic_management_storage_data
. . indicator_control_storage_data
. . . indicator_control_storage_data_for_highways
. . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_crossing_controls
. . . . . . indicator_identity
. . . . . . list_size
. . . . . indicator_ramp_control_data
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . ramp_controls
. . . indicator_control_storage_data_for_roads
. . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_crossing_controls
. . . . . . indicator_identity
. . . . . . list_size
. . . . . indicator_junction_control_data
. . . . . . indicator_identity
. . . . . . indicator_junction_controls
. . . . . . list_size
. . . . . indicator_pedestrian_control_data
. . . . . . indicator_identity
. . . . . . indicator_pedestrian_controls
. . . . . . list_size
. . indicator_input_storage_data
. . . indicator_input_storage_data_for_highways
. . . . indicator_response_state
. . . . indicator_type
. . . . list_size
. . . indicator_input_storage_data_for_roads
. . . . indicator_response_state
. . . . indicator_type
. . . . list_size
. . selected_strategy
. . . selected_emergency_vehicle_strategy
. . . . indicator_list
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_emergency_strategy
. . . selected_parking_lot_control_strategy
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_parking_lot_strategy_type
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number

. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. historical_vehicle_smart_probe_stored_data
. . list_size
. . vehicle_smart_probe_data_for_storage
. . . vehicle_smart_probe_data_indication
. . . vehicle_smart_probe_data_source
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. historical_wide_area_pollution_data
. . historical_pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . historical_pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . list_size
. o_d_matrix
long_term_data_for_retrieval
. current_incident_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. . list_size
. current_other_routes_use
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. parking_lot_storage_data
. . list_size
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. traffic_flow_state
. . current_road_network_use
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . link_data_from_avl
. . . link_journey_time
. . . link_queue_time
. . . link_speed
. . . list_size
. . link_data_from_tags
. . . link_journey_time
. . . link_queue_time
. . . list_size
. . ramp_signal_state
. . . list_size
. . . ramp_controls
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. vehicle_smart_probe_stored_data
. . list_size
. . vehicle_smart_probe_data_for_storage
. . . vehicle_smart_probe_data_indication
. . . vehicle_smart_probe_data_source
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. wide_area_pollution_data
. . list_size
. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution

. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
m_and_c_activity_schedule
. fleet_activity_schedule
. m_and_c_work_plans
. work_zone_activity_plan
m_and_c_activity_schedule_for_archive
. m_and_c_activity_schedule
. . fleet_activity_schedule
. . m_and_c_work_plans
. . work_zone_activity_plan
m_and_c_activity_schedule_for_archive_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
m_and_c_activity_status
. m_and_c_fleet_manager_status
. . m_and_c_fleet_status
. . . current_fleet_maintenance_status
. . . date
. . . fleet_maintenance_record
. . . list_size
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . mcv_crew_status
. . . mcv_equipment_configuration
. . . mcv_operator_status
. . . mcv_vehicle_type
. . . mcv_work_activity_status
. . . operational_data_for_mcv
. . . safety_data_for_mcv
. . . . driver_safety_status
. . . . vehicle_attitude_data
. . . . vehicle_motion_data
. . . . vehicle_proximity_data
. . . . vehicle_safety_status
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. . . vehicle_location_for_mcv_tracking
. . . . date
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . m_and_c_view_of_road_network
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_list
. . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . . pedestrian_sensor_data

Appendix D: Data Tree

. . . . . node_list
. . . . . node_list
. . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . list_size
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . current_incident_details
. . . . . list_size
. . . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . env_info_for_road_network
. . . . road_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_conditions
. . . . road_weather_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_response_status_from_emerg
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. m_and_c_work_performance
. materials_availability_for_status

. . materials_status
. . . date
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . m_and_c_materials_usage_rate
. . . time
. . storage_facility_id
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
m_and_c_activity_status_for_archive
. m_and_c_activity_status
. . m_and_c_fleet_manager_status
. . . m_and_c_fleet_status
. . . . current_fleet_maintenance_status
. . . . date
. . . . fleet_maintenance_record
. . . . list_size
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . mcv_crew_status
. . . . mcv_equipment_configuration
. . . . mcv_operator_status
. . . . mcv_vehicle_type
. . . . mcv_work_activity_status
. . . . operational_data_for_mcv
. . . . safety_data_for_mcv
. . . . . driver_safety_status
. . . . . vehicle_attitude_data
. . . . . vehicle_motion_data
. . . . . vehicle_proximity_data
. . . . . vehicle_safety_status
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . . . vehicle_location_for_mcv_tracking
. . . . . date
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . location_identity
. . . m_and_c_view_of_road_network
. . . . current_data
. . . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . roadway_traffic_conditions
. . . . . strategy_data
. . . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . hri_sensor_data
. . . . . pedestrian_sensor_data
. . . . . traffic_sensor_data
. . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . current_incident_data
. . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_avl
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . pollution_state_roadside_collection
. . . . env_info_for_road_network
. . . . . road_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_conditions
. . . . . road_weather_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_response_status_from_emerg
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count

. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . m_and_c_work_performance
. . materials_availability_for_status
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . storage_facility_id
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv

m_and_c_activity_status_for_archive_attributes

. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute

m_and_c_activity_status_for_mdss

. m_and_c_activity_status
. . m_and_c_fleet_manager_status
. . . m_and_c_fleet_status
. . . . current_fleet_maintenance_status
. . . . date
. . . . fleet_maintenance_record
. . . . list_size
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . mcv_crew_status
. . . . mcv_equipment_configuration
. . . . mcv_operator_status
. . . . mcv_vehicle_type
. . . . mcv_work_activity_status
. . . . operational_data_for_mcv
. . . . safety_data_for_mcv
. . . . . driver_safety_status
. . . . . vehicle_attitude_data
. . . . . vehicle_motion_data
. . . . . vehicle_proximity_data
. . . . . vehicle_safety_status
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . . . vehicle_location_for_mcv_tracking
. . . . . date
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . location_identity
. . . m_and_c_view_of_road_network
. . . . current_data
. . . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . roadway_traffic_conditions
. . . . . strategy_data
. . . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . hri_sensor_data

Appendix D: Data Tree

. . . . . pedestrian_sensor_data
. . . . . traffic_sensor_data
. . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . current_incident_data
. . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_avl
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . pollution_state_roadside_collection
. . . . env_info_for_road_network
. . . . . road_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_conditions
. . . . . road_weather_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_response_status_from_emerg
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . m_and_c_work_performance
. . materials_availability_for_status
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . storage_facility_id
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
m_and_c_activity_status_for_personnel
. m_and_c_activity_status
. . m_and_c_fleet_manager_status
. . . m_and_c_fleet_status
. . . . current_fleet_maintenance_status
. . . . date
. . . . fleet_maintenance_record
. . . . list_size
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . mcv_crew_status
. . . . mcv_equipment_configuration
. . . . mcv_operator_status
. . . . mcv_vehicle_type
. . . . mcv_work_activity_status
. . . . operational_data_for_mcv
. . . . safety_data_for_mcv
. . . . . driver_safety_status
. . . . . vehicle_attitude_data
. . . . . vehicle_motion_data
. . . . . vehicle_proximity_data
. . . . . vehicle_safety_status
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . . . vehicle_location_for_mcv_tracking
. . . . . date
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . location_identity
. . . m_and_c_view_of_road_network

Appendix D: Data Tree

. . . . current_data
. . . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . roadway_traffic_conditions
. . . . . strategy_data
. . . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . hri_sensor_data
. . . . . pedestrian_sensor_data
. . . . . traffic_sensor_data
. . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . current_incident_data
. . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_avl
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . pollution_state_roadside_collection
. . . . env_info_for_road_network
. . . . . road_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_conditions
. . . . . road_weather_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_response_status_from_emerg
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . m_and_c_work_performance
. . materials_availability_for_status
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . storage_facility_id
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
m_and_c_activity_status_for_scheduler
. m_and_c_activity_status
. . m_and_c_fleet_manager_status
. . . m_and_c_fleet_status
. . . . current_fleet_maintenance_status
. . . . date
. . . . fleet_maintenance_record
. . . . list_size
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate

Appendix D: Data Tree

. . . . . time
. . . . mcv_crew_status
. . . . mcv_equipment_configuration
. . . . mcv_operator_status
. . . . mcv_vehicle_type
. . . . mcv_work_activity_status
. . . . operational_data_for_mcv
. . . . safety_data_for_mcv
. . . . . driver_safety_status
. . . . . vehicle_attitude_data
. . . . . vehicle_motion_data
. . . . . vehicle_proximity_data
. . . . . vehicle_safety_status
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . . . vehicle_location_for_mcv_tracking
. . . . . date
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . location_identity
. . . m_and_c_view_of_road_network
. . . . current_data
. . . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . roadway_traffic_conditions
. . . . . strategy_data
. . . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . hri_sensor_data
. . . . . pedestrian_sensor_data
. . . . . traffic_sensor_data
. . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . current_incident_data
. . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_avl
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . pollution_state_roadside_collection
. . . . env_info_for_road_network
. . . . . road_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_conditions
. . . . . road_weather_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_response_status_from_emerg
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . m_and_c_work_performance
. . materials_availability_for_status
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . storage_facility_id
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output

. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
m_and_c_archive_catalog
m_and_c_archive_catalog_request
m_and_c_archive_commands_from_personnel
m_and_c_archive_data
. m_and_c_archive_catalog
. m_and_c_data_for_archive
. . auto_treatment_system_status_for_archive
. . . auto_treatment_activation_data
. . . device_identity
. . . list_size
. . . station_id
. . auto_treatment_system_status_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . field_device_status_for_archive
. . . auto_treat_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . dms_equip_status_for_m_and_c
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . dms_fault
. . . . . dms_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . env_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . har_equip_status_for_m_and_c
. . . . har_fault
. . . . . har_identity
. . . hov_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . indicator_equip_status_from_highways_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . indicator_equip_status_from_roads_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . infrastructure_sensor_equip_status_for_m_and_c
. . . . infrastructure_sensor_status_for_m_and_c
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . station_id
. . . . infrastructure_sensor_status_for_mcv
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . station_id
. . . smart_probe_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . traffic_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . vehicle_sign_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . video_device_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . field_device_status_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling

. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . infrastructure_data_for_archive
. . . infrastructure_sensor_data_for_m_and_c
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . mcv_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. . . processed_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_m_and_c
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . mcv_infrastructure_sensor_data
. . . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. . infrastructure_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_activity_schedule_for_archive
. . . m_and_c_activity_schedule
. . . . fleet_activity_schedule
. . . . m_and_c_work_plans
. . . . work_zone_activity_plan
. . m_and_c_activity_schedule_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_activity_status_for_archive
. . . m_and_c_activity_status
. . . . m_and_c_fleet_manager_status
. . . . . m_and_c_fleet_status
. . . . . current_fleet_maintenance_status
. . . . . date
. . . . . fleet_maintenance_record
. . . . . list_size
. . . . . materials_status
. . . . . mcv_crew_status
. . . . . mcv_equipment_configuration
. . . . . mcv_operator_status
. . . . . mcv_vehicle_type
. . . . . mcv_work_activity_status
. . . . . operational_data_for_mcv
. . . . . safety_data_for_mcv
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . vehicle_location_for_mcv_tracking
. . . . . m_and_c_view_of_road_network
. . . . . current_data
. . . . . env_info_for_road_network
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_response_status_from_emerg
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . link_state_data
. . . . . predicted_road_network_data
. . . . . roadway_environment_conditions
. . . . m_and_c_work_performance
. . . . materials_availability_for_status

. . . . . materials_status
. . . . . . date
. . . . . . list_size
. . . . . . m_and_c_materials_quantity
. . . . . . m_and_c_materials_type
. . . . . . m_and_c_materials_usage_rate
. . . . . . time
. . . . . storage_facility_id
. . . . work_zone_data_for_status
. . . . . fomcm_work_zone_info
. . . . . work_zone_device_status
. . . . . . device_fault
. . . . . . device_identity
. . . . . . device_status
. . . . . . list_size
. . . . . work_zone_intrusion_warning_data
. . . . . . roadside_crew_warning_given
. . . . . . work_zone_intrusion_alert
. . . . . . work_zone_intrusion_detected
. . . . . . work_zone_intrusion_video_image
. . . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_resource_status
. . . . . . work_zone_equipment_status
. . . . . . work_zone_identifier
. . . . . . work_zone_personnel_status
. . . . . . work_zone_vehicle_status
. . . . . work_zone_status_from_mcv
. . m_and_c_activity_status_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_maint_resource_needs_for_archive
. . . m_and_c_resource_request_from_emerg
. . . m_and_c_resource_request_from_traffic
. . . resource_needs_from_scheduler
. . . . date
. . . . list_size
. . . . m_and_c_equipment_quantity
. . . . m_and_c_equipment_type
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . mcv_vehicle_type
. . . . time
. .
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_roadway_maint_needs_for_archive
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . need_date
. . . need_time
. . . roadway_maint_plan
. .
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_winter_maint_needs_for_archive
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . need_date
. . . need_time
. . . winter_treatment_plan

. . m_and_c_winter_maint_needs_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . work_zone_data_for_archive
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv
. . work_zone_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
m_and_c_archive_data_request
m_and_c_archive_input
. m_and_c_archive_request
. . m_and_c_archive_catalog_request
. . m_and_c_archive_data_request
. m_and_c_archive_status
m_and_c_archive_request
. m_and_c_archive_catalog_request
. m_and_c_archive_data_request
m_and_c_archive_status
m_and_c_archive_status_to_personnel
m_and_c_center_identity
m_and_c_data_archive
. m_and_c_archive_catalog
. m_and_c_data_for_archive
. . auto_treatment_system_status_for_archive
. . . auto_treatment_activation_data
. . . device_identity
. . . list_size
. . . station_id
. . auto_treatment_system_status_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . field_device_status_for_archive
. . . auto_treat_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . dms_equip_status_for_m_and_c
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning

. . . . . dms_weather_warning
. . . . dms_fault
. . . . . dms_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . env_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . har_equip_status_for_m_and_c
. . . . har_fault
. . . . . har_identity
. . . hov_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . indicator_equip_status_from_highways_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . indicator_equip_status_from_roads_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . infrastructure_sensor_equip_status_for_m_and_c
. . . . infrastructure_sensor_status_for_m_and_c
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . station_id
. . . . infrastructure_sensor_status_for_mcv
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . station_id
. . . smart_probe_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . traffic_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . vehicle_sign_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . video_device_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . field_device_status_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . infrastructure_data_for_archive
. . . infrastructure_sensor_data_for_m_and_c
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . mcv_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. . . processed_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_m_and_c
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . mcv_infrastructure_sensor_data
. . . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. . infrastructure_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time

. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_activity_schedule_for_archive
. . . m_and_c_activity_schedule
. . . . fleet_activity_schedule
. . . . m_and_c_work_plans
. . . . work_zone_activity_plan
. . m_and_c_activity_schedule_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_activity_status_for_archive
. . . m_and_c_activity_status
. . . . m_and_c_fleet_manager_status
. . . . . m_and_c_fleet_status
. . . . . . current_fleet_maintenance_status
. . . . . . date
. . . . . . fleet_maintenance_record
. . . . . . list_size
. . . . . . materials_status
. . . . . . mcv_crew_status
. . . . . . mcv_equipment_configuration
. . . . . . mcv_operator_status
. . . . . . mcv_vehicle_type
. . . . . . mcv_work_activity_status
. . . . . . operational_data_for_mcv
. . . . . . safety_data_for_mcv
. . . . . . time
. . . . . . vehicle_id_for_mcv
. . . . . . vehicle_location_for_mcv
. . . . . . vehicle_location_for_mcv_tracking
. . . . . m_and_c_view_of_road_network
. . . . . . current_data
. . . . . . env_info_for_road_network
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_response_status_from_emerg
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . . . . link_state_data
. . . . . . predicted_road_network_data
. . . . . . roadway_environment_conditions
. . . . m_and_c_work_performance
. . . . materials_availability_for_status
. . . . . materials_status
. . . . . . date
. . . . . . list_size
. . . . . . m_and_c_materials_quantity
. . . . . . m_and_c_materials_type
. . . . . . m_and_c_materials_usage_rate
. . . . . . time
. . . . . storage_facility_id
. . . . work_zone_data_for_status
. . . . . fomcm_work_zone_info
. . . . . work_zone_device_status
. . . . . . device_fault
. . . . . . device_identity
. . . . . . device_status
. . . . . . list_size
. . . . . work_zone_intrusion_warning_data
. . . . . . roadside_crew_warning_given
. . . . . . work_zone_intrusion_alert
. . . . . . work_zone_intrusion_detected
. . . . . . work_zone_intrusion_video_image
. . . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_resource_status
. . . . . . work_zone_equipment_status
. . . . . . work_zone_identifier
. . . . . . work_zone_personnel_status
. . . . . . work_zone_vehicle_status
. . . . . work_zone_status_from_mcv
. . m_and_c_activity_status_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_maint_resource_needs_for_archive
. . . m_and_c_resource_request_from_emerg
. . . m_and_c_resource_request_from_traffic
. . . resource_needs_from_scheduler
. . . . date

. . . . list_size
. . . . m_and_c_equipment_quantity
. . . . m_and_c_equipment_type
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . mcv_vehicle_type
. . . . time
. .
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_roadway_maint_needs_for_archive
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . need_date
. . . need_time
. . . roadway_maint_plan
. .
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . m_and_c_winter_maint_needs_for_archive
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . need_date
. . . need_time
. . . winter_treatment_plan
. . m_and_c_winter_maint_needs_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . work_zone_data_for_archive
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv
. . work_zone_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision

. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
m_and_c_data_for_archive
. auto_treatment_system_status_for_archive
. . auto_treatment_activation_data
. . device_identity
. . list_size
. . station_id
. auto_treatment_system_status_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. field_device_status_for_archive
. . auto_treat_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . dms_equip_status_for_m_and_c
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . env_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . har_equip_status_for_m_and_c
. . . har_fault
. . . . har_identity
. . hov_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . indicator_equip_status_from_highways_for_m_and_c
. . . indicator_fault
. . . indicator_type
. . . list_size
. . indicator_equip_status_from_roads_for_m_and_c
. . . indicator_fault
. . . indicator_type
. . . list_size
. . infrastructure_sensor_equip_status_for_m_and_c
. . . infrastructure_sensor_status_for_m_and_c
. . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . . infrastructure_sensor_status_for_mcv
. . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . smart_probe_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . traffic_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . vehicle_sign_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . video_device_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. field_device_status_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived

Appendix D: Data Tree

. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. infrastructure_data_for_archive
. . infrastructure_sensor_data_for_m_and_c
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . mcv_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_mcv
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . infrastructure_sensor_data_from_onboard_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . vehicle_id_for_mcv
. . processed_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_m_and_c
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . mcv_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. infrastructure_data_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_activity_schedule_for_archive
. . m_and_c_activity_schedule
. . . fleet_activity_schedule
. . . m_and_c_work_plans
. . . work_zone_activity_plan
. m_and_c_activity_schedule_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_activity_status_for_archive
. . m_and_c_activity_status
. . . m_and_c_fleet_manager_status
. . . . m_and_c_fleet_status
. . . . . current_fleet_maintenance_status
. . . . . date
. . . . . fleet_maintenance_record
. . . . . list_size
. . . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . . mcv_crew_status
. . . . . mcv_equipment_configuration
. . . . . mcv_operator_status
. . . . . mcv_vehicle_type
. . . . . mcv_work_activity_status
. . . . . operational_data_for_mcv
. . . . . safety_data_for_mcv

. . . . . driver_safety_status
. . . . . vehicle_attitude_data
. . . . . vehicle_motion_data
. . . . . vehicle_proximity_data
. . . . . vehicle_safety_status
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . location_identity
. . . . . vehicle_location_for_mcv_tracking
. . . . . date
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . m_and_c_view_of_road_network
. . . . . current_data
. . . . . current_other_routes_use
. . . . . parking_lot_storage_data
. . . . . processed_data
. . . . . sensor_output_data
. . . . . stored_incident_data
. . . . . traffic_flow_state
. . . . . traffic_management_storage_data
. . . . . traffic_video_image_data
. . . . . vehicle_smart_probe_stored_data
. . . . . wide_area_pollution_data
. . . . . env_info_for_road_network
. . . . . road_conditions
. . . . . road_weather_conditions
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_response_status_from_emerg
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_occupancy
. . . . . link_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . m_and_c_work_performance
. . . materials_availability_for_status
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . storage_facility_id
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv
. m_and_c_activity_status_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_maint_resource_needs_for_archive
. . m_and_c_resource_request_from_emerg
. . m_and_c_resource_request_from_traffic
. . resource_needs_from_scheduler
. . . date
. . . list_size
. . . m_and_c_equipment_quantity
. . . m_and_c_equipment_type
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . time
. m_and_c_maint_resource_needs_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date

Appendix D: Data Tree

. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_roadway_maint_needs_for_archive
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . mcv_vehicle_type
. . need_date
. . need_time
. . roadway_maint_plan
. m_and_c_roadway_maint_needs_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. m_and_c_winter_maint_needs_for_archive
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . mcv_vehicle_type
. . need_date
. . need_time
. . winter_treatment_plan
. m_and_c_winter_maint_needs_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. work_zone_data_for_archive
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
. work_zone_data_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security

Appendix D: Data Tree

. . standard_data_attribute
. . standard_message_attribute
m_and_c_equipment_id
m_and_c_equipment_quantity
m_and_c_equipment_status
m_and_c_equipment_type
m_and_c_fleet_activity_schedule_for_maint
. fleet_maintenance_availability
. vehicle_utilization_information
m_and_c_fleet_manager_status
. m_and_c_fleet_status
. . current_fleet_maintenance_status
. . date
. . fleet_maintenance_record
. . list_size
. . materials_status
. . . date
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . m_and_c_materials_usage_rate
. . . time
. . mcv_crew_status
. . mcv_equipment_configuration
. . mcv_operator_status
. . mcv_vehicle_type
. . mcv_work_activity_status
. . operational_data_for_mcv
. . safety_data_for_mcv
. . . driver_safety_status
. . . vehicle_attitude_data
. . . vehicle_motion_data
. . . vehicle_proximity_data
. . . vehicle_safety_status
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity
. . vehicle_location_for_mcv_tracking
. . . date
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. m_and_c_view_of_road_network
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data

. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . . incident_description
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . . indicator_list
. . . . . . ramp_list
. . . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . . parking_lot_list
. . . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . . vehicle_smart_probe_data_source_identity
. . . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . env_info_for_road_network
. . . road_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_conditions
. . . road_weather_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_weather_conditions
. . incident_duration
. . . duration
. . incident_location

. . . location_identity
. . incident_number
. . incident_response_status_from_emerg
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size

m_and_c_fleet_status

. current_fleet_maintenance_status
. date
. fleet_maintenance_record
. list_size
. materials_status
. . date
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . m_and_c_materials_usage_rate
. . time
. mcv_crew_status
. mcv_equipment_configuration
. mcv_operator_status
. mcv_vehicle_type
. mcv_work_activity_status
. operational_data_for_mcv
. safety_data_for_mcv
. . driver_safety_status
. . vehicle_attitude_data
. . vehicle_motion_data
. . vehicle_proximity_data
. . vehicle_safety_status
. time
. vehicle_id_for_mcv
. vehicle_location_for_mcv
. . location_identity
. vehicle_location_for_mcv_tracking
. . date
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity

m_and_c_maint_resource_needs_for_archive

. m_and_c_resource_request_from_emerg
. m_and_c_resource_request_from_traffic
. resource_needs_from_scheduler
. . date
. . list_size
. . m_and_c_equipment_quantity
. . m_and_c_equipment_type
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . mcv_vehicle_type
. . time

m_and_c_maint_resource_needs_for_archive_attribut

. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute

m_and_c_materials_quantity

m_and_c_materials_type

m_and_c_materials_usage_rate

m_and_c_plan_feedback

m_and_c_plan_feedback_from_emerg

. m_and_c_plan_feedback

m_and_c_plan_feedback_from_traffic

. m_and_c_plan_feedback

m_and_c_plan_feedback_from_transit

. m_and_c_plan_feedback

m_and_c_resource_request_from_emerg

m_and_c_resource_request_from_traffic

m_and_c_resource_response_to_emerg

m_and_c_resource_response_to_traffic

m_and_c_resource_status_for_needs

. date
. m_and_c_resources
. . equipment_availability
. . . date
. . . list_size
. . . m_and_c_equipment_quantity
. . . m_and_c_equipment_status
. . . m_and_c_equipment_type
. . . time
. . fleet_vehicle_available
. . . date
. . . list_size
. . . mcv_equipment_configuration
. . . mcv_vehicle_type
. . . time
. . . vehicle_id_for_mcv

. . . vehicle_location_for_mcv
. . . . location_identity
. . materials_availability
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . storage_facility_id
. time
m_and_c_resources
. equipment_availability
. . date
. . list_size
. . m_and_c_equipment_quantity
. . m_and_c_equipment_status
. . m_and_c_equipment_type
. . time
. fleet_vehicle_available
. . date
. . list_size
. . mcv_equipment_configuration
. . mcv_vehicle_type
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity
. materials_availability
. . materials_status
. . . date
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . m_and_c_materials_usage_rate
. . . time
. . storage_facility_id
m_and_c_resources_avail
. date
. m_and_c_resources
. . equipment_availability
. . . date
. . . list_size
. . . m_and_c_equipment_quantity
. . . m_and_c_equipment_status
. . . m_and_c_equipment_type
. . . time
. . fleet_vehicle_available
. . . date
. . . list_size
. . . mcv_equipment_configuration
. . . mcv_vehicle_type
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. . materials_availability
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . storage_facility_id
. time
m_and_c_resources_avail_to_scheduler
. date
. m_and_c_resources
. . equipment_availability
. . . date
. . . list_size
. . . m_and_c_equipment_quantity
. . . m_and_c_equipment_status
. . . m_and_c_equipment_type
. . . time
. . fleet_vehicle_available
. . . date
. . . list_size
. . . mcv_equipment_configuration
. . . mcv_vehicle_type
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. . materials_availability
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . storage_facility_id
. time
m_and_c_road_network_view
. m_and_c_view_of_road_network_for_mdss
. . m_and_c_view_of_road_network
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_list

. . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . node_list
. . . . . node_list
. . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . list_size
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . current_incident_details
. . . . . list_size
. . . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . env_info_for_road_network
. . . . road_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_conditions
. . . . road_weather_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_response_status_from_emerg
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number

. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. m_and_c_view_of_road_network_for_personnel
. . m_and_c_view_of_road_network
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . . parking_lot_calculated_occupancy
. . . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . . list_size
. . . . . . parking_lot_list
. . . . . . vehicle_count
. . . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . . list_size
. . . . . . private_vehicle_occupants
. . . . . . ramp_list
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . . link_environment_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . . strategy_data_for_highways
. . . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . . environment_sensor_output
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . hri_sensor_data
. . . . . . closure_event_data
. . . . . . hri_status
. . . . . . intersection_blocked
. . . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . . node_list
. . . . . . node_list
. . . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . . list_size
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . . current_incident_details
. . . . . . list_size
. . . . . planned_event_data
. . . . . . list_size
. . . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . . route_segment_identity
. . . . . . route_segment_journey_time
. . . . . . route_segment_total_number
. . . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . . current_highway_network_data
. . . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . link_data_from_avl
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . link_speed
. . . . . . list_size
. . . . . link_data_from_tags
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . list_size
. . . . . ramp_signal_state
. . . . . . list_size
. . . . . . ramp_controls
. . . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . . selected_emergency_vehicle_strategy
. . . . . . selected_parking_lot_control_strategy
. . . . . . selected_ramp_control_strategy
. . . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . . location_identity
. . . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . . vehicle_smart_probe_data_indication
. . . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data

. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . . area_air_quality_index
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_roadside_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . env_info_for_road_network
. . . . road_conditions
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . road_segment_conditions
. . . . road_weather_conditions
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_response_status_from_emerg
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size

m_and_c_roadway_maint_needs_for_archive

. list_size
. m_and_c_materials_quantity
. m_and_c_materials_type
. mcv_vehicle_type
. need_date
. need_time
. roadway_maint_plan

m_and_c_roadway_maint_needs_for_archive_attribute

. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute

m_and_c_roadway_needs_to_scheduler

. list_size
. m_and_c_materials_quantity
. m_and_c_materials_type
. mcv_vehicle_type
. need_date
. need_time
. roadway_maint_plan

m_and_c_status_from_mcv_operator

. date
. mcv_crew_status
. mcv_operator_status
. mcv_status_from_operator
. mcv_work_activity_status
. time
. vehicle_id_for_mcv

m_and_c_to_emergency

. asset_restrictions_for_emerg
. . current_asset_restrictions
. incident_info_for_emerg
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type

Appendix D: Data Tree

. m_and_c_resource_response_to_emerg
. m_and_c_work_plans_for_emerg
. . m_and_c_work_plans
. road_weather_info_for_emergency
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. roadway_maint_status_for_emerg
. . current_roadway_maintenance_status
. work_zone_info_for_emergency
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv

m_and_c_to_traffic

. environmental_sensor_control_for_roadway
. . environmental_sensor_control
. . sensor_identity
. . station_id
. environmental_sensor_control_for_roadway_sensors
. . environmental_sensor_control
. . list_size
. . sensor_identity
. . station_id
. environmental_sensor_data_for_roadway
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. . station_id
. incident_info_for_traffic
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. infrastructure_sensor_control_from_mcv
. . infrastructure_sensor_control_of_roadside_devices
. m_and_c_resource_response_to_traffic
. m_and_c_work_plans_for_traffic
. . m_and_c_work_plans
. road_weather_info_for_traffic
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. roadway_m_and_c_device_data_to_traffic
. . dms_auto_treat_data_from_maint
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . list_size
. . dms_auto_treat_data_from_roadway
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . list_size
. . field_equip_maint_status
. . . device_identity
. . . list_size

. . . roadside_device_status
. . . station_id
. . t_other_rw_dms_auto_treat_data_from_roadway
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . list_size
. . t_other_rw_env_sensor_control_by_auto_treat_device
. . . env_sensor_control_by_roadway_treatment_device
. roadway_m_and_c_to_traffic
. . asset_restrictions_for_info_provider
. . . current_asset_restrictions
. . asset_restrictions_for_traffic
. . . current_asset_restrictions
. . env_sensor_control_by_auto_treat_device
. . . env_sensor_control_by_roadway_treatment_device
. . infrastructure_sensor_control_from_m_and_c
. . . infrastructure_sensor_control_of_roadside_devices
. . m_and_c_work_plans_for_info_provider
. . . m_and_c_work_plans
. . roadway_maint_status_for_info_provider
. . . current_roadway_maintenance_status
. . roadway_maint_status_for_traffic
. . . current_roadway_maintenance_status
. work_zone_device_control_data
. . dms_data_from_m_and_c
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . list_size
. . dms_data_from_mcv
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . list_size
. . har_data_from_m_and_c
. . . har_identity
. . . har_management_data
. . . . har_mode
. . . . har_schedule
. . . har_program
. . individual_vehicle_speed_for_display
. . speed_warning_for_display
. . work_zone_info_for_display
. work_zone_incident_data
. . video_control_from_m_and_c
. . work_zone_images_for_traffic
. . . fomcm_work_zone_images
. . . work_zone_images
. . work_zone_info_for_traffic
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv
. work_zone_surveillance_data
. . speed_data_for_traffic_display
. . . individual_vehicle_speed
. . . . list_size
. . . . sensor_identity
. . . . speed_sensor_data
. . . . timestamp
. . . . . date
. . . . . time
. . . processed_speed_sensor_data
. . speed_data_for_traffic_status
. . . individual_vehicle_speed
. . . . list_size
. . . . sensor_identity
. . . . speed_sensor_data
. . . . timestamp
. . . . . date
. . . . . time
. . . processed_speed_sensor_data
. . t_other_rw_individual_vehicle_speed_to_dms
. . t_other_rw_speed_warning_to_dms
. . t_other_rw_work_zone_intrusion_detection
. . . work_zone_intrusion_detection
. . work_zone_images_for_isp
. . . fomcm_work_zone_images
. . . work_zone_images
. . work_zone_info_for_isp
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv

m_and_c_to_transit

. asset_restrictions_for_transit
. . current_asset_restrictions
. m_and_c_work_plans_for_transit

. . m_and_c_work_plans
. road_weather_info_for_transit
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. roadway_maint_status_for_transit
. . current_roadway_maintenance_status
. work_zone_info_for_transit
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv

m_and_c_to_traveler

. intrusion_alert_for_in_vehicle_signing
. road_weather_info_for_isp
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
.

m_and_c_vehicle_maintenance_info

. current_fleet_maintenance_status
. fleet_maintenance_record

m_and_c_view_of_road_network

. current_data
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . roadway_traffic_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . link_traffic_conditions
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . . crossing_close_duration

Appendix D: Data Tree

. . . . . crossing_close_time
. . . . . crossing_list
. . . . . list_size
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . list_size
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . indicator_list
. . . . . list_size
. . . . . pedestrian_demand
. . sensor_output_data
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . hri_sensor_data
. . . . closure_event_data
. . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . intersection_blocked
. . . . rail_schedules_data
. . . pedestrian_sensor_data
. . . . node_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . . . pedestrian_demand
. . . traffic_sensor_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . . traffic_video_image
. . stored_incident_data
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . planned_event_data
. . . . list_size
. . . . planned_event_details
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads

. . . . . indicator_junction_control_data
. . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . traffic_video_image_data
. . . list_size
. . . traffic_video_camera_number
. . . . location_identity
. . . . unit_number
. . . traffic_video_image
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. env_info_for_road_network
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_response_status_from_emerg
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
. link_state_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_queue_length
. . vehicle_speed
. predicted_road_network_data
. . link_delay
. . link_journey_time
. . link_list_for_roads
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
. roadway_environment_conditions
. . link_environment_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size

m_and_c_view_of_road_network_for_fleet_manager

. m_and_c_view_of_road_network
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity

Appendix D: Data Tree

. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count

. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . env_info_for_road_network
. . . road_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_conditions
. . . road_weather_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_weather_conditions
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_response_status_from_emerg
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
m_and_c_view_of_road_network_for_mdss
. m_and_c_view_of_road_network
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time

Appendix D: Data Tree

. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time

. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . . indicator_list
. . . . . . ramp_list
. . . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . . parking_lot_list
. . . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . . vehicle_smart_probe_data_source_identity
. . . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . env_info_for_road_network
. . . road_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_conditions
. . . road_weather_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_weather_conditions
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_response_status_from_emerg
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
m_and_c_view_of_road_network_for_personnel
. m_and_c_view_of_road_network
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size

Appendix D: Data Tree

. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . . crossing_data_for_highways
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . . crossing_data_for_roads
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . . hri_closure_data_response
. . . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . . incident_description
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size

. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . . indicator_list
. . . . . . ramp_list
. . . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . . parking_lot_list
. . . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . . vehicle_smart_probe_data_source_identity
. . . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . env_info_for_road_network
. . . road_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_conditions
. . . road_weather_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_weather_conditions
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_response_status_from_emerg
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size

m_and_c_winter_maint_needs_for_archive

. list_size
. m_and_c_materials_quantity
. m_and_c_materials_type
. mcv_vehicle_type
. need_date
. need_time
. winter_treatment_plan

m_and_c_winter_maint_needs_for_archive_attributes

. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision

Appendix D: Data Tree

. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
m_and_c_winter_needs_to_scheduler
. list_size
. m_and_c_materials_quantity
. m_and_c_materials_type
. mcv_vehicle_type
. need_date
. need_time
. winter_treatment_plan
m_and_c_work_performance
m_and_c_work_plans
m_and_c_work_plans_for_emerg
. m_and_c_work_plans
m_and_c_work_plans_for_info_provider
. m_and_c_work_plans
m_and_c_work_plans_for_traffic
. m_and_c_work_plans
m_and_c_work_plans_for_transit
. m_and_c_work_plans
maint_dec_support_parameter_updates
manual_brake_input_detected
manual_input_received
manual_steering_input_detected
manual_throttle_input_detected
map_archive_catalog
map_archive_catalog_request
map_archive_data_request
map_data
map_data_for_archive
. imported_map_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. imported_map_data_for_archive
map_data_for_cv_drivers
. map_data
map_data_for_demand_display
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_emergency_display
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_fleet_managers
. map_data
map_data_for_general_use
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_incident_display
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_m_and_c_display
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_m_and_c_routing
. map_data_for_m_and_c_display
. . map_data_store_contents
. . . map_digitized_data
. . . map_gazetteer_data
. . . map_hri_data
. . . map_link_identity_data
. . . map_transit_data
map_data_for_m_and_c_status_display
. map_data_for_m_and_c_display
. . map_data_store_contents
. . . map_digitized_data
. . . map_gazetteer_data
. . . map_hri_data
. . . map_link_identity_data
. . . map_transit_data
map_data_for_m_and_c_tracking_display
. map_data_for_m_and_c_display
. . map_data_store_contents
. . . map_digitized_data
. . . map_gazetteer_data
. . . map_hri_data
. . . map_link_identity_data
. . . map_transit_data
map_data_for_m_and_c_wz_status_display
. map_data_for_m_and_c_display

. . map_data_store_contents
. . . map_digitized_data
. . . map_gazetteer_data
. . . map_hri_data
. . . map_link_identity_data
. . . map_transit_data
map_data_for_pollution_display
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_route_selection
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_traffic_display
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_transit
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_traveler_displays
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_for_traveler_personal_displays
. map_data_store_contents
. . map_digitized_data
. . map_gazetteer_data
. . map_hri_data
. . map_link_identity_data
. . map_transit_data
map_data_store_contents
. map_digitized_data
. map_gazetteer_data
. map_hri_data
. map_link_identity_data
. map_transit_data
map_digitized_data
map_gazetteer_data
map_hri_data
map_link_identity_data
map_transit_data
materials_availability
. materials_status
. . date
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . m_and_c_materials_usage_rate
. . time
. storage_facility_id
materials_availability_for_status
. materials_status
. . date
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . m_and_c_materials_usage_rate
. . time
. storage_facility_id
materials_status
. date
. list_size
. m_and_c_materials_quantity
. m_and_c_materials_type
. m_and_c_materials_usage_rate
. time
materials_status_request
mayday_agency_ID
mayday_emergency_data
. emergency_request_driver_details
. . date
. . driver_personal_emergency_request
. . . call_back_information
. . . driver_information
. . . vehicle_identity
. . . vehicle_location_for_emergencies
. . . . location_identity
. . . vehicle_status_details
. . . . vehicle_security_status
. . . . vehicle_system_status
. . time
. emergency_request_vehicle_details
. . date
. . time
. . vehicle_emergency_request
. . . processed_cargo_data
. . . vehicle_crash_sensor_data
. . . vehicle_identity
. . . vehicle_location_for_incidents
. . . . location_identity
. . . vehicle_status_details
. . . . vehicle_security_status
. . . . vehicle_system_status
. mayday_agency_ID
. mayday_vehicle_tracking
. . date
. . list_size
. . time
. . vehicle_identity
. . vehicle_location_for_incidents
. . . location_identity
mayday_vehicle_tracking
. date
. list_size
. time
. vehicle_identity
. vehicle_location_for_incidents
. . location_identity
mcv_crew_status
mcv_dispatch_instructions
mcv_equipment_configuration
mcv_infrastructure_sensor_control
. infrastructure_sensor_control_from_mcv
. . infrastructure_sensor_control_of_roadside_devices
. infrastructure_sensor_control_of_onboard_devices
mcv_infrastructure_sensor_data
. infrastructure_sensor_data_for_mcv
. . infrastructure_sensor_data_from_roadside_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. infrastructure_sensor_data_from_onboard_devices
. . infrastructure_sensor_output
. . list_size
. . sensor_identity
. . vehicle_id_for_mcv
mcv_infrastructure_sensor_status
. infrastructure_sensor_status_for_mcv
. . infrastructure_sensor_status_of_roadside_devices

. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. infrastructure_sensor_status_of_onboard_devices
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . vehicle_id_for_mcv
mcv_materials_status
. materials_status
. . date
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . m_and_c_materials_usage_rate
. . time
. vehicle_id_for_mcv
mcv_operational_data
. mcv_equipment_configuration
. mcv_vehicle_type
. operational_data_for_mcv
. vehicle_id_for_mcv
mcv_operator_status
mcv_status_from_operator
mcv_tracking_data_for_fleet_manager
. m_and_c_equipment_id
. m_and_c_equipment_type
. vehicle_id_for_mcv
. vehicle_location_analysis_outputs
. vehicle_location_for_mcv_tracking
. . date
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity
. vehicle_location_for_mcv_tracking_history
. . date
. . time
. . vehicle_location_for_mcv_tracking
. . . date
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. vehicle_speed
mcv_tracking_data_for_personnel
. m_and_c_equipment_id
. m_and_c_equipment_type
. vehicle_id_for_mcv
. vehicle_location_analysis_outputs
. vehicle_location_for_mcv_tracking
. . date
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity
. vehicle_location_for_mcv_tracking_history
. . date
. . time
. . vehicle_location_for_mcv_tracking
. . . date
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. vehicle_speed
mcv_vehicle_systems_control_by_fleet_manager
mcv_vehicle_type
mcv_winter_dispatch_instructions
mcv_work_activity_status
mdss_recommended_actions_for_operator
mdss_recommended_actions_for_personnel
mdss_recommended_actions_for_resource_needs
mdss_recommended_actions_for_roadway_maint_nee
mdss_recommended_actions_for_winter_treatment_ne
media_identity
media_incident_data_updates
. current_incidents_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. media_identity
median_type
meso_scale_surface_trans_weather_forecasts
. surface_trans_weather_advisories
. surface_trans_weather_forecast_details
meso_scale_weather_forecasts
. weather_advisories
. weather_forecast_details
. weather_warnings
. weather_watches
methods_applied
micro_scale_surface_trans_weather_forecasts
. surface_trans_weather_forecast_details
miso_scale_surface_trans_weather_forecasts
. surface_trans_weather_advisories
. surface_trans_weather_forecast_details
miso_scale_weather_forecasts
. weather_advisories
. weather_forecast_details
. weather_warnings
modes
multi_use_trail_information
multimodal_archive_catalog
multimodal_archive_catalog_request
multimodal_archive_data_request
multimodal_crossing_sensor_data
. crossing_close_duration
. crossing_close_time
. crossing_list
. . crossing_identity
. . . location_identity
. . . unit_number
. . list_size
multimodal_data
multimodal_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling

. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
multimodal_data_for_archive
. multimodal_data
. multimodal_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
multimodal_service_arrival_time
. time
multimodal_service_confirm
. multimodal_services_details
. . air_services_details
. . . air_services_costs
. . . . cost
. . . air_services_routes
. . . . air_services_route_details
. . . . . air_services_destination
. . . . . route_point
. . . . . air_services_intermediate_point
. . . . . route_point
. . . . . air_services_origin
. . . . . route_point
. . . air_services_schedules
. . . . air_services_schedule_details
. . . . . air_services_destination_arrival_time
. . . . . time
. . . . . air_services_intermediate_arrival_time
. . . . . time
. . . . . air_services_intermediate_depart_time
. . . . . time
. . . . . air_services_origin_depart_time
. . . . . time
. . ferry_services_details
. . . ferry_services_costs
. . . . cost
. . . ferry_services_routes
. . . . ferry_services_route_details
. . . . . ferry_services_destination
. . . . . route_point
. . . . . ferry_services_intermediate_point
. . . . . route_point
. . . . . ferry_services_origin
. . . . . route_point
. . . ferry_services_schedules
. . . . ferry_services_schedule_details
. . . . . ferry_services_destination_arrival_time
. . . . . time
. . . . . ferry_services_intermediate_arrival_time
. . . . . time
. . . . . ferry_services_intermediate_depart_time
. . . . . time
. . . . . ferry_services_origin_depart_time
. . . . . time
. . rail_services_details
. . . rail_services_costs
. . . . cost
. . . rail_services_routes
. . . . rail_services_route_details
. . . . . rail_services_destination
. . . . . route_point
. . . . . rail_services_intermediate_point
. . . . . route_point
. . . . . rail_services_origin
. . . . . route_point
. . . rail_services_schedules
. . . . rail_services_schedule_details
. . . . . rail_services_destination_arrival_time
. . . . . time
. . . . . rail_services_intermediate_arrival_time
. . . . . time
. . . . . rail_services_intermediate_depart_time
. . . . . time
. . . . . rail_services_origin_depart_time
. . . . . time
. traveler_identity
multimodal_service_confirmation
. reservation_status
. . confirmation_flag
. traveler_identity
multimodal_service_data_request
. multimodal_service_arrival_time
. . time
. multimodal_service_departure_time
. . time
. multimodal_service_destination
. . route_point
. multimodal_service_origin
. . route_point
. multimodal_service_possible_modes
multimodal_service_data_response
. air_services_details
. . air_services_costs
. . . cost
. . air_services_routes
. . . air_services_route_details
. . . . air_services_destination
. . . . . route_point
. . . . air_services_intermediate_point
. . . . . route_point
. . . . air_services_origin
. . . . . route_point
. . air_services_schedules
. . . air_services_schedule_details
. . . . air_services_destination_arrival_time
. . . . . time
. . . . air_services_intermediate_arrival_time
. . . . . time
. . . . air_services_intermediate_depart_time
. . . . . time
. . . . air_services_origin_depart_time
. . . . . time

Appendix D: Data Tree

. ferry_services_details
. . ferry_services_costs
. . . cost
. . ferry_services_routes
. . . ferry_services_route_details
. . . . ferry_services_destination
. . . . . route_point
. . . . ferry_services_intermediate_point
. . . . . route_point
. . . . ferry_services_origin
. . . . . route_point
. . ferry_services_schedules
. . . ferry_services_schedule_details
. . . . ferry_services_destination_arrival_time
. . . . . time
. . . . ferry_services_intermediate_arrival_time
. . . . . time
. . . . ferry_services_intermediate_depart_time
. . . . . time
. . . . ferry_services_origin_depart_time
. . . . . time
. non_motorized_services_details
. . non_motorized_service_costs
. . . cost
. . non_motorized_service_routes
. rail_services_details
. . rail_services_costs
. . . cost
. . rail_services_routes
. . . rail_services_route_details
. . . . rail_services_destination
. . . . . route_point
. . . . rail_services_intermediate_point
. . . . . route_point
. . . . rail_services_origin
. . . . . route_point
. . rail_services_schedules
. . . rail_services_schedule_details
. . . . rail_services_destination_arrival_time
. . . . . time
. . . . rail_services_intermediate_arrival_time
. . . . . time
. . . . rail_services_intermediate_depart_time
. . . . . time
. . . . rail_services_origin_depart_time
. . . . . time
multimodal_service_departure_time
. time
multimodal_service_destination
. route_point
multimodal_service_details_data
. air_services_details
. . air_services_costs
. . . cost
. . air_services_routes
. . . air_services_route_details
. . . . air_services_destination
. . . . . route_point
. . . . air_services_intermediate_point
. . . . . route_point
. . . . air_services_origin
. . . . . route_point
. . air_services_schedules
. . . air_services_schedule_details
. . . . air_services_destination_arrival_time
. . . . . time
. . . . air_services_intermediate_arrival_time
. . . . . time
. . . . air_services_intermediate_depart_time
. . . . . time
. . . . air_services_origin_depart_time
. . . . . time
. ferry_services_details
. . ferry_services_costs
. . . cost
. . ferry_services_routes
. . . ferry_services_route_details
. . . . ferry_services_destination
. . . . . route_point
. . . . ferry_services_intermediate_point
. . . . . route_point
. . . . ferry_services_origin
. . . . . route_point
. . ferry_services_schedules
. . . ferry_services_schedule_details
. . . . ferry_services_destination_arrival_time
. . . . . time
. . . . ferry_services_intermediate_arrival_time
. . . . . time
. . . . ferry_services_intermediate_depart_time
. . . . . time
. . . . ferry_services_origin_depart_time
. . . . . time
. rail_services_details
. . rail_services_costs
. . . cost
. . rail_services_routes
. . . rail_services_route_details
. . . . rail_services_destination
. . . . . route_point
. . . . rail_services_intermediate_point
. . . . . route_point
. . . . rail_services_origin
. . . . . route_point
. . rail_services_schedules
. . . rail_services_schedule_details
. . . . rail_services_destination_arrival_time
. . . . . time
. . . . rail_services_intermediate_arrival_time
. . . . . time
. . . . rail_services_intermediate_depart_time
. . . . . time
. . . . rail_services_origin_depart_time
. . . . . time
multimodal_service_origin
. route_point
multimodal_service_possible_modes
multimodal_services_details
. air_services_details
. . air_services_costs
. . . cost
. . air_services_routes
. . . air_services_route_details
. . . . air_services_destination
. . . . . route_point
. . . . air_services_intermediate_point
. . . . . route_point
. . . . air_services_origin
. . . . . route_point
. . air_services_schedules
. . . air_services_schedule_details
. . . . air_services_destination_arrival_time
. . . . . time
. . . . air_services_intermediate_arrival_time
. . . . . time
. . . . air_services_intermediate_depart_time
. . . . . time
. . . . air_services_origin_depart_time
. . . . . time
. ferry_services_details
. . ferry_services_costs
. . . cost
. . ferry_services_routes
. . . ferry_services_route_details
. . . . ferry_services_destination
. . . . . route_point
. . . . ferry_services_intermediate_point
. . . . . route_point

. . . . ferry_services_origin
. . . . . route_point
. . ferry_services_schedules
. . . ferry_services_schedule_details
. . . . ferry_services_destination_arrival_time
. . . . . time
. . . . ferry_services_intermediate_arrival_time
. . . . . time
. . . . ferry_services_intermediate_depart_time
. . . . . time
. . . . ferry_services_origin_depart_time
. . . . . time
. rail_services_details
. . rail_services_costs
. . . cost
. . rail_services_routes
. . . rail_services_route_details
. . . . rail_services_destination
. . . . . route_point
. . . . rail_services_intermediate_point
. . . . . route_point
. . . . rail_services_origin
. . . . . route_point
. . rail_services_schedules
. . . rail_services_schedule_details
. . . . rail_services_destination_arrival_time
. . . . . time
. . . . rail_services_intermediate_arrival_time
. . . . . time
. . . . rail_services_intermediate_depart_time
. . . . . time
. . . . rail_services_origin_depart_time
. . . . . time
navigable_map_traveler_update_cost
. cost
navigable_map_vehicle_update_cost
. cost
near_term_status
need_date
need_time
new_sensor_static_data
. static_data_for_sensor_processing
. . dms_allocation
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . dms_hri_allocation
. . . crossing_id
. . . list_size
. . highway_control_devices
. . . crossing_equipment_data_for_highways
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . highway_equipment_data
. . . . dms_allocation
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_start_point
. . . . . location_identity
. . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . ramp_devices
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . . ramp_phase_data
. . road_control_devices
. . . crossing_equipment_data_for_roads
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . hri_data_for_roads
. . . . crossing_id
. . . . hri_phase_data
. . . . list_size
. . . intersection_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . intersection_phase_data
. . . . intersection_phase_number
. . . . list_size
. . . pedestrian_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . pedestrian_phase_data

Appendix D: Data Tree

. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . sensor_allocation
. . . sensor_allocation_for_controllers
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . . sensor_allocation_for_hov_lanes
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . . sensor_allocation_for_probes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . sensor_allocation_for_tags
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . vehicle_tag_data_source_location
. . . . . location_identity
node_list
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
non_motorized_service_costs
. cost
non_motorized_service_routes
non_motorized_services_details
. non_motorized_service_costs
. . cost
. non_motorized_service_routes
number_of_lanes
o_d_matrix
on_board_intrusion_detection_device_control
on_board_intrusion_detection_device_status
. device_fault
. device_identity
. device_status
. list_size
on_board_work_zone_device_status
. device_fault
. device_identity
. device_status
. list_size
on_board_work_zone_device_status_for_operator
. device_fault
. device_identity
. device_status
. list_size
on_demand_archive_request
operational_data_for_mcv
operations_incident_data_updates
. incident_duration
. . duration
. incident_info_type
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
. traffic_impact_criteria
operator_control_of_on_board_work_zone_devices
operator_log_for_incidents_data
. ftop_resource_request
. m_and_c_resource_request_from_traffic
. m_and_c_resource_response_to_traffic
. traffic_operations_resource_request
. traffic_operations_resource_response
. ttop_resource_response
operator_log_for_traffic_data
. ftop_traffic_information_requests
. request_traffic_operations_data
. retrieved_traffic_operations_data
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size

. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads

Appendix D: Data Tree

. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . long_term_data
. . . historical_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . historical_parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . historical_processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . historical_stored_incident_data
. . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . list_size
. . . historical_traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type

Appendix D: Data Tree

. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . historical_traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . historical_vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . historical_wide_area_pollution_data
. . . . historical_pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . historical_pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . list_size
. . . o_d_matrix
. . predictive_model_data
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . predicted_o_d_matrix
. . . predicted_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_road_network_use
. . . . route_segment_guided_vehicles
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. ttop_traffic_control_information_display
operator_monitoring_action_command
origin
. route_point
other_archive_data
other_archive_data_input
other_archive_data_request
other_archive_data_request_input
other_control_data_for_highways
. other_indicator_highway_requested_state

. . indicator_control_data_for_highways
. . . indicator_crossing_control_data_for_highways
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_ramp_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . ramp_controls
. . list_size
other_control_data_for_roads
. other_indicator_control_data_for_roads
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size
other_current_data
. current_other_routes_use
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. parking_lot_storage_data
. . list_size
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. processed_data
. . hri_state_data
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . o_d_matrix
. . parking_lot_input_data
. . . list_size
. . . parking_lot_list
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . vehicle_count
. . . vehicle_queue_length
. . private_vehicle_occupants
. . ramp_data
. . . list_size
. . . private_vehicle_occupants
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . roadway_traffic_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_traffic_conditions
. . strategy_data
. . . strategy_data_for_highways
. . . . crossing_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . link_strategy_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . strategy_data_for_roads
. . . . crossing_data_for_roads
. . . . . crossing_close_duration

. . . . . crossing_close_time
. . . . . crossing_list
. . . . . . crossing_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . link_strategy_data
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . pedestrian_data
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. sensor_output_data
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . hri_sensor_data
. . . closure_event_data
. . . hri_status
. . . . hri_closure_data_response
. . . . hri_state
. . . intersection_blocked
. . . rail_schedules_data
. . pedestrian_sensor_data
. . . node_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . pedestrian_demand
. . traffic_sensor_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. . traffic_video_image
. stored_incident_data
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . planned_event_data
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. traffic_flow_state
. . current_road_network_use
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . link_data_from_avl
. . . link_journey_time
. . . link_queue_time
. . . link_speed
. . . list_size
. . link_data_from_tags
. . . link_journey_time
. . . link_queue_time
. . . list_size
. . ramp_signal_state
. . . list_size
. . . ramp_controls
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. traffic_management_storage_data
. . indicator_control_storage_data
. . . indicator_control_storage_data_for_highways
. . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_crossing_controls

. . . . . indicator_identity
. . . . . list_size
. . . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . list_size
. . . . . ramp_controls
. . . indicator_control_storage_data_for_roads
. . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . list_size
. . . . . indicator_junction_control_data
. . . . . indicator_identity
. . . . . indicator_junction_controls
. . . . . list_size
. . . . . indicator_pedestrian_control_data
. . . . . indicator_identity
. . . . . indicator_pedestrian_controls
. . . . . list_size
. . indicator_input_storage_data
. . . indicator_input_storage_data_for_highways
. . . . indicator_response_state
. . . . indicator_type
. . . . list_size
. . . indicator_input_storage_data_for_roads
. . . . indicator_response_state
. . . . indicator_type
. . . . list_size
. . selected_strategy
. . . selected_emergency_vehicle_strategy
. . . . indicator_list
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . selected_emergency_strategy
. . . selected_parking_lot_control_strategy
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . selected_parking_lot_strategy_type
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. traffic_video_image_data
. . list_size
. . traffic_video_camera_number
. . . location_identity
. . . unit_number
. . traffic_video_image
. vehicle_smart_probe_stored_data
. . list_size
. . vehicle_smart_probe_data_for_storage
. . . vehicle_smart_probe_data_indication
. . . vehicle_smart_probe_data_source
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. wide_area_pollution_data
. . list_size
. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
other_current_incidents
. current_incidents_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. list_size
. tmc_identity
other_data_source_catalog
other_data_source_catalog_request
other_dms_data
. other_indicator_sign_control_data_for_hri
. . crossing_id
. . hri_sign_control_data
. . list_size
. other_indicator_sign_control_data_for_roads
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_sign_control_data
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning

. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . parking_lot_dms_controls
. . . pollution_output_message
. . . . dms_pollution_message
. . . . vehicle_identity
. . list_size
other_dms_status
. dms_status
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. dms_updates
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
other_har_data
. har_identity
. har_management_data
. . har_mode
. . har_schedule
. har_program
other_har_status
. har_identity
. har_status
. . device_status
. . har_fault
. . . har_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
other_indicator_control_data_for_roads
. indicator_crossing_control_data_for_roads
. . indicator_crossing_controls
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. indicator_junction_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_junction_controls
. . list_size
. indicator_pedestrian_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_pedestrian_controls
. . list_size
other_indicator_highway_requested_state
. indicator_control_data_for_highways
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls
. list_size
other_indicator_input_data_from_highways
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_response_state
. list_size
other_indicator_input_state_for_roads
. indicator_data
. indicator_type
. list_size
other_indicator_sign_control_data_for_hri
. crossing_id
. hri_sign_control_data
. list_size
other_indicator_sign_control_data_for_roads
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_sign_control_data
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . parking_lot_dms_controls
. . pollution_output_message
. . . dms_pollution_message
. . . vehicle_identity
. list_size
other_long_term_data
. historical_other_routes_use
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. historical_parking_lot_storage_data
. . list_size
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. historical_processed_data

Appendix D: Data Tree

. . hri_state_data
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . o_d_matrix
. . parking_lot_input_data
. . . list_size
. . . parking_lot_list
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . vehicle_count
. . . vehicle_queue_length
. . private_vehicle_occupants
. . ramp_data
. . . list_size
. . . private_vehicle_occupants
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . strategy_data
. . . strategy_data_for_highways
. . . . crossing_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . link_strategy_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . pedestrian_data
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. historical_stored_incident_data
. . historical_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . list_size
. historical_traffic_flow_state
. . current_road_network_use
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay

. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . link_data_from_tags
. . . link_journey_time
. . . link_queue_time
. . . list_size
. . ramp_signal_state
. . . list_size
. . . ramp_controls
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. historical_traffic_management_storage_data
. . indicator_control_storage_data
. . . indicator_control_storage_data_for_highways
. . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_crossing_controls
. . . . . . indicator_identity
. . . . . . list_size
. . . . . indicator_ramp_control_data
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . ramp_controls
. . . indicator_control_storage_data_for_roads
. . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_crossing_controls
. . . . . . indicator_identity
. . . . . . list_size
. . . . . indicator_junction_control_data
. . . . . . indicator_identity
. . . . . . indicator_junction_controls
. . . . . . list_size
. . . . . indicator_pedestrian_control_data
. . . . . . indicator_identity
. . . . . . indicator_pedestrian_controls
. . . . . . list_size
. . indicator_input_storage_data
. . . indicator_input_storage_data_for_highways
. . . . indicator_response_state
. . . . indicator_type
. . . . list_size
. . . indicator_input_storage_data_for_roads
. . . . indicator_response_state
. . . . indicator_type
. . . . list_size
. . selected_strategy
. . . selected_emergency_vehicle_strategy
. . . . indicator_list
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_emergency_strategy
. . . selected_parking_lot_control_strategy
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_parking_lot_strategy_type
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. historical_vehicle_smart_probe_stored_data
. . list_size
. . vehicle_smart_probe_data_for_storage
. . . vehicle_smart_probe_data_indication
. . . vehicle_smart_probe_data_source
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. historical_wide_area_pollution_data
. . historical_pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . historical_pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . list_size
. o_d_matrix
other_modes_routes
other_parking_lot_price_data
. parking_lot_charge_application_time
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_price

. vehicle_type_for_charges
other_parking_lot_price_data_request
other_planned_events
. list_size
. planned_events_data
. . crossing_closure_schedule
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. tmc_identity
other_roadway_information_data
. other_dms_data
. . other_indicator_sign_control_data_for_hri
. . . crossing_id
. . . hri_sign_control_data
. . . list_size
. . other_indicator_sign_control_data_for_roads
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_sign_control_data
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . lane_dms_controls
. . . . parking_lot_dms_controls
. . . . pollution_output_message
. . . . . dms_pollution_message
. . . . . vehicle_identity
. . . list_size
. other_har_data
. . har_identity
. . har_management_data
. . . har_mode
. . . har_schedule
. . har_program
other_roadway_information_status
. other_dms_status
. . dms_status
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . dms_updates
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. other_har_status
. . har_identity
. . har_status
. . . device_status
. . . har_fault
. . . . har_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
other_route
. route_cost
. route_segment_end_point
. . location_identity
. route_segment_estimated_travel_time
. route_segment_mode
. route_segment_report_position_points
. . list_size
. . route_segment_way_point
. . . location_identity
. route_segment_start_point
. . location_identity
other_route_segment_data
. route_segment_details
. . list_size
. . route_segment_stored_details
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_incident_data
. . . . incident_description
. . . . incident_severity
. . . . incident_traffic_impact
. . . . incident_type
. . . route_segment_journey_time
. . . route_segment_occupancy_predictions
. . . route_segment_pollution_data
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . route_segment_queue_delay_predictions
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
. . . route_segment_volume_delay_predictions
other_services_data
other_services_payment_confirm
other_services_roadside_request
. credit_identity
. other_services_data
. traveler_identity
other_services_roadside_response
. credit_identity
. other_services_data
. traveler_identity
other_services_vehicle_request
. credit_identity
. other_services_data
. traveler_identity
other_services_vehicle_response
. credit_identity
. other_services_data
. traveler_identity
other_status_for_highways

. other_indicator_input_data_from_highways
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
other_status_for_roads
. other_indicator_input_state_for_roads
. . indicator_data
. . indicator_type
. . list_size
other_TMC_cv_incidents
. permit_route_plan
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . load_description
. permit_traffic_controls
. . selected_ramp_control_strategy
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_ramp_strategy_type
. . selected_roadway_control_strategy
. . . selected_highway_control_strategy
. . . . highway_sign_plan_number
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . selected_strategy_type
. . . selected_road_control_strategy
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . . list_size
. . . . selected_strategy_type
. permit_type
other_TMC_data_request
other_TMC_emergency_data
. emergency_traffic_control_request
. . date
. . list_size
. . route_segment_estimated_arrival_time
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . time
. selected_emergency_vehicle_strategy
. . indicator_list
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . selected_emergency_strategy
other_TMC_incidents_request
. request_other_current_incidents_data
. request_other_planned_events_data
other_TMC_strategy_data
. strategy_data
. . strategy_data_for_highways
. . . crossing_data_for_highways
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_strategy_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . strategy_data_for_roads
. . . crossing_data_for_roads
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_strategy_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_occupancy

. . . . vehicle_queue_length
. . . pedestrian_data
. . . . indicator_list
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . pedestrian_demand
other_toll_admin_data
. fota_toll_charges_reconciliation_data
. fota_toll_pricing_data
other_toll_data_input
. other_toll_pricing_data
. toll_reconciliation_inputs
other_toll_data_output
. toll_prices_for_other_toll
. toll_reconciliation_outputs
other_toll_pricing_data
other_traffic_center_data
. list_size
. other_long_term_data
. . historical_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . historical_parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . historical_processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . . indicator_list
. . . . . . list_size
. . . . . . pedestrian_demand
. . historical_stored_incident_data
. . . historical_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . list_size
. . historical_traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number

. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . historical_traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_junction_control_data
. . . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . historical_vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . historical_wide_area_pollution_data
. . . historical_pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . historical_pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . list_size
. . o_d_matrix
. tmc_list
. . list_size
. . tmc_identity
other_TRM_service_data
override_lane_hold
override_throttle
owner_entities
parameters_data_for_broadcast_messages
. broadcast_parameters_data
paratransit_arrival_time
. time
paratransit_availability_time
paratransit_available_vehicles
. transit_vehicle_identity
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
. transit_vehicle_passenger_capacity
. transit_vehicle_type
paratransit_constraints
. constraint_on_acceptable_travel_time
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_number_of_mode_changes

. constraint_on_number_of_transfers
. constraint_on_special_needs
. constraint_on_urban
. constraint_on_vehicle_type
paratransit_destination
paratransit_personal_schedule
. paratransit_service_cost
. . cost
. paratransit_service_details
. . paratransit_arrival_time
. . . time
. . paratransit_availability_time
. . paratransit_destination
. . paratransit_pickup_location
. . . location_identity
. . paratransit_pickup_time
. . paratransit_service_identity
. traveler_identity
paratransit_pickup_location
. location_identity
paratransit_pickup_time
paratransit_request
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
paratransit_requested_services
. paratransit_personal_schedule
. . paratransit_service_cost
. . . cost
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. . traveler_identity
. traveler_identity
paratransit_route_confirm
. paratransit_service_details
. . paratransit_arrival_time
. . . time
. . paratransit_availability_time
. . paratransit_destination
. . paratransit_pickup_location
. . . location_identity
. . paratransit_pickup_time
. . paratransit_service_identity
. traveler_identity
paratransit_route_request
. traveler_identity
. trip_request
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions
paratransit_route_response
. paratransit_service_details
. . paratransit_arrival_time
. . . time
. . paratransit_availability_time
. . paratransit_destination
. . paratransit_pickup_location
. . . location_identity
. . paratransit_pickup_time
. . paratransit_service_identity
. traveler_identity
paratransit_schedule
. paratransit_service_details
. . paratransit_arrival_time
. . . time
. . paratransit_availability_time
. . paratransit_destination
. . paratransit_pickup_location
. . . location_identity
. . paratransit_pickup_time
. . paratransit_service_identity
. transit_route
. . route_cost
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
. transit_schedules
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity
. transit_stop_locations
. . list_size
. . location_identity
. . transit_route_number
. . transit_route_stop_number
paratransit_service_confirmation
. paratransit_service_identity

. transit_confirmation_flag
. traveler_identity
paratransit_service_cost
. cost
paratransit_service_data
. paratransit_personal_schedule
. . paratransit_service_cost
. . . cost
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. . traveler_identity
. traveler_identity
paratransit_service_data_for_archive
. paratransit_personal_schedule
. . paratransit_service_cost
. . . cost
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. . traveler_identity
. traveler_identity
paratransit_service_details
. paratransit_arrival_time
. . time
. paratransit_availability_time
. paratransit_destination
. paratransit_pickup_location
. . location_identity
. paratransit_pickup_time
. paratransit_service_identity
paratransit_service_identity
paratransit_service_output
. paratransit_service_details
. . paratransit_arrival_time
. . . time
. . paratransit_availability_time
. . paratransit_destination
. . paratransit_pickup_location
. . . location_identity
. . paratransit_pickup_time
. . paratransit_service_identity
paratransit_service_stored_data
. list_size
. paratransit_service_details
. . paratransit_arrival_time
. . . time
. . paratransit_availability_time
. . paratransit_destination
. . paratransit_pickup_location
. . . location_identity
. . paratransit_pickup_time
. . paratransit_service_identity
paratransit_services
. paratransit_service_details
. . paratransit_arrival_time
. . . time
. . paratransit_availability_time
. . paratransit_destination
. . paratransit_pickup_location
. . . location_identity
. . paratransit_pickup_time
. . paratransit_service_identity
. transit_route
. . route_cost
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
. transit_schedules
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity
. transit_stop_locations
. . list_size
. . location_identity
. . transit_route_number
. . transit_route_stop_number
. transit_vehicle_identity
. traveler_identity
paratransit_services_for_transit_drivers
. transit_route
. . route_cost
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
. transit_schedules
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time

. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity
. transit_stop_locations
. . list_size
. . location_identity
. . transit_route_number
. . transit_route_stop_number
paratransit_transit_driver_instructions
paratransit_transit_vehicle_availability
paratransit_trip_request
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
. paratransit_constraints
. . constraint_on_acceptable_travel_time
. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_number_of_mode_changes
. . constraint_on_number_of_transfers
. . constraint_on_special_needs
. . constraint_on_urban
. . constraint_on_vehicle_type
. preferences
. . modes
. . preferred_alternate_routes
. . preferred_ridesharing_options
. . preferred_route_segments
. . preferred_routes
. . preferred_transit_options
. . preferred_weather_conditions
. traveler_identity
parking_archive_catalog
parking_archive_catalog_request
parking_archive_data
. parking_archive_catalog
. parking_data_for_archive
. . parking_charge_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . parking_charge_response_for_archive
. . . list_size
. . . parking_lot_availability
. . . . handicap_access_information
. . . . parking_lot_hours_of_operation
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_spaces
. . . . traveler_identity
. . . parking_lot_charge_application_time
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_price
. . . vehicle_type_for_charges
. . parking_lot_state_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . parking_lot_state_for_archive
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
parking_archive_data_request
parking_archive_request
. parking_archive_catalog_request
. parking_archive_data_request
parking_archive_status
parking_charge_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created

. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
parking_charge_request_for_archive
. parking_lot_charge_application_time
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_price
. vehicle_type_for_charges
parking_charge_response_for_archive
. list_size
. parking_lot_availability
. . handicap_access_information
. . parking_lot_hours_of_operation
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_spaces
. . traveler_identity
. parking_lot_charge_application_time
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_price
. vehicle_type_for_charges
parking_data_archive
. parking_archive_catalog
. parking_charge_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. parking_charge_response_for_archive
. . list_size
. . parking_lot_availability
. . . handicap_access_information
. . . parking_lot_hours_of_operation
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_spaces
. . . traveler_identity
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. parking_lot_state_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. parking_lot_state_for_archive
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
parking_data_for_archive
. parking_charge_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published

Appendix D: Data Tree

. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. parking_charge_response_for_archive
. . list_size
. . parking_lot_availability
. . . handicap_access_information
. . . parking_lot_hours_of_operation
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_spaces
. . . traveler_identity
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. parking_lot_state_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. parking_lot_state_for_archive
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
parking_guidance_for_dms
. indicator_list
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. list_size
. parking_lot_dms_controls
parking_input_data
parking_lot_availability
. handicap_access_information
. parking_lot_hours_of_operation
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_spaces
. traveler_identity
parking_lot_bookings_confirm
. reservation_status
. . confirmation_flag
. vehicle_identity
parking_lot_bookings_request
. parking_lot_identity
. . location_identity
. . unit_number
. parking_space_details
. . date
. . duration
. . time
. vehicle_identity
parking_lot_calculated_occupancy
parking_lot_capacity_update
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_spaces
parking_lot_capacity_update_confirm
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_spaces
parking_lot_charge
. parking_lot_cost
. . cost
. parking_lot_tag_data
. . credit_identity
. . date
. . parking_lot_entry_lane_number
. . stored_credit
. . time
. vehicle_identity
parking_lot_charge_application_time
parking_lot_charge_change_request
. parking_lot_charge_application_time
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_price
. vehicle_type_for_charges
parking_lot_charge_change_response
parking_lot_charge_details
. parking_lot_charge_application_time
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_price
. vehicle_type_for_charges
parking_lot_charge_direct_details
. parking_lot_charge_application_time
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_price
. vehicle_type_for_charges
parking_lot_charge_direct_request

Appendix D: Data Tree

parking_lot_charge_request
parking_lot_cost
. cost
parking_lot_current_occupancy
. parking_lot_calculated_occupancy
. parking_lot_identity
. . location_identity
. . unit_number
parking_lot_current_state
. parking_lot_current_occupancy
. . parking_lot_calculated_occupancy
. . parking_lot_identity
. . . location_identity
. . . unit_number
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_state
parking_lot_data
. parking_lot_bookings_request
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_space_details
. . . date
. . . duration
. . . time
. . vehicle_identity
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_spaces
parking_lot_data_for_archive
. parking_lot_bookings_request
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_space_details
. . . date
. . . duration
. . . time
. . vehicle_identity
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_spaces
parking_lot_data_for_archive_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
parking_lot_data_request
. date
. parking_lot_identity
. . location_identity
. . unit_number
. time
. traveler_identity
parking_lot_decreasing_threshold
parking_lot_dms_allocation
. list_size
. unit_number
parking_lot_dms_controls
parking_lot_entry_lane_number
parking_lot_hours_of_operation
parking_lot_identity
. location_identity
. unit_number
parking_lot_increasing_threshold
parking_lot_input_data
. list_size
. parking_lot_list
. . list_size
. . parking_lot_identity
. . . location_identity
. . . unit_number
. vehicle_count
. vehicle_queue_length
parking_lot_list
. list_size
. parking_lot_identity
. . location_identity
. . unit_number
parking_lot_occupancy
parking_lot_operator_input_data
parking_lot_operator_output_data
parking_lot_operator_transit_update
parking_lot_payment_confirmation
. confirmation_flag
parking_lot_payment_debited
. confirmation_flag
parking_lot_payment_pull_in_message
. vehicle_identity
parking_lot_payment_request
. parking_lot_cost
. . cost
parking_lot_price
parking_lot_price_data
. parking_lot_charge_application_time
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_price
. vehicle_type_for_charges
parking_lot_price_data_request
parking_lot_price_details
. list_size
. parking_lot_price_data
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
parking_lot_prices
. list_size
. parking_lot_charge_application_time
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_price
. vehicle_type_for_charges

parking_lot_reservation_confirm
. parking_lot_identity
. . location_identity
. . unit_number
. reservation_status
. . confirmation_flag
. traveler_identity
parking_lot_reservation_request
. date
. parking_lot_identity
. . location_identity
. . unit_number
. time
. traveler_identity
parking_lot_sensor_allocation
. list_size
. parking_lot_sensor_type
. unit_number
parking_lot_sensor_type
parking_lot_spaces
parking_lot_state
parking_lot_state_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
parking_lot_state_for_archive
. parking_lot_current_occupancy
. . parking_lot_calculated_occupancy
. . parking_lot_identity
. . . location_identity
. . . unit_number
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_state
parking_lot_state_thresholds
. parking_lot_decreasing_threshold
. parking_lot_increasing_threshold
parking_lot_static_data
. list_size
. parking_lot_dms_allocation
. . list_size
. . unit_number
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_sensor_allocation
. . list_size
. . parking_lot_sensor_type
. . unit_number
. parking_lot_state_thresholds
. . parking_lot_decreasing_threshold
. . parking_lot_increasing_threshold
parking_lot_storage_data
. list_size
. parking_lot_current_occupancy
. . parking_lot_calculated_occupancy
. . parking_lot_identity
. . . location_identity
. . . unit_number
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_state
parking_lot_tag_data
. credit_identity
. date
. parking_lot_entry_lane_number
. stored_credit
. time
parking_lot_tag_data_clear
. parking_lot_tag_data
. . credit_identity
. . date
. . parking_lot_entry_lane_number
. . stored_credit
. . time
parking_lot_tag_data_collect
. parking_lot_tag_data
. . credit_identity
. . date
. . parking_lot_entry_lane_number
. . stored_credit
. . time
parking_lot_tag_data_input
. parking_lot_tag_data
. . credit_identity
. . date
. . parking_lot_entry_lane_number
. . stored_credit
. . time
parking_lot_tag_data_needed
parking_lot_tag_data_request
parking_lot_tag_data_store
. parking_lot_tag_data
. . credit_identity
. . date
. . parking_lot_entry_lane_number
. . stored_credit
. . time
parking_lot_tag_data_update
. parking_lot_tag_data
. . credit_identity
. . date
. . parking_lot_entry_lane_number
. . stored_credit
. . time
parking_lot_tag_pull_in_message
parking_lot_transaction_records
. advanced_charge_transactions
. . credit_identity
. . date
. . parking_lot_cost
. . . cost
. . stored_credit
. . time
. . vehicle_identity
. current_charge_transactions
. . credit_identity
. . date
. . parking_lot_cost

. . . cost
. . time
. . vehicle_identity
. list_size
parking_lot_transit_request
parking_lot_transit_response
parking_lot_violation_information
parking_output_data
parking_space_details
. date
. duration
. time
parking_transit_update
pavement_type
payment_request
. driver_advanced_payment_for_map
. . navigable_map_vehicle_update_cost
. . . cost
. . stored_credit
. driver_map_update_payment_request
. . credit_identity
. . navigable_map_vehicle_update_cost
. . . cost
. . vehicle_identity
. other_services_vehicle_request
. . credit_identity
. . other_services_data
. . traveler_identity
. parking_lot_data_request
. . date
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . time
. . traveler_identity
. parking_lot_reservation_request
. . date
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . time
. . traveler_identity
. request_prices
. rideshare_payment_request
. . credit_identity
. . rideshare_cost
. traveler_map_update_payment_request
. . credit_identity
. . navigable_map_traveler_update_cost
. . . cost
. . traveler_identity
. traveler_other_services_payment_request
. . credit_identity
. . traveler_identity
. . yellow_pages_dining_reservation
. . yellow_pages_lodging_reservation
. . yellow_pages_ticket_purchase
. traveler_payment_request
. . credit_identity
. . parking_space_details
. . . date
. . . duration
. . . time
. . ride_segments
. . . list_size
. . . transit_route_segment_number
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . transaction_number
. . traveler_identity
. traveler_personal_data_update
. . traveler_personal_display_update_cost
. . . display_map_traveler_update_cost
. . . stored_credit
. . . traveler_identity
. . traveler_personal_information_update
. . traveler_personal_trip_costs
. . . stored_credit
. . . traveler_identity
. . . traveler_total_trip_cost
. traveler_personal_display_update_payment_request
. . credit_identity
. . display_map_traveler_update_cost
. . traveler_identity
. traveler_personal_map_update_cost
. . navigable_map_traveler_update_cost
. . . cost
. . stored_credit
. . traveler_identity
. traveler_roadside_data_update
. . traveler_roadside_personal_information_update
. . traveler_roadside_trip_costs
. . . kiosk_identity
. . . stored_credit
. . . traveler_total_trip_cost
. yellow_pages_service_provider_registration_request
. . credit_identity
. . yellow_pages_service_provider_identity
payment_result
. driver_credit_identity
. . credit_identity
. . stored_credit
. driver_map_update_payment_response
. . confirmation_flag
. . credit_identity
. . vehicle_identity
. other_services_vehicle_response
. . credit_identity
. . other_services_data
. . traveler_identity
. parking_lot_availability
. . handicap_access_information
. . parking_lot_hours_of_operation
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_spaces
. . traveler_identity
. parking_lot_reservation_confirm
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . reservation_status
. . . confirmation_flag
. . traveler_identity
. prices
. . parking_lot_price_data
. . . parking_lot_charge_application_time
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_price
. . . vehicle_type_for_charges
. . toll_price_data
. . . toll_price
. . . toll_price_application_time
. . . toll_segment_identity
. . . . unit_number
. . . vehicle_type_for_tolls
. . . . cv_tag_data
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_vehicle_characteristics
. . . . . cv_vehicle_configuration

. . . . . cv_vehicle_size
. . . . . cv_vehicle_weight
. . . . vehicle_identity
. . . . vehicle_type
. . transit_fare_data
. . . list_size
. . . transit_fares
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_use_time
. . . . transit_user_category
. rideshare_payment_confirmation
. traveler_info_payments_transactions
. . driver_map_update_payments_transactions
. . traveler_map_update_payments_transactions
. . traveler_rideshare_payments_transactions
. . traveler_trip_payments_transactions
. . yellow_pages_provider_payments_transactions
. traveler_map_update_payment_response
. . confirmation_flag
. . credit_identity
. . traveler_identity
. traveler_other_services_payment_result
. . other_services_payment_confirm
. . traveler_identity
. traveler_payment_response
. . advanced_fares_confirm
. . . confirmation_flag
. . advanced_tolls_confirm
. . . confirmation_flag
. . . credit_identity
. . . stored_credit
. . . toll_cost
. . advanced_traveler_charges_confirm
. . . confirmation_flag
. . . parking_lot_cost
. . . . cost
. . . stored_credit
. . . traveler_identity
. . transaction_number
. traveler_personal_data
. . traveler_personal_credit_identity
. . . credit_identity
. . . stored_credit
. . traveler_personal_information
. traveler_personal_display_update_payment_response
. . confirmation_flag
. . credit_identity
. . traveler_identity
. traveler_roadside_data
. . traveler_roadside_credit_identity
. . . credit_identity
. . traveler_roadside_personal_information
. vehicle_toll_probe_data
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time_from_tolls
. yellow_pages_service_provider_registration_response
. . confirmation_flag
. . yellow_pages_service_provider_identity

payment_transaction_records

. driver_map_update_payments_transactions
. transit_user_payments_transactions
. traveler_map_update_payments_transactions
. traveler_trip_payments_transactions
. yellow_pages_provider_payments_transactions

pedestrian_adaptive_data
pedestrian_control_commands
pedestrian_cycle_time
pedestrian_data

. indicator_list
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. list_size
. pedestrian_demand

pedestrian_demand
pedestrian_equipment_data

. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
. pedestrian_phase_data

pedestrian_fixed_time_data

. pedestrian_control_commands
. pedestrian_cycle_time
. pedestrian_offset_time

pedestrian_offset_time
pedestrian_phase_data
pedestrian_sensor_data

. node_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. pedestrian_demand

perishability_date

. date
. time

permit_coordination

. date
. permit_route_plan
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . load_description
. permit_traffic_controls
. . selected_ramp_control_strategy
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_ramp_strategy_type
. . selected_roadway_control_strategy
. . . selected_highway_control_strategy
. . . . highway_sign_plan_number
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . selected_strategy_type
. . . selected_road_control_strategy
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number

. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . . list_size
. . . . selected_strategy_type
. permit_type
. time
permit_cost
. cost
permit_route_plan
. link_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. load_description
permit_traffic_controls
. selected_ramp_control_strategy
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . selected_ramp_strategy_type
. selected_roadway_control_strategy
. . selected_highway_control_strategy
. . . highway_sign_plan_number
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . selected_strategy_type
. . selected_road_control_strategy
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_road_adaptive_plan_number
. . . indicator_road_fixed_plan_number
. . . list_size
. . . selected_strategy_type
permit_type
personal_identification_status
planned_event_data
. list_size
. planned_event_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
planned_event_data_for_vehicle_signage
. planned_event_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
planned_event_details
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
planned_events
. list_size
. planned_event_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
planned_events_data
. crossing_closure_schedule
. list_size
. planned_event_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
planned_events_data_output
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
planned_events_for_advisories
. list_size
. planned_event_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
planned_events_for_broadcast
. list_size
. planned_event_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
planned_events_local_data

. crossing_closure_schedule
. list_size
. planned_events_data
. . crossing_closure_schedule
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. tmc_identity
planned_events_new_data
. crossing_closure_schedule
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_traffic_impact
. incident_type
planned_events_store
. crossing_closure_schedule
. list_size
. planned_event_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
planned_incident_response
. agency_incident_response_procedures
. dms_displays
. traffic_control_strategy_alterations
platoon_accel_decel_profile
. vehicle_accel_decel_data
platoon_action
platoon_ahead_vehicle_status
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
platoon_change_lane_servo_override
platoon_following_commands
. platoon_change_lane_servo_override
. platoon_headway_servo_override
. platoon_lane_servo_override
. platoon_speed_servo_override
platoon_headway
. vehicle_headway_data
platoon_headway_servo_override
platoon_lane_servo_override
platoon_rear_vehicle_status
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
platoon_speed_servo_override
platoon_status
platooning_selected
pollution_archive_data_log
. pollution_state_static_log_data
. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. pollution_state_vehicle_log_data
. . pollution_state_vehicle_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_sulfur_dioxide_pollution
. . . vehicle_type
pollution_archive_data_log_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
pollution_area_acceptance_data
pollution_area_acceptance_times
pollution_area_tolerance_data
pollution_area_tolerance_times
pollution_data_log
. list_size
. pollution_state_area_collection
. . area_air_quality_index
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_roadside_collection

. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_vehicle_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_sulfur_dioxide_pollution
. . vehicle_type
pollution_data_violation
pollution_incident
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_type
pollution_output_message
. dms_pollution_message
. vehicle_identity
pollution_reference_data
. pollution_area_acceptance_data
. pollution_area_acceptance_times
. pollution_area_tolerance_data
. pollution_area_tolerance_times
. pollution_roadside_acceptance_data
. pollution_roadside_acceptance_times
. pollution_roadside_tolerance_data
. pollution_roadside_tolerance_times
. pollution_vehicle_acceptance_conditions
. pollution_vehicle_acceptance_data
pollution_reference_data_archive_request
pollution_reference_data_output
. pollution_area_acceptance_data
. pollution_area_acceptance_times
. pollution_area_tolerance_data
. pollution_area_tolerance_times
. pollution_roadside_acceptance_data
. pollution_roadside_acceptance_times
. pollution_roadside_tolerance_data
. pollution_roadside_tolerance_times
. pollution_vehicle_acceptance_conditions
. pollution_vehicle_acceptance_data
. state_contact_data
. . state_contact_details
. . . state_contact_address
. . . state_contact_computer
. . . state_contact_email
. . . state_contact_fax
. . . state_contact_name
. . . state_contact_phone
. . state_contact_identity
. . state_contact_method
pollution_reference_data_request
pollution_reference_data_update
pollution_roadside_acceptance_data
pollution_roadside_acceptance_times
pollution_roadside_tolerance_data
pollution_roadside_tolerance_times
pollution_state
. list_size
. pollution_state_area_collection
. . area_air_quality_index
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_roadside_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_vehicle_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_sulfur_dioxide_pollution
. . vehicle_type
pollution_state_area_collection
. area_air_quality_index
. current_carbon_monoxide_pollution
. current_hydrocarbon_pollution
. current_nitrous_oxide_pollution
. current_ozone_pollution
. current_particulate_pollution
. current_pollution_location
. . location_identity
. current_sulfur_dioxide_pollution
pollution_state_data
. current_carbon_monoxide_pollution
. current_hydrocarbon_pollution
. current_nitrous_oxide_pollution
. current_ozone_pollution
. current_particulate_pollution
. current_pollution_location
. . location_identity
. current_sulfur_dioxide_pollution
. vehicle_type
pollution_state_data_output
. current_carbon_monoxide_pollution
. current_hydrocarbon_pollution
. current_nitrous_oxide_pollution
. current_ozone_pollution
. current_particulate_pollution
. current_pollution_location
. . location_identity
. current_sulfur_dioxide_pollution
. vehicle_type
pollution_state_data_output_request
pollution_state_data_request
pollution_state_roadside_collection
. current_carbon_monoxide_pollution
. current_hydrocarbon_pollution
. current_nitrous_oxide_pollution
. current_ozone_pollution
. current_particulate_pollution
. current_roadside_pollution_location
. . location_identity
. current_sulfur_dioxide_pollution
pollution_state_static_acceptance_criteria
. pollution_area_acceptance_data
. pollution_area_acceptance_times
. pollution_area_tolerance_data
. pollution_area_tolerance_times
. pollution_roadside_acceptance_data
. pollution_roadside_acceptance_times
. pollution_roadside_tolerance_data
. pollution_roadside_tolerance_times
pollution_state_static_collection

. pollution_state_area_collection
. . area_air_quality_index
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_roadside_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution

pollution_state_static_log_data
. pollution_state_area_collection
. . area_air_quality_index
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_roadside_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution

pollution_state_vehicle_acceptance_criteria
. pollution_vehicle_acceptance_conditions
. pollution_vehicle_acceptance_data

pollution_state_vehicle_collection
. current_carbon_monoxide_pollution
. current_hydrocarbon_pollution
. current_nitrous_oxide_pollution
. current_ozone_pollution
. current_particulate_pollution
. current_sulfur_dioxide_pollution
. vehicle_type

pollution_state_vehicle_log_data
. pollution_state_vehicle_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_sulfur_dioxide_pollution
. . vehicle_type

pollution_vehicle_acceptance_conditions

pollution_vehicle_acceptance_data

position_advisory_message

position_critical_state

position_warning_to_front
. position_advisory_message
. position_critical_state

position_warning_to_rear
. position_advisory_message
. position_critical_state

position_warning_to_side
. position_advisory_message
. position_critical_state

position_warnings
. position_warning_to_front
. . position_advisory_message
. . position_critical_state
. position_warning_to_rear
. . position_advisory_message
. . position_critical_state
. position_warning_to_side
. . position_advisory_message
. . position_critical_state

possible_defined_response_identity

possible_defined_responses
. agency_incident_response_procedures
. dms_displays
. incident_duration
. . duration
. incident_severity
. incident_traffic_impact
. incident_type
. possible_defined_response_identity
. traffic_control_strategy_alterations

possible_defined_responses_data
. agency_incident_response_procedures
. dms_displays
. incident_duration
. . duration
. incident_severity
. incident_traffic_impact
. incident_type
. traffic_control_strategy_alterations

possible_defined_responses_output
. agency_incident_response_procedures
. dms_displays
. incident_duration
. . duration
. incident_severity
. incident_traffic_impact
. incident_type
. possible_defined_response_identity
. traffic_control_strategy_alterations

possible_defined_responses_output_request
. possible_defined_response_identity

possible_detected_incidents
. incident_location
. . location_identity
. incident_type

possible_incident_data_update

possible_incidents
. climatic_scale_weather_forecasts
. current_weather_observations
. environmental_data_for_incidents
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. event_attendance_expected
. event_duration
. event_location
. . location_identity
. event_name
. event_start_time
. incident_confidence_level
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_type
. meso_scale_weather_forecasts
. . weather_advisories
. . weather_forecast_details
. . weather_warnings
. . weather_watches

Appendix D: Data Tree

. miso_scale_weather_forecasts
. . weather_advisories
. . weather_forecast_details
. . weather_warnings
. synoptic_scale_weather_forecasts
. . weather_forecast_details
. . weather_watches
. weather_scale_forecast_data_attributes
possible_incidents_data_output
. incident_confidence_level
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_type
predicted_data_for_broadcast
. predicted_highway_network_data
. . link_delay
. . link_journey_time
. . link_list_for_highways
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
. predicted_parking_lot_data
. . list_size
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_occupancy
. . parking_lot_state
. predicted_road_network_data
. . link_delay
. . link_journey_time
. . link_list_for_roads
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
predicted_highway_network_data
. link_delay
. link_journey_time
. link_list_for_highways
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. link_occupancy
. link_speed
predicted_hov_lane_data
. hov_lane_vehicle_count
. hov_lane_violation_count
. list_size
predicted_hri_state
predicted_o_d_matrix
predicted_other_routes_use
. route_segment_guided_travelers
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time
. route_segment_total_number
predicted_parking_lot_data
. list_size
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_occupancy
. parking_lot_state
predicted_road_network_data
. link_delay
. link_journey_time
. link_list_for_roads
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. link_occupancy
. link_speed
predicted_road_network_use
. route_segment_guided_vehicles
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time
. route_segment_total_number
prediction_data
. list_size
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_occupancy_predictions
. route_segment_queue_delay_predictions
. route_segment_speed_predictions
. . vehicle_speed
. route_segment_volume_delay_predictions
prediction_data_for_advisories
. list_size
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_occupancy_predictions
. route_segment_queue_delay_predictions
. route_segment_volume_delay_predictions
prediction_data_for_broadcast
. link_delay
. link_journey_time
. link_list_for_highways
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. link_list_for_roads
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. link_speed
prediction_request
predictive_model_data
. predicted_highway_network_data
. . link_delay
. . link_journey_time
. . link_list_for_highways
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed

. predicted_hov_lane_data
. . hov_lane_vehicle_count
. . hov_lane_violation_count
. . list_size
. predicted_o_d_matrix
. predicted_other_routes_use
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. predicted_parking_lot_data
. . list_size
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_occupancy
. . parking_lot_state
. predicted_road_network_data
. . link_delay
. . link_journey_time
. . link_list_for_roads
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
. predicted_road_network_use
. . route_segment_guided_vehicles
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
predictive_model_data_for_retrieval
. predicted_highway_network_data
. . link_delay
. . link_journey_time
. . link_list_for_highways
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
. predicted_hov_lane_data
. . hov_lane_vehicle_count
. . hov_lane_violation_count
. . list_size
. predicted_other_routes_use
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. predicted_parking_lot_data
. . list_size
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_occupancy
. . parking_lot_state
. predicted_road_network_data
. . link_delay
. . link_journey_time
. . link_list_for_roads
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
. predicted_road_network_use
. . route_segment_guided_vehicles
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
preemption_command
preferences
. modes
. preferred_alternate_routes
. preferred_ridesharing_options
. preferred_route_segments
. preferred_routes
. preferred_transit_options
. preferred_weather_conditions
preferred_alternate_routes
preferred_ridesharing_options
preferred_route_segments
preferred_routes
preferred_transit_options
preferred_weather_conditions
price_data
. other_parking_lot_price_data
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. parking_charge_response_for_archive
. . list_size
. . parking_lot_availability
. . . handicap_access_information
. . . parking_lot_hours_of_operation
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_spaces
. . . traveler_identity
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. parking_lot_charge_change_response
. parking_lot_charge_details
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. parking_lot_charge_direct_details
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. probe_data_for_traffic
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type

. . . unit_number
. . route_segment_journey_time_from_tolls
. tag_data_inputs
. . parking_lot_tag_data_input
. . . parking_lot_tag_data
. . . . credit_identity
. . . . date
. . . . parking_lot_entry_lane_number
. . . . stored_credit
. . . . time
. . toll_tag_data_input
. . . toll_tag_data
. . . . credit_identity
. . . . stored_credit
. . . . toll_segment_identity
. . . . . unit_number
. toll_price_changes_response
. toll_price_details
. . toll_price
. . toll_price_application_time
. . toll_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_type_for_tolls
. . . cv_tag_data
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_vehicle_characteristics
. . . . cv_vehicle_configuration
. . . . cv_vehicle_size
. . . . cv_vehicle_weight
. . . vehicle_identity
. . . vehicle_type
. toll_price_direct_details
. . toll_price
. . toll_price_application_time
. . toll_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_type_for_tolls
. . . cv_tag_data
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_vehicle_characteristics
. . . . cv_vehicle_configuration
. . . . cv_vehicle_size
. . . . cv_vehicle_weight
. . . vehicle_identity
. . . vehicle_type
. transit_fare_details
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
. transit_fare_direct_details
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category

price_data_for_services

. parking_lot_price_details
. . list_size
. . parking_lot_price_data
. . . parking_lot_charge_application_time
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_price
. . . vehicle_type_for_charges
. toll_price_values
. . list_size
. . toll_price_data
. . . toll_price
. . . toll_price_application_time
. . . toll_segment_identity
. . . . unit_number
. . . vehicle_type_for_tolls
. . . . cv_tag_data
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_vehicle_characteristics
. . . . . cv_vehicle_configuration
. . . . . cv_vehicle_size
. . . . . cv_vehicle_weight
. . . . vehicle_identity
. . . . vehicle_type
. transit_fare_data
. . list_size
. . transit_fares
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category

price_request

. other_parking_lot_price_data_request
. parking_charge_request_for_archive
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. parking_lot_charge_change_request
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. parking_lot_charge_direct_request
. parking_lot_charge_request
. tag_data_requests
. . parking_lot_tag_data_needed
. . toll_tag_data_needed

Appendix D: Data Tree

. toll_price_changes_request
. . toll_price
. . toll_price_application_time
. . toll_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_type_for_tolls
. . . cv_tag_data
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_vehicle_characteristics
. . . . cv_vehicle_configuration
. . . . cv_vehicle_size
. . . . cv_vehicle_weight
. . . vehicle_identity
. . . vehicle_type
. toll_price_direct_request
. toll_price_request
. transit_fare_direct_request
. transit_fare_request
prices
. parking_lot_price_data
. . parking_lot_charge_application_time
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_price
. . vehicle_type_for_charges
. toll_price_data
. . toll_price
. . toll_price_application_time
. . toll_segment_identity
. . . unit_number
. . vehicle_type_for_tolls
. . . cv_tag_data
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_vehicle_characteristics
. . . . cv_vehicle_configuration
. . . . cv_vehicle_size
. . . . cv_vehicle_weight
. . . vehicle_identity
. . . vehicle_type
. transit_fare_data
. . list_size
. . transit_fares
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
private_vehicle_occupants
probe_data_for_traffic
. list_size
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time_from_tolls
processed_cargo_data
processed_data
. hri_state_data
. link_state_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_queue_length
. . vehicle_speed
. o_d_matrix
. parking_lot_input_data
. . list_size
. . parking_lot_list
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . vehicle_count
. . vehicle_queue_length
. private_vehicle_occupants
. ramp_data
. . list_size
. . private_vehicle_occupants
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_speed
. roadway_environment_conditions
. . link_environment_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. roadway_traffic_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_traffic_conditions
. strategy_data
. . strategy_data_for_highways
. . . crossing_data_for_highways
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number

. . . . . list_size
. . . . list_size
. . . link_strategy_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . strategy_data_for_roads
. . . crossing_data_for_roads
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_strategy_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . pedestrian_data
. . . . indicator_list
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . pedestrian_demand

processed_env_info
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions

processed_env_info_for_display
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions

processed_infrastructure_sensor_data
. infrastructure_sensor_data_for_m_and_c
. . infrastructure_sensor_data_from_roadside_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. mcv_infrastructure_sensor_data
. . infrastructure_sensor_data_for_mcv
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . infrastructure_sensor_data_from_onboard_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . vehicle_id_for_mcv

processed_speed_sensor_data
quality_control_attribute
rail_operations_advisories
rail_operations_data
rail_operations_device_command
rail_operations_message
rail_operations_priority_data
rail_operations_query
rail_operations_update
rail_schedules_data
rail_services_costs
. cost

rail_services_destination
. route_point

rail_services_destination_arrival_time
. time

rail_services_details
. rail_services_costs
. . cost
. rail_services_routes
. . rail_services_route_details
. . . rail_services_destination
. . . . route_point
. . . rail_services_intermediate_point
. . . . route_point
. . . rail_services_origin
. . . . route_point
. rail_services_schedules
. . rail_services_schedule_details
. . . rail_services_destination_arrival_time
. . . . time
. . . rail_services_intermediate_arrival_time
. . . . time
. . . rail_services_intermediate_depart_time
. . . . time
. . . rail_services_origin_depart_time
. . . . time

rail_services_intermediate_arrival_time
. time

rail_services_intermediate_depart_time
. time

rail_services_intermediate_point
. route_point

rail_services_origin
. route_point

rail_services_origin_depart_time
. time
rail_services_route_details
. rail_services_destination
. . route_point
. rail_services_intermediate_point
. . route_point
. rail_services_origin
. . route_point
rail_services_routes
. rail_services_route_details
. . rail_services_destination
. . . route_point
. . rail_services_intermediate_point
. . . route_point
. . rail_services_origin
. . . route_point
rail_services_schedule_details
. rail_services_destination_arrival_time
. . time
. rail_services_intermediate_arrival_time
. . time
. rail_services_intermediate_depart_time
. . time
. rail_services_origin_depart_time
. . time
rail_services_schedules
. rail_services_schedule_details
. . rail_services_destination_arrival_time
. . . time
. . rail_services_intermediate_arrival_time
. . . time
. . rail_services_intermediate_depart_time
. . . time
. . rail_services_origin_depart_time
. . . time
rail_traffic_control_data
ramp_controls
ramp_data
. list_size
. private_vehicle_occupants
. ramp_list
. . list_size
. . ramp_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . location_identity
. . . unit_number
. vehicle_headway
. vehicle_occupancy
. vehicle_speed
ramp_devices
. list_size
. ramp_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . location_identity
. . unit_number
. ramp_phase_data
ramp_identity
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. location_identity
. unit_number
ramp_list
. list_size
. ramp_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . location_identity
. . unit_number
ramp_phase_data
ramp_signal_state
. list_size
. ramp_controls
. ramp_list
. . list_size
. . ramp_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . location_identity
. . . unit_number
reclassify_incidents
record_size
remote_video_image_control
request_current_traffic_media_data
. request_dms_outputs
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. request_equipment_faults
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. request_link_journey_time
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. request_traffic_flow
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
request_demand_display_update
request_dms_outputs
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
request_emergency_display_update
request_equipment_faults
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
request_erms
. hov_lane_violation
. . private_vehicle_occupants
. . vehicle_identity
. . vehicle_license
. incident_alert
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact

. . incident_type
. incident_details_request
. . incident_oldest_time
. . . time
. . incident_type
. incident_response_clear
. . incident_location
. . . location_identity
. . incident_type
. vehicle_pollution_alert
. . pollution_data_violation
. . vehicle_identity
. . vehicle_license
. wrong_way_vehicle_detection
. . incident_video_image
. . traffic_video_image
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. . vehicle_identity
. . vehicle_license
request_erms_acknowledge
. emergency_data_request
. . request_for_additional_data
. emergency_request_vehicle_acknowledge
. vehicle_security_system_commands
request_erms_message
. emergency_request_vehicle_details
. . date
. . time
. . vehicle_emergency_request
. . . processed_cargo_data
. . . vehicle_crash_sensor_data
. . . vehicle_identity
. . . vehicle_location_for_incidents
. . . . location_identity
. . . vehicle_status_details
. . . . vehicle_security_status
. . . . vehicle_system_status
. vehicle_security_system_commands_request
. vehicle_status_update
request_for_additional_data
request_for_m_and_c_schedule
request_for_traffic_info
request_hri_closure_data
request_incident_map_display_update
request_incident_media_data
request_incident_operations_data
request_link_journey_time
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
request_local_current_incidents_data
request_local_planned_events_data
request_long_term_traffic_media_data
. request_link_journey_time
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. request_traffic_flow
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
request_m_and_c_routing_map_data
request_m_and_c_status_display_update
request_m_and_c_tracking_display_update
request_m_and_c_wz_status_display_update
request_other_current_incidents_data
request_other_planned_events_data
request_other_route_segment_data
request_other_routes_map_update
request_other_TMC_data
request_planned_events_data
. incident_location
. . location_identity
. incident_type
request_pollution_map_display_update
request_possible_incidents_data
. incident_oldest_time
. . time
. incident_type
request_predictive_traffic_media_data
. request_dms_outputs
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. request_equipment_faults
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. request_link_journey_time
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. request_traffic_flow
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
request_prices
request_rail_schedules_data
request_roadside_fare_payment
. transit_fare
. transit_roadside_fare_collection_identity
. transit_user_roadside_tag_identity
. . credit_identity
. . traveler_identity
request_route_segment_data
request_route_selection_map_update
request_sensor_static_data
request_traffic_flow
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
request_traffic_map_display_update
request_traffic_media_data
. request_current_traffic_media_data
. . request_dms_outputs
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . request_equipment_faults
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . request_link_journey_time
. . . link_identity

. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . request_traffic_flow
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. request_long_term_traffic_media_data
. . request_link_journey_time
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . request_traffic_flow
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. request_predictive_traffic_media_data
. . request_dms_outputs
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . request_equipment_faults
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . request_link_journey_time
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . request_traffic_flow
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. request_unusual_traffic_data_output
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
request_traffic_operations_data
request_transit_map_update
request_transit_service_external_data
request_transit_service_internal_data
request_transit_services_data_for_output
request_transit_user_roadside_image
request_transit_user_vehicle_image
request_unusual_traffic_data_output
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
request_vehicle_fare_payment
. transit_fare
. transit_route_number
. transit_user_vehicle_tag_identity
. . credit_identity
. . stored_credit
. . traveler_identity
. transit_vehicle_fare_collection_method
. transit_vehicle_identity
reservation_status
. confirmation_flag
resource_deployment_status
resource_needs_from_scheduler
. date
. list_size
. m_and_c_equipment_quantity
. m_and_c_equipment_type
. m_and_c_materials_quantity
. m_and_c_materials_type
. mcv_vehicle_type
. time
resource_request
. traffic_resource_request
resource_request_to_personnel
. date
. list_size
. m_and_c_equipment_quantity
. m_and_c_equipment_type
. m_and_c_materials_quantity
. m_and_c_materials_type
. mcv_vehicle_type
. time
resource_response_from_personnel
. date
. list_size
. m_and_c_equipment_quantity
. m_and_c_equipment_type
. m_and_c_materials_quantity
. m_and_c_materials_type
. mcv_vehicle_type
. time
retained_traveler_guidance_data
retained_vehicle_guidance_data
retrieved_archive_data
. formatted_archive_catalog
. . cv_archive_catalog
. . em_archive_catalog
. . emissions_archive_catalog
. . intermodal_archive_catalog
. . m_and_c_archive_catalog
. . map_archive_catalog
. . multimodal_archive_catalog
. . other_data_source_catalog
. . parking_archive_catalog
. . toll_archive_catalog
. . traffic_archive_catalog
. . transit_archive_catalog
. . traveler_archive_catalog
. . weather_archive_catalog
. formatted_archive_data
. . formatted_cv_data
. . . cv_credentials_enrollment_data
. . . . cv_update_new_credentials_request
. . . . . cv_credentials_details
. . . . . . cv_carrier_number
. . . . . . cv_driver_number
. . . . . . cv_vehicle_number
. . . . . cv_route_details
. . . . . . cv_route_data
. . . . . . cv_route_number
. . . . . . cv_taxes_and_duties
. . . . . . route_type
. . . . . cv_trip_classification_data
. . . . . . cv_cargo_class
. . . . . . cv_vehicle_class
. . . . . . cv_weight_class
. . . . . cv_trip_identity
. . . . . hazmat_load_data
. . . cv_daily_logs
. . . . cv_roadside_daily_log
. . . . . cv_roadside_facility_identity

Appendix D: Data Tree

. . . . . cv_roadside_record
. . . . . cv_archived_inspection_data
. . . . . cv_archived_safety_data
. . . . . cv_screening_record
. . . . . list_size
. . . . . date
. . . . cvo_border_clearance
. . . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_pull_in_output
. . . . . list_size
. . . . . cv_roadside_facility_identity
. . . . . date
. . formatted_em_data
. . . em_operational_data
. . . . archive_manage_emergency_vehicle_data
. . . . . emergency_vehicle_status_data
. . . . . emergency_vehicle_status_details
. . . . . list_size
. . . .
. . . . emergency_service_log_for_archive
. . . . . emergency_service_action_log
. . . . . emergency_service_action_details
. . . . . incident_action_time
. . . . . list_size
. . formatted_emissions_data
. . . archive_pollution_reference_data
. . . . pollution_area_acceptance_data
. . . . pollution_area_acceptance_times
. . . . pollution_area_tolerance_data
. . . . pollution_area_tolerance_times
. . . . pollution_roadside_acceptance_data
. . . . pollution_roadside_acceptance_times
. . . . pollution_roadside_tolerance_data
. . . . pollution_roadside_tolerance_times
. . . . pollution_vehicle_acceptance_conditions
. . . . pollution_vehicle_acceptance_data
. . . archive_pollution_state_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_vehicle_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_sulfur_dioxide_pollution
. . . . . vehicle_type
. . . pollution_archive_data_log
. . . . pollution_state_static_log_data
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_vehicle_log_data
. . . . . pollution_state_vehicle_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_sulfur_dioxide_pollution
. . . . . vehicle_type
. . formatted_intermodal_data
. . . intermodal_data
. . formatted_m_and_c_data
. . . auto_treatment_system_status_for_archive
. . . . auto_treatment_activation_data
. . . . device_identity
. . . . list_size
. . . . station_id
. . . field_device_status_for_archive
. . . . auto_treat_equip_status_for_m_and_c
. . . . . device_identity
. . . . . list_size
. . . . . roadside_device_status
. . . . . station_id
. . . . dms_equip_status_for_m_and_c
. . . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . . dms_fault
. . . . . dms_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . env_sensor_equip_status_for_m_and_c
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . . . har_equip_status_for_m_and_c
. . . . . har_fault
. . . . . har_identity
. . . . hov_sensor_equip_status_for_m_and_c
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . . .
. . . . . indicator_fault
. . . . . indicator_type
. . . . . list_size
. . . . indicator_equip_status_from_roads_for_m_and_c
. . . . . indicator_fault
. . . . . indicator_type
. . . . . list_size
. . . . infrastructure_sensor_equip_status_for_m_and_c
. . . . . infrastructure_sensor_status_for_m_and_c
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . infrastructure_sensor_status_for_mcv

Appendix D: Data Tree

. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . smart_probe_equip_status_for_m_and_c
. . . . . device_identity
. . . . . list_size
. . . . . roadside_device_status
. . . . . station_id
. . . . traffic_sensor_equip_status_for_m_and_c
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . . . vehicle_sign_equip_status_for_m_and_c
. . . . . device_identity
. . . . . list_size
. . . . . roadside_device_status
. . . . . station_id
. . . . video_device_equip_status_for_m_and_c
. . . . . device_identity
. . . . . list_size
. . . . . roadside_device_status
. . . . . station_id
. . . infrastructure_data_for_archive
. . . . infrastructure_sensor_data_for_m_and_c
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . mcv_infrastructure_sensor_data
. . . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. . . . processed_infrastructure_sensor_data
. . . . . infrastructure_sensor_data_for_m_and_c
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . mcv_infrastructure_sensor_data
. . . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_onboard_devices
. . . m_and_c_activity_schedule_for_archive
. . . . m_and_c_activity_schedule
. . . . . fleet_activity_schedule
. . . . . m_and_c_work_plans
. . . . . work_zone_activity_plan
. . . m_and_c_activity_status_for_archive
. . . . m_and_c_activity_status
. . . . . m_and_c_fleet_manager_status
. . . . . m_and_c_fleet_status
. . . . . m_and_c_view_of_road_network
. . . . . m_and_c_work_performance
. . . . . materials_availability_for_status
. . . . . materials_status
. . . . . storage_facility_id
. . . . . work_zone_data_for_status
. . . . . fomcm_work_zone_info
. . . . . work_zone_device_status
. . . . . work_zone_intrusion_warning_data
. . . . . work_zone_resource_status
. . . . . work_zone_status_from_mcv
. . . m_and_c_maint_resource_needs_for_archive
. . . . m_and_c_resource_request_from_emerg
. . . . m_and_c_resource_request_from_traffic
. . . . resource_needs_from_scheduler
. . . . . date
. . . . . list_size
. . . . . m_and_c_equipment_quantity
. . . . . m_and_c_equipment_type
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . mcv_vehicle_type
. . . . . time
. . . m_and_c_roadway_maint_needs_for_archive
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . mcv_vehicle_type
. . . . need_date
. . . . need_time
. . . . roadway_maint_plan
. . . m_and_c_winter_maint_needs_for_archive
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . mcv_vehicle_type
. . . . need_date
. . . . need_time
. . . . winter_treatment_plan
. . . work_zone_data_for_archive
. . . . work_zone_data_for_status
. . . . . fomcm_work_zone_info
. . . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . . work_zone_status_from_mcv
. . formatted_map_data
. . . imported_map_data_for_archive
. . formatted_multimodal_data
. . . multimodal_data
. . formatted_parking_data
. . . parking_charge_response_for_archive
. . . . list_size
. . . . parking_lot_availability
. . . . . handicap_access_information
. . . . . parking_lot_hours_of_operation
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_spaces
. . . . . traveler_identity
. . . . parking_lot_charge_application_time
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_price
. . . . vehicle_type_for_charges
. . . parking_lot_state_for_archive
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . formatted_roadside_data
. . . archive_environmental_sensor_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity

Appendix D: Data Tree

. . . . . station_id
. . . . environment_sensor_fault_data
. . . . environmental_sensor_status
. . . . . environment_sensor_fault_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . fault_data
. . . . sensor_fault_data
. . . sensor_data_archive_input
. . . . hov_sensor_data
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . local_sensor_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . list_size
. . . . . traffic_video_image
. . . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . local_sensor_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . pedestrian_demand
. . . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . list_size
. . . . . traffic_video_image
. . . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . multimodal_crossing_sensor_data
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . crossing_identity
. . . . . crossing_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . sensor_data_for_reversible_lanes
. . . . . traffic_video_image
. . . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . sensor_status
. . . . traffic_sensor_status
. . formatted_toll_data
. . . toll_operational_data
. . . . date
. . . . list_size
. . . . time
. . . . toll_cost
. . . . toll_segment_identity
. . . . . unit_number
. . . . toll_segment_users
. . . toll_prices_for_archive
. . . . list_size
. . . . toll_price
. . . . toll_price_application_time
. . . . toll_segment_identity
. . . . . unit_number
. . . . vehicle_type_for_tolls
. . . . . cv_tag_data
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . cv_vehicle_characteristics
. . . . . cv_vehicle_configuration
. . . . . cv_vehicle_size
. . . . . cv_vehicle_weight
. . . . . vehicle_identity
. . . . . vehicle_type
. . formatted_traffic_data
. . . ahs_operational_data
. . . . ahs_checking_records
. . . . . ahs_check_identity
. . . . . location_identity
. . . . . unit_number
. . . . . ahs_failed_checks_count
. . . . . ahs_successful_checks_count
. . . . . list_size
. . . . ahs_lane_use_data
. . . . . ahs_vehicle_count
. . . . . list_size
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . date
. . . . list_size
. . . . time
. . . static_data_for_archive
. . . . static_data_for_traffic_control
. . . . . background_strategy
. . . . . list_size
. . . . . selected_strategy_data
. . . . . selected_strategy_type
. . . . . strategy_date
. . . . . strategy_day
. . . . . strategy_end_time
. . . . . strategy_start_time
. . . . . coordination_rules_for_highways
. . . . . coordination_rule_data_for_highways
. . . . . coordination_rule_highway_data_description
. . . . . coordination_rule_highway_data_number

Appendix D: Data Tree

. . . . . list_size
. . . . . coordination_rules_for_roads
. . . . . coordination_rule_data_for_roads
. . . . . coordination_rule_road_data_description
. . . . . coordination_rule_road_data_number
. . . . . list_size
. . . . . dms_allocation
. . . . . indicator_identity
. . . . . list_size
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . highway_control_devices
. . . . . crossing_equipment_data_for_highways
. . . . . highway_equipment_data
. . . . . highway_network
. . . . . list_size
. . . . . route_segment_downstream_identity
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . route_segment_upstream_identity
. . . . . indicator_highway_control_static_data
. . . . . highway_sign_setting_data
. . . . . highway_sign_setting_plans
. . . . . indicator_road_control_static_data
. . . . . indicator_road_adaptive_plans
. . . . . indicator_road_fixed_plans
. . . . . link_data
. . . . . link_attributes
. . . . . link_identity
. . . . . link_TMC_identity
. . . . . parking_lot_static_data
. . . . . list_size
. . . . . parking_lot_dms_allocation
. . . . . parking_lot_identity
. . . . . parking_lot_sensor_allocation
. . . . . parking_lot_state_thresholds
. . . . . ramp_devices
. . . . . list_size
. . . . . ramp_identity
. . . . . ramp_phase_data
. . . . . road_control_devices
. . . . . crossing_equipment_data_for_roads
. . . . . hri_data_for_roads
. . . . . intersection_equipment_data
. . . . . pedestrian_equipment_data
. . . . . road_network
. . . . . list_size
. . . . . route_segment_downstream_identity
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . route_segment_upstream_identity
. . . . . roadway_characteristics
. . . . . link_speed_limit
. . . . . median_type
. . . . . number_of_lanes
. . . . . pavement_type
. . . . . shoulder_width
. . . . . sensor_allocation
. . . . . sensor_allocation_for_controllers
. . . . . sensor_allocation_for_hov_lanes
. . . . . sensor_allocation_for_probes
. . . . . sensor_allocation_for_tags
. . . . . vehicle_signage_output_identity
. . . . . location_identity
. . . . . unit_number
. . . traffic_data_for_deployment
. . . . current_data
. . . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . roadway_traffic_conditions
. . . . . strategy_data
. . . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . hri_sensor_data
. . . . . pedestrian_sensor_data
. . . . . traffic_sensor_data
. . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . current_incident_data
. . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_avl
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . pollution_state_roadside_collection
. . . . long_term_data
. . . . . historical_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . historical_parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . historical_processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . strategy_data
. . . . . historical_stored_incident_data
. . . . . historical_incident_details
. . . . . list_size
. . . . . historical_traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data

. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . historical_traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . historical_vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . historical_wide_area_pollution_data
. . . . . historical_pollution_state_area_collection
. . . . . historical_pollution_state_roadside_collection
. . . . . list_size
. . . . . o_d_matrix
. . . . predictive_model_data
. . . . . predicted_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_occupancy
. . . . . link_speed
. . . . . predicted_hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . predicted_o_d_matrix
. . . . . predicted_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . predicted_parking_lot_data
. . . . . list_size
. . . . . parking_lot_identity
. . . . . parking_lot_occupancy
. . . . . parking_lot_state
. . . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_occupancy
. . . . . link_speed
. . . . . predicted_road_network_use
. . . . . route_segment_guided_vehicles
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . formatted_transit_data
. . . bad_transit_collected_fare_payment
. . . . enforcement_agency_contact
. . . . enforcement_agency_details
. . . . . enforcement_agency_address
. . . . . enforcement_agency_computer
. . . . . enforcement_agency_email
. . . . . enforcement_agency_fax
. . . . . enforcement_agency_name
. . . . . enforcement_agency_phone
. . . . . enforcement_agency_responsibility
. . . . fare_violation_information
. . . . . credit_identity
. . . . . transit_fare
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_roadside_image
. . . . . transit_user_vehicle_image
. . . . . traveler_identity
. . . bad_transit_roadside_fare_payment
. . . . enforcement_agency_contact
. . . . enforcement_agency_details
. . . . . enforcement_agency_address
. . . . . enforcement_agency_computer
. . . . . enforcement_agency_email
. . . . . enforcement_agency_fax
. . . . . enforcement_agency_name
. . . . . enforcement_agency_phone
. . . . . enforcement_agency_responsibility
. . . . fare_collection_roadside_violation_information
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_user_roadside_image
. . . . . transit_user_roadside_tag_identity
. . . . . credit_identity
. . . . . traveler_identity
. . . bad_transit_vehicle_fare_payment
. . . . enforcement_agency_contact
. . . . enforcement_agency_details
. . . . . enforcement_agency_address
. . . . . enforcement_agency_computer
. . . . . enforcement_agency_email
. . . . . enforcement_agency_fax
. . . . . enforcement_agency_name
. . . . . enforcement_agency_phone
. . . . . enforcement_agency_responsibility
. . . . fare_collection_vehicle_violation_information
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_user_vehicle_image
. . . . . transit_user_vehicle_tag_identity
. . . . . credit_identity
. . . . . stored_credit
. . . . . traveler_identity
. . . paratransit_service_data_for_archive
. . . . paratransit_personal_schedule
. . . . . paratransit_service_cost
. . . . . cost
. . . . . paratransit_service_details
. . . . . paratransit_arrival_time
. . . . . paratransit_availability_time
. . . . . paratransit_destination
. . . . . paratransit_pickup_location
. . . . . paratransit_pickup_time
. . . . . paratransit_service_identity
. . . . . traveler_identity
. . . . traveler_identity
. . . transit_driver_info_for_archive
. . . . list_size
. . . . transit_driver_details
. . . . . transit_driver_availability
. . . . . transit_driver_availability_considerations
. . . . . transit_driver_cost_effectiveness
. . . . . transit_driver_cost_effectiveness_considerations
. . . . . transit_driver_eligibility
. . . . . transit_driver_eligibility_considerations
. . . . . transit_driver_identity
. . . . . transit_driver_performance
. . . . . transit_driver_performance_considerations
. . . . . transit_driver_route_assignment_considerations
. . . . . transit_driver_route_details
. . . transit_emergency_data_for_archive
. . . . transit_emergency_data
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . transit_emergency_details
. . . . . transit_driver_emergency_request
. . . . . transit_user_emergency_request
. . . . . transit_vehicle_location
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_location_data
. . . . transit_media_emergency_interface_parameters
. . . transit_fare_transactions
. . . . advanced_fare_transactions

. . . . . credit_identity
. . . . . date
. . . . . stored_credit
. . . . . time
. . . . . transit_fare
. . . . . traveler_identity
. . . . current_fare_transactions
. . . . . credit_identity
. . . . . date
. . . . . time
. . . . . transit_fare
. . . . . traveler_identity
. . . . list_size
. . . transit_incident_info_for_archive
. . . . emergency_request_transit_details
. . . . . date
. . . . . time
. . . . . transit_emergency_request
. . . . . traveler_identity
. . . . . traveler_location_for_emergencies
. . . . transit_area_surveillance_information
. . . . transit_incident_details
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . transit_media_incident_interface_parameters
. . . . transit_operator_security_action
. . . . . transit_incident_extra_data
. . . . . transit_incident_required_action
. . . . . transit_video_camera_command
. . . transit_operational_data_for_archive
. . . . transit_operational_data
. . . . . date
. . . . . list_size
. . . . . time
. . . . . transit_passenger_operational_data
. . . . . date
. . . . . list_size
. . . . . time
. . . . . transit_roadside_operational_data
. . . . . transit_route_operational_data
. . . . . transit_roadside_operational_data
. . . . . list_size
. . . . . transit_roadside_passenger_data
. . . . . transit_vehicle_operational_data
. . . . . list_size
. . . . . transit_vehicle_availability
. . . . . transit_vehicle_data
. . . . . transit_vehicle_passenger_data
. . . transit_route_assign_for_archive
. . . . list_size
. . . . paratransit_services_for_transit_drivers
. . . . . transit_route
. . . . . route_cost
. . . . . route_segment_end_point
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_report_position_points
. . . . . route_segment_start_point
. . . . . transit_schedules
. . . . . transit_schedule_data
. . . . . transit_stop_locations
. . . . . list_size
. . . . . location_identity
. . . . . transit_route_number
. . . . . transit_route_stop_number
. . . . transit_services_for_transit_drivers
. . . . . list_size
. . . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . transit_schedule_data
. . . . transit_vehicle_availability
. . . . transit_vehicle_identity
. . . transit_services_for_deployment
. . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_number
. . . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_list
. . . . . transit_schedule_identity
. . . transit_technician_info
. . . . list_size
. . . . transit_technician_detail
. . . . . transit_technician_identity
. . . . . transit_technician_seniority
. . . . . transit_technician_work_assignment
. . . . . transit_technician_identity
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_maintenance_work
. . . . . transit_technician_work_hours
. . . . . transit_technician_work_log
. . . . . date
. . . . . list_size
. . . . . time
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_maintenance_work
. . . . . transit_technician_work_preferences
. . . . . transit_technician_work_skills
. . . transit_user_payments_transactions
. . . transit_vehicle_data_for_archive
. . . . transit_vehicle_data
. . . . . list_size
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_information
. . . . . transit_vehicle_collected_maintenance_data
. . . . . transit_vehicle_mileage_accumulated
. . . . . transit_vehicle_operating_condition
. . . . . transit_vehicle_collected_trip_data
. . . . . transit_vehicle_passenger_loading
. . . . . transit_vehicle_running_times
. . . . . transit_vehicle_deviation_update
. . . . . list_size
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_location
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_location_data
. . . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . transit_vehicle_identity

. . . transit_vehicle_maintenance_info
. . . . list_size
. . . . transit_vehicle_identity
. . . . transit_vehicle_operations_details
. . . . . transit_vehicle_maintenance
. . . . . . transit_vehicle_maintenance_date
. . . . . . transit_vehicle_maintenance_mileage
. . . . . . transit_vehicle_maintenance_required
. . . . . transit_vehicle_maintenance_log
. . . . . . transit_vehicle_maintenance_log_activity
. . . . . . transit_vehicle_maintenance_log_date
. . . . . . transit_vehicle_maintenance_log_mileage
. . . . . . transit_vehicle_maintenance_log_time
. . . . . transit_vehicle_maintenance_schedule
. . . . . . transit_vehicle_maintenance_schedule_activity
. . . . . . transit_vehicle_maintenance_schedule_date
. . . . . . transit_vehicle_maintenance_schedule_mileage
. . . . . transit_vehicle_maintenance_specs
. . . . . . transit_vehicle_identity
. . . . . . transit_vehicle_maintenance_details
. . . . . . transit_vehicle_type
. . formatted_traveler_data
. . . guidance_data_for_archive
. . . . route_guidance_data_for_archive
. . . . . list_size
. . . . . vehicle_guidance_stored_data
. . . . . . route_identity
. . . . . . route_segment_description
. . . . . . route_segment_end_point
. . . . . . route_segment_estimated_travel_time
. . . . . . route_segment_report_position_points
. . . . . . route_segment_start_point
. . . . vehicle_guidance_probe_data_for_archive
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . time
. . . . . vehicle_identity
. . . parking_lot_data_for_archive
. . . . parking_lot_bookings_request
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_space_details
. . . . . . date
. . . . . . duration
. . . . . . time
. . . . . vehicle_identity
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_spaces
. . . rideshare_for_archive
. . . . rideshare_data_for_archive
. . . . . rideshare_confirmation_data
. . . . . . reservation_status
. . . . . . rideshare_selection_number
. . . . . rideshare_details
. . . . . rideshare_eligibility_data
. . . . traveler_rideshare_request_for_archive
. . . . . traveler_rideshare_request
. . . . . . traveler_identity
. . . . . . traveler_rideshare_constraints
. . . . . . traveler_rideshare_data
. . . . . . traveler_rideshare_preferences
. . . service_req_and_confirm_for_archive
. . . . service_req_and_confirm_data
. . . . . advisory_data_request_for_archive
. . . . . . advisory_data_request
. . . . . event_information_requests_for_archive
. . . . . . event_information_advisory_requests_for_archive
. . . . . . traveler_event_information_request_for_archive
. . . . . .
. . . . . traffic_data_kiosk_request_for_archive
. . . . . . traffic_data_kiosk_request
. . . . . traffic_data_personal_request_for_archive
. . . . . . traffic_data_personal_request
. . . . . transit_deviation_kiosk_request_for_archive
. . . . . . transit_deviation_kiosk_request
. . . . . transit_deviations_personal_request_for_archive
. . . . . . transit_deviations_personal_request
. . . . . traveler_confirm_for_archive
. . . . . . traveler_personal_trip_confirmation_for_archive
. . . . . . traveler_trip_confirmation_for_archive
. . . . . traveler_route_accepted_for_archive
. . . . . . traveler_route_accepted
. . . . . traveler_route_request_for_archive
. . . . . . traveler_route_request
. . . . . traveler_trip_and_cond_requests_for_archive
. . . . . . traveler_current_condition_request_for_archive
. . . . . .
. . . . . . traveler_personal_trip_request_for_archive
. . . . . . traveler_trip_request_for_archive
. . . . . traveler_yellow_pages_requests_for_archive
. . . . . . traveler_personal_transaction_request_for_archive
. . . . . .
. . . . . . traveler_transaction_request_for_archive
. . . . . .
. . . . . vehicle_guidance_route_accepted_for_archive
. . . . . . vehicle_guidance_route_accepted
. . . . . vehicle_route_request_for_archive
. . . . . . vehicle_route_request
. . . . . yellow_pages_advisory_requests_for_archive
. . . . . . yellow_pages_advisory_requests
. . . traveler_info_payments_transactions
. . . . driver_map_update_payments_transactions
. . . . traveler_map_update_payments_transactions
. . . . traveler_rideshare_payments_transactions
. . . . traveler_trip_payments_transactions
. . . . yellow_pages_provider_payments_transactions
. . . trip_request_for_archive
. . . . constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_load_classification
. . . . . constraint_on_number_of_mode_changes
. . . . . constraint_on_number_of_transfers
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . . preferences
. . . . . modes
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . preferred_transit_options
. . . . . preferred_weather_conditions
. . . usage_for_archive
. . . . current_other_routes_use_for_archive
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number

. . . . current_road_network_use_for_archive
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . formatted_user_defined_data
. . . user_defined_data
. . formatted_weather_data
. . . weather_data
. formatted_archive_data_attributes
. . formatted_cv_data_attributes
. . . cv_credentials_enrollment_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . cv_daily_logs_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_em_data_attributes
. . . em_operational_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_emissions_data_attributes
. . . archive_pollution_reference_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . archive_pollution_state_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions

. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . pollution_archive_data_log_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_intermodal_data_attributes
. . . intermodal_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . formatted_m_and_c_data_attributes
. . . auto_treatment_system_status_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . field_device_status_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security

. . . . standard_data_attribute
. . . . standard_message_attribute
. . . infrastructure_data_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . m_and_c_activity_schedule_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . m_and_c_activity_status_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . .
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . .
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities

. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . m_and_c_winter_maint_needs_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . work_zone_data_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_map_data_attributes
. . . imported_map_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_multimodal_data_attributes
. . . multimodal_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_parking_data_attributes
. . . parking_charge_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time

. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . parking_lot_state_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_roadside_data_attributes
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . fault_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . sensor_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment

. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_toll_data_attributes
. . . toll_operational_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . toll_prices_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . static_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status

. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . traffic_deployment_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_transit_data_attributes
. . . transit_operational_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_traveler_data_attributes
. . . guidance_data_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . parking_lot_data_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . rideshare_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date

. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . service_req_and_confirm_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . traveler_info_payments_transactions_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . trip_request_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . usage_for_archive_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_user_defined_data_attributes
. . . user_defined_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version

. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . formatted_weather_data_attributes
. . . weather_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute

retrieved_incident_media_data

. current_incidents_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. defined_responses_data
. . incident_info_template
. . incident_type
. . planned_incident_response
. . . agency_incident_response_procedures
. . . dms_displays
. . . traffic_control_strategy_alterations
. . traffic_impact_criteria
. planned_events_data
. . crossing_closure_schedule
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type

retrieved_incident_operations_data

. current_incidents_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. defined_responses_data
. . incident_info_template
. . incident_type
. . planned_incident_response
. . . agency_incident_response_procedures
. . . dms_displays
. . . traffic_control_strategy_alterations
. . traffic_impact_criteria
. planned_events_data
. . crossing_closure_schedule
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type

retrieved_traffic_media_data

. current_data_for_retrieval
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers

. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. long_term_data_for_retrieval
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time

. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. predictive_model_data_for_retrieval
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . predicted_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_road_network_use
. . . route_segment_guided_vehicles
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
retrieved_traffic_operations_data
. current_data
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_headway

. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . roadway_traffic_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . link_traffic_conditions
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . . indicator_list
. . . . . . list_size
. . . . . . pedestrian_demand
. . sensor_output_data
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . hri_sensor_data
. . . . closure_event_data
. . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . intersection_blocked
. . . . rail_schedules_data
. . . pedestrian_sensor_data
. . . . node_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . pedestrian_demand
. . . traffic_sensor_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . . traffic_video_image
. . stored_incident_data
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . planned_event_data
. . . . list_size
. . . . planned_event_details
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count

Appendix D: Data Tree

. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_junction_control_data
. . . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . traffic_video_image_data
. . . list_size
. . . traffic_video_camera_number
. . . . location_identity
. . . . unit_number
. . . traffic_video_image
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. long_term_data
. . historical_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . historical_parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . historical_processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data

. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . . indicator_list
. . . . . . list_size
. . . . . . pedestrian_demand
. . historical_stored_incident_data
. . . historical_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . list_size
. . historical_traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . historical_traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_junction_control_data
. . . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list

. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . historical_vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . historical_wide_area_pollution_data
. . . historical_pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . historical_pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . list_size
. . o_d_matrix
. predictive_model_data
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . predicted_o_d_matrix
. . predicted_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_road_network_use
. . . route_segment_guided_vehicles
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
reversible_lane_data
. reversible_lane_status
. reversible_lane_video_images
. . incident_video_image
reversible_lane_status
reversible_lane_video_images
. incident_video_image
ride_segments
. list_size
. transit_route_segment_number
rideshare_confirmation
. reservation_status
. . confirmation_flag
. traveler_identity
rideshare_confirmation_data
. reservation_status
. . confirmation_flag
. rideshare_selection_number
rideshare_cost
rideshare_data
. rideshare_confirmation_data
. . reservation_status
. . . confirmation_flag
. . rideshare_selection_number
. rideshare_details
. rideshare_eligibility_data
rideshare_data_for_archive
. rideshare_confirmation_data
. . reservation_status
. . . confirmation_flag
. . rideshare_selection_number
. rideshare_details
. rideshare_eligibility_data

Appendix D: Data Tree

rideshare_details
rideshare_eligibility_data
rideshare_for_archive
. rideshare_data_for_archive
. . rideshare_confirmation_data
. . . reservation_status
. . . . confirmation_flag
. . . rideshare_selection_number
. . rideshare_details
. . rideshare_eligibility_data
. traveler_rideshare_request_for_archive
. . traveler_rideshare_request
. . . traveler_identity
. . . traveler_rideshare_constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . traveler_rideshare_data
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . traveler_rideshare_preferences
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
rideshare_for_archive_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
rideshare_ineligible_status_notification
rideshare_information
. rideshare_confirmation
. . reservation_status
. . . confirmation_flag
. . traveler_identity
. rideshare_data_for_archive
. . rideshare_confirmation_data
. . . reservation_status
. . . . confirmation_flag
. . . rideshare_selection_number
. . rideshare_details
. . rideshare_eligibility_data
. rideshare_response
. . rideshare_details
. . rideshare_selection_number
. . traveler_identity
. traveler_rideshare_request_for_archive
. . traveler_rideshare_request
. . . traveler_identity
. . . traveler_rideshare_constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . traveler_rideshare_data
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . traveler_rideshare_preferences
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
rideshare_payment_confirmation
rideshare_payment_request
. credit_identity
. rideshare_cost
rideshare_request_and_confirmation
. traveler_rideshare_confirmation
. . credit_identity
. . reservation_status
. . . confirmation_flag
. . rideshare_selection_number
. . traveler_identity
. traveler_rideshare_request
. . traveler_identity
. . traveler_rideshare_constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . traveler_rideshare_data
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . traveler_rideshare_preferences
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
rideshare_request_from_eligible_traveler
. traveler_identity
. traveler_rideshare_constraints
. . constraint_on_acceptable_travel_time
. . constraint_on_ahs_lanes

. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_special_needs
. . constraint_on_urban
. . constraint_on_vehicle_type
. traveler_rideshare_data
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. traveler_rideshare_preferences
. . preferred_alternate_routes
. . preferred_ridesharing_options
. . preferred_route_segments
. . preferred_routes
rideshare_response
. rideshare_details
. rideshare_selection_number
. traveler_identity
rideshare_selection
. rideshare_details
. rideshare_selection_number
. traveler_identity
rideshare_selection_number
ro_requests
road_conditions
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
. road_segment_conditions
road_control_devices
. crossing_equipment_data_for_roads
. . crossing_identity
. . . location_identity
. . . unit_number
. . crossing_phase_data
. . list_size
. hri_data_for_roads
. . crossing_id
. . hri_phase_data
. . list_size
. intersection_equipment_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . intersection_phase_data
. . intersection_phase_number
. . list_size
. pedestrian_equipment_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . pedestrian_phase_data
road_data
road_network
. list_size
. route_segment_downstream_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. route_segment_end_point
. . location_identity
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_start_point
. . location_identity
. route_segment_upstream_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
road_network_info_for_transit
. asset_restrictions_for_transit
. . current_asset_restrictions
. fstws_surface_trans_weather_forecasts
. . climatic_scale_surface_trans_weather_forecasts
. . meso_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_advisories
. . . surface_trans_weather_forecast_details
. . micro_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_forecast_details
. . miso_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_advisories
. . . surface_trans_weather_forecast_details
. . surface_trans_weather_scale_forecast_data_attributes
. . synoptic_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_forecast_details
. fstws_surface_trans_weather_observations
. . surface_trans_weather_observations
. . weather_observation_attributes
. fws_current_weather_observations
. . current_weather_observations
. . weather_observation_attributes
. fws_weather_forecasts
. . climatic_scale_weather_forecasts
. . meso_scale_weather_forecasts
. . . weather_advisories
. . . weather_forecast_details
. . . weather_warnings
. . . weather_watches
. . miso_scale_weather_forecasts
. . . weather_advisories
. . . weather_forecast_details
. . . weather_warnings
. . synoptic_scale_weather_forecasts
. . . weather_forecast_details
. . . weather_watches
. . weather_scale_forecast_data_attributes
. road_weather_info_for_transit
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. work_zone_info_for_transit
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity

. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
road_network_info_from_traffic
. current_data
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . . roadway_traffic_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . . . link_traffic_conditions
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . list_size
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . list_size
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . indicator_list
. . . . . list_size
. . . . . pedestrian_demand
. . sensor_output_data
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . hri_sensor_data
. . . . closure_event_data
. . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . intersection_blocked
. . . . rail_schedules_data
. . . pedestrian_sensor_data
. . . . node_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity

. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . . . pedestrian_demand
. . . traffic_sensor_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . . traffic_video_image
. . stored_incident_data
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . planned_event_data
. . . . list_size
. . . . planned_event_details
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_junction_control_data
. . . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . traffic_video_image_data
. . . list_size
. . . traffic_video_camera_number
. . . . location_identity
. . . . unit_number

Appendix D: Data Tree

. . . traffic_video_image
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. link_state_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_queue_length
. . vehicle_speed
. predicted_road_network_data
. . link_delay
. . link_journey_time
. . link_list_for_roads
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
. roadway_environment_conditions
. . link_environment_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
road_network_info_to_mcv
. m_and_c_view_of_road_network
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output

Appendix D: Data Tree

. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location

. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . env_info_for_road_network
. . . road_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_conditions
. . . road_weather_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_weather_conditions
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_response_status_from_emerg
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
road_segment_conditions
road_segment_location
. list_size
. route_segment_end_point
. . location_identity
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_start_point
. . location_identity
road_segment_weather_conditions
road_weather_conditions
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
. road_segment_weather_conditions
road_weather_info_for_emergency
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
road_weather_info_for_isp
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
road_weather_info_for_traffic
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
road_weather_info_for_transit
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
roadside_archive_catalog
roadside_archive_catalog_request
roadside_archive_control
. roadside_archive_catalog_request
. roadside_archive_data_request
roadside_archive_data
. roadside_archive_catalog
. roadside_data_for_archive
. . archive_environmental_sensor_data

Appendix D: Data Tree

. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . environment_sensor_fault_data
. . . environmental_sensor_status
. . . . environment_sensor_fault_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . fault_data
. . . sensor_fault_data
. . fault_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . sensor_data_archive_input
. . . hov_sensor_data
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . private_vehicle_occupants
. . . local_sensor_data_for_highways
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . traffic_video_image
. . . . vehicle_detection_data

. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . local_sensor_data_for_roads
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . hov_priority
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . hov_lane_list
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . pedestrian_demand
. . . . roadside_conditions
. . . . . link_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . traffic_video_image
. . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . multimodal_crossing_sensor_data
. . . . crossing_close_duration
. . . . crossing_close_time
. . . . crossing_list
. . . . . crossing_identity
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . pedestrian_sensor_data
. . . . node_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . pedestrian_demand
. . . sensor_data_for_reversible_lanes
. . . . traffic_video_image
. . . . vehicle_detection_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . traffic_sensor_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . sensor_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . sensor_status
. . . traffic_sensor_status
roadside_archive_data_request
roadside_conditions
. link_conditions
. link_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. list_size
roadside_crew_warning_given
roadside_data_archive
. archive_environmental_sensor_data
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . environment_sensor_fault_data
. . environmental_sensor_status
. . . environment_sensor_fault_data
. . . list_size
. . . sensor_identity
. . . station_id
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute

Appendix D: Data Tree

. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. fault_data
. . sensor_fault_data
. fault_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. sensor_data_archive_input
. . hov_sensor_data
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . private_vehicle_occupants
. . local_sensor_data_for_highways
. . . crossing_close_duration
. . . crossing_close_time
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . roadside_conditions
. . . . link_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . local_sensor_data_for_roads
. . . crossing_close_duration
. . . crossing_close_time
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . pedestrian_demand
. . . roadside_conditions
. . . . link_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output

Appendix D: Data Tree

. . multimodal_crossing_sensor_data
. . . crossing_close_duration
. . . crossing_close_time
. . . crossing_list
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . pedestrian_sensor_data
. . . node_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . pedestrian_demand
. . sensor_data_for_reversible_lanes
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . traffic_sensor_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. sensor_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. sensor_status
. . traffic_sensor_status

roadside_data_for_archive

. archive_environmental_sensor_data
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . environment_sensor_fault_data
. . environmental_sensor_status
. . . environment_sensor_fault_data
. . . list_size
. . . sensor_identity
. . . station_id
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. fault_data
. . sensor_fault_data
. fault_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived

Appendix D: Data Tree

. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. sensor_data_archive_input
. . hov_sensor_data
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . private_vehicle_occupants
. . local_sensor_data_for_highways
. . . crossing_close_duration
. . . crossing_close_time
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . roadside_conditions
. . . . link_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . local_sensor_data_for_roads
. . . crossing_close_duration
. . . crossing_close_time
. . . hov_priority
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . hov_lane_list
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . pedestrian_demand
. . . roadside_conditions
. . . . link_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . multimodal_crossing_sensor_data
. . . crossing_close_duration
. . . crossing_close_time
. . . crossing_list
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . pedestrian_sensor_data
. . . node_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . pedestrian_demand
. . sensor_data_for_reversible_lanes
. . . traffic_video_image
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . traffic_sensor_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. sensor_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status

. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. sensor_status
. . traffic_sensor_status
roadside_device_control_to_work_zone
. dms_status_for_m_and_c
. . device_status
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. dms_status_for_mcv
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. har_status_for_m_and_c
. . device_status
. . har_fault
. . . har_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
roadside_device_status
roadway_characteristics
. link_speed_limit
. . special_vehicle_speed_limit
. . . vehicle_class
. . . vehicle_type
. . speed_limit
. median_type
. number_of_lanes
. pavement_type
. shoulder_width
roadway_environment_conditions
. link_environment_conditions
. link_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
roadway_fault_device_status
. dms_status
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. har_status
. . device_status
. . har_fault
. . . har_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. smart_probe_reader_status
. . device_status
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. traffic_control_device_status
. . indicator_fault_data
. . . indicator_fault
. . . indicator_type
. . smart_probe_reader_status
. . . device_status
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . traffic_sensor_status
. . vehicle_sign_data_status
. vehicle_sign_data_status
roadway_information_data
. dms_data
. . indicator_sign_control_data
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . parking_lot_dms_controls
. . . pollution_output_message
. . . . dms_pollution_message
. . . . vehicle_identity
. . indicator_sign_control_data_for_hri
. . . crossing_id
. . . hri_sign_control_data
. . . list_size
. har_data
. . har_identity
. . har_management_data
. . . har_mode
. . . har_schedule
. . har_program
roadway_information_status
. dms_status
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. dms_updates
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close

. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. har_status
. . device_status
. . har_fault
. . . har_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
roadway_m_and_c_device_data_to_traffic
. dms_auto_treat_data_from_maint
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . list_size
. dms_auto_treat_data_from_roadway
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . list_size
. field_equip_maint_status
. . device_identity
. . list_size
. . roadside_device_status
. . station_id
. t_other_rw_dms_auto_treat_data_from_roadway
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . list_size
. t_other_rw_env_sensor_control_by_auto_treat_device
. . env_sensor_control_by_roadway_treatment_device
roadway_m_and_c_to_traffic
. asset_restrictions_for_info_provider
. . current_asset_restrictions
. asset_restrictions_for_traffic
. . current_asset_restrictions
. env_sensor_control_by_auto_treat_device
. . env_sensor_control_by_roadway_treatment_device
. infrastructure_sensor_control_from_m_and_c
. . infrastructure_sensor_control_of_roadside_devices
. m_and_c_work_plans_for_info_provider
. . m_and_c_work_plans
. roadway_maint_status_for_info_provider
. . current_roadway_maintenance_status
. roadway_maint_status_for_traffic
. . current_roadway_maintenance_status
roadway_maint_action_req_from_emerg
roadway_maint_action_req_from_traffic
roadway_maint_plan
roadway_maint_status_for_emerg
. current_roadway_maintenance_status
roadway_maint_status_for_info_provider
. current_roadway_maintenance_status
roadway_maint_status_for_traffic
. current_roadway_maintenance_status
roadway_maint_status_for_transit
. current_roadway_maintenance_status
roadway_status
roadway_traffic_conditions
. link_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. link_traffic_conditions
roadway_treatment_system_control
. auto_treatment_device_control
. env_sensor_control_by_roadway_treatment_device
roadway_treatment_system_status
. auto_treatment_activation_data
. device_identity
. list_size
. roadside_device_status
. station_id
route
. route_cost
. route_list
. . route_segment_number
. route_segment
. . route_segment_data
. . . route_segment_description
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_arrival_time
. . . route_segment_estimated_condition
. . . route_segment_estimated_travel_time
. . . route_segment_predicted_weather
. . . route_segment_report_position_points
. . . . list_size
. . . . route_segment_way_point
. . . . . location_identity
. . . route_segment_start_point
. . . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_mode
. route_start_time
. . date
. . time
. route_statistics
route_cost
route_data
. current_other_routes_use
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. current_road_network_use
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time

. . route_segment_total_number
. . route_segment_use_prediction
. . . route_segment_guided_vehicles
. current_transit_routes_use
. . list_size
. . transit_route_current_use
. . transit_route_number
. logged_special_vehicle_route
. . hazmat_load_data
. . list_size
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_arrival_time
. . route_segment_estimated_travel_time
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. special_vehicle_priority_routing
. . route
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment
. . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_mode
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . vehicle_identity
. traffic_data_advisory_request
. traffic_data_guidance_request
. traffic_data_kiosk_request
. . kiosk_identity
. . traffic_data_request
. traffic_data_personal_request
. . traffic_data_request
. . traveler_identity
. traffic_data_ridesharing_request
. traveler_traffic_profile
. . traveler_contact_setting
. . . traveler_contact_information
. . . traveler_name
. . traveler_device_setting
. . . device_setting
. . . traveler_device_identity
. . traveler_identity
. . traveler_traffic_preference_setting
. . . list_size
. . . setting_identity
. . . setting_preferences
. . . setting_type

route_guidance_data_for_archive

. list_size
. vehicle_guidance_stored_data
. . route_identity
. . route_segment_description
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity

route_identity

route_list

. route_segment_number

route_point

route_reports

. current_other_routes_use_for_archive
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. current_road_network_use_for_archive
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. . route_segment_use_prediction
. . . route_segment_guided_vehicles

route_segment

. route_segment_data
. . route_segment_description
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_arrival_time
. . route_segment_estimated_condition
. . route_segment_estimated_travel_time
. . route_segment_predicted_weather
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_mode

route_segment_commercial_details

. route_segment_end_point
. . location_identity
. route_segment_estimated_condition
. route_segment_estimated_travel_time
. route_segment_predicted_weather
. route_segment_start_point
. . location_identity

route_segment_data

. route_segment_description
. route_segment_end_point
. . location_identity
. route_segment_estimated_arrival_time
. route_segment_estimated_condition
. route_segment_estimated_travel_time
. route_segment_predicted_weather
. route_segment_report_position_points
. . list_size
. . route_segment_way_point
. . . location_identity
. route_segment_start_point

. . location_identity
route_segment_description
route_segment_details
. list_size
. route_segment_stored_details
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_incident_data
. . . incident_description
. . . incident_severity
. . . incident_traffic_impact
. . . incident_type
. . route_segment_journey_time
. . route_segment_occupancy_predictions
. . route_segment_pollution_data
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . route_segment_queue_delay_predictions
. . route_segment_use_prediction
. . . route_segment_guided_vehicles
. . route_segment_volume_delay_predictions
route_segment_details_updated
route_segment_downstream_identity
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
route_segment_end_point
. location_identity
route_segment_estimated_arrival_time
route_segment_estimated_condition
route_segment_estimated_travel_time
route_segment_guided_travelers
route_segment_guided_vehicles
route_segment_identity
. location_identity
. route_segment_type
. unit_number
route_segment_incident_data
. incident_description
. incident_severity
. incident_traffic_impact
. incident_type
route_segment_journey_time
route_segment_journey_time_from_tolls
route_segment_mode
route_segment_number
route_segment_occupancy_predictions
route_segment_pollution_data
. current_carbon_monoxide_pollution
. current_hydrocarbon_pollution
. current_nitrous_oxide_pollution
. current_ozone_pollution
. current_particulate_pollution
. current_roadside_pollution_location
. . location_identity
. current_sulfur_dioxide_pollution
route_segment_predicted_weather
route_segment_queue_delay_predictions
route_segment_report_position_points
. list_size
. route_segment_way_point
. . location_identity
route_segment_speed_predictions
. vehicle_speed
route_segment_start_point
. location_identity
route_segment_stored_details
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_incident_data
. . incident_description
. . incident_severity
. . incident_traffic_impact
. . incident_type
. route_segment_journey_time
. route_segment_occupancy_predictions
. route_segment_pollution_data
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. route_segment_queue_delay_predictions
. route_segment_use_prediction
. . route_segment_guided_vehicles
. route_segment_volume_delay_predictions
route_segment_total_number
route_segment_type
route_segment_upstream_identity
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
route_segment_use_prediction
. route_segment_guided_vehicles
route_segment_volume_delay_predictions
route_segment_way_point
. location_identity
route_selection_parameters
route_start_time
. date
. time
route_statistics
route_type
routes_for_vehicles_data
. list_size
. vehicle_guidance_stored_data
. . route_identity
. . route_segment_description
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
routing_parameters_for_m_and_c_fleet
safety_advisory_message
safety_data
. vehicle_attitude_data
. vehicle_motion_data
safety_data_for_fleet_mgmt
. date
. safety_data_for_mcv
. . driver_safety_status
. . vehicle_attitude_data
. . vehicle_motion_data
. . vehicle_proximity_data
. . vehicle_safety_status
. time
. vehicle_id_for_mcv
safety_data_for_mcv

. driver_safety_status
. vehicle_attitude_data
. vehicle_motion_data
. vehicle_proximity_data
. vehicle_safety_status
safety_state_for_driver
safety_warning_for_driver_condition
. safety_advisory_message
. safety_state_for_driver
safety_warning_for_road_condition
. safety_advisory_message
. safety_state_for_driver
safety_warning_for_vehicle_condition
. safety_advisory_message
. safety_state_for_driver
safety_warnings
. safety_warning_for_driver_condition
. . safety_advisory_message
. . safety_state_for_driver
. safety_warning_for_road_condition
. . safety_advisory_message
. . safety_state_for_driver
. safety_warning_for_vehicle_condition
. . safety_advisory_message
. . safety_state_for_driver
scheduled_work_plan
. m_and_c_work_plans
scheduled_work_plan_for_personnel
. m_and_c_work_plans
secure_area_broadcast_message
secure_area_emergency_data_request
. date
. time
. traveler_emergency_request
secure_area_incident_data
. incident_location
. . location_identity
. incident_video_image
secure_area_monitoring_control
secure_area_surveillance_information
security
select_headway
select_lane_hold
select_speed
selected_emergency_strategy
selected_emergency_vehicle_strategy
. indicator_list
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. ramp_list
. . list_size
. . ramp_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . location_identity
. . . unit_number
. selected_emergency_strategy
selected_highway_control_strategy
. highway_sign_plan_number
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
. selected_strategy_type
selected_hri_control_strategy
. crossing_id
. list_size
. selected_hri_strategy
selected_hri_strategy
selected_parking_lot_control_strategy
. parking_lot_list
. . list_size
. . parking_lot_identity
. . . location_identity
. . . unit_number
. selected_parking_lot_strategy_type
selected_parking_lot_strategy_type
selected_ramp_control_strategy
. ramp_list
. . list_size
. . ramp_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . location_identity
. . . unit_number
. selected_ramp_strategy_type
selected_ramp_strategy_type
selected_road_control_strategy
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_road_adaptive_plan_number
. indicator_road_fixed_plan_number
. list_size
. selected_strategy_type
selected_roadway_control_strategy
. selected_highway_control_strategy
. . highway_sign_plan_number
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . selected_strategy_type
. selected_road_control_strategy
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_road_adaptive_plan_number
. . indicator_road_fixed_plan_number
. . list_size
. . selected_strategy_type
selected_strategy
. selected_emergency_vehicle_strategy
. . indicator_list
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . selected_emergency_strategy
. selected_parking_lot_control_strategy
. . parking_lot_list
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . selected_parking_lot_strategy_type
. selected_ramp_control_strategy

. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . selected_ramp_strategy_type
. selected_roadway_control_strategy
. . selected_highway_control_strategy
. . . highway_sign_plan_number
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . selected_strategy_type
. . selected_road_control_strategy
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_road_adaptive_plan_number
. . . indicator_road_fixed_plan_number
. . . list_size
. . . selected_strategy_type

selected_strategy_data

selected_strategy_type

sensor_allocation

. sensor_allocation_for_controllers
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . sensor_list
. . . list_size
. . . sensor_description
. . . . location_identity
. . . . sensor_type
. . . . unit_number
. sensor_allocation_for_hov_lanes
. . hov_lane_identity
. . . location_identity
. . . unit_number
. . list_size
. . sensor_list
. . . list_size
. . . sensor_description
. . . . location_identity
. . . . sensor_type
. . . . unit_number
. sensor_allocation_for_probes
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . vehicle_smart_probe_data_source_identity
. . . unit_number
. . vehicle_smart_probe_data_source_location
. . . location_identity
. sensor_allocation_for_tags
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . vehicle_tag_data_source_identity
. . . unit_number
. . vehicle_tag_data_source_location
. . . location_identity

sensor_allocation_for_controllers

. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
. sensor_list
. . list_size
. . sensor_description
. . . location_identity
. . . sensor_type
. . . unit_number

sensor_allocation_for_hov_lanes

. hov_lane_identity
. . location_identity
. . unit_number
. list_size
. sensor_list
. . list_size
. . sensor_description
. . . location_identity
. . . sensor_type
. . . unit_number

sensor_allocation_for_probes

. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
. vehicle_smart_probe_data_source_identity
. . unit_number
. vehicle_smart_probe_data_source_location
. . location_identity

sensor_allocation_for_tags

. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
. vehicle_tag_data_source_identity
. . unit_number
. vehicle_tag_data_source_location
. . location_identity

sensor_attributes

. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute

Appendix D: Data Tree

sensor_configuration_data
sensor_data
. headway
. lane_deviation
. speed
sensor_data_archive_input
. hov_sensor_data
. . hov_priority
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . hov_lane_list
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . private_vehicle_occupants
. local_sensor_data_for_highways
. . crossing_close_duration
. . crossing_close_time
. . hov_priority
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . hov_lane_list
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . roadside_conditions
. . . link_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . traffic_video_image
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. local_sensor_data_for_roads
. . crossing_close_duration
. . crossing_close_time
. . hov_priority
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . hov_lane_list
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . pedestrian_demand
. . roadside_conditions
. . . link_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . traffic_video_image
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. multimodal_crossing_sensor_data
. . crossing_close_duration
. . crossing_close_time
. . crossing_list
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. pedestrian_sensor_data
. . node_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . pedestrian_demand
. sensor_data_for_reversible_lanes
. . traffic_video_image
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. traffic_sensor_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
sensor_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
sensor_data_for_distribution
. roadway_environment_conditions
. . link_environment_conditions
. . link_list

. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. sensor_output_data
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . hri_sensor_data
. . . closure_event_data
. . . hri_status
. . . . hri_closure_data_response
. . . . hri_state
. . . intersection_blocked
. . . rail_schedules_data
. . pedestrian_sensor_data
. . . node_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . pedestrian_demand
. . traffic_sensor_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. . traffic_video_image
sensor_data_for_reversible_lanes
. traffic_video_image
. vehicle_detection_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
sensor_data_input
. hov_sensor_data
. . hov_priority
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . hov_lane_list
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . private_vehicle_occupants
. multimodal_crossing_sensor_data
. . crossing_close_duration
. . crossing_close_time
. . crossing_list
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. pedestrian_sensor_data
. . node_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . pedestrian_demand
. sensor_data_for_reversible_lanes
. . traffic_video_image
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
sensor_description
. location_identity
. sensor_type
. unit_number
sensor_device_status
sensor_fault_data
sensor_fault_data_store
. environmental_sensor_status
. . environment_sensor_fault_data
. . list_size
. . sensor_identity
. . station_id
. traffic_sensor_fault_data
. traffic_sensor_status
sensor_identity
sensor_list
. list_size
. sensor_description
. . location_identity
. . sensor_type
. . unit_number
sensor_output_data
. environment_sensor_data
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. hri_sensor_data
. . closure_event_data
. . hri_status
. . . hri_closure_data_response
. . . hri_state
. . intersection_blocked
. . rail_schedules_data
. pedestrian_sensor_data
. . node_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . pedestrian_demand
. traffic_sensor_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
. traffic_video_image
sensor_parameters
. control_data_for_highways
. . dms_data
. . . indicator_sign_control_data
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . lane_dms_controls
. . . . parking_lot_dms_controls
. . . . pollution_output_message
. . . . . dms_pollution_message

. . . . . vehicle_identity
. . . indicator_sign_control_data_for_hri
. . . . crossing_id
. . . . hri_sign_control_data
. . . . list_size
. . har_data
. . . har_identity
. . . har_management_data
. . . . har_mode
. . . . har_schedule
. . . har_program
. . indicator_highway_requested_state
. . . indicator_control_data_for_highways
. . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . ramp_controls
. . . list_size
. control_data_for_roads
. . indicator_control_data_for_roads
. . . indicator_crossing_control_data_for_roads
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_junction_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_junction_controls
. . . . list_size
. . . indicator_pedestrian_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_pedestrian_controls
. . . . list_size
. current_ramp_state
. current_roadway_network_data
. . current_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . current_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. cv_incidents_for_other_TMC
. . permit_route_plan
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . load_description
. . permit_traffic_controls
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. . permit_type
. emergency_data_for_other_TMC
. . emergency_traffic_control_request
. . . date
. . . list_size
. . . route_segment_estimated_arrival_time
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . time
. . selected_emergency_vehicle_strategy
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_emergency_strategy
. indicator_control_storage_data
. . indicator_control_storage_data_for_highways
. . . indicator_control_data_for_highways
. . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . indicator_type

Appendix D: Data Tree

. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . ramp_controls
. . indicator_control_storage_data_for_roads
. . . indicator_control_data_for_roads
. . . . indicator_crossing_control_data_for_roads
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_junction_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_junction_controls
. . . . . list_size
. . . . indicator_pedestrian_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_pedestrian_controls
. . . . . list_size
. indicator_input_storage_data
. . indicator_input_storage_data_for_highways
. . . indicator_response_state
. . . indicator_type
. . . list_size
. . indicator_input_storage_data_for_roads
. . . indicator_response_state
. . . indicator_type
. . . list_size
. link_data_update
. . link_attributes
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . link_TMC_identity
. new_sensor_static_data
. . static_data_for_sensor_processing
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . dms_hri_allocation
. . . . crossing_id
. . . . list_size
. . . highway_control_devices
. . . . crossing_equipment_data_for_highways
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . crossing_phase_data
. . . . . list_size
. . . . highway_equipment_data
. . . . . dms_allocation
. . . . . indicator_identity
. . . . . list_size
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . list_size
. . . highway_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . ramp_devices
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . . ramp_phase_data
. . . road_control_devices
. . . . crossing_equipment_data_for_roads
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . crossing_phase_data
. . . . . list_size
. . . . hri_data_for_roads
. . . . . crossing_id
. . . . . hri_phase_data
. . . . . list_size
. . . . intersection_equipment_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . intersection_phase_data
. . . . . intersection_phase_number
. . . . . list_size
. . . . pedestrian_equipment_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . pedestrian_phase_data
. . . road_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity

. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . sensor_allocation
. . . . sensor_allocation_for_controllers
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . sensor_allocation_for_hov_lanes
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . sensor_allocation_for_probes
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . . sensor_allocation_for_tags
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . . vehicle_tag_data_source_location
. . . . . location_identity
. other_roadway_information_status
. . other_dms_status
. . . dms_status
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . dms_fault
. . . . . dms_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . dms_updates
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . other_har_status
. . . har_identity
. . . har_status
. . . . device_status
. . . . har_fault
. . . . . har_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. other_status_for_highways
. . other_indicator_input_data_from_highways
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_response_state
. . . list_size
. other_status_for_roads
. . other_indicator_input_state_for_roads
. . . indicator_data
. . . indicator_type
. . . list_size
. parking_lot_current_state
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. request_other_TMC_data
. request_sensor_static_data
. roadway_information_data
. . dms_data
. . . indicator_sign_control_data
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . lane_dms_controls
. . . . parking_lot_dms_controls
. . . . pollution_output_message
. . . . . dms_pollution_message
. . . . . vehicle_identity
. . . indicator_sign_control_data_for_hri
. . . . crossing_id
. . . . hri_sign_control_data
. . . . list_size
. . har_data
. . . har_identity
. . . har_management_data
. . . . har_mode
. . . . har_schedule
. . . har_program
. selected_strategy
. . selected_emergency_vehicle_strategy
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity

. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_emergency_strategy
. . selected_parking_lot_control_strategy
. . . parking_lot_list
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . selected_parking_lot_strategy_type
. . selected_ramp_control_strategy
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_ramp_strategy_type
. . selected_roadway_control_strategy
. . . selected_highway_control_strategy
. . . . highway_sign_plan_number
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . selected_strategy_type
. . . selected_road_control_strategy
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . . list_size
. . . . selected_strategy_type
. signal_override_status
. . emergency_vehicle_preemptions
. . . emergency_vehicle_junction_preemption
. . . emergency_vehicle_pedestrian_preemption
. . . emergency_vehicle_ramp_preemption
. . . emergency_vehicle_sign_preemption
. . transit_vehicle_roadway_priorities
. . . transit_vehicle_junction_priority
. . . transit_vehicle_pedestrian_priority
. . . transit_vehicle_ramp_priority
. . . transit_vehicle_sign_priority
sensor_status
. traffic_sensor_status
sensor_status_from_traffic
. environmental_sensor_status
. . environment_sensor_fault_data
. . list_size
. . sensor_identity
. . station_id
. traffic_sensor_fault_data
. traffic_sensor_status
sensor_status_to_roadway_m_and_c
. env_sensor_data_for_auto_treat_device
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. . station_id
. hov_sensor_equip_status_for_m_and_c
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
. infrastructure_sensor_data_for_m_and_c
. . infrastructure_sensor_data_from_roadside_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. infrastructure_sensor_status_for_m_and_c
. . infrastructure_sensor_status_of_roadside_devices
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. traffic_sensor_equip_status_for_m_and_c
. . list_size
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
sensor_type
sensor_vehicle_speed_data
. env_sensor_data_for_speed_enforcement
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. speed_data_for_m_and_c_speed_monitoring
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
. speed_data_for_traffic_speed_monitoring
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
service_req_and_confirm_data
. advisory_data_request_for_archive
. . advisory_data_request
. . . advisory_data_scope
. . . transit_route_number
. . . transit_vehicle_identity
. . . vehicle_location_for_advisories

. . . . location_identity
. event_information_requests_for_archive
. . event_information_advisory_requests_for_archive
. . . event_information_advisory_requests
. . traveler_event_information_request_for_archive
. . . traveler_event_information_request
. .
. . . traveler_personal_event_information_request
. traffic_data_kiosk_request_for_archive
. . traffic_data_kiosk_request
. . . kiosk_identity
. . . traffic_data_request
. traffic_data_personal_request_for_archive
. . traffic_data_personal_request
. . . traffic_data_request
. . . traveler_identity
. transit_deviation_kiosk_request_for_archive
. . transit_deviation_kiosk_request
. . . kiosk_identity
. . . transit_vehicle_deviation_request
. transit_deviations_personal_request_for_archive
. . transit_deviations_personal_request
. . . transit_route_number
. . . transit_vehicle_deviation_request
. . . traveler_identity
. traveler_confirm_for_archive
. . traveler_personal_trip_confirmation_for_archive
. . . traveler_personal_trip_confirmation
. . . . paratransit_service_confirmation
. . . . . paratransit_service_identity
. . . . . transit_confirmation_flag
. . . . . traveler_identity
. . . . traveler_identity
. . . . traveler_rideshare_confirmation
. . . . . credit_identity
. . . . . reservation_status
. . . . . confirmation_flag
. . . . . rideshare_selection_number
. . . . . traveler_identity
. . traveler_trip_confirmation_for_archive
. . . traveler_trip_confirmation
. . . . paratransit_service_confirmation
. . . . . paratransit_service_identity
. . . . . transit_confirmation_flag
. . . . . traveler_identity
. . . . traveler_identity
. . . . traveler_rideshare_confirmation
. . . . . credit_identity
. . . . . reservation_status
. . . . . confirmation_flag
. . . . . rideshare_selection_number
. . . . . traveler_identity
. traveler_route_accepted_for_archive
. . traveler_route_accepted
. . . route_identity
. traveler_route_request_for_archive
. . traveler_route_request
. . . constraint_on_acceptable_travel_time
. . . constraint_on_eta_change
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . modes
. . . origin
. . . . route_point
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . traveler_identity
. . . traveler_location
. . . . location_identity
. . . traveler_route_accepted
. . . . route_identity
. traveler_trip_and_cond_requests_for_archive
. . traveler_current_condition_request_for_archive
. . . traveler_current_condition_request
. . . . kiosk_identity
. .
. . . traveler_personal_current_condition_request
. . . . traveler_identity
. . traveler_personal_trip_request_for_archive
. . . traveler_personal_trip_request
. . . . traveler_identity
. . . . traveler_rideshare_request
. . . . . traveler_identity
. . . . . traveler_rideshare_constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . traveler_rideshare_data
. . . . . departure_time
. . . . . desired_arrival_time
. . . . . destination
. . . . . origin
. . . . . traveler_rideshare_preferences
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . trip_request
. . . . . constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_load_classification
. . . . . constraint_on_number_of_mode_changes
. . . . . constraint_on_number_of_transfers
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . departure_time
. . . . . time
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . origin
. . . . . route_point
. . . . . preferences
. . . . . modes
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . preferred_transit_options
. . . . . preferred_weather_conditions
. . traveler_trip_request_for_archive
. . . traveler_trip_request
. . . . traveler_identity
. . . . traveler_rideshare_request
. . . . . traveler_identity
. . . . . traveler_rideshare_constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_special_needs

. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . traveler_rideshare_data
. . . . . departure_time
. . . . . desired_arrival_time
. . . . . destination
. . . . . origin
. . . . . traveler_rideshare_preferences
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . trip_request
. . . . . constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_load_classification
. . . . . constraint_on_number_of_mode_changes
. . . . . constraint_on_number_of_transfers
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . departure_time
. . . . . time
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . origin
. . . . . route_point
. . . . . preferences
. . . . . modes
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . preferred_transit_options
. . . . . preferred_weather_conditions
. traveler_yellow_pages_requests_for_archive
. . traveler_personal_transaction_request_for_archive
. . . traveler_personal_transaction_request
. . . . yellow_pages_dining_reservation
. . . . yellow_pages_lodging_reservation
. . . . yellow_pages_ticket_purchase
. .
. . . traveler_personal_yellow_pages_information_request
. . . . traveler_identity
. . traveler_transaction_request_for_archive
. . . traveler_transaction_request
. . . . yellow_pages_dining_reservation
. . . . yellow_pages_lodging_reservation
. . . . yellow_pages_ticket_purchase
. .
. . . traveler_yellow_pages_information_request
. . . . kiosk_identity
. vehicle_guidance_route_accepted_for_archive
. . vehicle_guidance_route_accepted
. . . route_identity
. vehicle_route_request_for_archive
. . vehicle_route_request
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferred_alternate_routes
. . . preferred_route_segments
. . . preferred_routes
. . . vehicle_identity
. . . vehicle_location_for_dynamic_guidance
. . . . location_identity
. yellow_pages_advisory_requests_for_archive
. . yellow_pages_advisory_requests
. . . advisory_data_scope
. . . transit_route_number
. . . transit_vehicle_identity
. . . vehicle_location_for_advisories
. . . . location_identity
. . . yellow_pages_dining_reservation
. . . yellow_pages_lodging_reservation
. . . yellow_pages_non_motorized_reservation
. . . yellow_pages_ticket_purchase

service_req_and_confirm_for_archive

. service_req_and_confirm_data
. . advisory_data_request_for_archive
. . . advisory_data_request
. . . . advisory_data_scope
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . vehicle_location_for_advisories
. . . . . location_identity
. . event_information_requests_for_archive
. . . event_information_advisory_requests_for_archive
. . . . event_information_advisory_requests
. . . traveler_event_information_request_for_archive
. . . . traveler_event_information_request
. . .
. . . . traveler_personal_event_information_request
. . traffic_data_kiosk_request_for_archive
. . . traffic_data_kiosk_request
. . . . kiosk_identity
. . . . traffic_data_request
. . traffic_data_personal_request_for_archive
. . . traffic_data_personal_request
. . . . traffic_data_request
. . . . traveler_identity
. . transit_deviation_kiosk_request_for_archive
. . . transit_deviation_kiosk_request
. . . . kiosk_identity
. . . . transit_vehicle_deviation_request
. . transit_deviations_personal_request_for_archive
. . . transit_deviations_personal_request
. . . . transit_route_number
. . . . transit_vehicle_deviation_request
. . . . traveler_identity
. . traveler_confirm_for_archive
. . . traveler_personal_trip_confirmation_for_archive
. . . . traveler_personal_trip_confirmation
. . . . . paratransit_service_confirmation
. . . . . paratransit_service_identity
. . . . . transit_confirmation_flag
. . . . . traveler_identity
. . . . . traveler_identity
. . . . . traveler_rideshare_confirmation
. . . . . credit_identity
. . . . . reservation_status
. . . . . rideshare_selection_number
. . . . . traveler_identity
. . . traveler_trip_confirmation_for_archive
. . . . traveler_trip_confirmation
. . . . . paratransit_service_confirmation
. . . . . paratransit_service_identity
. . . . . transit_confirmation_flag
. . . . . traveler_identity
. . . . . traveler_identity

. . . . . traveler_rideshare_confirmation
. . . . . . credit_identity
. . . . . . reservation_status
. . . . . . rideshare_selection_number
. . . . . . traveler_identity
. . traveler_route_accepted_for_archive
. . . traveler_route_accepted
. . . . route_identity
. . traveler_route_request_for_archive
. . . traveler_route_request
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_eta_change
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . modes
. . . . origin
. . . . . route_point
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . traveler_identity
. . . . traveler_location
. . . . . location_identity
. . . . traveler_route_accepted
. . . . . route_identity
. . traveler_trip_and_cond_requests_for_archive
. . . traveler_current_condition_request_for_archive
. . . . traveler_current_condition_request
. . . . . kiosk_identity
. . .
. . . . traveler_personal_current_condition_request
. . . . . traveler_identity
. . . traveler_personal_trip_request_for_archive
. . . . traveler_personal_trip_request
. . . . . traveler_identity
. . . . . traveler_rideshare_request
. . . . . traveler_identity
. . . . . traveler_rideshare_constraints
. . . . . traveler_rideshare_data
. . . . . traveler_rideshare_preferences
. . . . . trip_request
. . . . . constraints
. . . . . departure_time
. . . . . desired_arrival_time
. . . . . destination
. . . . . origin
. . . . . preferences
. . . traveler_trip_request_for_archive
. . . . traveler_trip_request
. . . . . traveler_identity
. . . . . traveler_rideshare_request
. . . . . traveler_identity
. . . . . traveler_rideshare_constraints
. . . . . traveler_rideshare_data
. . . . . traveler_rideshare_preferences
. . . . . trip_request
. . . . . constraints
. . . . . departure_time
. . . . . desired_arrival_time
. . . . . destination
. . . . . origin
. . . . . preferences
. . traveler_yellow_pages_requests_for_archive
. . . traveler_personal_transaction_request_for_archive
. . . . traveler_personal_transaction_request
. . . . . yellow_pages_dining_reservation
. . . . . yellow_pages_lodging_reservation
. . . . . yellow_pages_ticket_purchase
. . .
. . . .
. . . . . traveler_identity
. . . traveler_transaction_request_for_archive
. . . . traveler_transaction_request
. . . . . yellow_pages_dining_reservation
. . . . . yellow_pages_lodging_reservation
. . . . . yellow_pages_ticket_purchase
. . .
. . . . traveler_yellow_pages_information_request
. . . . . kiosk_identity
. . vehicle_guidance_route_accepted_for_archive
. . . vehicle_guidance_route_accepted
. . . . route_identity
. . vehicle_route_request_for_archive
. . . vehicle_route_request
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . . preferred_alternate_routes
. . . . preferred_route_segments
. . . . preferred_routes
. . . . vehicle_identity
. . . . vehicle_location_for_dynamic_guidance
. . . . . location_identity
. . yellow_pages_advisory_requests_for_archive
. . . yellow_pages_advisory_requests
. . . . advisory_data_scope
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . vehicle_location_for_advisories
. . . . . location_identity
. . . . yellow_pages_dining_reservation
. . . . yellow_pages_lodging_reservation
. . . . yellow_pages_non_motorized_reservation
. . . . yellow_pages_ticket_purchase

service_req_and_confirm_for_archive_attributes

. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date

Appendix D: Data Tree

. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
setting_identity
setting_preferences
setting_type
shoulder_width
signal_override_equip_status_for_m_and_c
. emergency_vehicle_preemptions
. . emergency_vehicle_junction_preemption
. . emergency_vehicle_pedestrian_preemption
. . emergency_vehicle_ramp_preemption
. . emergency_vehicle_sign_preemption
. transit_vehicle_roadway_priorities
. . transit_vehicle_junction_priority
. . transit_vehicle_pedestrian_priority
. . transit_vehicle_ramp_priority
. . transit_vehicle_sign_priority
signal_override_status
. emergency_vehicle_preemptions
. . emergency_vehicle_junction_preemption
. . emergency_vehicle_pedestrian_preemption
. . emergency_vehicle_ramp_preemption
. . emergency_vehicle_sign_preemption
. transit_vehicle_roadway_priorities
. . transit_vehicle_junction_priority
. . transit_vehicle_pedestrian_priority
. . transit_vehicle_ramp_priority
. . transit_vehicle_sign_priority
skyway_information
smart_probe_equip_status_for_m_and_c
. device_identity
. list_size
. roadside_device_status
. station_id
smart_probe_reader_status
. device_status
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
source_identity
source_reliability_information
special_vehicle_application
. hazmat_load_data
special_vehicle_priority_routing
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. vehicle_identity
special_vehicle_speed_limit
. vehicle_class
. vehicle_type
speed
speed_data_for_m_and_c_display
. individual_vehicle_speed
. . list_size
. . sensor_identity
. . speed_sensor_data
. . timestamp
. . . date
. . . time
. processed_speed_sensor_data
speed_data_for_m_and_c_speed_monitoring
. list_size
. sensor_identity
. station_id
. traffic_sensor_output
speed_data_for_status
. individual_vehicle_speed
. . list_size
. . sensor_identity
. . speed_sensor_data
. . timestamp
. . . date
. . . time
. processed_speed_sensor_data
speed_data_for_traffic_display
. individual_vehicle_speed
. . list_size
. . sensor_identity
. . speed_sensor_data
. . timestamp
. . . date
. . . time
. processed_speed_sensor_data
speed_data_for_traffic_speed_monitoring
. list_size
. sensor_identity
. station_id
. traffic_sensor_output
speed_data_for_traffic_status
. individual_vehicle_speed
. . list_size
. . sensor_identity
. . speed_sensor_data
. . timestamp
. . . date
. . . time
. processed_speed_sensor_data
speed_limit
speed_sensor_control
speed_sensor_control_from_m_and_c
. list_size
. sensor_identity
. speed_sensor_control
speed_sensor_control_from_traffic
. list_size
. sensor_identity
. speed_sensor_control
speed_sensor_data
speed_sensor_log_for_m_and_c
. list_size
. processed_speed_sensor_data
. sensor_identity
. speed_sensor_data
speed_sensor_log_for_traffic
. list_size

Appendix D: Data Tree

. processed_speed_sensor_data
. sensor_identity
. speed_sensor_data
speed_sensor_status_for_m_and_c
. list_size
. sensor_device_status
. sensor_identity
speed_sensor_status_for_traffic
. list_size
. sensor_device_status
. sensor_identity
speed_violation_notification_for_m_and_c
. individual_vehicle_speed
. . list_size
. . sensor_identity
. . speed_sensor_data
. . timestamp
. . . date
. . . time
speed_violation_notification_for_traffic
. individual_vehicle_speed
. . list_size
. . sensor_identity
. . speed_sensor_data
. . timestamp
. . . date
. . . time
speed_warning_for_display
ssr_control_request
ssr_device_control
ssr_device_control_state
staging_area
standard_data_attribute
standard_message_attribute
state_contact_address
state_contact_computer
state_contact_data
. state_contact_details
. . state_contact_address
. . state_contact_computer
. . state_contact_email
. . state_contact_fax
. . state_contact_name
. . state_contact_phone
. state_contact_identity
. state_contact_method
state_contact_details
. state_contact_address
. state_contact_computer
. state_contact_email
. state_contact_fax
. state_contact_name
. state_contact_phone
state_contact_email
state_contact_fax
state_contact_identity
state_contact_method
state_contact_name
state_contact_phone
static_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
static_data_for_archive
. static_data_for_traffic_control
. . background_strategy
. . . list_size
. . . selected_strategy_data
. . . selected_strategy_type
. . . strategy_date
. . . strategy_day
. . . strategy_end_time
. . . . time
. . . strategy_start_time
. . . . time
. . coordination_rules_for_highways
. . . coordination_rule_data_for_highways
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . coordination_rule_highway_data_description
. . . coordination_rule_highway_data_number
. . . list_size
. . coordination_rules_for_roads
. . . coordination_rule_data_for_roads
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . coordination_rule_road_data_description
. . . coordination_rule_road_data_number
. . . list_size
. . dms_allocation
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . highway_control_devices
. . . crossing_equipment_data_for_highways
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . highway_equipment_data
. . . . dms_allocation
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . location_identity

Appendix D: Data Tree

. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_start_point
. . . . . . location_identity
. . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . list_size
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . indicator_highway_control_static_data
. . . highway_sign_setting_data
. . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . list_size
. . . highway_sign_setting_plans
. . . . highway_sign_plan_data
. . . . . highway_sign_plan_priority
. . . . . highway_sign_plan_purpose
. . . . . highway_sign_sequence_data
. . . . . . highway_sign_sequence_purpose
. . . . . . indicator_list
. . . . highway_sign_plan_number
. . . . list_size
. . indicator_road_control_static_data
. . . indicator_road_adaptive_plans
. . . . crossing_adaptive_data
. . . . indicator_road_adaptive_plan_number
. . . . intersection_adaptive_data
. . . . list_size
. . . . pedestrian_adaptive_data
. . . indicator_road_fixed_plans
. . . . crossing_fixed_time_data
. . . . . crossing_control_commands
. . . . . crossing_cycle_time
. . . . . crossing_offset_time
. . . . indicator_road_fixed_plan_number
. . . . intersection_fixed_time_data
. . . . . intersection_control_commands
. . . . . intersection_cycle_time
. . . . . intersection_offset_time
. . . . list_size
. . . . pedestrian_fixed_time_data
. . . . . pedestrian_control_commands
. . . . . pedestrian_cycle_time
. . . . . pedestrian_offset_time
. . link_data
. . . link_attributes
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . link_TMC_identity
. . parking_lot_static_data
. . . list_size
. . . parking_lot_dms_allocation
. . . . list_size
. . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_sensor_allocation
. . . . list_size
. . . . parking_lot_sensor_type
. . . . unit_number
. . . parking_lot_state_thresholds
. . . . parking_lot_decreasing_threshold
. . . . parking_lot_increasing_threshold
. . ramp_devices
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . . ramp_phase_data
. . road_control_devices
. . . crossing_equipment_data_for_roads
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . hri_data_for_roads
. . . . crossing_id
. . . . hri_phase_data
. . . . list_size
. . . intersection_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . intersection_phase_data
. . . . intersection_phase_number
. . . . list_size
. . . pedestrian_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . pedestrian_phase_data
. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number

. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . roadway_characteristics
. . . link_speed_limit
. . . . special_vehicle_speed_limit
. . . . . vehicle_class
. . . . . vehicle_type
. . . . speed_limit
. . . median_type
. . . number_of_lanes
. . . pavement_type
. . . shoulder_width
. . sensor_allocation
. . . sensor_allocation_for_controllers
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . . location_identity
. . . . . . sensor_type
. . . . . . unit_number
. . . sensor_allocation_for_hov_lanes
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . . location_identity
. . . . . . sensor_type
. . . . . . unit_number
. . . sensor_allocation_for_probes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . sensor_allocation_for_tags
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . vehicle_tag_data_source_location
. . . . . location_identity
. . vehicle_signage_output_identity
. . . location_identity
. . . unit_number

static_data_for_control

. static_data_for_dms_allocation
. . dms_allocation
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . dms_hri_allocation
. . . crossing_id
. . . list_size
. static_data_for_highway_control
. . highway_control_devices
. . . crossing_equipment_data_for_highways
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . highway_equipment_data
. . . . dms_allocation
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_start_point
. . . . . location_identity
. . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . ramp_devices
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . . ramp_phase_data
. static_data_for_road_control

Appendix D: Data Tree

. . road_control_devices
. . . crossing_equipment_data_for_roads
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . hri_data_for_roads
. . . . crossing_id
. . . . hri_phase_data
. . . . list_size
. . . intersection_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . intersection_phase_data
. . . . intersection_phase_number
. . . . list_size
. . . pedestrian_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . pedestrian_phase_data
. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. static_data_for_vehicle_signage
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . vehicle_signage_output_identity
. . . location_identity
. . . unit_number

static_data_for_dms_allocation

. dms_allocation
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. dms_hri_allocation
. . crossing_id
. . list_size

static_data_for_highway_control

. highway_control_devices
. . crossing_equipment_data_for_highways
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . highway_equipment_data
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . dms_downstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . dms_upstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . list_size
. highway_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. ramp_devices
. . list_size
. . ramp_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . location_identity
. . . unit_number
. . ramp_phase_data

static_data_for_highways

. coordination_rules_for_highways
. . coordination_rule_data_for_highways
. . . highway_sign_plan_number
. . . indicator_road_adaptive_plan_number
. . . indicator_road_fixed_plan_number
. . coordination_rule_highway_data_description
. . coordination_rule_highway_data_number
. . list_size
. highway_control_devices
. . crossing_equipment_data_for_highways

. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . highway_equipment_data
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . dms_downstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . dms_upstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . list_size
. highway_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. indicator_highway_control_static_data
. . highway_sign_setting_data
. . . highway_sign_sequence_data
. . . . highway_sign_sequence_purpose
. . . . indicator_list
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . list_size
. . highway_sign_setting_plans
. . . highway_sign_plan_data
. . . . highway_sign_plan_priority
. . . . highway_sign_plan_purpose
. . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . highway_sign_plan_number
. . . list_size
. sensor_allocation
. . sensor_allocation_for_controllers
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . sensor_list
. . . . list_size
. . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . sensor_allocation_for_hov_lanes
. . . hov_lane_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . . sensor_list
. . . . list_size
. . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . sensor_allocation_for_probes
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . vehicle_smart_probe_data_source_identity
. . . . unit_number
. . . vehicle_smart_probe_data_source_location
. . . . location_identity
. . sensor_allocation_for_tags
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . vehicle_tag_data_source_identity
. . . . unit_number
. . . vehicle_tag_data_source_location
. . . . location_identity

static_data_for_incident_management

. highway_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. road_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity

. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. road_segment_location
. . list_size
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
static_data_for_parking_lots
. parking_lot_dms_allocation
. . list_size
. . unit_number
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_sensor_allocation
. . list_size
. . parking_lot_sensor_type
. . unit_number
. parking_lot_state_thresholds
. . parking_lot_decreasing_threshold
. . parking_lot_increasing_threshold
static_data_for_ramps
. highway_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. ramp_devices
. . list_size
. . ramp_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . location_identity
. . . unit_number
. . ramp_phase_data
static_data_for_road_control
. road_control_devices
. . crossing_equipment_data_for_roads
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . hri_data_for_roads
. . . crossing_id
. . . hri_phase_data
. . . list_size
. . intersection_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . intersection_phase_data
. . . intersection_phase_number
. . . list_size
. . pedestrian_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . pedestrian_phase_data
. road_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
static_data_for_roads
. coordination_rules_for_roads
. . coordination_rule_data_for_roads
. . . highway_sign_plan_number
. . . indicator_road_adaptive_plan_number
. . . indicator_road_fixed_plan_number
. . coordination_rule_road_data_description
. . coordination_rule_road_data_number
. . list_size
. indicator_road_control_static_data
. . indicator_road_adaptive_plans
. . . crossing_adaptive_data
. . . indicator_road_adaptive_plan_number
. . . intersection_adaptive_data
. . . list_size
. . . pedestrian_adaptive_data
. . indicator_road_fixed_plans
. . . crossing_fixed_time_data
. . . . crossing_control_commands
. . . . crossing_cycle_time
. . . . crossing_offset_time
. . . indicator_road_fixed_plan_number
. . . intersection_fixed_time_data
. . . . intersection_control_commands
. . . . intersection_cycle_time
. . . . intersection_offset_time
. . . list_size
. . . pedestrian_fixed_time_data
. . . . pedestrian_control_commands
. . . . pedestrian_cycle_time
. . . . pedestrian_offset_time
. road_control_devices
. . crossing_equipment_data_for_roads
. . . crossing_identity
. . . . location_identity

. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . hri_data_for_roads
. . . crossing_id
. . . hri_phase_data
. . . list_size
. . intersection_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . intersection_phase_data
. . . intersection_phase_number
. . . list_size
. . pedestrian_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . pedestrian_phase_data
. road_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. sensor_allocation
. . sensor_allocation_for_controllers
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . sensor_list
. . . . list_size
. . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . sensor_allocation_for_hov_lanes
. . . hov_lane_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . . sensor_list
. . . . list_size
. . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . sensor_allocation_for_probes
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . vehicle_smart_probe_data_source_identity
. . . . unit_number
. . . vehicle_smart_probe_data_source_location
. . . . location_identity
. . sensor_allocation_for_tags
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . vehicle_tag_data_source_identity
. . . . unit_number
. . . vehicle_tag_data_source_location
. . . . location_identity
static_data_for_roadways
. static_data_for_highways
. . coordination_rules_for_highways
. . . coordination_rule_data_for_highways
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . coordination_rule_highway_data_description
. . . coordination_rule_highway_data_number
. . . list_size
. . highway_control_devices
. . . crossing_equipment_data_for_highways
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . highway_equipment_data
. . . . dms_allocation
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_start_point
. . . . . location_identity
. . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type

. . . . . unit_number
. . indicator_highway_control_static_data
. . . highway_sign_setting_data
. . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . list_size
. . . highway_sign_setting_plans
. . . . highway_sign_plan_data
. . . . . highway_sign_plan_priority
. . . . . highway_sign_plan_purpose
. . . . . highway_sign_sequence_data
. . . . . . highway_sign_sequence_purpose
. . . . . . indicator_list
. . . . highway_sign_plan_number
. . . . list_size
. . sensor_allocation
. . . sensor_allocation_for_controllers
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . . location_identity
. . . . . . sensor_type
. . . . . . unit_number
. . . sensor_allocation_for_hov_lanes
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . . location_identity
. . . . . . sensor_type
. . . . . . unit_number
. . . sensor_allocation_for_probes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . sensor_allocation_for_tags
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . vehicle_tag_data_source_location
. . . . . location_identity
. static_data_for_roads
. . coordination_rules_for_roads
. . . coordination_rule_data_for_roads
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . coordination_rule_road_data_description
. . . coordination_rule_road_data_number
. . . list_size
. . indicator_road_control_static_data
. . . indicator_road_adaptive_plans
. . . . crossing_adaptive_data
. . . . indicator_road_adaptive_plan_number
. . . . intersection_adaptive_data
. . . . list_size
. . . . pedestrian_adaptive_data
. . . indicator_road_fixed_plans
. . . . crossing_fixed_time_data
. . . . . crossing_control_commands
. . . . . crossing_cycle_time
. . . . . crossing_offset_time
. . . . indicator_road_fixed_plan_number
. . . . intersection_fixed_time_data
. . . . . intersection_control_commands
. . . . . intersection_cycle_time
. . . . . intersection_offset_time
. . . . list_size
. . . . pedestrian_fixed_time_data
. . . . . pedestrian_control_commands
. . . . . pedestrian_cycle_time
. . . . . pedestrian_offset_time
. . road_control_devices
. . . crossing_equipment_data_for_roads
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . hri_data_for_roads
. . . . crossing_id
. . . . hri_phase_data
. . . . list_size
. . . intersection_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . intersection_phase_data
. . . . intersection_phase_number
. . . . list_size
. . . pedestrian_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . pedestrian_phase_data
. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . sensor_allocation
. . . sensor_allocation_for_controllers
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list

. . . . . list_size
. . . . . sensor_description
. . . . . . location_identity
. . . . . . sensor_type
. . . . . . unit_number
. . . sensor_allocation_for_hov_lanes
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . . location_identity
. . . . . . sensor_type
. . . . . . unit_number
. . . sensor_allocation_for_probes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . sensor_allocation_for_tags
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . vehicle_tag_data_source_location
. . . . . location_identity

static_data_for_sensor_processing

. dms_allocation
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. dms_hri_allocation
. . crossing_id
. . list_size
. highway_control_devices
. . crossing_equipment_data_for_highways
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . highway_equipment_data
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . dms_downstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . dms_upstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . list_size
. highway_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. ramp_devices
. . list_size
. . ramp_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . location_identity
. . . unit_number
. . ramp_phase_data
. road_control_devices
. . crossing_equipment_data_for_roads
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . hri_data_for_roads
. . . crossing_id
. . . hri_phase_data
. . . list_size
. . intersection_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . intersection_phase_data
. . . intersection_phase_number
. . . list_size
. . pedestrian_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . pedestrian_phase_data
. road_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity

. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. sensor_allocation
. . sensor_allocation_for_controllers
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . sensor_list
. . . . list_size
. . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . sensor_allocation_for_hov_lanes
. . . hov_lane_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . . sensor_list
. . . . list_size
. . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . sensor_allocation_for_probes
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . vehicle_smart_probe_data_source_identity
. . . . unit_number
. . . vehicle_smart_probe_data_source_location
. . . . location_identity
. . sensor_allocation_for_tags
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . vehicle_tag_data_source_identity
. . . . unit_number
. . . vehicle_tag_data_source_location
. . . . location_identity
static_data_for_strategy
. background_strategy
. . list_size
. . selected_strategy_data
. . selected_strategy_type
. . strategy_date
. . strategy_day
. . strategy_end_time
. . . time
. . strategy_start_time
. . . time
. highway_control_devices
. . crossing_equipment_data_for_highways
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . highway_equipment_data
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . dms_downstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . dms_upstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . list_size
. highway_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. ramp_devices
. . list_size
. . ramp_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . location_identity
. . . unit_number
. . ramp_phase_data
. road_control_devices
. . crossing_equipment_data_for_roads
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . hri_data_for_roads
. . . crossing_id
. . . hri_phase_data
. . . list_size
. . intersection_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity

. . . . unit_number
. . . intersection_phase_data
. . . intersection_phase_number
. . . list_size
. . pedestrian_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . pedestrian_phase_data
. road_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
static_data_for_traffic_control
. background_strategy
. . list_size
. . selected_strategy_data
. . selected_strategy_type
. . strategy_date
. . strategy_day
. . strategy_end_time
. . . time
. . strategy_start_time
. . . time
. coordination_rules_for_highways
. . coordination_rule_data_for_highways
. . . highway_sign_plan_number
. . . indicator_road_adaptive_plan_number
. . . indicator_road_fixed_plan_number
. . coordination_rule_highway_data_description
. . coordination_rule_highway_data_number
. . list_size
. coordination_rules_for_roads
. . coordination_rule_data_for_roads
. . . highway_sign_plan_number
. . . indicator_road_adaptive_plan_number
. . . indicator_road_fixed_plan_number
. . coordination_rule_road_data_description
. . coordination_rule_road_data_number
. . list_size
. dms_allocation
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. highway_control_devices
. . crossing_equipment_data_for_highways
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . highway_equipment_data
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . dms_downstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . dms_upstream_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . list_size
. highway_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. indicator_highway_control_static_data
. . highway_sign_setting_data
. . . highway_sign_sequence_data
. . . . highway_sign_sequence_purpose
. . . . indicator_list
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . list_size
. . highway_sign_setting_plans
. . . highway_sign_plan_data
. . . . highway_sign_plan_priority
. . . . highway_sign_plan_purpose
. . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . highway_sign_plan_number
. . . list_size

Appendix D: Data Tree

. indicator_road_control_static_data
. . indicator_road_adaptive_plans
. . . crossing_adaptive_data
. . . indicator_road_adaptive_plan_number
. . . intersection_adaptive_data
. . . list_size
. . . pedestrian_adaptive_data
. . indicator_road_fixed_plans
. . . crossing_fixed_time_data
. . . . crossing_control_commands
. . . . crossing_cycle_time
. . . . crossing_offset_time
. . . indicator_road_fixed_plan_number
. . . intersection_fixed_time_data
. . . . intersection_control_commands
. . . . intersection_cycle_time
. . . . intersection_offset_time
. . . list_size
. . . pedestrian_fixed_time_data
. . . . pedestrian_control_commands
. . . . pedestrian_cycle_time
. . . . pedestrian_offset_time
. link_data
. . link_attributes
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . link_TMC_identity
. parking_lot_static_data
. . list_size
. . parking_lot_dms_allocation
. . . list_size
. . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_sensor_allocation
. . . list_size
. . . parking_lot_sensor_type
. . . unit_number
. . parking_lot_state_thresholds
. . . parking_lot_decreasing_threshold
. . . parking_lot_increasing_threshold
. ramp_devices
. . list_size
. . ramp_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . location_identity
. . . unit_number
. . ramp_phase_data
. road_control_devices
. . crossing_equipment_data_for_roads
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . crossing_phase_data
. . . list_size
. . hri_data_for_roads
. . . crossing_id
. . . hri_phase_data
. . . list_size
. . intersection_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . intersection_phase_data
. . . intersection_phase_number
. . . list_size
. . pedestrian_equipment_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . pedestrian_phase_data
. road_network
. . list_size
. . route_segment_downstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . route_segment_end_point
. . . location_identity
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_start_point
. . . location_identity
. . route_segment_upstream_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. roadway_characteristics
. . link_speed_limit
. . . special_vehicle_speed_limit
. . . . vehicle_class
. . . . vehicle_type
. . . speed_limit
. . median_type
. . number_of_lanes
. . pavement_type
. . shoulder_width
. sensor_allocation
. . sensor_allocation_for_controllers
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . sensor_list
. . . . list_size
. . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . sensor_allocation_for_hov_lanes
. . . hov_lane_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . . sensor_list
. . . . list_size
. . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . sensor_allocation_for_probes
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . vehicle_smart_probe_data_source_identity
. . . . unit_number
. . . vehicle_smart_probe_data_source_location
. . . . location_identity
. . sensor_allocation_for_tags
. . . link_identity
. . . . link_type
. . . . location_identity

. . . . unit_number
. . . list_size
. . . vehicle_tag_data_source_identity
. . . . unit_number
. . . vehicle_tag_data_source_location
. . . . location_identity
. vehicle_signage_output_identity
. . location_identity
. . unit_number
static_data_for_traffic_control_copy
. static_data_for_traffic_control
. . background_strategy
. . . list_size
. . . selected_strategy_data
. . . selected_strategy_type
. . . strategy_date
. . . strategy_day
. . . strategy_end_time
. . . . time
. . . strategy_start_time
. . . . time
. . coordination_rules_for_highways
. . . coordination_rule_data_for_highways
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . coordination_rule_highway_data_description
. . . coordination_rule_highway_data_number
. . . list_size
. . coordination_rules_for_roads
. . . coordination_rule_data_for_roads
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . coordination_rule_road_data_description
. . . coordination_rule_road_data_number
. . . list_size
. . dms_allocation
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . highway_control_devices
. . . crossing_equipment_data_for_highways
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . highway_equipment_data
. . . . dms_allocation
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_start_point
. . . . . location_identity
. . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . indicator_highway_control_static_data
. . . highway_sign_setting_data
. . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . list_size
. . . highway_sign_setting_plans
. . . . highway_sign_plan_data
. . . . . highway_sign_plan_priority
. . . . . highway_sign_plan_purpose
. . . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . highway_sign_plan_number
. . . . list_size
. . indicator_road_control_static_data
. . . indicator_road_adaptive_plans
. . . . crossing_adaptive_data
. . . . indicator_road_adaptive_plan_number
. . . . intersection_adaptive_data
. . . . list_size
. . . . pedestrian_adaptive_data
. . . indicator_road_fixed_plans
. . . . crossing_fixed_time_data
. . . . . crossing_control_commands
. . . . . crossing_cycle_time
. . . . . crossing_offset_time
. . . . indicator_road_fixed_plan_number
. . . . intersection_fixed_time_data
. . . . . intersection_control_commands
. . . . . intersection_cycle_time
. . . . . intersection_offset_time
. . . . list_size
. . . . pedestrian_fixed_time_data
. . . . . pedestrian_control_commands
. . . . . pedestrian_cycle_time
. . . . . pedestrian_offset_time
. . link_data
. . . link_attributes
. . . link_identity
. . . . link_type

. . . . location_identity
. . . . unit_number
. . . link_TMC_identity
. . parking_lot_static_data
. . . list_size
. . . parking_lot_dms_allocation
. . . . list_size
. . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_sensor_allocation
. . . . list_size
. . . . parking_lot_sensor_type
. . . . unit_number
. . . parking_lot_state_thresholds
. . . . parking_lot_decreasing_threshold
. . . . parking_lot_increasing_threshold
. . ramp_devices
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . . ramp_phase_data
. . road_control_devices
. . . crossing_equipment_data_for_roads
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . hri_data_for_roads
. . . . crossing_id
. . . . hri_phase_data
. . . . list_size
. . . intersection_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . intersection_phase_data
. . . . intersection_phase_number
. . . . list_size
. . . pedestrian_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . pedestrian_phase_data
. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . roadway_characteristics
. . . link_speed_limit
. . . . special_vehicle_speed_limit
. . . . . vehicle_class
. . . . . vehicle_type
. . . . speed_limit
. . . median_type
. . . number_of_lanes
. . . pavement_type
. . . shoulder_width
. . sensor_allocation
. . . sensor_allocation_for_controllers
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . . sensor_allocation_for_hov_lanes
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . . sensor_allocation_for_probes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . sensor_allocation_for_tags
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . vehicle_tag_data_source_location
. . . . . location_identity
. . vehicle_signage_output_identity
. . . location_identity
. . . unit_number

static_data_for_traffic_control_output

. static_data_for_traffic_control
. . background_strategy
. . . list_size
. . . selected_strategy_data
. . . selected_strategy_type
. . . strategy_date
. . . strategy_day
. . . strategy_end_time
. . . . time
. . . strategy_start_time
. . . . time
. . coordination_rules_for_highways
. . . coordination_rule_data_for_highways
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number

. . . coordination_rule_highway_data_description
. . . coordination_rule_highway_data_number
. . . list_size
. . coordination_rules_for_roads
. . . coordination_rule_data_for_roads
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . coordination_rule_road_data_description
. . . coordination_rule_road_data_number
. . . list_size
. . dms_allocation
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . highway_control_devices
. . . crossing_equipment_data_for_highways
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . highway_equipment_data
. . . . dms_allocation
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . . location_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_start_point
. . . . . . location_identity
. . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . list_size
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . indicator_highway_control_static_data
. . . highway_sign_setting_data
. . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . list_size
. . . highway_sign_setting_plans
. . . . highway_sign_plan_data
. . . . . highway_sign_plan_priority
. . . . . highway_sign_plan_purpose
. . . . . highway_sign_sequence_data
. . . . . . highway_sign_sequence_purpose
. . . . . . indicator_list
. . . . highway_sign_plan_number
. . . . list_size
. . indicator_road_control_static_data
. . . indicator_road_adaptive_plans
. . . . crossing_adaptive_data
. . . . indicator_road_adaptive_plan_number
. . . . intersection_adaptive_data
. . . . list_size
. . . . pedestrian_adaptive_data
. . . indicator_road_fixed_plans
. . . . crossing_fixed_time_data
. . . . . crossing_control_commands
. . . . . crossing_cycle_time
. . . . . crossing_offset_time
. . . . indicator_road_fixed_plan_number
. . . . intersection_fixed_time_data
. . . . . intersection_control_commands
. . . . . intersection_cycle_time
. . . . . intersection_offset_time
. . . . list_size
. . . . pedestrian_fixed_time_data
. . . . . pedestrian_control_commands
. . . . . pedestrian_cycle_time
. . . . . pedestrian_offset_time
. . link_data
. . . link_attributes
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . link_TMC_identity
. . parking_lot_static_data
. . . list_size
. . . parking_lot_dms_allocation
. . . . list_size
. . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_sensor_allocation
. . . . list_size
. . . . parking_lot_sensor_type
. . . . unit_number
. . . parking_lot_state_thresholds
. . . . parking_lot_decreasing_threshold
. . . . parking_lot_increasing_threshold
. . ramp_devices
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity

. . . . unit_number
. . . ramp_phase_data
. . road_control_devices
. . . crossing_equipment_data_for_roads
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . hri_data_for_roads
. . . . crossing_id
. . . . hri_phase_data
. . . . list_size
. . . intersection_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . intersection_phase_data
. . . . intersection_phase_number
. . . . list_size
. . . pedestrian_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . pedestrian_phase_data
. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . roadway_characteristics
. . . link_speed_limit
. . . . special_vehicle_speed_limit
. . . . . vehicle_class
. . . . . vehicle_type
. . . . speed_limit
. . . median_type
. . . number_of_lanes
. . . pavement_type
. . . shoulder_width
. . sensor_allocation
. . . sensor_allocation_for_controllers
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . . sensor_allocation_for_hov_lanes
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . location_identity
. . . . . sensor_type
. . . . . unit_number
. . . sensor_allocation_for_probes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . sensor_allocation_for_tags
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . vehicle_tag_data_source_location
. . . . . location_identity
. . vehicle_signage_output_identity
. . . location_identity
. . . unit_number

static_data_for_traffic_control_update

. static_data_for_traffic_control
. . background_strategy
. . . list_size
. . . selected_strategy_data
. . . selected_strategy_type
. . . strategy_date
. . . strategy_day
. . . strategy_end_time
. . . . time
. . . strategy_start_time
. . . . time
. . coordination_rules_for_highways
. . . coordination_rule_data_for_highways
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . coordination_rule_highway_data_description
. . . coordination_rule_highway_data_number
. . . list_size
. . coordination_rules_for_roads
. . . coordination_rule_data_for_roads
. . . . highway_sign_plan_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . coordination_rule_road_data_description
. . . coordination_rule_road_data_number
. . . list_size
. . dms_allocation
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . highway_control_devices

Appendix D: Data Tree

. . . crossing_equipment_data_for_highways
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . highway_equipment_data
. . . . dms_allocation
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . . location_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_start_point
. . . . . . location_identity
. . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . list_size
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . indicator_highway_control_static_data
. . . highway_sign_setting_data
. . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . list_size
. . . highway_sign_setting_plans
. . . . highway_sign_plan_data
. . . . . highway_sign_plan_priority
. . . . . highway_sign_plan_purpose
. . . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . highway_sign_plan_number
. . . . list_size
. . indicator_road_control_static_data
. . . indicator_road_adaptive_plans
. . . . crossing_adaptive_data
. . . . indicator_road_adaptive_plan_number
. . . . intersection_adaptive_data
. . . . list_size
. . . . pedestrian_adaptive_data
. . . indicator_road_fixed_plans
. . . . crossing_fixed_time_data
. . . . . crossing_control_commands
. . . . . crossing_cycle_time
. . . . . crossing_offset_time
. . . . indicator_road_fixed_plan_number
. . . . intersection_fixed_time_data
. . . . . intersection_control_commands
. . . . . intersection_cycle_time
. . . . . intersection_offset_time
. . . . list_size
. . . . pedestrian_fixed_time_data
. . . . . pedestrian_control_commands
. . . . . pedestrian_cycle_time
. . . . . pedestrian_offset_time
. . link_data
. . . link_attributes
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . link_TMC_identity
. . parking_lot_static_data
. . . list_size
. . . parking_lot_dms_allocation
. . . . list_size
. . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_sensor_allocation
. . . . list_size
. . . . parking_lot_sensor_type
. . . . unit_number
. . . parking_lot_state_thresholds
. . . . parking_lot_decreasing_threshold
. . . . parking_lot_increasing_threshold
. . ramp_devices
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
. . . ramp_phase_data
. . road_control_devices
. . . crossing_equipment_data_for_roads
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . crossing_phase_data
. . . . list_size
. . . hri_data_for_roads
. . . . crossing_id
. . . . hri_phase_data
. . . . list_size
. . . intersection_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . intersection_phase_data
. . . . intersection_phase_number
. . . . list_size
. . . pedestrian_equipment_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number

. . . . list_size
. . . . pedestrian_phase_data
. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . roadway_characteristics
. . . link_speed_limit
. . . . special_vehicle_speed_limit
. . . . . vehicle_class
. . . . . vehicle_type
. . . . speed_limit
. . . median_type
. . . number_of_lanes
. . . pavement_type
. . . shoulder_width
. . sensor_allocation
. . . sensor_allocation_for_controllers
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . . location_identity
. . . . . . sensor_type
. . . . . . unit_number
. . . sensor_allocation_for_hov_lanes
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . . . location_identity
. . . . . . sensor_type
. . . . . . unit_number
. . . sensor_allocation_for_probes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . sensor_allocation_for_tags
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . vehicle_tag_data_source_location
. . . . . location_identity
. . vehicle_signage_output_identity
. . . location_identity
. . . unit_number
static_data_for_vehicle_signage
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. list_size
. vehicle_signage_output_identity
. . location_identity
. . unit_number
static_data_store_updated
station_id
status_data_for_highways
. indicator_highway_requested_state
. . indicator_control_data_for_highways
. . . indicator_crossing_control_data_for_highways
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_ramp_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . ramp_controls
. . list_size
status_data_for_roads
. indicator_input_state_for_roads
. . indicator_data
. . indicator_type
. . list_size
status_of_other_work_zones
steering_commands
storage_facility_id
stored_credit
stored_incident_data
. current_incident_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. . list_size
. planned_event_data
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
strategy_data
. strategy_data_for_highways

. . crossing_data_for_highways
. . . crossing_close_duration
. . . crossing_close_time
. . . crossing_list
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . hov_priority
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . hov_lane_list
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . link_strategy_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_occupancy
. . . vehicle_queue_length
. strategy_data_for_roads
. . crossing_data_for_roads
. . . crossing_close_duration
. . . crossing_close_time
. . . crossing_list
. . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . hov_priority
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . hov_lane_list
. . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . link_strategy_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_occupancy
. . . vehicle_queue_length
. . pedestrian_data
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . pedestrian_demand
strategy_data_for_highways
. crossing_data_for_highways
. . crossing_close_duration
. . crossing_close_time
. . crossing_list
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. hov_priority
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . hov_lane_list
. . . hov_lane_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. link_strategy_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_occupancy
. . vehicle_queue_length
strategy_data_for_roads
. crossing_data_for_roads
. . crossing_close_duration
. . crossing_close_time
. . crossing_list
. . . crossing_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. hov_priority
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . hov_lane_list
. . . hov_lane_identity
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. link_strategy_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_occupancy
. . vehicle_queue_length
. pedestrian_data
. . indicator_list
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . pedestrian_demand
strategy_date
strategy_day
strategy_end_time

Appendix D: Data Tree

. time
strategy_preemption
strategy_start_time
. time
suggested_route_to_mcv
. route_identity
. route_segment_description
. route_segment_end_point
. . location_identity
. route_segment_estimated_travel_time
. route_segment_report_position_points
. . list_size
. . route_segment_way_point
. . . location_identity
. route_segment_start_point
. . location_identity
. vehicle_id_for_mcv
supplied_route
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_cost
. traveler_identity
supply_incident_static_data
. static_data_for_incident_management
. . highway_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . road_network
. . . list_size
. . . route_segment_downstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
. . . route_segment_upstream_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . road_segment_location
. . . list_size
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_start_point
. . . . location_identity
surface_trans_weather_advisories
surface_trans_weather_archive_catalog
surface_trans_weather_archive_catalog_request
surface_trans_weather_archive_data_request
surface_trans_weather_data_for_archive
. climatic_scale_surface_trans_weather_forecasts
. meso_scale_surface_trans_weather_forecasts
. . surface_trans_weather_advisories
. . surface_trans_weather_forecast_details
. micro_scale_surface_trans_weather_forecasts
. . surface_trans_weather_forecast_details
. miso_scale_surface_trans_weather_forecasts
. . surface_trans_weather_advisories
. . surface_trans_weather_forecast_details
. surface_trans_weather_observations
. surface_trans_weather_scale_forecast_data_attributes
. synoptic_scale_surface_trans_weather_forecasts
. . surface_trans_weather_forecast_details
. weather_observation_attributes
surface_trans_weather_forecast_details
surface_trans_weather_information
. fstws_surface_trans_weather_forecasts
. . climatic_scale_surface_trans_weather_forecasts
. . meso_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_advisories
. . . surface_trans_weather_forecast_details
. . micro_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_forecast_details
. . miso_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_advisories
. . . surface_trans_weather_forecast_details
. . surface_trans_weather_scale_forecast_data_attributes
. . synoptic_scale_surface_trans_weather_forecasts
. . . surface_trans_weather_forecast_details
. fstws_surface_trans_weather_observations
. . surface_trans_weather_observations
. . weather_observation_attributes
surface_trans_weather_observations
surface_trans_weather_scale_forecast_data_attributes
surveillance_data_for_env
. environmental_sensor_data_from_roadway
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions

Appendix D: Data Tree

. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. . station_id
. environmental_sensor_data_from_roadway_sensors
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. environmental_sensor_data_from_traffic_management
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. environmental_sensor_fault_data_from_roadway
. . sensor_fault_data
. . sensor_identity
. . station_id
.
. . list_size
. . sensor_fault_data
. . sensor_identity
. . station_id
. environmental_sensor_status_from_roadway
. . sensor_identity
. . sensor_status
. . . traffic_sensor_status
. . station_id
. environmental_sensor_status_from_roadway_sensors
. . list_size
. . sensor_device_status
. . sensor_identity
. . station_id
synoptic_scale_surface_trans_weather_forecasts
. surface_trans_weather_forecast_details
synoptic_scale_weather_forecasts
. weather_forecast_details
. weather_watches
system_status_onboard_to_mcv_operator
. operational_data_for_mcv
t_other_rw_dms_auto_treat_data_from_roadway
. dms_advisory_text
. . dms_auto_treat_info
. . dms_highway_open_close
. . dms_incident_warning
. . dms_weather_warning
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. lane_dms_controls
. list_size
t_other_rw_env_sensor_control_by_auto_treat_device
. env_sensor_control_by_roadway_treatment_device
t_other_rw_env_sensor_data
. t_other_rw_env_sensor_data_for_auto_treat_device
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions

. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. . station_id
. t_other_rw_env_sensor_data_to_dms
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
t_other_rw_env_sensor_data_for_auto_treat_device
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. sensor_identity
. station_id
t_other_rw_env_sensor_data_to_dms
. environment_sensor_output
. list_size
. sensor_identity
. station_id
t_other_rw_fc_control_to_fc
. indicator_crossing_control_data_for_highways
. . indicator_crossing_controls
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. indicator_ramp_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. . ramp_controls
t_other_rw_fc_control_to_traffic_sensor
t_other_rw_fc_status_to_fc
. indicator_fault
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. indicator_response_state
. list_size
t_other_rw_fc_to_fc
. t_other_rw_fc_control_to_fc
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls
. t_other_rw_fc_status_to_fc
. . indicator_fault
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
t_other_rw_ic_control_to_ic
. indicator_crossing_control_data_for_roads
. . indicator_crossing_controls
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. indicator_junction_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_junction_controls
. . list_size
. indicator_pedestrian_control_data
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_pedestrian_controls
. . list_size
t_other_rw_ic_control_to_traffic_sensor
t_other_rw_ic_status_to_ic
. indicator_fault
. indicator_identity
. . indicator_type
. . location_identity

. . unit_number
. indicator_response_state
. list_size
t_other_rw_ic_to_ic
. t_other_rw_ic_control_to_ic
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size
. t_other_rw_ic_status_to_ic
. . indicator_fault
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
t_other_rw_individual_vehicle_speed_to_dms
t_other_rw_sensor_to_fc
. t_other_rw_traffic_sensor_data_to_fc
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. t_other_rw_traffic_sensor_status_to_fc
. . sensor_status
. . . traffic_sensor_status
t_other_rw_sensor_to_ic
. t_other_rw_traffic_sensor_data_to_ic
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. t_other_rw_traffic_sensor_status_to_ic
. . sensor_status
. . . traffic_sensor_status
t_other_rw_speed_warning_to_dms
t_other_rw_traffic_sensor_data_to_fc
. vehicle_detection_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
t_other_rw_traffic_sensor_data_to_ic
. vehicle_detection_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
t_other_rw_traffic_sensor_status_to_fc
. sensor_status
. . traffic_sensor_status
t_other_rw_traffic_sensor_status_to_ic
. sensor_status
. . traffic_sensor_status
t_other_rw_work_zone_intrusion_detection
. work_zone_intrusion_detection
tada_archive_administration_data
tadu_archive_analysis_results
tadu_archive_data_product
tadu_on_demand_confirmation
tag_data_inputs
. parking_lot_tag_data_input
. . parking_lot_tag_data
. . . credit_identity
. . . date
. . . parking_lot_entry_lane_number
. . . stored_credit
. . . time
. toll_tag_data_input
. . toll_tag_data
. . . credit_identity
. . . stored_credit
. . . toll_segment_identity
. . . . unit_number
tag_data_requests
. parking_lot_tag_data_needed
. toll_tag_data_needed
tag_identity
tam_archive_request
. asset_archive_catalog_request
. asset_archive_data_request
tam_asset_archive_status
tam_asset_status_update_for_asset_mgmt
. auto_treatment_system_status_for_archive
. . auto_treatment_activation_data
. . device_identity
. . list_size
. . station_id
. field_device_status_for_archive
. . auto_treat_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . dms_equip_status_for_m_and_c
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . env_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . har_equip_status_for_m_and_c
. . . har_fault
. . . . har_identity
. . hov_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . indicator_equip_status_from_highways_for_m_and_c
. . . indicator_fault
. . . indicator_type
. . . list_size
. . indicator_equip_status_from_roads_for_m_and_c
. . . indicator_fault

Appendix D: Data Tree

. . . indicator_type
. . . list_size
. . infrastructure_sensor_equip_status_for_m_and_c
. . . infrastructure_sensor_status_for_m_and_c
. . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . . infrastructure_sensor_status_for_mcv
. . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . traffic_sensor_status
. . . . . station_id
. . smart_probe_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . traffic_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . vehicle_sign_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . video_device_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. infrastructure_data_for_archive
. . infrastructure_sensor_data_for_m_and_c
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . mcv_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_mcv
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . infrastructure_sensor_data_from_onboard_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . vehicle_id_for_mcv
. . processed_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_m_and_c
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . mcv_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. m_and_c_activity_schedule_for_archive
. . m_and_c_activity_schedule
. . . fleet_activity_schedule
. . . m_and_c_work_plans
. . . work_zone_activity_plan
. m_and_c_activity_status_for_archive
. . m_and_c_activity_status
. . . m_and_c_fleet_manager_status
. . . . m_and_c_fleet_status
. . . . . current_fleet_maintenance_status
. . . . . date
. . . . . fleet_maintenance_record
. . . . . list_size
. . . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . . mcv_crew_status
. . . . . mcv_equipment_configuration
. . . . . mcv_operator_status
. . . . . mcv_vehicle_type
. . . . . mcv_work_activity_status
. . . . . operational_data_for_mcv
. . . . . safety_data_for_mcv
. . . . . driver_safety_status
. . . . . vehicle_attitude_data
. . . . . vehicle_motion_data
. . . . . vehicle_proximity_data
. . . . . vehicle_safety_status
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . location_identity
. . . . . vehicle_location_for_mcv_tracking
. . . . . date
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . m_and_c_view_of_road_network
. . . . . current_data
. . . . . current_other_routes_use
. . . . . parking_lot_storage_data
. . . . . processed_data
. . . . . sensor_output_data
. . . . . stored_incident_data
. . . . . traffic_flow_state
. . . . . traffic_management_storage_data
. . . . . traffic_video_image_data
. . . . . vehicle_smart_probe_stored_data
. . . . . wide_area_pollution_data
. . . . . env_info_for_road_network
. . . . . road_conditions
. . . . . road_weather_conditions
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_response_status_from_emerg
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway

. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_occupancy
. . . . . link_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . m_and_c_work_performance
. . . materials_availability_for_status
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . storage_facility_id
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv
. m_and_c_maint_resource_needs_for_archive
. . m_and_c_resource_request_from_emerg
. . m_and_c_resource_request_from_traffic
. . resource_needs_from_scheduler
. . . date
. . . list_size
. . . m_and_c_equipment_quantity
. . . m_and_c_equipment_type
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . time
. m_and_c_roadway_maint_needs_for_archive
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . mcv_vehicle_type
. . need_date
. . need_time
. . roadway_maint_plan
. m_and_c_winter_maint_needs_for_archive
. . list_size
. . m_and_c_materials_quantity
. . m_and_c_materials_type
. . mcv_vehicle_type
. . need_date
. . need_time
. . winter_treatment_plan
. work_zone_data_for_archive
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
tam_infrastructure_data_for_analysis
. infrastructure_sensor_data_for_m_and_c
. . infrastructure_sensor_data_from_roadside_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. mcv_infrastructure_sensor_data
. . infrastructure_sensor_data_for_mcv
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . infrastructure_sensor_data_from_onboard_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . vehicle_id_for_mcv
. processed_infrastructure_sensor_data
. . infrastructure_sensor_data_for_m_and_c
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . mcv_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_mcv
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . infrastructure_sensor_data_from_onboard_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . vehicle_id_for_mcv
tbmcv_vehicle_system_control
tbv_change_brake_setting
tbv_change_direction
tbv_change_throttle_setting
tbv_deploy_crash_restraints
tbv_har_broadcast
tbv_steer_left
tbv_steer_right
tbv_steer_straight
tbv_vehicle_security_system_commands
. vehicle_security_system_commands
tcf_care_facility_status_request

tcf_care_facility_vehicle_status_request
tcf_emergency_vehicle_patient_status_update
tci_credentials_data_output
tci_inspection_report
tci_output_log_report
tci_pull_in_information
tci_safety_data_output
tcvd_border_pull_in_output
tcvd_clearance_pull_in_output
tcvd_confirm_data_stored
tcvd_critical_safety_problem
tcvd_data_input_request
tcvd_data_request
tcvd_enrollment_confirmation
tcvd_enrollment_payment_confirmation
tcvd_general_pull_in_output
tcvd_inspection_results
tcvd_on_board_pull_in_output
tcvd_other_data_request
tcvd_output_data
tcvd_output_tag_data
tcvd_route_data
tcvd_routing_instructions
tcvd_safety_pull_in_output
tcvd_type_input_request
tcvm_confirm_enrollment_data_stored
tcvm_data_input_request
tcvm_driver_route_instructions
tcvm_enrollment_confirmation
tcvm_enrollment_payment_confirmation
tcvm_other_data_request
tcvm_output_tag_data
tcvm_preclearance_results
tcvm_roadside_activity_report
tcvm_route_data
tcvoir_credential_status
tcvoir_credentials
tcvoir_safety_status
td_advisory_information
td_broadcast_information
td_dms_indication
td_driving_guidance
td_guidance_input_request
td_guidance_map_update_response
td_guidance_route_details
td_information_for_drivers_in_traffic_FB
. td_dms_indication
. td_lane_use_indication_for_highways
. td_lane_use_indication_for_roads
. td_ramp_state_indication
. td_signal_indication
td_lane_use_indication_for_highways
td_lane_use_indication_for_roads
td_mcv_on_board_display
td_other_services_parking_response
td_other_services_toll_response
td_parking_lot_payment_confirmed
td_parking_lot_payment_invalid
td_ramp_state_indication
td_signal_indication
td_toll_payment_confirmed
td_toll_payment_invalid
td_traffic_advisory_from_mcv
td_work_zone_intrusion_alert
td_work_zone_intrusion_alert_from_mcv
tdmv_parking_lot_violation_identity_code
tdmv_parking_lot_violation_vehicle_license
tdmv_toll_violation_identity_code
tdmv_toll_violation_vehicle_license
tdmv_traffic_violation_identity_code
tdmv_traffic_violation_vehicle_license
tea_accident_data
tea_cv_citation_data
tea_cv_violation_data
tea_enforcement_request_from_m_and_c
tea_enforcement_request_from_traffic
tea_fare_collection_roadside_violation_data
tea_fare_collection_vehicle_violation_data
tea_fare_payment_violation_data
tea_parking_violation_data
tea_speed_sensor_status
. list_size
. sensor_device_status
. sensor_identity
tea_speed_violation_notification
tea_toll_violation_data
tea_traffic_violation_data
tep_decision_support
tep_emergency_dispatch_order
terf_basic_mcv_measures_for_equip_repair
. vehicle_id_for_mcv
. vehicle_system_status
terf_fleet_maintenance_availability
. fleet_maintenance_availability
terf_mdss_recommended_actions
terf_vehicle_utilization_information
. vehicle_utilization_information
teso_archive_status
teso_emergency_action_log_output
teso_emergency_data_output
teso_emergency_vehicle_dispatch_failure
tets_incident_acknowledge
tevp_event_confirmation
tevp_event_information_request
tevp_planned_event_confirmation
tfi_archive_analysis_payment_request
tfi_archive_payment_request
tfi_cv_payment_request
tfi_driver_map_payment_request
tfi_fare_payment_violator_data
tfi_other_services_payment_request
tfi_parking_lot_payment_violator_data
tfi_registration_payment_request
tfi_request_charges_payment
tfi_request_fare_payment
tfi_request_toll_payment
tfi_toll_payment_violator_data
tfi_traveler_display_payment_request
tfi_traveler_map_payment_request
tfi_traveler_other_services_payments_request
tfi_traveler_rideshare_payment_request
tgrs_government_data_report_input
throttle_commands
tifd_freight_request
tifd_intermodal_archive_request
. intermodal_archive_catalog_request
. intermodal_archive_data_request
tifd_intermodal_archive_status
tifs_border_clearance_status
. cvo_border_clearance_info
. . cvo_border_clearance
. . . cv_border_record
. . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_operator_override
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . . time
. . . . list_size

. . . cv_roadside_facility_identity
. . . date
. cvo_border_status_from_other_cvas
. . cvo_border_clearance_info
. . . cvo_border_clearance
. . . . cv_border_record
. . . . . cv_border_override
. . . . . . cv_border_override_code
. . . . . . cv_credentials_details
. . . . . . time
. . . . . cv_border_pull_in_output
. . . . . . cv_border_problem
. . . . . . cv_credentials_details
. . . . . . time
. . . . . list_size
. . . . cv_roadside_facility_identity
. . . . date
time
time_period
time_to_closing
timestamp
. date
. time
tispo_archive_status
tispo_broadcast_data_parameters_output
tispo_route_selection_parameters
tispo_trip_planning_parameters
tm_emergency_information
. incident_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_type
. . incident_vehicles_involved
tm_incident_data
tm_incident_information
tm_m_and_c_work_plans_for_media
. m_and_c_work_plans
tm_pollution_data
tm_road_weather_info
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
tm_roadway_maint_status_for_media
. current_roadway_maintenance_status
tm_traffic_data
tm_traffic_information
tm_transit_emergency_information
tm_transit_incident_information
tm_transit_schedule_deviations_to_media
tm_transit_vehicle_deviations
tm_traveler_information_request
tm_work_zone_images
tm_work_zone_info
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
tmc_identity
tmc_list
. list_size
. tmc_identity
tmcas_m_and_c_administrative_request
tmcas_m_and_c_work_performance
tmcas_resupply_request
tmcas_work_zone_info
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
tmccp_archive_status
tmccp_auto_treat_status
tmccp_env_and_weather_data
. env_and_weather_data
. . env_probe_info
. . . env_probe_info_from_emergency
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_isp
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_total_number
. . . env_probe_info_from_transit
. . . . env_probe_data
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type

. . . . . unit_number
. . . . route_segment_total_number
. . environmental_sensor_data
. . . environmental_sensor_data_from_mcv
. . . . environmental_sensor_data_from_mcv_sensors
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . . environmental_sensor_data_from_roadway
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . environmental_sensor_data_from_roadway_sensors
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . .
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fomcm_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date

. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fstws_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . fws_env_sensor_data
. . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date
. . . . . time
. . . . . date_created
. . . . . date
. . . . . time
. . . . . date_published
. . . . . date
. . . . . time
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . date
. . . . . time
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . surface_trans_weather_information
. . . fstws_surface_trans_weather_forecasts
. . . . climatic_scale_surface_trans_weather_forecasts
. . . . meso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . micro_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . miso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . .
. . . . synoptic_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . fstws_surface_trans_weather_observations
. . . . surface_trans_weather_observations
. . . . weather_observation_attributes
. . weather_service_information
. . . fws_current_weather_observations
. . . . current_weather_observations
. . . . weather_observation_attributes
. . . fws_weather_forecasts
. . . . climatic_scale_weather_forecasts
. . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . weather_scale_forecast_data_attributes
tmccp_env_info_for_dissemination
tmccp_m_and_c_activity_status
. m_and_c_activity_status
. . m_and_c_fleet_manager_status
. . . m_and_c_fleet_status
. . . . current_fleet_maintenance_status
. . . . date
. . . . fleet_maintenance_record
. . . . list_size
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . mcv_crew_status
. . . . mcv_equipment_configuration
. . . . mcv_operator_status
. . . . mcv_vehicle_type
. . . . mcv_work_activity_status
. . . . operational_data_for_mcv

Appendix D: Data Tree

. . . . safety_data_for_mcv
. . . . . driver_safety_status
. . . . . vehicle_attitude_data
. . . . . vehicle_motion_data
. . . . . vehicle_proximity_data
. . . . . vehicle_safety_status
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . . . vehicle_location_for_mcv_tracking
. . . . . date
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . location_identity
. . . m_and_c_view_of_road_network
. . . . current_data
. . . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . roadway_traffic_conditions
. . . . . strategy_data
. . . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . hri_sensor_data
. . . . . pedestrian_sensor_data
. . . . . traffic_sensor_data
. . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . current_incident_data
. . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_avl
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . pollution_state_roadside_collection
. . . . env_info_for_road_network
. . . . . road_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_conditions
. . . . . road_weather_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_response_status_from_emerg
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . m_and_c_work_performance
. . materials_availability_for_status
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . storage_facility_id
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier

. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
tmccp_mdss_recommended_actions
tmccp_processed_env_info
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
tmccp_resource_request
tmccp_scheduled_work_plan
. scheduled_work_plan_for_personnel
. . m_and_c_work_plans
tmccp_vehicle_fleet_status
. vehicle_fleet_status_for_personnel
. . m_and_c_fleet_status
. . . current_fleet_maintenance_status
. . . date
. . . fleet_maintenance_record
. . . list_size
. . . materials_status
. . . . date
. . . . list_size
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . m_and_c_materials_usage_rate
. . . . time
. . . mcv_crew_status
. . . mcv_equipment_configuration
. . . mcv_operator_status
. . . mcv_vehicle_type
. . . mcv_work_activity_status
. . . operational_data_for_mcv
. . . safety_data_for_mcv
. . . . driver_safety_status
. . . . vehicle_attitude_data
. . . . vehicle_motion_data
. . . . vehicle_proximity_data
. . . . vehicle_safety_status
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. . . vehicle_location_for_mcv_tracking
. . . . date
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . m_and_c_view_of_road_network
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . . parking_lot_calculated_occupancy
. . . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . . list_size
. . . . . . parking_lot_list
. . . . . . vehicle_count
. . . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . . list_size
. . . . . . private_vehicle_occupants
. . . . . . ramp_list
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . . link_environment_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . . strategy_data_for_highways
. . . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . . environment_sensor_output
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . hri_sensor_data
. . . . . . closure_event_data
. . . . . . hri_status
. . . . . . intersection_blocked
. . . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . . node_list
. . . . . . node_list
. . . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . . list_size
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . . current_incident_details
. . . . . . list_size
. . . . . planned_event_data
. . . . . . list_size
. . . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . . route_segment_identity
. . . . . . route_segment_journey_time
. . . . . . route_segment_total_number
. . . . . . route_segment_use_prediction

. . . . . current_roadway_network_data
. . . . . . current_highway_network_data
. . . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . link_data_from_avl
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . link_speed
. . . . . . list_size
. . . . . link_data_from_tags
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . list_size
. . . . . ramp_signal_state
. . . . . . list_size
. . . . . . ramp_controls
. . . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . . selected_emergency_vehicle_strategy
. . . . . . selected_parking_lot_control_strategy
. . . . . . selected_ramp_control_strategy
. . . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . . location_identity
. . . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . . vehicle_smart_probe_data_indication
. . . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . . area_air_quality_index
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_roadside_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . env_info_for_road_network
. . . . road_conditions
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . road_segment_conditions
. . . . road_weather_conditions
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_response_status_from_emerg
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size

tmccp_view_of_road_network

. m_and_c_view_of_road_network
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data

. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . . crossing_data_for_highways
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . . crossing_data_for_roads
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . . hri_closure_data_response
. . . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . . incident_description
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . traffic_management_storage_data

. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . env_info_for_road_network
. . . road_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_conditions
. . . road_weather_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_weather_conditions
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_response_status_from_emerg
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size

tmccp_work_zone_images_for_display

. fomcm_work_zone_images
. work_zone_images
. work_zone_intrusion_video_image

tmccp_work_zone_info

tmcfp_dispatch_info

. dispatch_orders_to_mcv
. . date
. . m_and_c_center_identity
. . mcv_dispatch_instructions
. . time
. . vehicle_id_for_mcv
. winter_dispatch_orders_to_mcv
. . date
. . m_and_c_center_identity
. . mcv_winter_dispatch_instructions
. . time
. . vehicle_id_for_mcv

tmcfp_environmental_info

. environmental_sensor_data_on_board
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision

Appendix D: Data Tree

. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
tmcfp_mcv_operational_data
. operational_data_for_mcv
tmcfp_road_network_info
. fomcv_env_conditions
. . environment_sensor_output
. . sensor_identity
. road_network_info_to_mcv
. . m_and_c_view_of_road_network
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . . parking_lot_calculated_occupancy
. . . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . . list_size
. . . . . . parking_lot_list
. . . . . . vehicle_count
. . . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . . list_size
. . . . . . private_vehicle_occupants
. . . . . . ramp_list
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . . link_environment_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . . strategy_data_for_highways
. . . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . . environment_sensor_output
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . hri_sensor_data
. . . . . . closure_event_data
. . . . . . hri_status
. . . . . . intersection_blocked
. . . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . . node_list
. . . . . . node_list
. . . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . . list_size
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . . current_incident_details
. . . . . . list_size
. . . . . planned_event_data
. . . . . . list_size
. . . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . . route_segment_identity
. . . . . . route_segment_journey_time
. . . . . . route_segment_total_number
. . . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . . current_highway_network_data
. . . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . link_data_from_avl
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . link_speed
. . . . . . list_size
. . . . . link_data_from_tags
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . list_size
. . . . . ramp_signal_state
. . . . . . list_size
. . . . . . ramp_controls
. . . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_input_storage_data_for_roads

. . . . . selected_strategy
. . . . . . selected_emergency_vehicle_strategy
. . . . . . selected_parking_lot_control_strategy
. . . . . . selected_ramp_control_strategy
. . . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . . location_identity
. . . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . . vehicle_smart_probe_data_indication
. . . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . . area_air_quality_index
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_roadside_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . env_info_for_road_network
. . . . road_conditions
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . road_segment_conditions
. . . . road_weather_conditions
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_response_status_from_emerg
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
tmcfp_suggested_route
. suggested_route_to_mcv
. . route_identity
. . route_segment_description
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
. . vehicle_id_for_mcv
tmcfp_vehicle_condition_status
. basic_mcv_measures_for_mcv_operator
. . vehicle_system_status
. vehicle_location_for_mcv_operator
. . date
. . time
. . vehicle_location_for_mcv
. . . location_identity
tmcfp_work_zone_intrusion_alert
tmcfp_work_zone_intrusion_alert_from_mcv
tmcfp_work_zone_intrusion_warning
tmcfp_work_zone_on_board_intrusion_warning
tmcfp_work_zone_status_presentation
. status_of_other_work_zones
. work_zone_status_for_display
tmmc_crossing_clear_at_highways
tmmc_crossing_clear_at_roads
tmmc_highway_equipment_status
tmmc_road_equipment_status
tmmc_stop_alternate_mode_at_highways
tmmc_stop_alternate_mode_at_roads
tms_coordination_for_hri
. hri_traffic_surveillance
tms_requests
tmtsp_air_services_request
tmtsp_confirm_multimodal_service
tmtsp_ferry_services_request
tmtsp_m_and_c_work_plans_for_mtsp
. m_and_c_work_plans
tmtsp_multimodal_archive_request
. multimodal_archive_catalog_request
. multimodal_archive_data_request
tmtsp_multimodal_archive_status
tmtsp_non_motorized_services_request
tmtsp_rail_services_request
tmtsp_transit_arrival_changes
tmtsp_transit_arrival_deviations
tmtsp_transit_service_data

Appendix D: Data Tree

tmup_emergency_route_map_request
tmup_map_archive_request
. map_archive_catalog_request
. map_archive_data_request
tmup_map_archive_status
tmup_map_static_data
tmup_request_demand_display_update
tmup_request_emergency_display_update
tmup_request_incident_display_update
tmup_request_m_and_c_display_update
tmup_request_m_and_c_route_map
tmup_request_other_routes_map_update
tmup_request_pollution_display_update
tmup_request_route_selection_map_update
tmup_request_traffic_display_update
tmup_request_traveler_display_update
tmup_request_traveler_display_updates_FB
. tmup_request_traveler_personal_display_update
. . credit_identity
. . traveler_identity
. tmup_request_traveler_personal_display_update_cost
. tmup_traveler_map_update_cost_request
. tmup_traveler_map_update_request
tmup_request_traveler_personal_display_update
. credit_identity
. traveler_identity
tmup_request_traveler_personal_display_update_cost
tmup_transit_map_update_request
tmup_traveler_map_update_cost_request
tmup_traveler_map_update_request
tmup_vehicle_map_update_cost_request
tmup_vehicle_map_update_request
To_Archived_Data_Administrator
. tada_archive_administration_data
To_Archived_Data_User_Systems
. tadu_archive_analysis_results
. tadu_archive_data_product
. tadu_on_demand_confirmation
To_Asset_Management
. tam_archive_request
. . asset_archive_catalog_request
. . asset_archive_data_request
. tam_asset_archive_status
. tam_asset_status_update_for_asset_mgmt
. . auto_treatment_system_status_for_archive
. . . auto_treatment_activation_data
. . . device_identity
. . . list_size
. . . station_id
. . field_device_status_for_archive
. . . auto_treat_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . dms_equip_status_for_m_and_c
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . dms_fault
. . . . . dms_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . env_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . har_equip_status_for_m_and_c
. . . . har_fault
. . . . . har_identity
. . . hov_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . indicator_equip_status_from_highways_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . indicator_equip_status_from_roads_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . infrastructure_sensor_equip_status_for_m_and_c
. . . . infrastructure_sensor_status_for_m_and_c
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . station_id
. . . . infrastructure_sensor_status_for_mcv
. . . . . infrastructure_sensor_status_of_roadside_devices
. . . . . list_size
. . . . . sensor_identity
. . . . . sensor_status
. . . . . station_id
. . . smart_probe_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . traffic_sensor_equip_status_for_m_and_c
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . . vehicle_sign_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . video_device_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . infrastructure_data_for_archive
. . . infrastructure_sensor_data_for_m_and_c
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . mcv_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. . . processed_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_m_and_c
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output

Appendix D: Data Tree

. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . mcv_infrastructure_sensor_data
. . . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv
. . m_and_c_activity_schedule_for_archive
. . . m_and_c_activity_schedule
. . . . fleet_activity_schedule
. . . . m_and_c_work_plans
. . . . work_zone_activity_plan
. . m_and_c_activity_status_for_archive
. . . m_and_c_activity_status
. . . . m_and_c_fleet_manager_status
. . . . . m_and_c_fleet_status
. . . . . current_fleet_maintenance_status
. . . . . date
. . . . . fleet_maintenance_record
. . . . . list_size
. . . . . materials_status
. . . . . mcv_crew_status
. . . . . mcv_equipment_configuration
. . . . . mcv_operator_status
. . . . . mcv_vehicle_type
. . . . . mcv_work_activity_status
. . . . . operational_data_for_mcv
. . . . . safety_data_for_mcv
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . vehicle_location_for_mcv_tracking
. . . . . m_and_c_view_of_road_network
. . . . . current_data
. . . . . env_info_for_road_network
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_response_status_from_emerg
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . link_state_data
. . . . . predicted_road_network_data
. . . . . roadway_environment_conditions
. . . . m_and_c_work_performance
. . . . materials_availability_for_status
. . . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . . storage_facility_id
. . . . work_zone_data_for_status
. . . . . fomcm_work_zone_info
. . . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . . work_zone_status_from_mcv
. . m_and_c_maint_resource_needs_for_archive
. . . m_and_c_resource_request_from_emerg
. . . m_and_c_resource_request_from_traffic
. . . resource_needs_from_scheduler
. . . . date
. . . . list_size
. . . . m_and_c_equipment_quantity
. . . . m_and_c_equipment_type
. . . . m_and_c_materials_quantity
. . . . m_and_c_materials_type
. . . . mcv_vehicle_type
. . . . time
. . m_and_c_roadway_maint_needs_for_archive
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . need_date
. . . need_time
. . . roadway_maint_plan
. . m_and_c_winter_maint_needs_for_archive
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . mcv_vehicle_type
. . . need_date
. . . need_time
. . . winter_treatment_plan
. . work_zone_data_for_archive
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv
. tam_infrastructure_data_for_analysis
. . infrastructure_sensor_data_for_m_and_c
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . mcv_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_mcv
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . infrastructure_sensor_data_from_onboard_devices
. . . . infrastructure_sensor_output
. . . . list_size

. . . . sensor_identity
. . . . vehicle_id_for_mcv
. . processed_infrastructure_sensor_data
. . . infrastructure_sensor_data_for_m_and_c
. . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . mcv_infrastructure_sensor_data
. . . . infrastructure_sensor_data_for_mcv
. . . . . infrastructure_sensor_data_from_roadside_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . infrastructure_sensor_data_from_onboard_devices
. . . . . infrastructure_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . vehicle_id_for_mcv

To_Basic_MC_Vehicle

. tbmcv_vehicle_system_control

To_Basic_Vehicle

. tbv_change_brake_setting
. tbv_change_direction
. tbv_change_throttle_setting
. tbv_deploy_crash_restraints
. tbv_har_broadcast
. tbv_steer_left
. tbv_steer_right
. tbv_steer_straight
. tbv_vehicle_security_system_commands
. . vehicle_security_system_commands

To_Care_Facility

. tcf_care_facility_status_request
. tcf_care_facility_vehicle_status_request
. tcf_emergency_vehicle_patient_status_update

To_Commercial_Vehicle_Driver

. tcvd_border_pull_in_output
. tcvd_clearance_pull_in_output
. tcvd_confirm_data_stored
. tcvd_critical_safety_problem
. tcvd_data_input_request
. tcvd_data_request
. tcvd_enrollment_confirmation
. tcvd_enrollment_payment_confirmation
. tcvd_general_pull_in_output
. tcvd_inspection_results
. tcvd_on_board_pull_in_output
. tcvd_other_data_request
. tcvd_output_data
. tcvd_output_tag_data
. tcvd_route_data
. tcvd_routing_instructions
. tcvd_safety_pull_in_output
. tcvd_type_input_request

To_Commercial_Vehicle_Manager

. tcvm_confirm_enrollment_data_stored
. tcvm_data_input_request
. tcvm_driver_route_instructions
. tcvm_enrollment_confirmation
. tcvm_enrollment_payment_confirmation
. tcvm_other_data_request
. tcvm_output_tag_data
. tcvm_preclearance_results
. tcvm_roadside_activity_report
. tcvm_route_data

To_CVO_Information_Requestor

. tcvoir_credential_status
. tcvoir_credentials
. tcvoir_safety_status

To_CVO_Inspector

. tci_credentials_data_output
. tci_inspection_report
. tci_output_log_report
. tci_pull_in_information
. tci_safety_data_output

To_DMV

. tdmv_parking_lot_violation_identity_code
. tdmv_parking_lot_violation_vehicle_license
. tdmv_toll_violation_identity_code
. tdmv_toll_violation_vehicle_license
. tdmv_traffic_violation_identity_code
. tdmv_traffic_violation_vehicle_license

To_Driver

. td_advisory_information
. td_broadcast_information
. td_driving_guidance
. td_guidance_input_request
. td_guidance_map_update_response
. td_guidance_route_details
. td_information_for_drivers_in_traffic_FB
. . td_dms_indication
. . td_lane_use_indication_for_highways
. . td_lane_use_indication_for_roads
. . td_ramp_state_indication
. . td_signal_indication
. td_mcv_on_board_display
. td_other_services_parking_response
. td_other_services_toll_response
. td_parking_lot_payment_confirmed
. td_parking_lot_payment_invalid
. td_toll_payment_confirmed
. td_toll_payment_invalid
. td_traffic_advisory_from_mcv
. td_work_zone_intrusion_alert
. td_work_zone_intrusion_alert_from_mcv

To_Emergency_Personnel

. tep_decision_support
. tep_emergency_dispatch_order

To_Emergency_System_Operator

. teso_archive_status
. teso_emergency_action_log_output
. teso_emergency_data_output
. teso_emergency_vehicle_dispatch_failure

To_Emergency_Telecommunications_System

. tets_incident_acknowledge

To_Enforcement_Agency

. tea_accident_data
. tea_cv_citation_data
. tea_cv_violation_data
. tea_enforcement_request_from_m_and_c
. tea_enforcement_request_from_traffic
. tea_fare_collection_roadside_violation_data
. tea_fare_collection_vehicle_violation_data
. tea_fare_payment_violation_data
. tea_parking_violation_data
. tea_speed_sensor_status
. . list_size
. . sensor_device_status
. . sensor_identity
. tea_speed_violation_notification
. tea_toll_violation_data
. tea_traffic_violation_data

To_Equipment_Repair_Facility

. terf_basic_mcv_measures_for_equip_repair
. . vehicle_id_for_mcv
. . vehicle_system_status
. terf_fleet_maintenance_availability
. . fleet_maintenance_availability
. terf_mdss_recommended_actions
. terf_vehicle_utilization_information
. . vehicle_utilization_information

To_Event_Promoters

. tevp_event_confirmation
. tevp_event_information_request
. tevp_planned_event_confirmation

Appendix D: Data Tree

To_Financial_Institution
. tfi_archive_analysis_payment_request
. tfi_archive_payment_request
. tfi_cv_payment_request
. tfi_driver_map_payment_request
. tfi_fare_payment_violator_data
. tfi_other_services_payment_request
. tfi_parking_lot_payment_violator_data
. tfi_registration_payment_request
. tfi_request_charges_payment
. tfi_request_fare_payment
. tfi_request_toll_payment
. tfi_toll_payment_violator_data
. tfi_traveler_display_payment_request
. tfi_traveler_map_payment_request
. tfi_traveler_other_services_payments_request
. tfi_traveler_rideshare_payment_request
To_Govt_Reporting_Systems
. tgrs_government_data_report_input
To_Intermodal_Freight_Depot
. tifd_freight_request
. tifd_intermodal_archive_request
. . intermodal_archive_catalog_request
. . intermodal_archive_data_request
. tifd_intermodal_archive_status
To_Intermodal_Freight_Shipper
. tifs_border_clearance_status
. . cvo_border_clearance_info
. . . cvo_border_clearance
. . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_override_code
. . . . . cv_credentials_details
. . . . . time
. . . . . cv_border_pull_in_output
. . . . . cv_border_problem
. . . . . cv_credentials_details
. . . . . time
. . . . . list_size
. . . . cv_roadside_facility_identity
. . . . date
. . cvo_border_status_from_other_cvas
. . . cvo_border_clearance_info
. . . . cvo_border_clearance
. . . . . cv_border_record
. . . . . cv_border_override
. . . . . cv_border_pull_in_output
. . . . . list_size
. . . . . cv_roadside_facility_identity
. . . . . date
To_ISP_Operator
. tispo_archive_status
. tispo_broadcast_data_parameters_output
. tispo_route_selection_parameters
. tispo_trip_planning_parameters
To_Map_Update_Provider
. tmup_emergency_route_map_request
. tmup_map_archive_request
. . map_archive_catalog_request
. . map_archive_data_request
. tmup_map_archive_status
. tmup_map_static_data
. tmup_request_demand_display_update
. tmup_request_emergency_display_update
. tmup_request_incident_display_update
. tmup_request_m_and_c_display_update
. tmup_request_m_and_c_route_map
. tmup_request_other_routes_map_update
. tmup_request_pollution_display_update
. tmup_request_route_selection_map_update
. tmup_request_traffic_display_update
. tmup_request_traveler_display_update
. tmup_request_traveler_display_updates_FB
. . tmup_request_traveler_personal_display_update
. . . credit_identity
. . . traveler_identity
. . tmup_request_traveler_personal_display_update_cost
. . tmup_traveler_map_update_cost_request
. . tmup_traveler_map_update_request
. tmup_transit_map_update_request
. tmup_vehicle_map_update_cost_request
. tmup_vehicle_map_update_request
To_MC_Administrative_Systems
. tmcas_m_and_c_administrative_request
. tmcas_m_and_c_work_performance
. tmcas_resupply_request
. tmcas_work_zone_info
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
To_MC_Center_Personnel
. tmccp_archive_status
. tmccp_auto_treat_status
. tmccp_env_and_weather_data
. . env_and_weather_data
. . . env_probe_info
. . . . env_probe_info_from_emergency
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_total_number
. . . . env_probe_info_from_isp
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_total_number
. . . . env_probe_info_from_transit
. . . . . env_probe_data
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_total_number
. . . environmental_sensor_data
. . . . environmental_sensor_data_from_mcv
. . . . . environmental_sensor_data_from_mcv_sensors
. . . . . environment_sensor_attributes
. . . . . environment_sensor_output
. . . . . sensor_identity
. . . . . station_id
. . . . . environmental_sensor_data_from_roadway
. . . . . environment_sensor_attributes
. . . . . environment_sensor_output
. . . . . sensor_identity

. . . . . station_id
. . . . environmental_sensor_data_from_roadway_sensors
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . .
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . fomcm_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . fstws_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . fws_env_sensor_data
. . . . . environment_sensor_attributes
. . . . . authorization_to_use
. . . . . collection_conditions
. . . . . collection_equipment
. . . . . data_aggregation
. . . . . data_concept_identifier
. . . . . data_reductions
. . . . . data_revision
. . . . . data_version
. . . . . date_archived
. . . . . date_created
. . . . . date_published
. . . . . equipment_status
. . . . . error_handling
. . . . . methods_applied
. . . . . owner_entities
. . . . . perishability_date
. . . . . personal_identification_status
. . . . . quality_control_attribute
. . . . . record_size
. . . . . security
. . . . . standard_data_attribute
. . . . . standard_message_attribute
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . surface_trans_weather_information
. . . . fstws_surface_trans_weather_forecasts
. . . . . climatic_scale_surface_trans_weather_forecasts
. . . . . meso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . . micro_scale_surface_trans_weather_forecasts

. . . . . surface_trans_weather_forecast_details
. . . . . miso_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_advisories
. . . . . surface_trans_weather_forecast_details
. . . . .
. . . . . synoptic_scale_surface_trans_weather_forecasts
. . . . . surface_trans_weather_forecast_details
. . . . fstws_surface_trans_weather_observations
. . . . . surface_trans_weather_observations
. . . . . weather_observation_attributes
. . . weather_service_information
. . . . fws_current_weather_observations
. . . . . current_weather_observations
. . . . . weather_observation_attributes
. . . . fws_weather_forecasts
. . . . . climatic_scale_weather_forecasts
. . . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . . weather_scale_forecast_data_attributes
. tmccp_env_info_for_dissemination
. tmccp_m_and_c_activity_status
. . m_and_c_activity_status
. . . m_and_c_fleet_manager_status
. . . . m_and_c_fleet_status
. . . . . current_fleet_maintenance_status
. . . . . date
. . . . . fleet_maintenance_record
. . . . . list_size
. . . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . . mcv_crew_status
. . . . . mcv_equipment_configuration
. . . . . mcv_operator_status
. . . . . mcv_vehicle_type
. . . . . mcv_work_activity_status
. . . . . operational_data_for_mcv
. . . . . safety_data_for_mcv
. . . . . driver_safety_status
. . . . . vehicle_attitude_data
. . . . . vehicle_motion_data
. . . . . vehicle_proximity_data
. . . . . vehicle_safety_status
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . location_identity
. . . . . vehicle_location_for_mcv_tracking
. . . . . date
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . m_and_c_view_of_road_network
. . . . . current_data
. . . . . current_other_routes_use
. . . . . parking_lot_storage_data
. . . . . processed_data
. . . . . sensor_output_data
. . . . . stored_incident_data
. . . . . traffic_flow_state
. . . . . traffic_management_storage_data
. . . . . traffic_video_image_data
. . . . . vehicle_smart_probe_stored_data
. . . . . wide_area_pollution_data
. . . . . env_info_for_road_network
. . . . . road_conditions
. . . . . road_weather_conditions
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_response_status_from_emerg
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_occupancy
. . . . . link_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . m_and_c_work_performance
. . . materials_availability_for_status
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . storage_facility_id
. . . work_zone_data_for_status
. . . . fomcm_work_zone_info
. . . . work_zone_device_status
. . . . . device_fault
. . . . . device_identity
. . . . . device_status
. . . . . list_size
. . . . work_zone_intrusion_warning_data
. . . . . roadside_crew_warning_given
. . . . . work_zone_intrusion_alert
. . . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . . work_zone_intrusion_video_image
. . . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . . work_zone_resource_status
. . . . . work_zone_equipment_status
. . . . . work_zone_identifier
. . . . . work_zone_personnel_status
. . . . . work_zone_vehicle_status
. . . . work_zone_status_from_mcv
. tmccp_mdss_recommended_actions
. tmccp_processed_env_info
. . road_conditions
. . . link_identity
. . . . link_type

. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. tmccp_resource_request
. tmccp_scheduled_work_plan
. . scheduled_work_plan_for_personnel
. . . m_and_c_work_plans
. tmccp_vehicle_fleet_status
. . vehicle_fleet_status_for_personnel
. . . m_and_c_fleet_status
. . . . current_fleet_maintenance_status
. . . . date
. . . . fleet_maintenance_record
. . . . list_size
. . . . materials_status
. . . . . date
. . . . . list_size
. . . . . m_and_c_materials_quantity
. . . . . m_and_c_materials_type
. . . . . m_and_c_materials_usage_rate
. . . . . time
. . . . mcv_crew_status
. . . . mcv_equipment_configuration
. . . . mcv_operator_status
. . . . mcv_vehicle_type
. . . . mcv_work_activity_status
. . . . operational_data_for_mcv
. . . . safety_data_for_mcv
. . . . . driver_safety_status
. . . . . vehicle_attitude_data
. . . . . vehicle_motion_data
. . . . . vehicle_proximity_data
. . . . . vehicle_safety_status
. . . . time
. . . . vehicle_id_for_mcv
. . . . vehicle_location_for_mcv
. . . . . location_identity
. . . . vehicle_location_for_mcv_tracking
. . . . . date
. . . . . time
. . . . . vehicle_id_for_mcv
. . . . . vehicle_location_for_mcv
. . . . . location_identity
. . . m_and_c_view_of_road_network
. . . . current_data
. . . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . roadway_traffic_conditions
. . . . . strategy_data
. . . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . hri_sensor_data
. . . . . pedestrian_sensor_data
. . . . . traffic_sensor_data
. . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . current_incident_data
. . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_avl
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . pollution_state_roadside_collection
. . . . env_info_for_road_network
. . . . . road_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_conditions
. . . . . road_weather_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_response_status_from_emerg
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity

Appendix D: Data Tree

. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. tmccp_view_of_road_network
. . m_and_c_view_of_road_network
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_list
. . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . node_list
. . . . . node_list
. . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . list_size
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . current_incident_details
. . . . . list_size
. . . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location

. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . env_info_for_road_network
. . . . road_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_conditions
. . . . road_weather_conditions
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_response_status_from_emerg
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. tmccp_work_zone_images_for_display
. . fomcm_work_zone_images
. . work_zone_images
. . work_zone_intrusion_video_image
. tmccp_work_zone_info
To_MC_Field_Personnel
. tmcfp_dispatch_info
. . dispatch_orders_to_mcv
. . . date
. . . m_and_c_center_identity
. . . mcv_dispatch_instructions
. . . time
. . . vehicle_id_for_mcv
. . winter_dispatch_orders_to_mcv
. . . date
. . . m_and_c_center_identity
. . . mcv_winter_dispatch_instructions
. . . time
. . . vehicle_id_for_mcv
. tmcfp_environmental_info
. . environmental_sensor_data_on_board
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . sensor_identity
. tmcfp_mcv_operational_data
. . operational_data_for_mcv
. tmcfp_road_network_info
. . fomcv_env_conditions
. . . environment_sensor_output
. . . sensor_identity
. . road_network_info_to_mcv
. . . m_and_c_view_of_road_network
. . . . current_data
. . . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_state
. . . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . o_d_matrix
. . . . . parking_lot_input_data

. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . roadway_traffic_conditions
. . . . . strategy_data
. . . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . hri_sensor_data
. . . . . pedestrian_sensor_data
. . . . . traffic_sensor_data
. . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . current_incident_data
. . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_avl
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . pollution_state_roadside_collection
. . . . env_info_for_road_network
. . . . . road_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_conditions
. . . . . road_weather_conditions
. . . . . link_identity
. . . . . list_size
. . . . . road_segment_weather_conditions
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_response_status_from_emerg
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. tmcfp_suggested_route
. . suggested_route_to_mcv
. . . route_identity
. . . route_segment_description
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_travel_time
. . . route_segment_report_position_points
. . . . list_size
. . . . route_segment_way_point
. . . . . location_identity
. . . route_segment_start_point
. . . . location_identity
. . . vehicle_id_for_mcv
. tmcfp_vehicle_condition_status
. . basic_mcv_measures_for_mcv_operator
. . . vehicle_system_status
. . vehicle_location_for_mcv_operator
. . . date
. . . time
. . . vehicle_location_for_mcv
. . . . location_identity
. tmcfp_work_zone_intrusion_alert
. tmcfp_work_zone_intrusion_alert_from_mcv
. tmcfp_work_zone_intrusion_warning
. tmcfp_work_zone_on_board_intrusion_warning
. tmcfp_work_zone_status_presentation
. . status_of_other_work_zones
. . work_zone_status_for_display

To_Media

. tm_emergency_information
. . incident_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_type
. . . incident_vehicles_involved
. tm_incident_data
. tm_incident_information
. tm_m_and_c_work_plans_for_media
. . m_and_c_work_plans
. tm_pollution_data
. tm_road_weather_info
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. tm_roadway_maint_status_for_media

. . current_roadway_maintenance_status
. tm_traffic_data
. tm_traffic_information
. tm_transit_emergency_information
. tm_transit_incident_information
. tm_transit_schedule_deviations_to_media
. tm_transit_vehicle_deviations
. tm_traveler_information_request
. tm_work_zone_images
. tm_work_zone_info
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv

To_Multimodal_Crossings

. tmmc_crossing_clear_at_highways
. tmmc_crossing_clear_at_roads
. tmmc_highway_equipment_status
. tmmc_road_equipment_status
. tmmc_stop_alternate_mode_at_highways
. tmmc_stop_alternate_mode_at_roads

To_Multimodal_Transportation_Service_Provider

. tmtsp_air_services_request
. tmtsp_confirm_multimodal_service
. tmtsp_ferry_services_request
. tmtsp_m_and_c_work_plans_for_mtsp
. . m_and_c_work_plans
. tmtsp_multimodal_archive_request
. . multimodal_archive_catalog_request
. . multimodal_archive_data_request
. tmtsp_multimodal_archive_status
. tmtsp_non_motorized_services_request
. tmtsp_rail_services_request
. tmtsp_transit_arrival_changes
. tmtsp_transit_arrival_deviations
. tmtsp_transit_service_data

To_Other_Archives

. toa_archive_coordination_data

To_Other_CVAS

. tocvas_border_clearance
. tocvas_credentials
. tocvas_credentials_status
. tocvas_data_table
. tocvas_safety_inspection
. tocvas_safety_status

To_Other_Data_Sources

. tods_other_data_source_archive_request
. . other_data_source_catalog_request
. . user_defined_data_request
. tods_other_data_source_archive_status

To_Other_EM

. toec_incident_data_FB
. . toec_emergency_center_identity
. . . emergency_center_identity
. . toec_incident_details
. . . incident_confidence_level
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_report_source
. . . incident_reported_time
. . . . time
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_status
. . . . incident_vehicles_involved
. . . incident_traffic_impact
. . . incident_type
. . toec_incident_response_coordination
. . . agency_incident_response_procedures
. . . hand_off_coordination
. . . incident_resource_coordination
. . . incident_response_status
. . . staging_area
. toec_mayday_emergency_data
. . driver_status_update
. . emergency_request_driver_details
. . . date
. . . driver_personal_emergency_request
. . . . call_back_information
. . . . driver_information
. . . . vehicle_identity
. . . . vehicle_location_for_emergencies
. . . . . location_identity
. . . . vehicle_status_details
. . . . . vehicle_security_status
. . . . . vehicle_system_status
. . . time
. . emergency_request_vehicle_details
. . . date
. . . time
. . . vehicle_emergency_request
. . . . processed_cargo_data
. . . . vehicle_crash_sensor_data
. . . . vehicle_identity
. . . . vehicle_location_for_incidents
. . . . . location_identity
. . . . vehicle_status_details
. . . . . vehicle_security_status
. . . . . vehicle_system_status
. . mayday_agency_ID
. . vehicle_status_update

To_Other_ISP

. toisp_data_supply
. . road_data
. toisp_request_data
. toisp_traffic_data_request
. toisp_traffic_information
. . current_data_for_retrieval
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size

. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . long_term_data_for_retrieval
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage

Appendix D: Data Tree

. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . planned_events
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . predictive_model_data_for_retrieval
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . predicted_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_road_network_use
. . . . route_segment_guided_vehicles
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . source_identity
. toisp_transit_data_request
. toisp_transit_information
. . transit_incident_data
. . transit_running_data_for_advisory_output
. . . list_size
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . . transit_vehicle_running_times
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. . traveler_transit_information_advisory_data
. . . traveler_transit_information_data
. . . . transit_running_data_for_advisory_output
. . . . . list_size
. . . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . transit_vehicle_identity
. . . . transit_services_for_advisory_data
. . . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . transit_schedule_data
. . traveler_transit_information_broadcast_data

. . . traveler_transit_information_data
. . . . transit_running_data_for_advisory_output
. . . . . list_size
. . . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . transit_vehicle_identity
. . . . transit_services_for_advisory_data
. . . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . transit_schedule_data

To_Other_MCM

. tomcm_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. tomcm_m_and_c_plan_feedback
. tomcm_m_and_c_work_plans
. tomcm_resource_coordination_data
. tomcm_road_weather_info
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. tomcm_roadway_maint_status
. . current_roadway_maintenance_status
. tomcm_work_zone_images
. . fomcm_work_zone_images
. . work_zone_images
. . work_zone_intrusion_video_image
. tomcm_work_zone_info
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv

To_Other_MCV

. tomcv_crew_movements
. tomcv_env_conditions
. . environment_sensor_output
. . sensor_identity
. tomcv_vehicle_operational_data
. . operational_data_for_mcv
. . vehicle_id_for_mcv
. tomcv_work_zone_intrusion_alert_on_board
. tomcv_work_zone_intrusion_detection_on_board
. tomcv_work_zone_intrusion_warning_to_crew

To_Other_Parking

. top_parking_coordination_data

To_Other_RS

. tors_device_control
. . t_other_rw_fc_control_to_fc
. . . indicator_crossing_control_data_for_highways
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_ramp_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . ramp_controls
. . t_other_rw_ic_control_to_ic
. . . indicator_crossing_control_data_for_roads
. . . . indicator_crossing_controls
. . . . indicator_identity

. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_junction_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_junction_controls
. . . . list_size
. . . indicator_pedestrian_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_pedestrian_controls
. . . . list_size
. tors_device_status
. . t_other_rw_fc_status_to_fc
. . . indicator_fault
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_response_state
. . . list_size
. . t_other_rw_ic_status_to_ic
. . . indicator_fault
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_response_state
. . . list_size
. tors_roadway_info_data_from_devices
. . t_other_rw_dms_auto_treat_data_from_roadway
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . list_size
. tors_roadway_info_data_from_sensors
. . t_other_rw_env_sensor_data_to_dms
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . t_other_rw_individual_vehicle_speed_to_dms
. . t_other_rw_speed_warning_to_dms
. tors_sensor_control
. . t_other_rw_env_sensor_control_by_auto_treat_device
. . . env_sensor_control_by_roadway_treatment_device
. . t_other_rw_fc_control_to_traffic_sensor
. . t_other_rw_ic_control_to_traffic_sensor
. tors_sensor_data
. . t_other_rw_env_sensor_data_for_auto_treat_device
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . sensor_identity
. . . station_id
. . t_other_rw_traffic_sensor_data_to_fc
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . t_other_rw_traffic_sensor_data_to_ic
. . . vehicle_detection_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . t_other_rw_work_zone_intrusion_detection
. . . work_zone_intrusion_detection
. tors_sensor_status
. . t_other_rw_traffic_sensor_status_to_fc
. . . sensor_status
. . . . traffic_sensor_status
. . t_other_rw_traffic_sensor_status_to_ic
. . . sensor_status
. . . . traffic_sensor_status

To_Other_TM

. totc_request_other_TMC_data_FB
. . totc_data_request
. . . other_TMC_data_request
. . . other_TMC_incidents_request
. . . . request_other_current_incidents_data
. . . . request_other_planned_events_data
. . totc_identity
. . . tmc_identity
. totc_transfer_local_TMC_data_FB
. . totc_identity
. . . tmc_identity
. . totc_traffic_control_and_status
. . . control_data_for_highways
. . . . dms_data
. . . . . indicator_sign_control_data
. . . . . dms_advisory_text
. . . . . indicator_identity
. . . . . lane_dms_controls
. . . . . parking_lot_dms_controls
. . . . . pollution_output_message
. . . . . indicator_sign_control_data_for_hri
. . . . . crossing_id
. . . . . hri_sign_control_data
. . . . . list_size
. . . . har_data
. . . . . har_identity
. . . . . har_management_data
. . . . . har_mode
. . . . . har_schedule

Appendix D: Data Tree

. . . . . har_program
. . . . indicator_highway_requested_state
. . . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_ramp_control_data
. . . . . list_size
. . . control_data_for_roads
. . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . list_size
. . . . . indicator_junction_control_data
. . . . . indicator_identity
. . . . . indicator_junction_controls
. . . . . list_size
. . . . . indicator_pedestrian_control_data
. . . . . indicator_identity
. . . . . indicator_pedestrian_controls
. . . . . list_size
. . . roadway_information_data
. . . . dms_data
. . . . . indicator_sign_control_data
. . . . . dms_advisory_text
. . . . . indicator_identity
. . . . . lane_dms_controls
. . . . . parking_lot_dms_controls
. . . . . pollution_output_message
. . . . . indicator_sign_control_data_for_hri
. . . . . crossing_id
. . . . . hri_sign_control_data
. . . . . list_size
. . . . har_data
. . . . . har_identity
. . . . . har_management_data
. . . . . har_mode
. . . . . har_schedule
. . . . . har_program
. . . roadway_information_status
. . . . dms_status
. . . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . . dms_fault
. . . . . dms_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . dms_updates
. . . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . har_status
. . . . . device_status
. . . . . har_fault
. . . . . har_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . status_data_for_highways
. . . . indicator_highway_requested_state
. . . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_ramp_control_data
. . . . . list_size
. . . status_data_for_roads
. . . . indicator_input_state_for_roads
. . . . . indicator_data
. . . . . indicator_type
. . . . . list_size
. . totc_transfer_data
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_list
. . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . intersection_blocked
. . . . . rail_schedules_data

Appendix D: Data Tree

. . . . . pedestrian_sensor_data
. . . . . . node_list
. . . . . . node_list
. . . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . . list_size
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data
. . . . . . current_incident_details
. . . . . . list_size
. . . . . planned_event_data
. . . . . . list_size
. . . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . . route_segment_identity
. . . . . . route_segment_journey_time
. . . . . . route_segment_total_number
. . . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . . current_highway_network_data
. . . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . . hov_lane_vehicle_count
. . . . . . hov_lane_violation_count
. . . . . . list_size
. . . . . link_data_from_avl
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . link_speed
. . . . . . list_size
. . . . . link_data_from_tags
. . . . . . link_journey_time
. . . . . . link_queue_time
. . . . . . list_size
. . . . . ramp_signal_state
. . . . . . list_size
. . . . . . ramp_controls
. . . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . . selected_emergency_vehicle_strategy
. . . . . . selected_parking_lot_control_strategy
. . . . . . selected_ramp_control_strategy
. . . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . . location_identity
. . . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . . vehicle_smart_probe_data_indication
. . . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . . area_air_quality_index
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . . current_carbon_monoxide_pollution
. . . . . . current_hydrocarbon_pollution
. . . . . . current_nitrous_oxide_pollution
. . . . . . current_ozone_pollution
. . . . . . current_particulate_pollution
. . . . . . current_roadside_pollution_location
. . . . . . current_sulfur_dioxide_pollution
. . . cv_incidents_for_other_TMC
. . . . permit_route_plan
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . load_description
. . . . permit_traffic_controls
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy
. . . . permit_type
. . . emergency_data_for_other_TMC
. . . . emergency_traffic_control_request
. . . . . date
. . . . . list_size
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . time
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . long_term_data
. . . . historical_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . historical_parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . . parking_lot_calculated_occupancy
. . . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_lot_state
. . . . historical_processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length

. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . historical_stored_incident_data
. . . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . list_size
. . . . historical_traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . historical_traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . historical_vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . historical_wide_area_pollution_data
. . . . . historical_pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . historical_pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . list_size
. . . . o_d_matrix
. . . permit_coordination
. . . . date
. . . . permit_route_plan
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . load_description
. . . . permit_traffic_controls
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . . permit_type
. . . . time
. . . planned_events_local_data
. . . . crossing_closure_schedule
. . . . list_size
. . . . planned_events_data
. . . . . crossing_closure_schedule
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . tmc_identity

To_Other_Toll_Administration

. tota_toll_charges_reconciliation_data
. tota_toll_pricing_data

To_Other_TRM

. totrm_transit_services
. . traffic_incident_data_for_transit
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . transit_fare_data
. . . list_size
. . . transit_fares
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list

. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_use_time
. . . . transit_user_category
. . transit_services_for_advisory_data
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . transit_vehicle_advisory_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_deviations_details
. . . transit_vehicle_collected_trip_data
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . transit_vehicle_deviation_update
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_location
. . . . transit_vehicle_identity
. . . . transit_vehicle_location_data
. . . . . location_identity
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. . transit_vehicle_passenger_data
. . . transit_passenger_numbers
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
. . . transit_vehicle_fare_collection_data
. . . . list_size
. . . . transit_fare_collection_data
. . . . . transit_fare
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . transit_vehicle_identity
To_Other_Vehicle
To_Parking_Operator
. tpo_archive_status
. tpo_change_lot_state
. tpo_parking_lot_charge_change_request
. tpo_request_advanced_parking_payment
. tpo_transaction_reports
To_Pedestrians
. tp_cross_request_received
. tp_cross_road
. tp_dms_indication
To_Rail_Operations
. tro_equipment_status
. tro_event_schedules
. tro_incident_notification
. tro_m_and_c_work_plans_for_rail
. tro_railroad_schedule_feedback
. tro_road_weather_info
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
To_Storage_Facility
. tsf_equipment_availability_request
. tsf_materials_status_request
To_Surface_Transportation_Weather_Service
. tstws_archive_request
. . surface_trans_weather_archive_catalog_request
. . surface_trans_weather_archive_data_request
. tstws_asset_treatment_info
. tstws_env_info
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. tstws_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment

Appendix D: Data Tree

. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. tstws_env_sensor_data_from_traffic
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. tstws_roadway_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. tstws_roadway_env_sensor_status
. . list_size
. . sensor_device_status
. . sensor_identity
. . station_id
. tstws_trans_weather_archive_status
. tstws_trans_weather_info_request

To_Toll_Administrator

. tta_archive_status
. tta_request_advanced_toll
. tta_toll_price_changes_request
. tta_transaction_reports

To_Toll_Operator

. tto_transaction_reports

To_Trade_Reg_Agencies

. ttra_border_clearance_status
. ttra_domestic_transportation_information
. ttra_transportation_border_clearance

To_Traffic_Operations_Personnel

. ttop_archive_status
. ttop_current_indicator_faults
. ttop_current_sensor_faults
. ttop_demand_management_outputs_FB
. . ttop_demand_data
. . ttop_demand_forecast_data
. . ttop_demand_forecast_result
. . ttop_demand_policy_activation_result
. . ttop_demand_policy_information
. ttop_incident_management_outputs_FB
. . ttop_defined_incident_responses_data
. . ttop_incident_information_display
. . ttop_incident_video_image_output
. . ttop_possible_defined_response_output
. . ttop_possible_incidents_data
. . ttop_undefined_response_details
. ttop_pollution_data_display
. ttop_resource_response
. ttop_traffic_control_information_display
. ttop_video_image_output
. ttop_weather_information
. ttop_wrong_way_detection

To_Transit_Driver

. ttd_batch_mode_data_transfer_status
. ttd_corrective_instructions
. ttd_emergency_information

Appendix D: Data Tree

. ttd_paratransit_information
. ttd_request_fare_transaction_mode_set_up
. ttd_route_assignments
. ttd_transit_vehicle_schedule_deviations
To_Transit_Fleet_Manager
. ttfm_coordination_request
. ttfm_parameters
. ttfm_paratransit_service
. ttfm_passenger_loading_error
. ttfm_proposed_corrections
. ttfm_response_parameter_output
. ttfm_technician_information
. ttfm_transaction_reports
. ttfm_transit_driver_information
. ttfm_transit_services_output
. ttfm_transit_vehicle_data
. ttfm_transit_vehicle_maintenance_information
To_Transit_Maintenance_Personnel
. ttmp_work_schedule
To_Transit_System_Operators
. ttso_archive_status
. ttso_emergency_request
. ttso_media_parameters
. ttso_potential_incidents_alarm
. ttso_potential_security_problem
. ttso_transaction_reports
. ttso_transit_fare_output
. ttso_video_image_data
To_Transit_User
. ttu_advisory_information
. ttu_other_services_roadside_confirmed
. ttu_other_services_vehicle_confirmed
. ttu_roadside_access_message
. ttu_roadside_payment_confirmed
. ttu_transit_information
. ttu_transit_vehicle_information
. ttu_traveler_information
. ttu_vehicle_access_message
. ttu_vehicle_payment_confirmed
To_Traveler
. tt_emergency_message
. tt_emergency_response
. tt_extra_trip_data_request
. tt_guidance
. tt_guidance_input_request
. tt_guidance_map_update_response
. tt_guidance_route_details
. tt_personal_extra_trip_data_request
. tt_personal_trip_planning_responses
. tt_trip_planning_responses
To_Traveler_Card
. ttc_debited_driver_payment_at_vehicle
. ttc_debited_fare_payment_at_roadside
. ttc_debited_payment_at_parking_lot
. ttc_debited_payment_at_personal_device
. ttc_debited_payment_at_toll_plaza
. ttc_debited_payment_on_transit_vehicle
. ttc_debited_transit_user_payment_at_roadside
. ttc_debited_transit_user_payment_at_vehicle
. ttc_debited_traveler_parking_payment
. ttc_debited_traveler_payment_at_roadside
. ttc_request_fare_payment_at_roadside
. ttc_request_fare_payment_on_transit_vehicle
. ttc_request_payment_at_parking_lot
. ttc_request_payment_at_toll_plaza
. ttc_request_traveler_parking_payment
. ttc_traveler_personal_information_update
. ttc_traveler_remote_personal_information_update
To_Wayside_Equipment
. twe_hri_status
. twe_stop_highway_indication
. twe_stop_train_indication
To_Weather_Service
. tws_env_info
. . road_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_conditions
. . road_weather_conditions
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . road_segment_weather_conditions
. tws_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. tws_env_sensor_data_from_traffic
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date

. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. tws_roadway_env_sensor_data
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. tws_roadway_env_sensor_status
. . list_size
. . sensor_device_status
. . sensor_identity
. . station_id
. tws_weather_archive_request
. . weather_archive_catalog_request
. . weather_archive_data_request
. tws_weather_archive_status

To_Yellow_Pages_Service_Providers

. typsp_provider_update_confirm
. typsp_transaction_request
. typsp_yellow_pages_info_request

toa_archive_coordination_data

tocvas_border_clearance

tocvas_credentials

tocvas_credentials_status

tocvas_data_table

tocvas_safety_inspection

tocvas_safety_status

tods_other_data_source_archive_request

. other_data_source_catalog_request
. user_defined_data_request

tods_other_data_source_archive_status

toec_emergency_center_identity

. emergency_center_identity

toec_incident_data_FB

. toec_emergency_center_identity
. . emergency_center_identity
. toec_incident_details
. . incident_confidence_level
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_report_source
. . incident_reported_time
. . . time
. . incident_severity
. . incident_start_time
. . . time
. . incident_status
. . . incident_vehicles_involved
. . incident_traffic_impact
. . incident_type
. toec_incident_response_coordination
. . agency_incident_response_procedures
. . hand_off_coordination
. . incident_resource_coordination
. . incident_response_status
. . staging_area

toec_incident_details

. incident_confidence_level
. incident_description
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_number
. incident_report_source
. incident_reported_time
. . time
. incident_severity
. incident_start_time
. . time
. incident_status
. . incident_vehicles_involved
. incident_traffic_impact
. incident_type

toec_incident_response_coordination

. agency_incident_response_procedures
. hand_off_coordination
. incident_resource_coordination
. incident_response_status
. staging_area

toec_mayday_emergency_data

. driver_status_update
. emergency_request_driver_details
. . date
. . driver_personal_emergency_request
. . . call_back_information
. . . driver_information
. . . vehicle_identity
. . . vehicle_location_for_emergencies
. . . . location_identity
. . . vehicle_status_details
. . . . vehicle_security_status
. . . . vehicle_system_status
. . time
. emergency_request_vehicle_details
. . date
. . time
. . vehicle_emergency_request
. . . processed_cargo_data
. . . vehicle_crash_sensor_data
. . . vehicle_identity
. . . vehicle_location_for_incidents
. . . . location_identity

. . . vehicle_status_details
. . . . vehicle_security_status
. . . . vehicle_system_status
. mayday_agency_ID
. vehicle_status_update
toisp_data_supply
. road_data
toisp_request_data
toisp_traffic_data_request
toisp_traffic_information
. current_data_for_retrieval
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. long_term_data_for_retrieval
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time

. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. planned_events
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. predictive_model_data_for_retrieval
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . predicted_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_road_network_use
. . . route_segment_guided_vehicles
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. source_identity
toisp_transit_data_request
toisp_transit_information
. transit_incident_data
. transit_running_data_for_advisory_output
. . list_size
. . transit_vehicle_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity

. . . transit_vehicle_passengers
. . transit_vehicle_running_times
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. traveler_transit_information_advisory_data
. . traveler_transit_information_data
. . . transit_running_data_for_advisory_output
. . . . list_size
. . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . time
. . . . . transit_vehicle_identity
. . . transit_services_for_advisory_data
. . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_number
. . . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_list
. . . . . transit_schedule_identity
. traveler_transit_information_broadcast_data
. . traveler_transit_information_data
. . . transit_running_data_for_advisory_output
. . . . list_size
. . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . time
. . . . . transit_vehicle_identity
. . . transit_services_for_advisory_data
. . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_number
. . . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_list
. . . . . transit_schedule_identity
toll_archive_catalog
toll_archive_catalog_request
toll_archive_data
. toll_archive_catalog
. toll_data_for_archive
. . toll_operational_data
. . . date
. . . list_size
. . . time
. . . toll_cost
. . . toll_segment_identity
. . . . unit_number
. . . toll_segment_users
. . toll_operational_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . toll_prices_for_archive
. . . list_size
. . . toll_price
. . . toll_price_application_time
. . . toll_segment_identity
. . . . unit_number
. . . vehicle_type_for_tolls
. . . . cv_tag_data

. . . . . cv_carrier_number
. . . . . cv_driver_number
. . . . . cv_vehicle_number
. . . . cv_vehicle_characteristics
. . . . . cv_vehicle_configuration
. . . . . cv_vehicle_size
. . . . . cv_vehicle_weight
. . . . vehicle_identity
. . . . vehicle_type
. . toll_prices_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
toll_archive_data_request
toll_archive_input
. toll_archive_request
. . toll_archive_catalog_request
. . toll_archive_data_request
. toll_archive_status
toll_archive_request
. toll_archive_catalog_request
. toll_archive_data_request
toll_archive_status
toll_bad_payment_check_request
. credit_identity
. cv_carrier_number
toll_bad_payment_check_response
. confirmation_flag
. credit_identity
. cv_carrier_number
toll_charge
. cv_carrier_number
. cv_vehicle_number
. toll_cost
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. toll_tag_data
. . credit_identity
. . stored_credit
. . toll_segment_identity
. . . unit_number
. vehicle_identity
. vehicle_type
toll_cost
toll_data_archive
. toll_archive_catalog
. toll_operational_data
. . date
. . list_size
. . time
. . toll_cost
. . toll_segment_identity
. . . unit_number
. . toll_segment_users
. toll_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. toll_prices_for_archive
. . list_size
. . toll_price
. . toll_price_application_time
. . toll_segment_identity
. . . unit_number
. . vehicle_type_for_tolls
. . . cv_tag_data
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_vehicle_characteristics
. . . . cv_vehicle_configuration
. . . . cv_vehicle_size
. . . . cv_vehicle_weight
. . . vehicle_identity
. . . vehicle_type
. toll_prices_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date

. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
toll_data_for_archive
. toll_operational_data
. . date
. . list_size
. . time
. . toll_cost
. . toll_segment_identity
. . . unit_number
. . toll_segment_users
. toll_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. toll_prices_for_archive
. . list_size
. . toll_price
. . toll_price_application_time
. . toll_segment_identity
. . . unit_number
. . vehicle_type_for_tolls
. . . cv_tag_data
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_vehicle_characteristics
. . . . cv_vehicle_configuration
. . . . cv_vehicle_size
. . . . cv_vehicle_weight
. . . vehicle_identity
. . . vehicle_type
. toll_prices_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
toll_operational_data
. date
. list_size
. time
. toll_cost
. toll_segment_identity
. . unit_number
. toll_segment_users
toll_operational_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
toll_payment_confirmation
. confirmation_flag
toll_payment_debited
. confirmation_flag
toll_payment_pull_in_message
. vehicle_identity
toll_payment_request

. toll_cost
toll_payment_violator_data
. credit_identity
. toll_cost
. vehicle_identity
toll_plaza_identity
toll_price
toll_price_application_time
toll_price_changes_request
. toll_price
. toll_price_application_time
. toll_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_type_for_tolls
. . cv_tag_data
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_vehicle_characteristics
. . . cv_vehicle_configuration
. . . cv_vehicle_size
. . . cv_vehicle_weight
. . vehicle_identity
. . vehicle_type
toll_price_changes_response
toll_price_data
. toll_price
. toll_price_application_time
. toll_segment_identity
. . unit_number
. vehicle_type_for_tolls
. . cv_tag_data
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_vehicle_characteristics
. . . cv_vehicle_configuration
. . . cv_vehicle_size
. . . cv_vehicle_weight
. . vehicle_identity
. . vehicle_type
toll_price_data_for_advanced_toll
. list_size
. toll_price
. toll_price_application_time
. toll_segment_identity
. . unit_number
. vehicle_type_for_tolls
. . cv_tag_data
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_vehicle_characteristics
. . . cv_vehicle_configuration
. . . cv_vehicle_size
. . . cv_vehicle_weight
. . vehicle_identity
. . vehicle_type
toll_price_data_for_vehicle_toll
. list_size
. toll_price
. toll_price_application_time
. toll_segment_identity
. . unit_number
. vehicle_type_for_tolls
. . cv_tag_data
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_vehicle_characteristics
. . . cv_vehicle_configuration
. . . cv_vehicle_size
. . . cv_vehicle_weight
. . vehicle_identity
. . vehicle_type
toll_price_data_request
toll_price_details
. toll_price
. toll_price_application_time
. toll_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_type_for_tolls
. . cv_tag_data
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_vehicle_characteristics
. . . cv_vehicle_configuration
. . . cv_vehicle_size
. . . cv_vehicle_weight
. . vehicle_identity
. . vehicle_type
toll_price_direct_details
. toll_price
. toll_price_application_time
. toll_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_type_for_tolls
. . cv_tag_data
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_vehicle_characteristics
. . . cv_vehicle_configuration
. . . cv_vehicle_size
. . . cv_vehicle_weight
. . vehicle_identity
. . vehicle_type
toll_price_direct_request
toll_price_for_cvo
. toll_price
. toll_price_application_time
. toll_segments
. . list_size
. . toll_segment_identity
. . . unit_number
toll_price_for_cvo_request
toll_price_request
toll_price_values
. list_size
. toll_price_data
. . toll_price
. . toll_price_application_time
. . toll_segment_identity
. . . unit_number
. . vehicle_type_for_tolls
. . . cv_tag_data
. . . . cv_carrier_number
. . . . cv_driver_number
. . . . cv_vehicle_number
. . . cv_vehicle_characteristics
. . . . cv_vehicle_configuration
. . . . cv_vehicle_size
. . . . cv_vehicle_weight
. . . vehicle_identity
. . . vehicle_type
toll_prices
. list_size
. toll_price
. toll_price_application_time
. toll_segment_identity
. . unit_number

. vehicle_type_for_tolls
. . cv_tag_data
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_vehicle_characteristics
. . . cv_vehicle_configuration
. . . cv_vehicle_size
. . . cv_vehicle_weight
. . vehicle_identity
. . vehicle_type
toll_prices_for_archive
. list_size
. toll_price
. toll_price_application_time
. toll_segment_identity
. . unit_number
. vehicle_type_for_tolls
. . cv_tag_data
. . . cv_carrier_number
. . . cv_driver_number
. . . cv_vehicle_number
. . cv_vehicle_characteristics
. . . cv_vehicle_configuration
. . . cv_vehicle_size
. . . cv_vehicle_weight
. . vehicle_identity
. . vehicle_type
toll_prices_for_archive_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
toll_prices_for_other_toll
toll_reconciliation_inputs
toll_reconciliation_outputs
toll_route_segments
. list_size
. toll_segment_identity
. . unit_number
toll_segment_identity
. unit_number
toll_segment_users
toll_segments
. list_size
. toll_segment_identity
. . unit_number
toll_tag_data
. credit_identity
. stored_credit
. toll_segment_identity
. . unit_number
toll_tag_data_clear
. toll_tag_data
. . credit_identity
. . stored_credit
. . toll_segment_identity
. . . unit_number
toll_tag_data_collect
. toll_tag_data
. . credit_identity
. . stored_credit
. . toll_segment_identity
. . . unit_number
toll_tag_data_input
. toll_tag_data
. . credit_identity
. . stored_credit
. . toll_segment_identity
. . . unit_number
toll_tag_data_needed
toll_tag_data_request
toll_tag_data_store
. toll_tag_data
. . credit_identity
. . stored_credit
. . toll_segment_identity
. . . unit_number
toll_tag_data_update
. toll_tag_data
. . credit_identity
. . stored_credit
. . toll_segment_identity
. . . unit_number
toll_tag_problem_message
toll_to_cvo
. cvo_payments_data
. . cvo_advanced_toll_payment_information
. . . confirmation_flag
. . . stored_credit
. . . toll_cost
. . . traveler_identity
. . toll_price_for_cvo
. . . toll_price
. . . toll_price_application_time
. . . toll_segments
. . . . list_size
. . . . toll_segment_identity
. . . . . unit_number
. cvo_toll_payments
. . cvo_advanced_toll_confirmation
. . . confirmation_flag
. . . stored_credit
. . . toll_cost
. . . traveler_identity
. . cvo_toll_price
. . . toll_price
. . . toll_price_application_time
. . . toll_segments
. . . . list_size
. . . . toll_segment_identity
. . . . . unit_number
toll_transaction_records
. advanced_toll_transactions
. . credit_identity
. . cv_carrier_number
. . cv_vehicle_number
. . date
. . stored_credit
. . time
. . toll_cost
. . toll_plaza_identity

. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
. current_toll_transactions
. . credit_identity
. . cv_carrier_number
. . cv_vehicle_number
. . date
. . stored_credit
. . time
. . toll_cost
. . toll_plaza_identity
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
. list_size
toll_transactions_for_probe_data
. date
. list_size
. time
. toll_plaza_identity
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. vehicle_identity
toll_transactions_for_probe_data_request
toll_violation_information
tomcm_env_sensor_data
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
tomcm_m_and_c_plan_feedback
tomcm_m_and_c_work_plans
tomcm_resource_coordination_data
tomcm_road_weather_info
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
tomcm_roadway_maint_status
. current_roadway_maintenance_status
tomcm_work_zone_images
. fomcm_work_zone_images
. work_zone_images
. work_zone_intrusion_video_image
tomcm_work_zone_info
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
tomcv_crew_movements
tomcv_env_conditions
. environment_sensor_output
. sensor_identity
tomcv_vehicle_operational_data
. operational_data_for_mcv
. vehicle_id_for_mcv
tomcv_work_zone_intrusion_alert_on_board
tomcv_work_zone_intrusion_detection_on_board
tomcv_work_zone_intrusion_warning_to_crew
top_parking_coordination_data
tors_device_control
. t_other_rw_fc_control_to_fc
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls
. t_other_rw_ic_control_to_ic
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type

. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size
tors_device_status
. t_other_rw_fc_status_to_fc
. . indicator_fault
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
. t_other_rw_ic_status_to_ic
. . indicator_fault
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . indicator_response_state
. . list_size
tors_roadway_info_data_from_devices
. t_other_rw_dms_auto_treat_data_from_roadway
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . list_size
tors_roadway_info_data_from_sensors
. t_other_rw_env_sensor_data_to_dms
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. t_other_rw_individual_vehicle_speed_to_dms
. t_other_rw_speed_warning_to_dms
tors_sensor_control
. t_other_rw_env_sensor_control_by_auto_treat_device
. . env_sensor_control_by_roadway_treatment_device
. t_other_rw_fc_control_to_traffic_sensor
. t_other_rw_ic_control_to_traffic_sensor
tors_sensor_data
. t_other_rw_env_sensor_data_for_auto_treat_device
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. . station_id
. t_other_rw_traffic_sensor_data_to_fc
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. t_other_rw_traffic_sensor_data_to_ic
. . vehicle_detection_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. t_other_rw_work_zone_intrusion_detection
. . work_zone_intrusion_detection
tors_sensor_status
. t_other_rw_traffic_sensor_status_to_fc
. . sensor_status
. . . traffic_sensor_status
. t_other_rw_traffic_sensor_status_to_ic
. . sensor_status
. . . traffic_sensor_status
tota_toll_charges_reconciliation_data
tota_toll_pricing_data
totc_data_request
. other_TMC_data_request
. other_TMC_incidents_request
. . request_other_current_incidents_data
. . request_other_planned_events_data
totc_identity
. tmc_identity
totc_request_other_TMC_data_FB
. totc_data_request
. . other_TMC_data_request
. . other_TMC_incidents_request
. . . request_other_current_incidents_data
. . . request_other_planned_events_data
. totc_identity
. . tmc_identity
totc_traffic_control_and_status
. control_data_for_highways
. . dms_data
. . . indicator_sign_control_data
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . lane_dms_controls

. . . . parking_lot_dms_controls
. . . . pollution_output_message
. . . . . dms_pollution_message
. . . . . vehicle_identity
. . . indicator_sign_control_data_for_hri
. . . . crossing_id
. . . . hri_sign_control_data
. . . . list_size
. . har_data
. . . har_identity
. . . har_management_data
. . . . har_mode
. . . . har_schedule
. . . har_program
. . indicator_highway_requested_state
. . . indicator_control_data_for_highways
. . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . ramp_controls
. . . list_size
. control_data_for_roads
. . indicator_control_data_for_roads
. . . indicator_crossing_control_data_for_roads
. . . . indicator_crossing_controls
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . indicator_junction_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_junction_controls
. . . . list_size
. . . indicator_pedestrian_control_data
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_pedestrian_controls
. . . . list_size
. roadway_information_data
. . dms_data
. . . indicator_sign_control_data
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . lane_dms_controls
. . . . parking_lot_dms_controls
. . . . pollution_output_message
. . . . . dms_pollution_message
. . . . . vehicle_identity
. . . indicator_sign_control_data_for_hri
. . . . crossing_id
. . . . hri_sign_control_data
. . . . list_size
. . har_data
. . . har_identity
. . . har_management_data
. . . . har_mode
. . . . har_schedule
. . . har_program
. roadway_information_status
. . dms_status
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . dms_updates
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . har_status
. . . device_status
. . . har_fault
. . . . har_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. status_data_for_highways
. . indicator_highway_requested_state
. . . indicator_control_data_for_highways
. . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . ramp_controls
. . . list_size
. status_data_for_roads
. . indicator_input_state_for_roads
. . . indicator_data
. . . indicator_type
. . . list_size
totc_transfer_data
. current_data
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number

Appendix D: Data Tree

. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . roadway_traffic_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . link_traffic_conditions
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . . indicator_list
. . . . . . list_size
. . . . . . pedestrian_demand
. . sensor_output_data
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . hri_sensor_data
. . . . closure_event_data
. . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . intersection_blocked
. . . . rail_schedules_data
. . . pedestrian_sensor_data
. . . . node_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . pedestrian_demand
. . . traffic_sensor_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . . traffic_video_image
. . stored_incident_data
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity

. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . planned_event_data
. . . . list_size
. . . . planned_event_details
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_junction_control_data
. . . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . traffic_video_image_data
. . . list_size
. . . traffic_video_camera_number
. . . . location_identity
. . . . unit_number
. . . traffic_video_image
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity

. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. cv_incidents_for_other_TMC
. . permit_route_plan
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . load_description
. . permit_traffic_controls
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. . permit_type
. emergency_data_for_other_TMC
. . emergency_traffic_control_request
. . . date
. . . list_size
. . . route_segment_estimated_arrival_time
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . time
. . selected_emergency_vehicle_strategy
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_emergency_strategy
. long_term_data
. . historical_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . historical_parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . historical_processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time

Appendix D: Data Tree

. . . . . crossing_list
. . . . . list_size
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . list_size
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . indicator_list
. . . . . list_size
. . . . . pedestrian_demand
. . historical_stored_incident_data
. . . historical_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . list_size
. . historical_traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . historical_traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . indicator_junction_control_data
. . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . historical_vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication

. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . historical_wide_area_pollution_data
. . . historical_pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . historical_pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . list_size
. . o_d_matrix
. permit_coordination
. . date
. . permit_route_plan
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . load_description
. . permit_traffic_controls
. . . selected_ramp_control_strategy
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_ramp_strategy_type
. . . selected_roadway_control_strategy
. . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . selected_strategy_type
. . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . selected_strategy_type
. . permit_type
. . time
. planned_events_local_data
. . crossing_closure_schedule
. . list_size
. . planned_events_data
. . . crossing_closure_schedule
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . tmc_identity

totc_transfer_local_TMC_data_FB

. totc_identity
. . tmc_identity
. totc_traffic_control_and_status
. . control_data_for_highways
. . . dms_data
. . . . indicator_sign_control_data
. . . . . dms_advisory_text
. . . . . . dms_auto_treat_info
. . . . . . dms_highway_open_close
. . . . . . dms_incident_warning
. . . . . . dms_weather_warning
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . lane_dms_controls
. . . . . parking_lot_dms_controls
. . . . . pollution_output_message
. . . . . . dms_pollution_message
. . . . . . vehicle_identity
. . . . indicator_sign_control_data_for_hri
. . . . . crossing_id
. . . . . hri_sign_control_data
. . . . . list_size
. . . har_data
. . . . har_identity
. . . . har_management_data
. . . . . har_mode
. . . . . har_schedule
. . . . har_program
. . . indicator_highway_requested_state
. . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_crossing_controls
. . . . . . indicator_identity
. . . . . . list_size
. . . . . indicator_ramp_control_data
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . ramp_controls
. . . . list_size
. . control_data_for_roads
. . . indicator_control_data_for_roads
. . . . indicator_crossing_control_data_for_roads
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . indicator_junction_control_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . indicator_junction_controls
. . . . . list_size
. . . . indicator_pedestrian_control_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . indicator_pedestrian_controls

. . . . . list_size
. . roadway_information_data
. . . dms_data
. . . . indicator_sign_control_data
. . . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . lane_dms_controls
. . . . . parking_lot_dms_controls
. . . . . pollution_output_message
. . . . . dms_pollution_message
. . . . . vehicle_identity
. . . . indicator_sign_control_data_for_hri
. . . . . crossing_id
. . . . . hri_sign_control_data
. . . . . list_size
. . . har_data
. . . . har_identity
. . . . har_management_data
. . . . . har_mode
. . . . . har_schedule
. . . . har_program
. . roadway_information_status
. . . dms_status
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . dms_fault
. . . . . dms_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . dms_updates
. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . har_status
. . . . device_status
. . . . har_fault
. . . . . har_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . status_data_for_highways
. . . indicator_highway_requested_state
. . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . list_size
. . . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . list_size
. . . . . ramp_controls
. . . . list_size
. . status_data_for_roads
. . . indicator_input_state_for_roads
. . . . indicator_data
. . . . indicator_type
. . . . list_size
. totc_transfer_data
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size

Appendix D: Data Tree

. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index

Appendix D: Data Tree

. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . cv_incidents_for_other_TMC
. . . permit_route_plan
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . load_description
. . . permit_traffic_controls
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . permit_type
. . emergency_data_for_other_TMC
. . . emergency_traffic_control_request
. . . . date
. . . . list_size
. . . . route_segment_estimated_arrival_time
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . time
. . . selected_emergency_vehicle_strategy
. . . . indicator_list
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . selected_emergency_strategy
. . long_term_data
. . . historical_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . historical_parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . historical_processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . . crossing_data_for_highways
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . . crossing_data_for_roads
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . . pedestrian_data
. . . historical_stored_incident_data
. . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration

. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . list_size
. . . historical_traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . historical_traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . . indicator_list
. . . . . . ramp_list
. . . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . . parking_lot_list
. . . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy
. . . historical_vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . . vehicle_smart_probe_data_source_identity
. . . . . . vehicle_smart_probe_data_source_location
. . . historical_wide_area_pollution_data
. . . . historical_pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . historical_pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . list_size
. . . o_d_matrix
. . permit_coordination
. . . date
. . . permit_route_plan
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . load_description
. . . permit_traffic_controls
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . permit_type
. . . time
. . planned_events_local_data
. . . crossing_closure_schedule
. . . list_size
. . . planned_events_data
. . . . crossing_closure_schedule
. . . . list_size
. . . . planned_event_details
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time

. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . tmc_identity
totrm_transit_services
. traffic_incident_data_for_transit
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. transit_fare_data
. . list_size
. . transit_fares
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
. transit_services_for_advisory_data
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. transit_vehicle_advisory_eta
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_deviations_details
. . transit_vehicle_collected_trip_data
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . . transit_vehicle_running_times
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_stop_scheduled_time
. . . . . time
. . transit_vehicle_deviation_update
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_location
. . . transit_vehicle_identity
. . . transit_vehicle_location_data
. . . . location_identity
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. transit_vehicle_passenger_data
. . transit_passenger_numbers
. . transit_route_number
. . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
. . transit_vehicle_fare_collection_data
. . . list_size
. . . transit_fare_collection_data
. . . . transit_fare
. . . . transit_route_use_time
. . . . transit_user_category
. . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . transit_vehicle_identity
tourist_information
. fevp_event_information_for_travelers
. fws_current_weather_observations
. . current_weather_observations
. . weather_observation_attributes
. fws_weather_forecasts
. . climatic_scale_weather_forecasts
. . meso_scale_weather_forecasts
. . . weather_advisories
. . . weather_forecast_details
. . . weather_warnings
. . . weather_watches
. . miso_scale_weather_forecasts
. . . weather_advisories
. . . weather_forecast_details
. . . weather_warnings
. . synoptic_scale_weather_forecasts
. . . weather_forecast_details
. . . weather_watches
. . weather_scale_forecast_data_attributes
. incident_information

Appendix D: Data Tree

. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. yellow_pages_general_information
. . yellow_pages_history
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. . yellow_pages_local_customs
. . . list_size
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_people
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. yellow_pages_specific_information
. . yellow_pages_food
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_gas_stations
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_hospitals
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_lodging
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_non_motorized_services
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_parking
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_private_vehicle_parts_shops
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_private_vehicle_repair_shops
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_rest_areas
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_special_events
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_tourist_activities
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. . yellow_pages_tourist_services
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. yellow_pages_transaction_information
. . yellow_pages_dining_information
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . yellow_pages_lodging_reservations
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity

. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . yellow_pages_ticket_information
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
tp_cross_request_received
tp_cross_road
tp_dms_indication
tpo_archive_status
tpo_change_lot_state
tpo_parking_lot_charge_change_request
tpo_request_advanced_parking_payment
tpo_transaction_reports
track_status
. hri_rail_alert
. wayside_status
traffic_archive_catalog
traffic_archive_data
. emissions_archive_data
. . emissions_archive_catalog
. . emissions_data_for_archive
. . . archive_pollution_reference_data
. . . . pollution_area_acceptance_data
. . . . pollution_area_acceptance_times
. . . . pollution_area_tolerance_data
. . . . pollution_area_tolerance_times
. . . . pollution_roadside_acceptance_data
. . . . pollution_roadside_acceptance_times
. . . . pollution_roadside_tolerance_data
. . . . pollution_roadside_tolerance_times
. . . . pollution_vehicle_acceptance_conditions
. . . . pollution_vehicle_acceptance_data
. . . archive_pollution_reference_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . archive_pollution_state_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_vehicle_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_sulfur_dioxide_pollution
. . . . . vehicle_type
. . . archive_pollution_state_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . pollution_archive_data_log
. . . . pollution_state_static_log_data
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection

Appendix D: Data Tree

. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_vehicle_log_data
. . . . . pollution_state_vehicle_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_sulfur_dioxide_pollution
. . . . . vehicle_type
. . . pollution_archive_data_log_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. parking_archive_data
. . parking_archive_catalog
. . parking_data_for_archive
. . . parking_charge_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . parking_charge_response_for_archive
. . . . list_size
. . . . parking_lot_availability
. . . . . handicap_access_information
. . . . . parking_lot_hours_of_operation
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_spaces
. . . . . traveler_identity
. . . . parking_lot_charge_application_time
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_price
. . . . vehicle_type_for_charges
. . . parking_lot_state_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . parking_lot_state_for_archive
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. roadside_archive_data
. . roadside_archive_catalog
. . roadside_data_for_archive
. . . archive_environmental_sensor_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . environment_sensor_fault_data

. . . . environmental_sensor_status
. . . . . environment_sensor_fault_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . fault_data
. . . . sensor_fault_data
. . . fault_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . sensor_data_archive_input
. . . . hov_sensor_data
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . local_sensor_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . roadside_conditions
. . . . . . link_conditions
. . . . . . link_list
. . . . . . list_size
. . . . . traffic_video_image
. . . . . vehicle_detection_data
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . local_sensor_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . pedestrian_demand
. . . . . roadside_conditions
. . . . . . link_conditions
. . . . . . link_list
. . . . . . list_size
. . . . . traffic_video_image
. . . . . vehicle_detection_data
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . multimodal_crossing_sensor_data

. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . . crossing_identity
. . . . . . crossing_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . pedestrian_demand
. . . . sensor_data_for_reversible_lanes
. . . . . traffic_video_image
. . . . . vehicle_detection_data
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . sensor_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . sensor_status
. . . . traffic_sensor_status
. traffic_management_archive_data
. . traffic_archive_catalog
. . traffic_data_for_archive
. . . ahs_operational_data
. . . . ahs_checking_records
. . . . . ahs_check_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . ahs_failed_checks_count
. . . . . ahs_successful_checks_count
. . . . . list_size
. . . . ahs_lane_use_data
. . . . . ahs_vehicle_count
. . . . . list_size
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . date
. . . . list_size
. . . . time
. . . ahs_operational_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . static_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . static_data_for_archive
. . . . static_data_for_traffic_control

Appendix D: Data Tree

. . . . . background_strategy
. . . . . . list_size
. . . . . . selected_strategy_data
. . . . . . selected_strategy_type
. . . . . . strategy_date
. . . . . . strategy_day
. . . . . . strategy_end_time
. . . . . . strategy_start_time
. . . . . coordination_rules_for_highways
. . . . . . coordination_rule_data_for_highways
. . . . . . coordination_rule_highway_data_description
. . . . . . coordination_rule_highway_data_number
. . . . . . list_size
. . . . . coordination_rules_for_roads
. . . . . . coordination_rule_data_for_roads
. . . . . . coordination_rule_road_data_description
. . . . . . coordination_rule_road_data_number
. . . . . . list_size
. . . . . dms_allocation
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . route_segment_end_point
. . . . . . route_segment_identity
. . . . . . route_segment_start_point
. . . . . highway_control_devices
. . . . . . crossing_equipment_data_for_highways
. . . . . . highway_equipment_data
. . . . . highway_network
. . . . . . list_size
. . . . . . route_segment_downstream_identity
. . . . . . route_segment_end_point
. . . . . . route_segment_identity
. . . . . . route_segment_start_point
. . . . . . route_segment_upstream_identity
. . . . . indicator_highway_control_static_data
. . . . . . highway_sign_setting_data
. . . . . . highway_sign_setting_plans
. . . . . indicator_road_control_static_data
. . . . . . indicator_road_adaptive_plans
. . . . . . indicator_road_fixed_plans
. . . . . link_data
. . . . . . link_attributes
. . . . . . link_identity
. . . . . . link_TMC_identity
. . . . . parking_lot_static_data
. . . . . . list_size
. . . . . . parking_lot_dms_allocation
. . . . . . parking_lot_identity
. . . . . . parking_lot_sensor_allocation
. . . . . . parking_lot_state_thresholds
. . . . . ramp_devices
. . . . . . list_size
. . . . . . ramp_identity
. . . . . . ramp_phase_data
. . . . . road_control_devices
. . . . . . crossing_equipment_data_for_roads
. . . . . . hri_data_for_roads
. . . . . . intersection_equipment_data
. . . . . . pedestrian_equipment_data
. . . . . road_network
. . . . . . list_size
. . . . . . route_segment_downstream_identity
. . . . . . route_segment_end_point
. . . . . . route_segment_identity
. . . . . . route_segment_start_point
. . . . . . route_segment_upstream_identity
. . . . . roadway_characteristics
. . . . . . link_speed_limit
. . . . . . median_type
. . . . . . number_of_lanes
. . . . . . pavement_type
. . . . . . shoulder_width
. . . . . sensor_allocation
. . . . . . sensor_allocation_for_controllers
. . . . . . sensor_allocation_for_hov_lanes
. . . . . . sensor_allocation_for_probes
. . . . . . sensor_allocation_for_tags
. . . . . vehicle_signage_output_identity
. . . . . . location_identity
. . . . . . unit_number
. . . traffic_data_for_deployment
. . . . current_data
. . . . . current_other_routes_use
. . . . . . route_segment_guided_travelers
. . . . . . route_segment_identity
. . . . . . route_segment_journey_time
. . . . . . route_segment_total_number
. . . . . parking_lot_storage_data
. . . . . . list_size
. . . . . . parking_lot_current_occupancy
. . . . . . parking_lot_identity
. . . . . . parking_lot_state
. . . . . processed_data
. . . . . . hri_state_data
. . . . . . link_state_data
. . . . . . o_d_matrix
. . . . . . parking_lot_input_data
. . . . . . private_vehicle_occupants
. . . . . . ramp_data
. . . . . . roadway_environment_conditions
. . . . . . roadway_traffic_conditions
. . . . . . strategy_data
. . . . . sensor_output_data
. . . . . . environment_sensor_data
. . . . . . hri_sensor_data
. . . . . . pedestrian_sensor_data
. . . . . . traffic_sensor_data
. . . . . . traffic_video_image
. . . . . stored_incident_data
. . . . . . current_incident_data
. . . . . . planned_event_data
. . . . . traffic_flow_state
. . . . . . current_road_network_use
. . . . . . current_roadway_network_data
. . . . . . hov_lane_data
. . . . . . link_data_from_avl
. . . . . . link_data_from_tags
. . . . . . ramp_signal_state
. . . . . traffic_management_storage_data
. . . . . . indicator_control_storage_data
. . . . . . indicator_input_storage_data
. . . . . . selected_strategy
. . . . . traffic_video_image_data
. . . . . . list_size
. . . . . . traffic_video_camera_number
. . . . . . traffic_video_image
. . . . . vehicle_smart_probe_stored_data
. . . . . . list_size
. . . . . . vehicle_smart_probe_data_for_storage
. . . . . wide_area_pollution_data
. . . . . . list_size
. . . . . . pollution_state_area_collection
. . . . . . pollution_state_roadside_collection
. . . . long_term_data
. . . . . historical_other_routes_use
. . . . . . route_segment_guided_travelers
. . . . . . route_segment_identity
. . . . . . route_segment_journey_time
. . . . . . route_segment_total_number
. . . . . historical_parking_lot_storage_data
. . . . . . list_size
. . . . . . parking_lot_current_occupancy
. . . . . . parking_lot_identity
. . . . . . parking_lot_state
. . . . . historical_processed_data
. . . . . . hri_state_data
. . . . . . link_state_data
. . . . . . o_d_matrix

. . . . . parking_lot_input_data
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . roadway_environment_conditions
. . . . . strategy_data
. . . . . historical_stored_incident_data
. . . . . historical_incident_details
. . . . . list_size
. . . . . historical_traffic_flow_state
. . . . . current_road_network_use
. . . . . current_roadway_network_data
. . . . . hov_lane_data
. . . . . link_data_from_tags
. . . . . ramp_signal_state
. . . . . historical_traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_input_storage_data
. . . . . selected_strategy
. . . . . historical_vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . historical_wide_area_pollution_data
. . . . . historical_pollution_state_area_collection
. . . . . historical_pollution_state_roadside_collection
. . . . . list_size
. . . . . o_d_matrix
. . . . predictive_model_data
. . . . . predicted_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_occupancy
. . . . . link_speed
. . . . . predicted_hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . predicted_o_d_matrix
. . . . . predicted_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . predicted_parking_lot_data
. . . . . list_size
. . . . . parking_lot_identity
. . . . . parking_lot_occupancy
. . . . . parking_lot_state
. . . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_occupancy
. . . . . link_speed
. . . . . predicted_road_network_use
. . . . . route_segment_guided_vehicles
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . traffic_deployment_data_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute

traffic_archive_input

. traffic_archive_request
. . emissions_archive_request
. . . emissions_archive_catalog_request
. . . emissions_archive_data_request
. . parking_archive_request
. . . parking_archive_catalog_request
. . . parking_archive_data_request
. . roadside_archive_control
. . . roadside_archive_catalog_request
. . . roadside_archive_data_request
. . traffic_management_archive_request
. . . traffic_management_archive_catalog_request
. . . traffic_management_archive_data_request
. traffic_archive_status
. . emissions_archive_status
. . parking_archive_status
. . traffic_management_archive_status

traffic_archive_request

. emissions_archive_request
. . emissions_archive_catalog_request
. . emissions_archive_data_request
. parking_archive_request
. . parking_archive_catalog_request
. . parking_archive_data_request
. roadside_archive_control
. . roadside_archive_catalog_request
. . roadside_archive_data_request
. traffic_management_archive_request
. . traffic_management_archive_catalog_request
. . traffic_management_archive_data_request

traffic_archive_status

. emissions_archive_status
. parking_archive_status
. traffic_management_archive_status

traffic_control_device_data

. dms_data
. . indicator_sign_control_data
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . lane_dms_controls
. . . parking_lot_dms_controls
. . . pollution_output_message
. . . . dms_pollution_message
. . . . vehicle_identity
. . indicator_sign_control_data_for_hri
. . . crossing_id
. . . hri_sign_control_data
. . . list_size
. har_data
. . har_identity

. . har_management_data
. . . har_mode
. . . har_schedule
. . har_program
traffic_control_device_status
. indicator_fault_data
. . indicator_fault
. . indicator_type
. smart_probe_reader_status
. . device_status
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. traffic_sensor_status
. vehicle_sign_data_status
traffic_control_strategy_alterations
traffic_data_advisory_request
traffic_data_archive
. ahs_operational_data
. . ahs_checking_records
. . . ahs_check_identity
. . . . location_identity
. . . . unit_number
. . . ahs_failed_checks_count
. . . ahs_successful_checks_count
. . . list_size
. . ahs_lane_use_data
. . . ahs_vehicle_count
. . . list_size
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . date
. . list_size
. . time
. ahs_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. static_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. static_data_for_archive
. . static_data_for_traffic_control
. . . background_strategy
. . . . list_size
. . . . selected_strategy_data
. . . . selected_strategy_type
. . . . strategy_date
. . . . strategy_day
. . . . strategy_end_time
. . . . . time
. . . . strategy_start_time
. . . . . time
. . . coordination_rules_for_highways
. . . . coordination_rule_data_for_highways
. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . coordination_rule_highway_data_description
. . . . coordination_rule_highway_data_number
. . . . list_size
. . . coordination_rules_for_roads
. . . . coordination_rule_data_for_roads
. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . coordination_rule_road_data_description
. . . . coordination_rule_road_data_number
. . . . list_size
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . highway_control_devices
. . . . crossing_equipment_data_for_highways
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . crossing_phase_data

Appendix D: Data Tree

. . . . . list_size
. . . . highway_equipment_data
. . . . . dms_allocation
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . route_segment_end_point
. . . . . . route_segment_identity
. . . . . . route_segment_start_point
. . . . . dms_downstream_identity
. . . . . . indicator_identity
. . . . . dms_upstream_identity
. . . . . . indicator_identity
. . . . . list_size
. . . highway_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . indicator_highway_control_static_data
. . . . highway_sign_setting_data
. . . . . highway_sign_sequence_data
. . . . . . highway_sign_sequence_purpose
. . . . . . indicator_list
. . . . . list_size
. . . . highway_sign_setting_plans
. . . . . highway_sign_plan_data
. . . . . . highway_sign_plan_priority
. . . . . . highway_sign_plan_purpose
. . . . . . highway_sign_sequence_data
. . . . . highway_sign_plan_number
. . . . . list_size
. . . indicator_road_control_static_data
. . . . indicator_road_adaptive_plans
. . . . . crossing_adaptive_data
. . . . . indicator_road_adaptive_plan_number
. . . . . intersection_adaptive_data
. . . . . list_size
. . . . . pedestrian_adaptive_data
. . . . indicator_road_fixed_plans
. . . . . crossing_fixed_time_data
. . . . . . crossing_control_commands
. . . . . . crossing_cycle_time
. . . . . . crossing_offset_time
. . . . . indicator_road_fixed_plan_number
. . . . . intersection_fixed_time_data
. . . . . . intersection_control_commands
. . . . . . intersection_cycle_time
. . . . . . intersection_offset_time
. . . . . list_size
. . . . . pedestrian_fixed_time_data
. . . . . . pedestrian_control_commands
. . . . . . pedestrian_cycle_time
. . . . . . pedestrian_offset_time
. . . link_data
. . . . link_attributes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . link_TMC_identity
. . . parking_lot_static_data
. . . . list_size
. . . . parking_lot_dms_allocation
. . . . . list_size
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_sensor_allocation
. . . . . list_size
. . . . . parking_lot_sensor_type
. . . . . unit_number
. . . . parking_lot_state_thresholds
. . . . . parking_lot_decreasing_threshold
. . . . . parking_lot_increasing_threshold
. . . ramp_devices
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . . ramp_phase_data
. . . road_control_devices
. . . . crossing_equipment_data_for_roads
. . . . . crossing_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . crossing_phase_data
. . . . . list_size
. . . . hri_data_for_roads
. . . . . crossing_id
. . . . . hri_phase_data
. . . . . list_size
. . . . intersection_equipment_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . intersection_phase_data
. . . . . intersection_phase_number
. . . . . list_size
. . . . pedestrian_equipment_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . . pedestrian_phase_data
. . . road_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . roadway_characteristics
. . . . link_speed_limit

. . . . . special_vehicle_speed_limit
. . . . . vehicle_class
. . . . . vehicle_type
. . . . . speed_limit
. . . . median_type
. . . . number_of_lanes
. . . . pavement_type
. . . . shoulder_width
. . . sensor_allocation
. . . . sensor_allocation_for_controllers
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . sensor_allocation_for_hov_lanes
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . sensor_allocation_for_probes
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . . sensor_allocation_for_tags
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . . vehicle_tag_data_source_location
. . . . . location_identity
. . . vehicle_signage_output_identity
. . . . location_identity
. . . . unit_number
. traffic_archive_catalog
. traffic_data_for_deployment
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity

Appendix D: Data Tree

. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . long_term_data
. . . historical_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . historical_parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy

. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . historical_processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . . crossing_data_for_highways
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . . crossing_data_for_roads
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . . pedestrian_data
. . . historical_stored_incident_data
. . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . list_size
. . . historical_traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . historical_traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . . indicator_list
. . . . . . ramp_list
. . . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . . parking_lot_list
. . . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy
. . . historical_vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . . vehicle_smart_probe_data_source_identity
. . . . . . vehicle_smart_probe_data_source_location
. . . historical_wide_area_pollution_data
. . . . historical_pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution

. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . historical_pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . list_size
. . . o_d_matrix
. . predictive_model_data
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . predicted_o_d_matrix
. . . predicted_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_road_network_use
. . . . route_segment_guided_vehicles
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. traffic_deployment_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
traffic_data_demand_request
. tmc_identity
. traffic_data_request
traffic_data_deployment_request
traffic_data_distribution_request
traffic_data_flow
. current_roadway_network_state
. . current_highway_network_state
. . . link_delay
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . link_journey_time
. . . link_level_of_service
. . . link_status
. . . . lane_closure
. . . . lane_open
. . . list_size
. . current_road_network_state
. . . link_delay
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . link_journey_time
. . . link_status
. . . . lane_closure
. . . . lane_open
. . . list_size
. link_data_for_guidance
. . link_attributes
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . link_ISP_identity
. . link_speed_limit
. . . special_vehicle_speed_limit
. . . . vehicle_class
. . . . vehicle_type
. . . speed_limit
. . list_size
. planned_events
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location

Appendix D: Data Tree

. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. prediction_data
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_occupancy_predictions
. . route_segment_queue_delay_predictions
. . route_segment_speed_predictions
. . . vehicle_speed
. . route_segment_volume_delay_predictions
. traffic_data_for_advisory_output
. . current_data_for_retrieval
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . long_term_data_for_retrieval
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number

Appendix D: Data Tree

. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . predictive_model_data_for_retrieval
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . predicted_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_road_network_use
. . . . route_segment_guided_vehicles
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . source_identity
. traffic_data_for_broadcast_to_kiosks
. . current_data_for_broadcast
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . link_state_data_for_broadcast
. . . . link_list
. . . . . link_identity

Appendix D: Data Tree

. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . . list_size
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . predicted_data_for_broadcast
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . source_identity
. traffic_data_for_broadcast_to_personal_devices
. . current_data_for_broadcast
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . link_state_data_for_broadcast
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . . list_size
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . predicted_data_for_broadcast
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state

Appendix D: Data Tree

. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . source_identity
. traffic_data_for_guidance
. . current_data_for_retrieval
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . long_term_data_for_retrieval
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data

Appendix D: Data Tree

. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . source_identity
. traffic_data_for_kiosks
. . current_data_for_broadcast
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . link_state_data_for_broadcast
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . . list_size
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . kiosk_identity
. . predicted_data_for_broadcast
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity

. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . source_identity
. traffic_data_for_personal_devices
. . current_data_for_broadcast
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . link_state_data_for_broadcast
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . . list_size
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . predicted_data_for_broadcast
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . source_identity
. . traveler_identity
. traffic_data_for_ridesharing
. . tmc_identity
. . traffic_data_for_distribution
. . . current_data_for_retrieval
. . . . area_air_quality_index
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity

Appendix D: Data Tree

. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . long_term_data_for_retrieval
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . predictive_model_data_for_retrieval
. . . . predicted_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . predicted_hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . predicted_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . predicted_parking_lot_data
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_occupancy
. . . . . parking_lot_state
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . predicted_road_network_use

. . . . . route_segment_guided_vehicles
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. traffic_data_request_for_archive
. . traffic_data_kiosk_request_for_archive
. . . traffic_data_kiosk_request
. . . . kiosk_identity
. . . . traffic_data_request
. . traffic_data_personal_request_for_archive
. . . traffic_data_personal_request
. . . . traffic_data_request
. . . . traveler_identity
. vehicle_signage_data
. . vehicle_sign_data_output_location
. . . location_identity
. . vehicle_signage_output_data
. . . environmental_data_for_signage
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . vehicle_signage_current_data
. . . vehicle_signage_dms_data
. . . vehicle_signage_fixed_data
. . . vehicle_signage_incident_details
. . vehicle_signage_traffic_data
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . vehicle_occupancy
. . . vehicle_speed
. vehicle_smart_probe_data_output

traffic_data_for_advisories

. current_incident_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. . list_size
. hov_lane_vehicle_count
. link_identity
. . link_type
. . location_identity
. . unit_number
. list_size
. parking_lot_identity
. . location_identity
. . unit_number
. parking_lot_state
. pollution_state_area_collection
. . area_air_quality_index
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_roadside_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time
. tmc_identity

traffic_data_for_advisory_output

. current_data_for_retrieval
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction

Appendix D: Data Tree

. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. long_term_data_for_retrieval
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location

. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. predictive_model_data_for_retrieval
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . predicted_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_road_network_use
. . . route_segment_guided_vehicles
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. source_identity
traffic_data_for_archive
. ahs_operational_data
. . ahs_checking_records
. . . ahs_check_identity
. . . . location_identity
. . . . unit_number
. . . ahs_failed_checks_count
. . . ahs_successful_checks_count
. . . list_size
. . ahs_lane_use_data
. . . ahs_vehicle_count
. . . list_size
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . date
. . list_size
. . time
. ahs_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. static_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. static_data_for_archive
. . static_data_for_traffic_control
. . . background_strategy
. . . . list_size
. . . . selected_strategy_data
. . . . selected_strategy_type
. . . . strategy_date
. . . . strategy_day
. . . . strategy_end_time
. . . . . time
. . . . strategy_start_time
. . . . . time
. . . coordination_rules_for_highways
. . . . coordination_rule_data_for_highways

. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . coordination_rule_highway_data_description
. . . . coordination_rule_highway_data_number
. . . . list_size
. . . coordination_rules_for_roads
. . . . coordination_rule_data_for_roads
. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . coordination_rule_road_data_description
. . . . coordination_rule_road_data_number
. . . . list_size
. . . dms_allocation
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . highway_control_devices
. . . . crossing_equipment_data_for_highways
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . crossing_phase_data
. . . . . list_size
. . . . highway_equipment_data
. . . . . dms_allocation
. . . . . indicator_identity
. . . . . list_size
. . . . . route_segment_end_point
. . . . . route_segment_identity
. . . . . route_segment_start_point
. . . . . dms_downstream_identity
. . . . . indicator_identity
. . . . . dms_upstream_identity
. . . . . indicator_identity
. . . . . list_size
. . . highway_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . indicator_highway_control_static_data
. . . . highway_sign_setting_data
. . . . . highway_sign_sequence_data
. . . . . highway_sign_sequence_purpose
. . . . . indicator_list
. . . . . list_size
. . . . highway_sign_setting_plans
. . . . . highway_sign_plan_data
. . . . . highway_sign_plan_priority
. . . . . highway_sign_plan_purpose
. . . . . highway_sign_sequence_data
. . . . . highway_sign_plan_number
. . . . . list_size
. . . indicator_road_control_static_data
. . . . indicator_road_adaptive_plans
. . . . . crossing_adaptive_data
. . . . . indicator_road_adaptive_plan_number
. . . . . intersection_adaptive_data
. . . . . list_size
. . . . . pedestrian_adaptive_data
. . . . indicator_road_fixed_plans
. . . . . crossing_fixed_time_data
. . . . . crossing_control_commands
. . . . . crossing_cycle_time
. . . . . crossing_offset_time
. . . . . indicator_road_fixed_plan_number
. . . . . intersection_fixed_time_data
. . . . . intersection_control_commands
. . . . . intersection_cycle_time
. . . . . intersection_offset_time
. . . . . list_size
. . . . . pedestrian_fixed_time_data
. . . . . pedestrian_control_commands
. . . . . pedestrian_cycle_time
. . . . . pedestrian_offset_time
. . . link_data
. . . . link_attributes
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . link_TMC_identity
. . . parking_lot_static_data
. . . . list_size
. . . . parking_lot_dms_allocation
. . . . . list_size
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_sensor_allocation
. . . . . list_size
. . . . . parking_lot_sensor_type
. . . . . unit_number
. . . . parking_lot_state_thresholds
. . . . . parking_lot_decreasing_threshold
. . . . . parking_lot_increasing_threshold
. . . ramp_devices
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . . ramp_phase_data
. . . road_control_devices
. . . . crossing_equipment_data_for_roads
. . . . . crossing_identity
. . . . . location_identity
. . . . . unit_number
. . . . . crossing_phase_data
. . . . . list_size
. . . . hri_data_for_roads
. . . . . crossing_id
. . . . . hri_phase_data
. . . . . list_size
. . . . intersection_equipment_data
. . . . . indicator_identity
. . . . . indicator_type

Appendix D: Data Tree

. . . . . location_identity
. . . . . unit_number
. . . . . intersection_phase_data
. . . . . intersection_phase_number
. . . . . list_size
. . . . pedestrian_equipment_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . pedestrian_phase_data
. . . road_network
. . . . list_size
. . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . roadway_characteristics
. . . . link_speed_limit
. . . . . special_vehicle_speed_limit
. . . . . vehicle_class
. . . . . vehicle_type
. . . . . speed_limit
. . . . median_type
. . . . number_of_lanes
. . . . pavement_type
. . . . shoulder_width
. . . sensor_allocation
. . . . sensor_allocation_for_controllers
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . sensor_allocation_for_hov_lanes
. . . . . hov_lane_identity
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . sensor_list
. . . . . list_size
. . . . . sensor_description
. . . . sensor_allocation_for_probes
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . . . sensor_allocation_for_tags
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . vehicle_tag_data_source_identity
. . . . . unit_number
. . . . . vehicle_tag_data_source_location
. . . . . location_identity
. . . vehicle_signage_output_identity
. . . . location_identity
. . . . unit_number
. traffic_data_for_deployment
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity

Appendix D: Data Tree

. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location

Appendix D: Data Tree

. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . long_term_data
. . . historical_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . historical_parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . historical_processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . historical_stored_incident_data
. . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . list_size
. . . historical_traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . historical_traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways

Appendix D: Data Tree

. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . historical_vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . historical_wide_area_pollution_data
. . . . historical_pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . historical_pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . list_size
. . . o_d_matrix
. . predictive_model_data
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . predicted_o_d_matrix
. . . predicted_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_road_network_use
. . . . route_segment_guided_vehicles
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. traffic_deployment_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
traffic_data_for_broadcast
. area_air_quality_index
. current_incident_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved

Appendix D: Data Tree

. . list_size
. current_roadway_network_data
. . current_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . current_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. link_state_data_for_broadcast
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . link_occupancy
. . link_speed
. . list_size
. . vehicle_occupancy
. . vehicle_speed
. parking_lot_storage_data
. . list_size
. . parking_lot_current_occupancy
. . . parking_lot_calculated_occupancy
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. roadway_environment_conditions
. . link_environment_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. source_identity

traffic_data_for_broadcast_to_kiosks

. current_data_for_broadcast
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . link_state_data_for_broadcast
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . . list_size
. . . vehicle_occupancy
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. predicted_data_for_broadcast
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size

. . . link_occupancy
. . . link_speed
. source_identity
traffic_data_for_broadcast_to_personal_devices
. current_data_for_broadcast
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . link_state_data_for_broadcast
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . . list_size
. . . vehicle_occupancy
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. predicted_data_for_broadcast
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. source_identity
traffic_data_for_cvo
. current_data_for_broadcast
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . link_state_data_for_broadcast
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed

. . . list_size
. . . vehicle_occupancy
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. predicted_data_for_broadcast
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. source_identity
traffic_data_for_demand
. long_term_data
. . historical_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . historical_parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . historical_processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . list_size
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . list_size
. . . . . hov_priority
. . . . . hov_lane_data

. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . indicator_list
. . . . . list_size
. . . . . pedestrian_demand
. . historical_stored_incident_data
. . . historical_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . list_size
. . historical_traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . historical_traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . indicator_junction_control_data
. . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . highway_sign_plan_number
. . . . . indicator_identity
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . indicator_identity
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . list_size
. . . . . list_size
. . . . . selected_strategy_type
. . historical_vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . historical_wide_area_pollution_data
. . . historical_pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . historical_pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution

. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . list_size
. . o_d_matrix
. predictive_model_data
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . predicted_o_d_matrix
. . predicted_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_road_network_use
. . . route_segment_guided_vehicles
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. tmc_identity

traffic_data_for_deployment

. current_data
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . unit_number
. . . parking_lot_state
. . processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . roadway_traffic_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . . . link_traffic_conditions
. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority

Appendix D: Data Tree

. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . crossing_close_duration
. . . . . crossing_close_time
. . . . . crossing_list
. . . . . list_size
. . . . . hov_priority
. . . . . hov_lane_data
. . . . . hov_lane_list
. . . . . list_size
. . . . . link_strategy_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . indicator_list
. . . . . list_size
. . . . . pedestrian_demand
. . sensor_output_data
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . hri_sensor_data
. . . . closure_event_data
. . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . intersection_blocked
. . . . rail_schedules_data
. . . pedestrian_sensor_data
. . . . node_list
. . . . . link_identity
. . . . . link_type
. . . . . link_type
. . . . . location_identity
. . . . . location_identity
. . . . . unit_number
. . . . . unit_number
. . . . . list_size
. . . . pedestrian_demand
. . . traffic_sensor_data
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . . . traffic_sensor_output
. . . traffic_video_image
. . stored_incident_data
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . planned_event_data
. . . . list_size
. . . . planned_event_details
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_crossing_control_data_for_highways
. . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . indicator_crossing_control_data_for_roads
. . . . . indicator_junction_control_data
. . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways

. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . traffic_video_image_data
. . . list_size
. . . traffic_video_camera_number
. . . . location_identity
. . . . unit_number
. . . traffic_video_image
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. long_term_data
. . historical_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . historical_parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . historical_processed_data
. . . hri_state_data
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . o_d_matrix
. . . parking_lot_input_data
. . . . list_size
. . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_count
. . . . vehicle_queue_length
. . . private_vehicle_occupants
. . . ramp_data
. . . . list_size
. . . . private_vehicle_occupants
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size

Appendix D: Data Tree

. . . strategy_data
. . . . strategy_data_for_highways
. . . . . crossing_data_for_highways
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . . crossing_close_duration
. . . . . . crossing_close_time
. . . . . . crossing_list
. . . . . . list_size
. . . . . hov_priority
. . . . . . hov_lane_data
. . . . . . hov_lane_list
. . . . . . list_size
. . . . . link_strategy_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . pedestrian_data
. . . . . . indicator_list
. . . . . . list_size
. . . . . . pedestrian_demand
. . historical_stored_incident_data
. . . historical_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . list_size
. . historical_traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . historical_traffic_management_storage_data
. . . indicator_control_storage_data
. . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . . indicator_crossing_control_data_for_highways
. . . . . . indicator_ramp_control_data
. . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . . . indicator_crossing_control_data_for_roads
. . . . . . indicator_junction_control_data
. . . . . . indicator_pedestrian_control_data
. . . indicator_input_storage_data
. . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . selected_strategy
. . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_emergency_strategy
. . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . . list_size
. . . . . . parking_lot_identity
. . . . . selected_parking_lot_strategy_type
. . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . . . selected_ramp_strategy_type
. . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . . highway_sign_plan_number
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . selected_strategy_type
. . . . . selected_road_control_strategy
. . . . . . indicator_identity
. . . . . . indicator_road_adaptive_plan_number
. . . . . . indicator_road_fixed_plan_number
. . . . . . list_size
. . . . . . list_size

Appendix D: Data Tree

. . . . . selected_strategy_type
. . historical_vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . historical_wide_area_pollution_data
. . . historical_pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . historical_pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . list_size
. . o_d_matrix
. predictive_model_data
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . predicted_o_d_matrix
. . predicted_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_road_network_use
. . . route_segment_guided_vehicles
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number

traffic_data_for_distribution

. current_data_for_retrieval
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways

Appendix D: Data Tree

. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. long_term_data_for_retrieval
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. predictive_model_data_for_retrieval
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time

. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . predicted_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_road_network_use
. . . route_segment_guided_vehicles
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number

traffic_data_for_emergency_services

. emergency_traffic_control_response
. . date
. . list_size
. . route_segment_estimated_arrival_time
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . selected_emergency_vehicle_strategy
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_emergency_strategy
. . time
. link_state_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_queue_length
. . vehicle_speed
. roadway_environment_conditions
. . link_environment_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size

traffic_data_for_guidance

. current_data_for_retrieval
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity

. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. long_term_data_for_retrieval
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_other_routes_use
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . traffic_flow_state
. . . current_road_network_use
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. . vehicle_smart_probe_stored_data
. . . list_size
. . . vehicle_smart_probe_data_for_storage
. . . . vehicle_smart_probe_data_indication
. . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . unit_number
. . . . . vehicle_smart_probe_data_source_location
. . . . . location_identity
. . wide_area_pollution_data
. . . list_size
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution

. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. source_identity
traffic_data_for_kiosks
. current_data_for_broadcast
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . link_state_data_for_broadcast
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . . list_size
. . . vehicle_occupancy
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. kiosk_identity
. predicted_data_for_broadcast
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. source_identity
traffic_data_for_personal_devices
. current_data_for_broadcast
. . area_air_quality_index
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . link_state_data_for_broadcast
. . . link_list
. . . . link_identity

. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . . list_size
. . . vehicle_occupancy
. . . vehicle_speed
. . parking_lot_storage_data
. . . list_size
. . . parking_lot_current_occupancy
. . . . parking_lot_calculated_occupancy
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. predicted_data_for_broadcast
. . predicted_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . predicted_parking_lot_data
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_occupancy
. . . parking_lot_state
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. source_identity
. traveler_identity
traffic_data_for_ridesharing
. tmc_identity
. traffic_data_for_distribution
. . current_data_for_retrieval
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list

Appendix D: Data Tree

. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . long_term_data_for_retrieval
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . predictive_model_data_for_retrieval
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . predicted_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_road_network_use

. . . . route_segment_guided_vehicles
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
traffic_data_for_signage
. link_state_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_queue_length
. . vehicle_speed
traffic_data_for_transit
. area_air_quality_index
. current_incidents_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. link_state_data
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . vehicle_count
. . vehicle_headway
. . vehicle_occupancy
. . vehicle_queue_length
. . vehicle_speed
. list_size
. roadway_environment_conditions
. . link_environment_conditions
. . link_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. traffic_flow_state
. . current_road_network_use
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
. . current_roadway_network_data
. . . current_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . current_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . hov_lane_data
. . . hov_lane_vehicle_count
. . . hov_lane_violation_count
. . . list_size
. . link_data_from_avl
. . . link_journey_time
. . . link_queue_time
. . . link_speed
. . . list_size
. . link_data_from_tags
. . . link_journey_time
. . . link_queue_time
. . . list_size
. . ramp_signal_state
. . . list_size
. . . ramp_controls
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
traffic_data_guidance_request
traffic_data_kiosk_request
. kiosk_identity
. traffic_data_request
traffic_data_kiosk_request_for_archive
. traffic_data_kiosk_request
. . kiosk_identity
. . traffic_data_request
traffic_data_media_parameters
traffic_data_personal_request
. traffic_data_request
. traveler_identity
traffic_data_personal_request_for_archive
. traffic_data_personal_request
. . traffic_data_request
. . traveler_identity
traffic_data_request
traffic_data_request_for_archive
. traffic_data_kiosk_request_for_archive
. . traffic_data_kiosk_request
. . . kiosk_identity
. . . traffic_data_request
. traffic_data_personal_request_for_archive
. . traffic_data_personal_request
. . . traffic_data_request
. . . traveler_identity
traffic_data_retrieval_parameters
traffic_data_ridesharing_request
traffic_deployment_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions

Appendix D: Data Tree

. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
traffic_device_control
traffic_device_control_state
traffic_device_status_to_roadway_m_and_c
. device_status_to_roadway_m_and_c
. . dms_equip_status_for_m_and_c
. . . dms_advisory_text
. . . . dms_auto_treat_info
. . . . dms_highway_open_close
. . . . dms_incident_warning
. . . . dms_weather_warning
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . har_equip_status_for_m_and_c
. . . har_fault
. . . . har_identity
. . indicator_equip_status_from_highways_for_m_and_c
. . . indicator_fault
. . . indicator_type
. . . list_size
. . indicator_equip_status_from_roads_for_m_and_c
. . . indicator_fault
. . . indicator_type
. . . list_size
. . signal_override_equip_status_for_m_and_c
. . . emergency_vehicle_preemptions
. . . . emergency_vehicle_junction_preemption
. . . . emergency_vehicle_pedestrian_preemption
. . . . emergency_vehicle_ramp_preemption
. . . . emergency_vehicle_sign_preemption
. . . transit_vehicle_roadway_priorities
. . . . transit_vehicle_junction_priority
. . . . transit_vehicle_pedestrian_priority
. . . . transit_vehicle_ramp_priority
. . . . transit_vehicle_sign_priority
. . smart_probe_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . vehicle_sign_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. dms_auto_treat_status_to_maint
. . device_status
. . dms_fault
. . . dms_identity
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . list_size
. f_other_rw_env_sensor_data_for_auto_treat_device
. . environment_sensor_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . environment_sensor_output
. . sensor_identity
. . station_id
. field_equipment_status_from_traffic
. . device_identity
. . list_size
. . roadside_device_status
. . station_id
traffic_flow_state
. current_road_network_use
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. . route_segment_use_prediction
. . . route_segment_guided_vehicles
. current_roadway_network_data
. . current_highway_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_highways
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . current_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type

. . . . . location_identity
. . . . . unit_number
. . . . list_size
. hov_lane_data
. . hov_lane_vehicle_count
. . hov_lane_violation_count
. . list_size
. link_data_from_avl
. . link_journey_time
. . link_queue_time
. . link_speed
. . list_size
. link_data_from_tags
. . link_journey_time
. . link_queue_time
. . list_size
. ramp_signal_state
. . list_size
. . ramp_controls
. . ramp_list
. . . list_size
. . . ramp_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . location_identity
. . . . unit_number
traffic_image_data
. incident_analysis_data
. incident_video_image
traffic_impact_criteria
traffic_incident_data_for_transit
. current_incident_details
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . incident_vehicles_involved
traffic_m_and_c_data
. env_sensor_data_for_traffic_speed_monitoring
. . environment_sensor_output
. . list_size
. . sensor_identity
. . station_id
. f_other_rw_work_zone_intrusion_detection
. . work_zone_intrusion_detection
. incident_data_for_work_zone
. . work_zone_images
. . work_zone_intrusion_video_image
. incident_info_from_traffic
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. infrastructure_sensor_data_for_m_and_c
. . infrastructure_sensor_data_from_roadside_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. infrastructure_sensor_data_for_mcv
. . infrastructure_sensor_data_from_roadside_devices
. . . infrastructure_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. infrastructure_sensor_status_for_m_and_c
. . infrastructure_sensor_status_of_roadside_devices
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. infrastructure_sensor_status_for_mcv
. . infrastructure_sensor_status_of_roadside_devices
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. road_network_info_from_traffic
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions

. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . . crossing_data_for_highways
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . . crossing_data_for_roads
. . . . . . hov_priority
. . . . . . link_strategy_data
. . . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . . hri_closure_data_response
. . . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . . link_identity
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . . incident_description
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . . incident_duration
. . . . . . incident_location
. . . . . . incident_number
. . . . . . incident_severity
. . . . . . incident_start_time
. . . . . . incident_traffic_impact
. . . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . . indicator_response_state
. . . . . . indicator_type
. . . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . . indicator_list
. . . . . . ramp_list
. . . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . . parking_lot_list
. . . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . . ramp_list
. . . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . . selected_highway_control_strategy
. . . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number

Appendix D: Data Tree

. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. roadside_device_control_to_work_zone
. . dms_status_for_m_and_c
. . . device_status
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . dms_status_for_mcv
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. sensor_status_to_roadway_m_and_c
. . env_sensor_data_for_auto_treat_device
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . sensor_identity
. . . station_id
. . hov_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . infrastructure_sensor_data_for_m_and_c
. . . infrastructure_sensor_data_from_roadside_devices
. . . . infrastructure_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . infrastructure_sensor_status_for_m_and_c
. . . infrastructure_sensor_status_of_roadside_devices
. . . . list_size
. . . . sensor_identity
. . . . sensor_status
. . . . . traffic_sensor_status
. . . . station_id
. . traffic_sensor_equip_status_for_m_and_c
. . . list_size
. . . sensor_identity
. . . sensor_status

. . . . traffic_sensor_status
. . . station_id
. sensor_vehicle_speed_data
. . env_sensor_data_for_speed_enforcement
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . speed_data_for_m_and_c_speed_monitoring
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. . speed_data_for_traffic_speed_monitoring
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
. surveillance_data_for_env
. . environmental_sensor_data_from_roadway
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . sensor_identity
. . . station_id
. . environmental_sensor_data_from_roadway_sensors
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. . environmental_sensor_fault_data_from_roadway
. . . sensor_fault_data
. . . sensor_identity
. . . station_id
. .
. . . list_size
. . . sensor_fault_data
. . . sensor_identity
. . . station_id
. . environmental_sensor_status_from_roadway
. . . sensor_identity
. . . sensor_status
. . . . traffic_sensor_status
. . . station_id
. . environmental_sensor_status_from_roadway_sensors
. . . list_size
. . . sensor_device_status
. . . sensor_identity
. . . station_id
. traffic_device_status_to_roadway_m_and_c
. . device_status_to_roadway_m_and_c
. . . dms_equip_status_for_m_and_c

Appendix D: Data Tree

. . . . dms_advisory_text
. . . . . dms_auto_treat_info
. . . . . dms_highway_open_close
. . . . . dms_incident_warning
. . . . . dms_weather_warning
. . . . dms_fault
. . . . . dms_identity
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . har_equip_status_for_m_and_c
. . . . har_fault
. . . . . har_identity
. . . indicator_equip_status_from_highways_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . indicator_equip_status_from_roads_for_m_and_c
. . . . indicator_fault
. . . . indicator_type
. . . . list_size
. . . signal_override_equip_status_for_m_and_c
. . . . emergency_vehicle_preemptions
. . . . . emergency_vehicle_junction_preemption
. . . . . emergency_vehicle_pedestrian_preemption
. . . . . emergency_vehicle_ramp_preemption
. . . . . emergency_vehicle_sign_preemption
. . . . transit_vehicle_roadway_priorities
. . . . . transit_vehicle_junction_priority
. . . . . transit_vehicle_pedestrian_priority
. . . . . transit_vehicle_ramp_priority
. . . . . transit_vehicle_sign_priority
. . . smart_probe_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . . vehicle_sign_equip_status_for_m_and_c
. . . . device_identity
. . . . list_size
. . . . roadside_device_status
. . . . station_id
. . dms_auto_treat_status_to_maint
. . . device_status
. . . dms_fault
. . . . dms_identity
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . f_other_rw_env_sensor_data_for_auto_treat_device
. . . environment_sensor_attributes
. . . . authorization_to_use
. . . . collection_conditions
. . . . collection_equipment
. . . . data_aggregation
. . . . data_concept_identifier
. . . . data_reductions
. . . . data_revision
. . . . data_version
. . . . date_archived
. . . . . date
. . . . . time
. . . . date_created
. . . . . date
. . . . . time
. . . . date_published
. . . . . date
. . . . . time
. . . . equipment_status
. . . . error_handling
. . . . methods_applied
. . . . owner_entities
. . . . perishability_date
. . . . . date
. . . . . time
. . . . personal_identification_status
. . . . quality_control_attribute
. . . . record_size
. . . . security
. . . . standard_data_attribute
. . . . standard_message_attribute
. . . environment_sensor_output
. . . sensor_identity
. . . station_id
. . field_equipment_status_from_traffic
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. traffic_resource_to_m_and_c
. . m_and_c_plan_feedback_from_traffic
. . . m_and_c_plan_feedback
. . m_and_c_resource_request_from_traffic
. . roadway_maint_action_req_from_traffic
. . video_device_equip_status_for_m_and_c
. . . device_identity
. . . list_size
. . . roadside_device_status
. . . station_id
. . winter_maint_action_req_from_traffic

traffic_management_archive_catalog_request

traffic_management_archive_data

. traffic_archive_catalog
. traffic_data_for_archive
. . ahs_operational_data
. . . ahs_checking_records
. . . . ahs_check_identity
. . . . . location_identity
. . . . . unit_number
. . . . ahs_failed_checks_count
. . . . ahs_successful_checks_count
. . . . list_size
. . . ahs_lane_use_data
. . . . ahs_vehicle_count
. . . . list_size
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . date
. . . list_size
. . . time
. . ahs_operational_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities

. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . static_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . static_data_for_archive
. . . static_data_for_traffic_control
. . . . background_strategy
. . . . . list_size
. . . . . selected_strategy_data
. . . . . selected_strategy_type
. . . . . strategy_date
. . . . . strategy_day
. . . . . strategy_end_time
. . . . . time
. . . . . strategy_start_time
. . . . . time
. . . . coordination_rules_for_highways
. . . . . coordination_rule_data_for_highways
. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . coordination_rule_highway_data_description
. . . . . coordination_rule_highway_data_number
. . . . . list_size
. . . . coordination_rules_for_roads
. . . . . coordination_rule_data_for_roads
. . . . . highway_sign_plan_number
. . . . . indicator_road_adaptive_plan_number
. . . . . indicator_road_fixed_plan_number
. . . . . coordination_rule_road_data_description
. . . . . coordination_rule_road_data_number
. . . . . list_size
. . . . dms_allocation
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_start_point
. . . . . location_identity
. . . . highway_control_devices
. . . . . crossing_equipment_data_for_highways
. . . . . crossing_identity
. . . . . crossing_phase_data
. . . . . list_size
. . . . . highway_equipment_data
. . . . . dms_allocation
. . . . . dms_downstream_identity
. . . . . dms_upstream_identity
. . . . . list_size
. . . . highway_network
. . . . . list_size
. . . . . route_segment_downstream_identity
. . . . . route_segment_identity
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_start_point
. . . . . location_identity
. . . . . route_segment_upstream_identity
. . . . . route_segment_identity
. . . . indicator_highway_control_static_data
. . . . . highway_sign_setting_data
. . . . . highway_sign_sequence_data
. . . . . list_size
. . . . . highway_sign_setting_plans
. . . . . highway_sign_plan_data
. . . . . highway_sign_plan_number
. . . . . list_size
. . . . indicator_road_control_static_data
. . . . . indicator_road_adaptive_plans
. . . . . crossing_adaptive_data
. . . . . indicator_road_adaptive_plan_number
. . . . . intersection_adaptive_data
. . . . . list_size
. . . . . pedestrian_adaptive_data
. . . . . indicator_road_fixed_plans
. . . . . crossing_fixed_time_data
. . . . . indicator_road_fixed_plan_number
. . . . . intersection_fixed_time_data
. . . . . list_size
. . . . . pedestrian_fixed_time_data
. . . . link_data
. . . . . link_attributes
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . link_TMC_identity
. . . . parking_lot_static_data
. . . . . list_size
. . . . . parking_lot_dms_allocation
. . . . . list_size
. . . . . unit_number
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_sensor_allocation
. . . . . list_size
. . . . . parking_lot_sensor_type
. . . . . unit_number
. . . . . parking_lot_state_thresholds
. . . . . parking_lot_decreasing_threshold

. . . . . parking_lot_increasing_threshold
. . . . ramp_devices
. . . . . list_size
. . . . . ramp_identity
. . . . . . indicator_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . ramp_phase_data
. . . . road_control_devices
. . . . . crossing_equipment_data_for_roads
. . . . . . crossing_identity
. . . . . . crossing_phase_data
. . . . . . list_size
. . . . . hri_data_for_roads
. . . . . . crossing_id
. . . . . . hri_phase_data
. . . . . . list_size
. . . . . intersection_equipment_data
. . . . . . indicator_identity
. . . . . . intersection_phase_data
. . . . . . intersection_phase_number
. . . . . . list_size
. . . . . pedestrian_equipment_data
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . pedestrian_phase_data
. . . . road_network
. . . . . list_size
. . . . . route_segment_downstream_identity
. . . . . . route_segment_identity
. . . . . route_segment_end_point
. . . . . . location_identity
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_start_point
. . . . . . location_identity
. . . . . route_segment_upstream_identity
. . . . . . route_segment_identity
. . . . roadway_characteristics
. . . . . link_speed_limit
. . . . . . special_vehicle_speed_limit
. . . . . . speed_limit
. . . . . median_type
. . . . . number_of_lanes
. . . . . pavement_type
. . . . . shoulder_width
. . . . sensor_allocation
. . . . . sensor_allocation_for_controllers
. . . . . . indicator_identity
. . . . . . list_size
. . . . . . sensor_list
. . . . . sensor_allocation_for_hov_lanes
. . . . . . hov_lane_identity
. . . . . . list_size
. . . . . . sensor_list
. . . . . sensor_allocation_for_probes
. . . . . . link_identity
. . . . . . list_size
. . . . . . vehicle_smart_probe_data_source_identity
. . . . . . vehicle_smart_probe_data_source_location
. . . . . sensor_allocation_for_tags
. . . . . . link_identity
. . . . . . list_size
. . . . . . vehicle_tag_data_source_identity
. . . . . . vehicle_tag_data_source_location
. . . . vehicle_signage_output_identity
. . . . . location_identity
. . . . . unit_number
. . traffic_data_for_deployment
. . . current_data
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . . parking_lot_calculated_occupancy
. . . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . parking_lot_state
. . . . processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . . link_list
. . . . . . list_size
. . . . . . vehicle_count
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_queue_length
. . . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . . list_size
. . . . . . parking_lot_list
. . . . . . vehicle_count
. . . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . . list_size
. . . . . . private_vehicle_occupants
. . . . . . ramp_list
. . . . . . vehicle_headway
. . . . . . vehicle_occupancy
. . . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . . link_environment_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . roadway_traffic_conditions
. . . . . . link_list
. . . . . . link_list
. . . . . . link_traffic_conditions
. . . . . strategy_data
. . . . . . strategy_data_for_highways
. . . . . . strategy_data_for_roads
. . . . sensor_output_data
. . . . . environment_sensor_data
. . . . . . environment_sensor_output
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . hri_sensor_data
. . . . . . closure_event_data
. . . . . . hri_status
. . . . . . intersection_blocked
. . . . . . rail_schedules_data
. . . . . pedestrian_sensor_data
. . . . . . node_list
. . . . . . node_list
. . . . . . pedestrian_demand
. . . . . traffic_sensor_data
. . . . . . list_size
. . . . . . list_size
. . . . . . sensor_identity
. . . . . . station_id
. . . . . . traffic_sensor_output
. . . . . traffic_video_image
. . . . stored_incident_data
. . . . . current_incident_data

Appendix D: Data Tree

. . . . . current_incident_details
. . . . . list_size
. . . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . traffic_video_image_data
. . . . . list_size
. . . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . . traffic_video_image
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . long_term_data
. . . . historical_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . historical_parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . historical_processed_data
. . . . . hri_state_data
. . . . . link_state_data
. . . . . link_list
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . . o_d_matrix
. . . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . . private_vehicle_occupants
. . . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_list
. . . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . strategy_data_for_roads
. . . . historical_stored_incident_data
. . . . . historical_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . list_size
. . . . historical_traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time

. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . historical_traffic_management_storage_data
. . . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_input_storage_data_for_roads
. . . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . selected_ramp_control_strategy
. . . . . selected_roadway_control_strategy
. . . . historical_vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . historical_wide_area_pollution_data
. . . . . historical_pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . historical_pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . list_size
. . . . o_d_matrix
. . . predictive_model_data
. . . . predicted_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . predicted_hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . predicted_o_d_matrix
. . . . predicted_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . predicted_parking_lot_data
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_occupancy
. . . . . parking_lot_state
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . predicted_road_network_use
. . . . . route_segment_guided_vehicles
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . traffic_deployment_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
traffic_management_archive_data_request
traffic_management_archive_request
. traffic_management_archive_catalog_request
. traffic_management_archive_data_request
traffic_management_archive_status
traffic_management_request
traffic_management_storage_data
. indicator_control_storage_data
. . indicator_control_storage_data_for_highways
. . . indicator_control_data_for_highways
. . . . indicator_crossing_control_data_for_highways
. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . indicator_ramp_control_data
. . . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . . ramp_controls
. . indicator_control_storage_data_for_roads
. . . indicator_control_data_for_roads
. . . . indicator_crossing_control_data_for_roads

. . . . . indicator_crossing_controls
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . indicator_junction_control_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . indicator_junction_controls
. . . . . list_size
. . . . indicator_pedestrian_control_data
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . indicator_pedestrian_controls
. . . . . list_size
. indicator_input_storage_data
. . indicator_input_storage_data_for_highways
. . . indicator_response_state
. . . indicator_type
. . . list_size
. . indicator_input_storage_data_for_roads
. . . indicator_response_state
. . . indicator_type
. . . list_size
. selected_strategy
. . selected_emergency_vehicle_strategy
. . . indicator_list
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_emergency_strategy
. . selected_parking_lot_control_strategy
. . . parking_lot_list
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . selected_parking_lot_strategy_type
. . selected_ramp_control_strategy
. . . ramp_list
. . . . list_size
. . . . ramp_identity
. . . . . indicator_identity
. . . . . . indicator_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . location_identity
. . . . . unit_number
. . . selected_ramp_strategy_type
. . selected_roadway_control_strategy
. . . selected_highway_control_strategy
. . . . highway_sign_plan_number
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . selected_strategy_type
. . . selected_road_control_strategy
. . . . indicator_identity
. . . . . indicator_type
. . . . . location_identity
. . . . . unit_number
. . . . indicator_road_adaptive_plan_number
. . . . indicator_road_fixed_plan_number
. . . . list_size
. . . . selected_strategy_type
traffic_operations_resource_request
traffic_operations_resource_response
traffic_probe_info_from_evs_for_traffic
. emergency_vehicle_tracking_data
. . emergency_vehicle_operational_data
. . vehicle_identity
. . vehicle_location_for_emergency_services
. . . location_identity
. . . time
traffic_probe_info_from_info_provider
. vehicle_probe_data_amalgamation
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
traffic_resource_request
traffic_resource_to_m_and_c
. m_and_c_plan_feedback_from_traffic
. . m_and_c_plan_feedback
. m_and_c_resource_request_from_traffic
. roadway_maint_action_req_from_traffic
. video_device_equip_status_for_m_and_c
. . device_identity
. . list_size
. . roadside_device_status
. . station_id
. winter_maint_action_req_from_traffic
traffic_sensor_data
. list_size
. sensor_identity
. station_id
. traffic_sensor_output
traffic_sensor_data_for_automated_lane_changing
. traffic_sensor_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
traffic_sensor_equip_status_for_m_and_c
. list_size
. sensor_identity
. sensor_status
. . traffic_sensor_status
. station_id
traffic_sensor_fault_data
traffic_sensor_output
traffic_sensor_status
traffic_surveillance_data
traffic_video_camera_number
. location_identity
. unit_number
traffic_video_image
traffic_video_image_data
. list_size
. traffic_video_camera_number
. . location_identity
. . unit_number
. traffic_video_image
traffic_video_image_for_display
. traffic_video_image
train_alert
train_direction
train_dynamics

Appendix D: Data Tree

. arrival_time
. . time
. location_identity
. train_length
. train_speed
. train_stopping_distance
train_id
train_length
train_message
train_ops_plan
train_sense_data
. crossing_id
. hri_sensor_data
. . closure_event_data
. . hri_status
. . . hri_closure_data_response
. . . hri_state
. . intersection_blocked
. . rail_schedules_data
train_speed
train_stopping_distance
transaction_number
transfer_charges_to_fares
. advanced_charges_confirm
. . confirmation_flag
. . credit_identity
. . parking_lot_cost
. . . cost
. . stored_credit
. advanced_fare_details
. . credit_identity
. . stored_credit
. . transit_journey_date
. . . date
. . . time
. . transit_route_destination
. . transit_route_origin
transfer_charges_to_tolls
. advanced_charges_confirm
. . confirmation_flag
. . credit_identity
. . parking_lot_cost
. . . cost
. . stored_credit
. advanced_tolls
. . credit_identity
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
transfer_fares_to_charges
. advanced_charges
. . credit_identity
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_space_details
. . . date
. . . duration
. . . time
. . stored_credit
. . traveler_identity
. . vehicle_identity
. advanced_fares_confirm
. . confirmation_flag
transfer_fares_to_tolls
. advanced_fares_confirm
. . confirmation_flag
. advanced_tolls
. . credit_identity
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
transfer_tolls_to_charges
. advanced_charges
. . credit_identity
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_space_details
. . . date
. . . duration
. . . time
. . stored_credit
. . traveler_identity
. . vehicle_identity
. advanced_tolls_confirm
. . confirmation_flag
. . credit_identity
. . stored_credit
. . toll_cost
transfer_tolls_to_fares
. advanced_fare_details
. . credit_identity
. . stored_credit
. . transit_journey_date
. . . date
. . . time
. . transit_route_destination
. . transit_route_origin
. advanced_tolls_confirm
. . confirmation_flag
. . credit_identity
. . stored_credit
. . toll_cost
transit_advisory_data
. planned_events_for_advisories
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. prediction_data_for_advisories
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_occupancy_predictions
. . route_segment_queue_delay_predictions
. . route_segment_volume_delay_predictions
. traffic_data_for_advisories
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved

. . . list_size
. . hov_lane_vehicle_count
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . tmc_identity
. transit_running_data_for_advisories
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
. . transit_vehicle_time
transit_advisory_data_request
. advisory_data_scope
. transit_route_number
. transit_vehicle_identity
. vehicle_location_for_advisories
. . location_identity
transit_advisory_vehicle_information
transit_archive_catalog
transit_archive_catalog_request
transit_archive_data
. transit_archive_catalog
. transit_data_for_archive
. . bad_transit_collected_fare_payment
. . . enforcement_agency_contact
. . . enforcement_agency_details
. . . . enforcement_agency_address
. . . . enforcement_agency_computer
. . . . enforcement_agency_email
. . . . enforcement_agency_fax
. . . . enforcement_agency_name
. . . . enforcement_agency_phone
. . . . enforcement_agency_responsibility
. . . fare_violation_information
. . . . credit_identity
. . . . transit_fare
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_route_use_time
. . . . transit_user_category
. . . . transit_user_roadside_image
. . . . transit_user_vehicle_image
. . . . traveler_identity
. . bad_transit_roadside_fare_payment
. . . enforcement_agency_contact
. . . enforcement_agency_details
. . . . enforcement_agency_address
. . . . enforcement_agency_computer
. . . . enforcement_agency_email
. . . . enforcement_agency_fax
. . . . enforcement_agency_name
. . . . enforcement_agency_phone
. . . . enforcement_agency_responsibility
. . . fare_collection_roadside_violation_information
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_user_roadside_image
. . . . transit_user_roadside_tag_identity
. . . . . credit_identity
. . . . . traveler_identity
. . bad_transit_vehicle_fare_payment
. . . enforcement_agency_contact
. . . enforcement_agency_details
. . . . enforcement_agency_address
. . . . enforcement_agency_computer
. . . . enforcement_agency_email
. . . . enforcement_agency_fax
. . . . enforcement_agency_name
. . . . enforcement_agency_phone
. . . . enforcement_agency_responsibility
. . . fare_collection_vehicle_violation_information
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_user_vehicle_image
. . . . transit_user_vehicle_tag_identity
. . . . . credit_identity
. . . . . stored_credit
. . . . . traveler_identity
. . paratransit_service_data_for_archive
. . . paratransit_personal_schedule
. . . . paratransit_service_cost
. . . . . cost
. . . . paratransit_service_details
. . . . . paratransit_arrival_time
. . . . . time
. . . . . paratransit_availability_time
. . . . . paratransit_destination
. . . . . paratransit_pickup_location
. . . . . location_identity
. . . . . paratransit_pickup_time
. . . . . paratransit_service_identity
. . . . traveler_identity
. . . traveler_identity
. . transit_driver_info_for_archive
. . . list_size
. . . transit_driver_details
. . . . transit_driver_availability
. . . . transit_driver_availability_considerations
. . . . transit_driver_cost_effectiveness
. . . . transit_driver_cost_effectiveness_considerations
. . . . transit_driver_eligibility
. . . . transit_driver_eligibility_considerations
. . . . transit_driver_identity
. . . . transit_driver_performance
. . . . transit_driver_performance_considerations
. . . . transit_driver_route_assignment_considerations
. . . . transit_driver_route_details
. . transit_emergency_data_for_archive
. . . transit_emergency_data
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity

. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . transit_emergency_details
. . . . transit_driver_emergency_request
. . . . transit_user_emergency_request
. . . . transit_vehicle_location
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_location_data
. . . . . location_identity
. . . transit_media_emergency_interface_parameters
. . transit_fare_transactions
. . . advanced_fare_transactions
. . . . credit_identity
. . . . date
. . . . stored_credit
. . . . time
. . . . transit_fare
. . . . traveler_identity
. . . current_fare_transactions
. . . . credit_identity
. . . . date
. . . . time
. . . . transit_fare
. . . . traveler_identity
. . . list_size
. . transit_incident_info_for_archive
. . . emergency_request_transit_details
. . . . date
. . . . time
. . . . transit_emergency_request
. . . . . traveler_identity
. . . . . traveler_location_for_emergencies
. . . . . location_identity
. . . transit_area_surveillance_information
. . . transit_incident_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . transit_media_incident_interface_parameters
. . . transit_operator_security_action
. . . . transit_incident_extra_data
. . . . transit_incident_required_action
. . . . transit_video_camera_command
. . transit_operational_data_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . transit_operational_data_for_archive
. . . transit_operational_data
. . . . date
. . . . list_size
. . . . time
. . . . transit_passenger_operational_data
. . . . . date
. . . . . list_size
. . . . . time
. . . . . transit_roadside_operational_data
. . . . . list_size
. . . . . transit_roadside_passenger_data
. . . . . transit_route_operational_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_vehicle_passenger_operational_data
. . . . transit_roadside_operational_data
. . . . . list_size
. . . . . transit_roadside_passenger_data
. . . . . list_size
. . . . . transit_passenger_numbers
. . . . . transit_roadside_fare_collection_data
. . . . . transit_route_stop_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_user_journey_start
. . . . transit_vehicle_operational_data
. . . . . list_size
. . . . . transit_vehicle_availability
. . . . . transit_vehicle_data
. . . . . list_size
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passenger_loading
. . . . . transit_vehicle_passenger_data
. . . . . transit_passenger_numbers
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_vehicle_fare_collection_data
. . . . . transit_vehicle_identity
. . transit_route_assign_for_archive
. . . list_size
. . . paratransit_services_for_transit_drivers
. . . . transit_route
. . . . . route_cost
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . transit_schedules
. . . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_list
. . . . . transit_schedule_identity
. . . . transit_stop_locations
. . . . . list_size
. . . . . location_identity
. . . . . transit_route_number
. . . . . transit_route_stop_number
. . . transit_services_for_transit_drivers
. . . . list_size

Appendix D: Data Tree

. . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . . list_size
. . . . . . transit_route_number
. . . . . . transit_route_segment_list
. . . . . . transit_route_stop_number
. . . . . transit_schedule_data
. . . . . . list_size
. . . . . . transit_route_number
. . . . . . transit_route_segment_list
. . . . . . transit_route_stop_list
. . . . . . transit_schedule_identity
. . . transit_vehicle_availability
. . . transit_vehicle_identity
. . transit_services_for_deployment
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . . list_size
. . . . . . transit_route_stop_data
. . . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . transit_technician_info
. . . list_size
. . . transit_technician_detail
. . . . transit_technician_identity
. . . . transit_technician_seniority
. . . . transit_technician_work_assignment
. . . . . transit_technician_identity
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_maintenance_work
. . . . transit_technician_work_hours
. . . . transit_technician_work_log
. . . . . date
. . . . . list_size
. . . . . time
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_maintenance_work
. . . . transit_technician_work_preferences
. . . . transit_technician_work_skills
. . transit_user_payments_transactions
. . transit_vehicle_data_for_archive
. . . transit_vehicle_data
. . . . list_size
. . . . transit_vehicle_identity
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . transit_vehicle_information
. . . . transit_vehicle_collected_maintenance_data
. . . . . transit_vehicle_mileage_accumulated
. . . . . transit_vehicle_operating_condition
. . . . transit_vehicle_collected_trip_data
. . . . . transit_vehicle_passenger_loading
. . . . . . list_size
. . . . . . transit_route_number
. . . . . . transit_route_segment_number
. . . . . . transit_vehicle_identity
. . . . . . transit_vehicle_passengers
. . . . . transit_vehicle_running_times
. . . . . . list_size
. . . . . . transit_route_number
. . . . . . transit_route_segment_number
. . . . . . transit_stop_scheduled_time
. . . . transit_vehicle_deviation_update
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . transit_vehicle_identity
. . . . transit_vehicle_location
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_location_data
. . . . . . location_identity
. . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . . time
. . . . . transit_vehicle_identity
. . transit_vehicle_maintenance_info
. . . list_size
. . . transit_vehicle_identity
. . . transit_vehicle_operations_details
. . . . transit_vehicle_maintenance
. . . . . transit_vehicle_maintenance_date
. . . . . . date
. . . . . transit_vehicle_maintenance_mileage
. . . . . transit_vehicle_maintenance_required
. . . . transit_vehicle_maintenance_log
. . . . . transit_vehicle_maintenance_log_activity
. . . . . transit_vehicle_maintenance_log_date
. . . . . . date
. . . . . transit_vehicle_maintenance_log_mileage
. . . . . transit_vehicle_maintenance_log_time
. . . . . . time
. . . . transit_vehicle_maintenance_schedule
. . . . . transit_vehicle_maintenance_schedule_activity
. . . . . transit_vehicle_maintenance_schedule_date
. . . . . . date
. . . . . transit_vehicle_maintenance_schedule_mileage
. . . . transit_vehicle_maintenance_specs
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_maintenance_details
. . . . . transit_vehicle_type
transit_archive_data_request
transit_archive_input
. transit_archive_request
. . transit_archive_catalog_request
. . transit_archive_data_request
. transit_archive_status
transit_archive_request
. transit_archive_catalog_request
. transit_archive_data_request
transit_archive_status
transit_area_broadcast_message
transit_area_monitoring_control
transit_area_surveillance_information
transit_changes_in_speed
transit_changes_in_stops
transit_conditions_advisories_request

transit_conditions_demand_request
transit_conditions_guidance_request
transit_confirmation_flag
transit_coordination_data
. transit_coordination_information
. transit_fleet_operation_acknowledge
. transit_response_to_incident
transit_coordination_information
transit_data
. paratransit_personal_schedule
. . paratransit_service_cost
. . . cost
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. . traveler_identity
. transit_deviation_kiosk_request_for_archive
. . transit_deviation_kiosk_request
. . . kiosk_identity
. . . transit_vehicle_deviation_request
. transit_deviations_for_broadcast_to_kiosks
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. transit_deviations_for_broadcast_to_personal_devices
. . list_size
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
. transit_deviations_for_kiosks
. . kiosk_identity
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. transit_deviations_for_personal_devices
. . list_size
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
. . traveler_identity
. transit_deviations_personal_request_for_archive
. . transit_deviations_personal_request
. . . transit_route_number
. . . transit_vehicle_deviation_request
. . . traveler_identity
. transit_incident_data
. transit_running_data_for_advisory_output
. . list_size
. . transit_vehicle_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. . transit_vehicle_running_times
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. transit_running_data_for_guidance
. . transit_vehicle_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. . transit_vehicle_running_times
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. transit_services_for_advisory_data
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. transit_services_for_guidance
. . transit_services_for_output
. . . list_size
. . . transit_route_number
. . . transit_route_segment_cost

. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . traveler_identity
. transit_services_for_kiosks
. . kiosk_identity
. . transit_services_for_output
. . . list_size
. . . transit_route_number
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. transit_services_for_personal_devices
. . transit_services_for_output
. . . list_size
. . . transit_route_number
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . traveler_identity
. transit_vehicle_advisory_eta
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_arrival_time
. transit_vehicle_eta_for_advisory
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
. traveler_transit_information_for_transit_advisories
. . traveler_transit_information_data
. . . transit_running_data_for_advisory_output
. . . . list_size
. . . . transit_vehicle_eta
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_time
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_vehicle_schedule_deviations
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_achieved_time
. . . . . time
. . . . . transit_vehicle_identity
. . . transit_services_for_advisory_data
. . . . transit_services
. . . . . map_transit_data
. . . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_number
. . . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . transit_route_stop_list
. . . . . transit_schedule_identity

transit_data_archive

. bad_transit_collected_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_violation_information
. . . credit_identity
. . . transit_fare
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
. . . transit_user_roadside_image
. . . transit_user_vehicle_image
. . . traveler_identity
. bad_transit_roadside_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_collection_roadside_violation_information
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_user_roadside_image
. . . transit_user_roadside_tag_identity
. . . . credit_identity
. . . . traveler_identity
. bad_transit_vehicle_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_collection_vehicle_violation_information
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_user_vehicle_image
. . . transit_user_vehicle_tag_identity
. . . . credit_identity
. . . . stored_credit
. . . . traveler_identity
. paratransit_service_data_for_archive
. . paratransit_personal_schedule
. . . paratransit_service_cost
. . . . cost
. . . paratransit_service_details
. . . . paratransit_arrival_time
. . . . . time
. . . . paratransit_availability_time
. . . . paratransit_destination
. . . . paratransit_pickup_location
. . . . . location_identity
. . . . paratransit_pickup_time
. . . . paratransit_service_identity
. . . traveler_identity
. . traveler_identity
. transit_archive_catalog

Appendix D: Data Tree

. transit_driver_info_for_archive
. . list_size
. . transit_driver_details
. . . transit_driver_availability
. . . transit_driver_availability_considerations
. . . transit_driver_cost_effectiveness
. . . transit_driver_cost_effectiveness_considerations
. . . transit_driver_eligibility
. . . transit_driver_eligibility_considerations
. . . transit_driver_identity
. . . transit_driver_performance
. . . transit_driver_performance_considerations
. . . transit_driver_route_assignment_considerations
. . . transit_driver_route_details
. transit_emergency_data_for_archive
. . transit_emergency_data
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_severity
. . . incident_start_time
. . . . time
. . transit_emergency_details
. . . transit_driver_emergency_request
. . . transit_user_emergency_request
. . . transit_vehicle_location
. . . . transit_vehicle_identity
. . . . transit_vehicle_location_data
. . . . . location_identity
. . transit_media_emergency_interface_parameters
. transit_fare_transactions
. . advanced_fare_transactions
. . . credit_identity
. . . date
. . . stored_credit
. . . time
. . . transit_fare
. . . traveler_identity
. . current_fare_transactions
. . . credit_identity
. . . date
. . . time
. . . transit_fare
. . . traveler_identity
. . list_size
. transit_incident_info_for_archive
. . emergency_request_transit_details
. . . date
. . . time
. . . transit_emergency_request
. . . . traveler_identity
. . . . traveler_location_for_emergencies
. . . . . location_identity
. . transit_area_surveillance_information
. . transit_incident_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_severity
. . . incident_start_time
. . . . time
. . transit_media_incident_interface_parameters
. . transit_operator_security_action
. . . transit_incident_extra_data
. . . transit_incident_required_action
. . . transit_video_camera_command
. transit_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. transit_operational_data_for_archive
. . transit_operational_data
. . . date
. . . list_size
. . . time
. . . transit_passenger_operational_data
. . . . date
. . . . list_size
. . . . time
. . . . transit_roadside_operational_data
. . . . . list_size
. . . . . transit_roadside_passenger_data
. . . . . list_size
. . . . . transit_passenger_numbers
. . . . . transit_roadside_fare_collection_data
. . . . . transit_route_stop_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_user_journey_start
. . . . transit_route_operational_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_vehicle_passenger_operational_data
. . . . . list_size
. . . . . transit_route_segment_number
. . . . . transit_vehicle_passengers
. . . transit_roadside_operational_data
. . . . list_size
. . . . transit_roadside_passenger_data
. . . . . list_size
. . . . . transit_passenger_numbers
. . . . . transit_roadside_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_route_stop_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . transit_vehicle_operational_data
. . . . list_size
. . . . transit_vehicle_availability
. . . . transit_vehicle_data
. . . . . list_size
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passenger_loading

Appendix D: Data Tree

. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_passenger_data
. . . . . transit_passenger_numbers
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_vehicle_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_vehicle_identity
. transit_route_assign_for_archive
. . list_size
. . paratransit_services_for_transit_drivers
. . . transit_route
. . . . route_cost
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_travel_time
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . transit_schedules
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . . transit_stop_locations
. . . . list_size
. . . . location_identity
. . . . transit_route_number
. . . . transit_route_stop_number
. . transit_services_for_transit_drivers
. . . list_size
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . transit_vehicle_availability
. . transit_vehicle_identity
. transit_services_for_deployment
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. transit_technician_info
. . list_size
. . transit_technician_detail
. . . transit_technician_identity
. . . transit_technician_seniority
. . . transit_technician_work_assignment
. . . . transit_technician_identity
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_work
. . . transit_technician_work_hours
. . . transit_technician_work_log
. . . . date
. . . . list_size
. . . . time
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_work
. . . transit_technician_work_preferences
. . . transit_technician_work_skills
. transit_user_payments_transactions
. transit_vehicle_data_for_archive
. . transit_vehicle_data
. . . list_size
. . . transit_vehicle_identity
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . transit_vehicle_information
. . . transit_vehicle_collected_maintenance_data
. . . . transit_vehicle_mileage_accumulated
. . . . transit_vehicle_operating_condition
. . . transit_vehicle_collected_trip_data
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers

. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . transit_vehicle_deviation_update
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_identity
. . . transit_vehicle_location
. . . . transit_vehicle_identity
. . . . transit_vehicle_location_data
. . . . . location_identity
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. transit_vehicle_maintenance_info
. . list_size
. . transit_vehicle_identity
. . transit_vehicle_operations_details
. . . transit_vehicle_maintenance
. . . . transit_vehicle_maintenance_date
. . . . . date
. . . . transit_vehicle_maintenance_mileage
. . . . transit_vehicle_maintenance_required
. . . transit_vehicle_maintenance_log
. . . . transit_vehicle_maintenance_log_activity
. . . . transit_vehicle_maintenance_log_date
. . . . . date
. . . . transit_vehicle_maintenance_log_mileage
. . . . transit_vehicle_maintenance_log_time
. . . . . time
. . . transit_vehicle_maintenance_schedule
. . . . transit_vehicle_maintenance_schedule_activity
. . . . transit_vehicle_maintenance_schedule_date
. . . . . date
. . . . transit_vehicle_maintenance_schedule_mileage
. . . transit_vehicle_maintenance_specs
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_details
. . . . transit_vehicle_type

transit_data_for_archive

. bad_transit_collected_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_violation_information
. . . credit_identity
. . . transit_fare
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
. . . transit_user_roadside_image
. . . transit_user_vehicle_image
. . . traveler_identity
. bad_transit_roadside_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_collection_roadside_violation_information
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_user_roadside_image
. . . transit_user_roadside_tag_identity
. . . . credit_identity
. . . . traveler_identity
. bad_transit_vehicle_fare_payment
. . enforcement_agency_contact
. . enforcement_agency_details
. . . enforcement_agency_address
. . . enforcement_agency_computer
. . . enforcement_agency_email
. . . enforcement_agency_fax
. . . enforcement_agency_name
. . . enforcement_agency_phone
. . . enforcement_agency_responsibility
. . fare_collection_vehicle_violation_information
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_user_vehicle_image
. . . transit_user_vehicle_tag_identity
. . . . credit_identity
. . . . stored_credit
. . . . traveler_identity
. paratransit_service_data_for_archive
. . paratransit_personal_schedule
. . . paratransit_service_cost
. . . . cost
. . . paratransit_service_details
. . . . paratransit_arrival_time
. . . . . time
. . . . paratransit_availability_time
. . . . paratransit_destination
. . . . paratransit_pickup_location
. . . . . location_identity
. . . . paratransit_pickup_time
. . . . paratransit_service_identity
. . . traveler_identity
. . traveler_identity
. transit_driver_info_for_archive
. . list_size
. . transit_driver_details
. . . transit_driver_availability
. . . transit_driver_availability_considerations
. . . transit_driver_cost_effectiveness
. . . transit_driver_cost_effectiveness_considerations
. . . transit_driver_eligibility
. . . transit_driver_eligibility_considerations
. . . transit_driver_identity
. . . transit_driver_performance
. . . transit_driver_performance_considerations
. . . transit_driver_route_assignment_considerations
. . . transit_driver_route_details
. transit_emergency_data_for_archive
. . transit_emergency_data
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_severity
. . . incident_start_time
. . . . time
. . transit_emergency_details

. . . transit_driver_emergency_request
. . . transit_user_emergency_request
. . . transit_vehicle_location
. . . . transit_vehicle_identity
. . . . transit_vehicle_location_data
. . . . . location_identity
. . transit_media_emergency_interface_parameters
. transit_fare_transactions
. . advanced_fare_transactions
. . . credit_identity
. . . date
. . . stored_credit
. . . time
. . . transit_fare
. . . traveler_identity
. . current_fare_transactions
. . . credit_identity
. . . date
. . . time
. . . transit_fare
. . . traveler_identity
. . list_size
. transit_incident_info_for_archive
. . emergency_request_transit_details
. . . date
. . . time
. . . transit_emergency_request
. . . . traveler_identity
. . . . traveler_location_for_emergencies
. . . . . location_identity
. . transit_area_surveillance_information
. . transit_incident_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_severity
. . . incident_start_time
. . . . time
. . transit_media_incident_interface_parameters
. . transit_operator_security_action
. . . transit_incident_extra_data
. . . transit_incident_required_action
. . . transit_video_camera_command
. transit_operational_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. transit_operational_data_for_archive
. . transit_operational_data
. . . date
. . . list_size
. . . time
. . . transit_passenger_operational_data
. . . . date
. . . . list_size
. . . . time
. . . . transit_roadside_operational_data
. . . . . list_size
. . . . . transit_roadside_passenger_data
. . . . . list_size
. . . . . transit_passenger_numbers
. . . . . transit_roadside_fare_collection_data
. . . . . transit_route_stop_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_user_journey_start
. . . . transit_route_operational_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_vehicle_passenger_operational_data
. . . . . list_size
. . . . . transit_route_segment_number
. . . . . transit_vehicle_passengers
. . . transit_roadside_operational_data
. . . . list_size
. . . . transit_roadside_passenger_data
. . . . . list_size
. . . . . transit_passenger_numbers
. . . . . transit_roadside_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_route_stop_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . transit_vehicle_operational_data
. . . . list_size
. . . . transit_vehicle_availability
. . . . transit_vehicle_data
. . . . . list_size
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_passenger_data
. . . . . transit_passenger_numbers
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_vehicle_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_vehicle_identity
. transit_route_assign_for_archive
. . list_size
. . paratransit_services_for_transit_drivers
. . . transit_route
. . . . route_cost
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_travel_time
. . . . route_segment_report_position_points

. . . . . list_size
. . . . . route_segment_way_point
. . . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . transit_schedules
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . . list_size
. . . . . . transit_route_stop_data
. . . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . . transit_stop_locations
. . . . list_size
. . . . location_identity
. . . . transit_route_number
. . . . transit_route_stop_number
. . transit_services_for_transit_drivers
. . . list_size
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . . list_size
. . . . . . transit_route_stop_data
. . . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . transit_vehicle_availability
. . transit_vehicle_identity
. transit_services_for_deployment
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . . list_size
. . . . . . transit_route_schedule_number
. . . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. transit_technician_info
. . list_size
. . transit_technician_detail
. . . transit_technician_identity
. . . transit_technician_seniority
. . . transit_technician_work_assignment
. . . . transit_technician_identity
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_work
. . . transit_technician_work_hours
. . . transit_technician_work_log
. . . . date
. . . . list_size
. . . . time
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_work
. . . transit_technician_work_preferences
. . . transit_technician_work_skills
. transit_user_payments_transactions
. transit_vehicle_data_for_archive
. . transit_vehicle_data
. . . list_size
. . . transit_vehicle_identity
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . transit_vehicle_information
. . . transit_vehicle_collected_maintenance_data
. . . . transit_vehicle_mileage_accumulated
. . . . transit_vehicle_operating_condition
. . . transit_vehicle_collected_trip_data
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . . transit_vehicle_running_times
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_stop_scheduled_time
. . . . . . time
. . . transit_vehicle_deviation_update
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_identity
. . . transit_vehicle_location
. . . . transit_vehicle_identity
. . . . transit_vehicle_location_data
. . . . . location_identity
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number

. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. transit_vehicle_maintenance_info
. . list_size
. . transit_vehicle_identity
. . transit_vehicle_operations_details
. . . transit_vehicle_maintenance
. . . . transit_vehicle_maintenance_date
. . . . . date
. . . . transit_vehicle_maintenance_mileage
. . . . transit_vehicle_maintenance_required
. . . transit_vehicle_maintenance_log
. . . . transit_vehicle_maintenance_log_activity
. . . . transit_vehicle_maintenance_log_date
. . . . . date
. . . . transit_vehicle_maintenance_log_mileage
. . . . transit_vehicle_maintenance_log_time
. . . . . time
. . . transit_vehicle_maintenance_schedule
. . . . transit_vehicle_maintenance_schedule_activity
. . . . transit_vehicle_maintenance_schedule_date
. . . . . date
. . . . transit_vehicle_maintenance_schedule_mileage
. . . transit_vehicle_maintenance_specs
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_details
. . . . transit_vehicle_type
transit_deviation_data_received
transit_deviation_kiosk_request
. kiosk_identity
. transit_vehicle_deviation_request
transit_deviation_kiosk_request_for_archive
. transit_deviation_kiosk_request
. . kiosk_identity
. . transit_vehicle_deviation_request
transit_deviations_for_broadcast_to_kiosks
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
transit_deviations_for_broadcast_to_personal_device
. list_size
. transit_route_segment_number
. transit_vehicle_achieved_time
. . time
. transit_vehicle_identity
transit_deviations_for_kiosks
. kiosk_identity
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
transit_deviations_for_personal_devices
. list_size
. transit_route_segment_number
. transit_vehicle_achieved_time
. . time
. transit_vehicle_identity
. traveler_identity
transit_deviations_personal_request
. transit_route_number
. transit_vehicle_deviation_request
. traveler_identity
transit_deviations_personal_request_for_archive
. transit_deviations_personal_request
. . transit_route_number
. . transit_vehicle_deviation_request
. . traveler_identity
transit_driver_availability
transit_driver_availability_considerations
transit_driver_availability_data
transit_driver_consideration_inputs
. transit_driver_availability_considerations
. transit_driver_identity
. transit_driver_route_details
transit_driver_consideration_updates
. transit_driver_cost_effectiveness_considerations
. transit_driver_eligibility_considerations
. transit_driver_identity
. transit_driver_performance_considerations
. transit_driver_route_assignment_considerations
transit_driver_cost_effectiveness
transit_driver_cost_effectiveness_considerations
transit_driver_cost_effectiveness_data
transit_driver_data_for_archive
. transit_driver_info_for_archive
. . list_size
. . transit_driver_details
. . . transit_driver_availability
. . . transit_driver_availability_considerations
. . . transit_driver_cost_effectiveness
. . . transit_driver_cost_effectiveness_considerations
. . . transit_driver_eligibility
. . . transit_driver_eligibility_considerations
. . . transit_driver_identity
. . . transit_driver_performance
. . . transit_driver_performance_considerations
. . . transit_driver_route_assignment_considerations
. . . transit_driver_route_details
. transit_route_assign_for_archive
. . list_size
. . paratransit_services_for_transit_drivers
. . . transit_route
. . . . route_cost
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_travel_time
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . transit_schedules
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . . transit_stop_locations
. . . . list_size
. . . . location_identity
. . . . transit_route_number
. . . . transit_route_stop_number
. . transit_services_for_transit_drivers
. . . list_size
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list

. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_stop_number
. . . . . transit_schedule_identity
. . transit_vehicle_availability
. . transit_vehicle_identity
transit_driver_details
. transit_driver_availability
. transit_driver_availability_considerations
. transit_driver_cost_effectiveness
. transit_driver_cost_effectiveness_considerations
. transit_driver_eligibility
. transit_driver_eligibility_considerations
. transit_driver_identity
. transit_driver_performance
. transit_driver_performance_considerations
. transit_driver_route_assignment_considerations
. transit_driver_route_details
transit_driver_eligibility
transit_driver_eligibility_considerations
transit_driver_eligibility_data
transit_driver_emergency_acknowledge
transit_driver_emergency_request
transit_driver_identity
transit_driver_info_for_archive
. list_size
. transit_driver_details
. . transit_driver_availability
. . transit_driver_availability_considerations
. . transit_driver_cost_effectiveness
. . transit_driver_cost_effectiveness_considerations
. . transit_driver_eligibility
. . transit_driver_eligibility_considerations
. . transit_driver_identity
. . transit_driver_performance
. . transit_driver_performance_considerations
. . transit_driver_route_assignment_considerations
. . transit_driver_route_details
transit_driver_information
. list_size
. transit_driver_details
. . transit_driver_availability
. . transit_driver_availability_considerations
. . transit_driver_cost_effectiveness
. . transit_driver_cost_effectiveness_considerations
. . transit_driver_eligibility
. . transit_driver_eligibility_considerations
. . transit_driver_identity
. . transit_driver_performance
. . transit_driver_performance_considerations
. . transit_driver_route_assignment_considerations
. . transit_driver_route_details
transit_driver_information_output
. list_size
. transit_driver_details
. . transit_driver_availability
. . transit_driver_availability_considerations
. . transit_driver_cost_effectiveness
. . transit_driver_cost_effectiveness_considerations
. . transit_driver_eligibility
. . transit_driver_eligibility_considerations
. . transit_driver_identity
. . transit_driver_performance
. . transit_driver_performance_considerations
. . transit_driver_performance_considerations
. . transit_driver_route_assignment_considerations
. . transit_driver_route_details
transit_driver_information_output_request
. list_size
. transit_driver_identity
transit_driver_performance
transit_driver_performance_considerations
transit_driver_performance_data
transit_driver_route_assignment_considerations
transit_driver_route_data
. list_size
. paratransit_services_for_transit_drivers
. . transit_route
. . . route_cost
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_travel_time
. . . route_segment_report_position_points
. . . . list_size
. . . . route_segment_way_point
. . . . . location_identity
. . . route_segment_start_point
. . . . location_identity
. . transit_schedules
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. . transit_stop_locations
. . . list_size
. . . location_identity
. . . transit_route_number
. . . transit_route_stop_number
. transit_services_for_transit_drivers
. . list_size
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size

. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. transit_vehicle_availability
. transit_vehicle_identity
transit_driver_route_details
transit_emergency
. fare_collection_roadside_violation_information
. . transit_route_number
. . transit_route_segment_number
. . transit_user_roadside_image
. . transit_user_roadside_tag_identity
. . . credit_identity
. . . traveler_identity
. fare_collection_vehicle_violation_information
. . transit_route_number
. . transit_route_segment_number
. . transit_user_vehicle_image
. . transit_user_vehicle_tag_identity
. . . credit_identity
. . . stored_credit
. . . traveler_identity
. transit_coordination_data
. . transit_coordination_information
. . transit_fleet_operation_acknowledge
. . transit_response_to_incident
. transit_emergency_data
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_severity
. . incident_start_time
. . . time
. transit_incident_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_severity
. . incident_start_time
. . . time
transit_emergency_coordination_data
. transit_incident_coordination_data
. . transit_coordination_information
. . transit_fleet_operation_request
. . transit_response_to_incident
transit_emergency_data
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
transit_emergency_data_for_archive
. transit_emergency_data
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_severity
. . incident_start_time
. . . time
. transit_emergency_details
. . transit_driver_emergency_request
. . transit_user_emergency_request
. . transit_vehicle_location
. . . transit_vehicle_identity
. . . transit_vehicle_location_data
. . . . location_identity
. transit_media_emergency_interface_parameters
transit_emergency_details
. transit_driver_emergency_request
. transit_user_emergency_request
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
transit_emergency_information
. transit_driver_emergency_request
. transit_user_emergency_request
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
transit_emergency_request
. traveler_identity
. traveler_location_for_emergencies
. . location_identity
transit_fare
transit_fare_collection_data
. transit_fare
. transit_route_use_time
. transit_user_category
. transit_user_journey_end
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_journey_start
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
transit_fare_data
. list_size
. transit_fares
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
transit_fare_data_request
transit_fare_details
. list_size
. transit_route_number
. transit_route_segment_list
. . link_identity_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . transit_route_segment_cost
. . transit_route_segment_number
. transit_route_use_time
. transit_user_category
transit_fare_direct_details
. list_size
. transit_route_number
. transit_route_segment_list
. . link_identity_list
. . . link_identity

. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . transit_route_segment_cost
. . transit_route_segment_number
. transit_route_use_time
. transit_user_category
transit_fare_direct_request
transit_fare_request
transit_fare_transaction_records
. advanced_fare_transactions
. . credit_identity
. . date
. . stored_credit
. . time
. . transit_fare
. . traveler_identity
. current_fare_transactions
. . credit_identity
. . date
. . time
. . transit_fare
. . traveler_identity
. list_size
transit_fare_transactions
. advanced_fare_transactions
. . credit_identity
. . date
. . stored_credit
. . time
. . transit_fare
. . traveler_identity
. current_fare_transactions
. . credit_identity
. . date
. . time
. . transit_fare
. . traveler_identity
. list_size
transit_fares
. transit_route_number
. transit_route_segment_list
. . link_identity_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . transit_route_segment_cost
. . transit_route_segment_number
. transit_route_use_time
. transit_user_category
transit_fares_for_advanced_payments
. transit_fare_data
. . list_size
. . transit_fares
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
transit_fares_for_roadside
. transit_fares
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
transit_fares_for_vehicle
. transit_fares
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
transit_fares_for_vehicle_store
. transit_fares
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
transit_fleet_operation_acknowledge
transit_fleet_operation_request
transit_highway_overall_priority
transit_highway_priority_given
. confirmation_flag
transit_incident_coordination_data
. transit_coordination_information
. transit_fleet_operation_request
. transit_response_to_incident
transit_incident_data
transit_incident_details
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
transit_incident_extra_data
transit_incident_info_for_archive
. emergency_request_transit_details
. . date
. . time
. . transit_emergency_request
. . . traveler_identity
. . . traveler_location_for_emergencies
. . . . location_identity
. transit_area_surveillance_information
. transit_incident_details
. . incident_duration
. . . duration

. . incident_location
. . . location_identity
. . incident_severity
. . incident_start_time
. . . time
. transit_media_incident_interface_parameters
. transit_operator_security_action
. . transit_incident_extra_data
. . transit_incident_required_action
. . transit_video_camera_command
transit_incident_information
. incident_duration
. . duration
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
transit_incident_location
. location_identity
transit_incident_required_action
transit_information_request
transit_inputs
. parking_lot_transit_response
. transit_probe_data
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_location_for_store
. . . transit_vehicle_identity
. . . transit_vehicle_location_data
. . . . location_identity
. . transit_vehicle_time
. transit_ramp_overall_priority
. transit_request_for_prediction_data
. transit_request_for_traffic_info
. transit_roadway_overall_priority
. . transit_highway_overall_priority
. . transit_road_overall_priority
. transit_running_data_for_demand
. . transit_vehicle_deviation_update
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. . transit_vehicle_running_times
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. transit_services_changes_response
. transit_services_for_demand
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . . list_size
. . . . . . transit_route_schedule_number
. . . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. transit_vehicle_roadway_priorities
. . transit_vehicle_junction_priority
. . transit_vehicle_pedestrian_priority
. . transit_vehicle_ramp_priority
. . transit_vehicle_sign_priority
transit_journey_date
. date
. time
transit_maint_info_for_archive
. transit_technician_info
. . list_size
. . transit_technician_detail
. . . transit_technician_identity
. . . transit_technician_seniority
. . . transit_technician_work_assignment
. . . . transit_technician_identity
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_work
. . . transit_technician_work_hours
. . . transit_technician_work_log
. . . . date
. . . . list_size
. . . . time
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_work
. . . transit_technician_work_preferences
. . . transit_technician_work_skills
. transit_vehicle_maintenance_info
. . list_size
. . transit_vehicle_identity
. . transit_vehicle_operations_details
. . . transit_vehicle_maintenance
. . . . transit_vehicle_maintenance_date
. . . . . date
. . . . transit_vehicle_maintenance_mileage
. . . . transit_vehicle_maintenance_required
. . . transit_vehicle_maintenance_log
. . . . transit_vehicle_maintenance_log_activity
. . . . transit_vehicle_maintenance_log_date
. . . . . date
. . . . transit_vehicle_maintenance_log_mileage
. . . . transit_vehicle_maintenance_log_time
. . . . . time
. . . transit_vehicle_maintenance_schedule
. . . . transit_vehicle_maintenance_schedule_activity
. . . . transit_vehicle_maintenance_schedule_date

. . . . . date
. . . . transit_vehicle_maintenance_schedule_mileage
. . . transit_vehicle_maintenance_specs
. . . . transit_vehicle_identity
. . . . transit_vehicle_maintenance_details
. . . . transit_vehicle_type
transit_media_emergency_information
. transit_driver_emergency_request
. transit_media_emergency_interface_parameters
. transit_user_emergency_request
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
transit_media_emergency_interface_parameters
transit_media_incident_information
. transit_incident_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_severity
. . incident_start_time
. . . time
. transit_incident_extra_data
. transit_incident_location
. . location_identity
. transit_media_incident_interface_parameters
transit_media_incident_interface_parameters
transit_media_interface_parameters
. transit_media_emergency_interface_parameters
. transit_media_incident_interface_parameters
transit_mode_routes
transit_operational_data
. date
. list_size
. time
. transit_passenger_operational_data
. . date
. . list_size
. . time
. . transit_roadside_operational_data
. . . list_size
. . . transit_roadside_passenger_data
. . . . list_size
. . . . transit_passenger_numbers
. . . . transit_roadside_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_fare
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_user_journey_start
. . . . transit_route_stop_number
. . . . transit_route_use_time
. . . . transit_user_category
. . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . transit_route_operational_data
. . . list_size
. . . transit_route_number
. . . transit_vehicle_passenger_operational_data
. . . . list_size
. . . . transit_route_segment_number
. . . . transit_vehicle_passengers
. transit_roadside_operational_data
. . list_size
. . transit_roadside_passenger_data
. . . list_size
. . . transit_passenger_numbers
. . . transit_roadside_fare_collection_data
. . . . list_size
. . . . transit_fare_collection_data
. . . . . transit_fare
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . transit_route_stop_number
. . . transit_route_use_time
. . . transit_user_category
. . . transit_user_journey_end
. . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . transit_user_journey_start
. . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. transit_vehicle_operational_data
. . list_size
. . transit_vehicle_availability
. . transit_vehicle_data
. . . list_size
. . . transit_vehicle_identity
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . transit_vehicle_passenger_data
. . . transit_passenger_numbers
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
. . . transit_vehicle_fare_collection_data
. . . . list_size
. . . . transit_fare_collection_data
. . . . . transit_fare
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . transit_vehicle_identity
transit_operational_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied

Appendix D: Data Tree

. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
transit_operational_data_for_archive
. transit_operational_data
. . date
. . list_size
. . time
. . transit_passenger_operational_data
. . . date
. . . list_size
. . . time
. . . transit_roadside_operational_data
. . . . list_size
. . . . transit_roadside_passenger_data
. . . . . list_size
. . . . . transit_passenger_numbers
. . . . . transit_roadside_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_route_stop_number
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . transit_route_operational_data
. . . . list_size
. . . . transit_route_number
. . . . transit_vehicle_passenger_operational_data
. . . . . list_size
. . . . . transit_route_segment_number
. . . . . transit_vehicle_passengers
. . transit_roadside_operational_data
. . . list_size
. . . transit_roadside_passenger_data
. . . . list_size
. . . . transit_passenger_numbers
. . . . transit_roadside_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_fare
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_user_journey_start
. . . . transit_route_stop_number
. . . . transit_route_use_time
. . . . transit_user_category
. . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . transit_vehicle_operational_data
. . . list_size
. . . transit_vehicle_availability
. . . transit_vehicle_data
. . . . list_size
. . . . transit_vehicle_identity
. . . . transit_vehicle_passenger_loading
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . . transit_vehicle_identity
. . . . . transit_vehicle_passengers
. . . transit_vehicle_passenger_data
. . . . transit_passenger_numbers
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_route_use_time
. . . . transit_user_category
. . . . transit_vehicle_fare_collection_data
. . . . . list_size
. . . . . transit_fare_collection_data
. . . . . transit_fare
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_user_journey_start
. . . . transit_vehicle_identity
transit_operator_emergency_request
transit_operator_incident_information
. transit_incident_location
. . location_identity
. transit_user_incident_input
. transit_video_camera_image
transit_operator_request_acknowledge
transit_operator_security_action
. transit_incident_extra_data
. transit_incident_required_action
. transit_video_camera_command
transit_passenger_capacities
transit_passenger_numbers
transit_passenger_operational_data
. date
. list_size
. time
. transit_roadside_operational_data
. . list_size
. . transit_roadside_passenger_data
. . . list_size
. . . transit_passenger_numbers
. . . transit_roadside_fare_collection_data
. . . . list_size
. . . . transit_fare_collection_data
. . . . . transit_fare
. . . . . transit_route_use_time
. . . . . transit_user_category
. . . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . transit_route_stop_number
. . . transit_route_use_time
. . . transit_user_category
. . . transit_user_journey_end
. . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . transit_user_journey_start
. . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. transit_route_operational_data
. . list_size
. . transit_route_number
. . transit_vehicle_passenger_operational_data
. . . list_size
. . . transit_route_segment_number
. . . transit_vehicle_passengers
transit_payment_data
. advanced_tolls_and_charges_roadside_request
. . advanced_charges
. . . credit_identity
. . . parking_lot_identity
. . . . location_identity

. . . . unit_number
. . . parking_space_details
. . . . date
. . . . duration
. . . . time
. . . stored_credit
. . . traveler_identity
. . . vehicle_identity
. . advanced_tolls
. . . credit_identity
. . . stored_credit
. . . toll_route_segments
. . . . list_size
. . . . toll_segment_identity
. . . . . unit_number
. . . vehicle_identity
. advanced_tolls_and_charges_vehicle_request
. . advanced_charges
. . . credit_identity
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_space_details
. . . . date
. . . . duration
. . . . time
. . . stored_credit
. . . traveler_identity
. . . vehicle_identity
. . advanced_tolls
. . . credit_identity
. . . stored_credit
. . . toll_route_segments
. . . . list_size
. . . . toll_segment_identity
. . . . . unit_number
. . . vehicle_identity
. bad_tag_list_request
. . transit_vehicle_identity
. other_services_roadside_request
. . credit_identity
. . other_services_data
. . traveler_identity
. other_services_vehicle_request
. . credit_identity
. . other_services_data
. . traveler_identity
. request_roadside_fare_payment
. . transit_fare
. . transit_roadside_fare_collection_identity
. . transit_user_roadside_tag_identity
. . . credit_identity
. . . traveler_identity
. request_vehicle_fare_payment
. . transit_fare
. . transit_route_number
. . transit_user_vehicle_tag_identity
. . . credit_identity
. . . stored_credit
. . . traveler_identity
. . transit_vehicle_fare_collection_method
. . transit_vehicle_identity
. transit_services_for_advanced_fares
. . transit_route_fare_data
. . . list_size
. . . map_transit_data
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. transit_user_advanced_payment_at_roadside
. . parking_lot_cost
. . . cost
. . stored_credit
. . toll_cost
. . transit_fare
. transit_user_advanced_payment_on_vehicle
. . parking_lot_cost
. . . cost
. . stored_credit
. . toll_cost
. . transit_fare
. transit_user_roadside_image
. transit_user_vehicle_image
transit_payment_results
. advanced_tolls_and_charges_roadside_confirm
. . advanced_charges_confirm
. . . confirmation_flag
. . . credit_identity
. . . parking_lot_cost
. . . . cost
. . . stored_credit
. . advanced_tolls_confirm
. . . confirmation_flag
. . . credit_identity
. . . stored_credit
. . . toll_cost
. . confirmation_flag
. advanced_tolls_and_charges_vehicle_confirm
. . advanced_charges_confirm
. . . confirmation_flag
. . . credit_identity
. . . parking_lot_cost
. . . . cost
. . . stored_credit
. . advanced_tolls_confirm
. . . confirmation_flag
. . . credit_identity
. . . stored_credit
. . . toll_cost
. . confirmation_flag
. bad_tag_list_update
. . credit_identity
. . list_size
. . transit_vehicle_identity
. confirm_roadside_fare_payment
. . confirmation_flag
. . transit_roadside_fare_collection_identity
. confirm_vehicle_fare_payment
. . confirmation_flag
. . transit_user_vehicle_tag_identity
. . . credit_identity
. . . stored_credit
. . . traveler_identity
. . transit_vehicle_identity
. other_services_roadside_response
. . credit_identity
. . other_services_data
. . traveler_identity
. other_services_vehicle_response
. . credit_identity
. . other_services_data
. . traveler_identity
. request_transit_user_roadside_image
. request_transit_user_vehicle_image
. transit_roadside_fare_data
. . transit_fare_data
. . . list_size
. . . transit_fares
. . . . transit_route_number
. . . . transit_route_segment_list

. . . . . link_identity_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_use_time
. . . . transit_user_category
. transit_user_roadside_credit_identity
. . credit_identity
. transit_user_roadside_tag_data
. . credit_identity
. . stored_credit
. transit_user_vehicle_credit_identity
. . credit_identity
. . stored_credit
. transit_user_vehicle_tag_data
. . credit_identity
. . stored_credit
. transit_vehicle_fare_data
. . transit_fares
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category
transit_payment_transactions_for_archive
. transit_fare_transactions
. . advanced_fare_transactions
. . . credit_identity
. . . date
. . . stored_credit
. . . time
. . . transit_fare
. . . traveler_identity
. . current_fare_transactions
. . . credit_identity
. . . date
. . . time
. . . transit_fare
. . . traveler_identity
. . list_size
. transit_user_payments_transactions
transit_plans
. paratransit_service_stored_data
. . list_size
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. transit_routes
. . transit_routes_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_number
. transit_schedules
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity
transit_preplanned_responses_for_incidents
. transit_coordination_information
. transit_response_to_incident
transit_probe_data
. list_size
. transit_route_number
. transit_route_segment_number
. transit_vehicle_location_for_store
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
. transit_vehicle_time
transit_ramp_overall_priority
transit_ramp_priority_given
. confirmation_flag
transit_request_for_prediction_data
transit_request_for_traffic_info
transit_requests
. paratransit_service_confirmation
. . paratransit_service_identity
. . transit_confirmation_flag
. . traveler_identity
. paratransit_trip_request
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . paratransit_constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options

. . . preferred_weather_conditions
. . traveler_identity
. transit_advisory_vehicle_information
. transit_conditions_advisories_request
. transit_conditions_guidance_request
. transit_deviation_kiosk_request
. . kiosk_identity
. . transit_vehicle_deviation_request
. transit_deviations_personal_request
. . transit_route_number
. . transit_vehicle_deviation_request
. . traveler_identity
. transit_services_advisories_request
. transit_services_guidance_request
. . destination
. . . route_point
. . origin
. . . route_point
. . traveler_identity
. transit_services_kiosk_request
. . destination
. . . route_point
. . kiosk_identity
. . origin
. . . route_point
. transit_services_personal_request
. . destination
. . . route_point
. . origin
. . . route_point
. . traveler_identity
. traveler_transit_profile
. . traveler_contact_setting
. . . traveler_contact_information
. . . traveler_name
. . traveler_device_setting
. . . device_setting
. . . traveler_device_identity
. . traveler_identity
. . traveler_transit_preference_setting
. . . list_size
. . . setting_identity
. . . setting_preferences
. . . setting_type
. vehicle_location_for_transit
. . location_identity

transit_response_to_incident

transit_road_overall_priority

transit_road_priority_given

. confirmation_flag

transit_roadside_fare_collection_data

. list_size
. transit_fare_collection_data
. . transit_fare
. . transit_route_use_time
. . transit_user_category
. . transit_user_journey_end
. . . transit_route_segment_identity
. . . . transit_route_number
. . . . transit_route_segment_number
. . transit_user_journey_start
. . . transit_route_segment_identity
. . . . transit_route_number
. . . . transit_route_segment_number

transit_roadside_fare_collection_identity

transit_roadside_fare_data

. transit_fare_data
. . list_size
. . transit_fares
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_use_time
. . . transit_user_category

transit_roadside_fare_payment_confirmation

. confirmation_flag

transit_roadside_fare_payment_debited

. confirmation_flag

transit_roadside_fare_payment_request

. transit_fare

transit_roadside_operational_data

. list_size
. transit_roadside_passenger_data
. . list_size
. . transit_passenger_numbers
. . transit_roadside_fare_collection_data
. . . list_size
. . . transit_fare_collection_data
. . . . transit_fare
. . . . transit_route_use_time
. . . . transit_user_category
. . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . . transit_route_number
. . . . . . transit_route_segment_number
. . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . . . . transit_route_number
. . . . . . transit_route_segment_number
. . transit_route_stop_number
. . transit_route_use_time
. . transit_user_category
. . transit_user_journey_end
. . . transit_route_segment_identity
. . . . transit_route_number
. . . . transit_route_segment_number
. . transit_user_journey_start
. . . transit_route_segment_identity
. . . . transit_route_number
. . . . transit_route_segment_number

transit_roadside_passenger_data

. list_size
. transit_passenger_numbers
. transit_roadside_fare_collection_data
. . list_size
. . transit_fare_collection_data
. . . transit_fare
. . . transit_route_use_time
. . . transit_user_category
. . . transit_user_journey_end
. . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . transit_user_journey_start
. . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. transit_route_stop_number
. transit_route_use_time
. transit_user_category
. transit_user_journey_end
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_journey_start
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number

transit_roadway_overall_priority

. transit_highway_overall_priority

. transit_road_overall_priority
transit_roadway_priority_given
. transit_highway_priority_given
. . confirmation_flag
. transit_road_priority_given
. . confirmation_flag
transit_route
. route_cost
. route_segment_end_point
. . location_identity
. route_segment_estimated_travel_time
. route_segment_report_position_points
. . list_size
. . route_segment_way_point
. . . location_identity
. route_segment_start_point
. . location_identity
transit_route_assign_for_archive
. list_size
. paratransit_services_for_transit_drivers
. . transit_route
. . . route_cost
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_travel_time
. . . route_segment_report_position_points
. . . . list_size
. . . . route_segment_way_point
. . . . . location_identity
. . . route_segment_start_point
. . . . location_identity
. . transit_schedules
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . . list_size
. . . . . . transit_route_schedule_number
. . . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity
. . transit_stop_locations
. . . list_size
. . . location_identity
. . . transit_route_number
. . . transit_route_stop_number
. transit_services_for_transit_drivers
. . list_size
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity
. transit_vehicle_availability
. transit_vehicle_identity
transit_route_corrections
transit_route_current_use
transit_route_destination
transit_route_details
. transit_passenger_capacities
. transit_route
. . route_cost
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
. transit_schedules
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity
. transit_stop_locations
. . list_size
. . location_identity
. . transit_route_number
. . transit_route_stop_number
. transit_vehicle_eta
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_passenger_loading
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_passengers
. transit_vehicle_running_times
. . list_size
. . transit_route_number
. . transit_route_segment_number

. . transit_stop_scheduled_time
. . . time
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
transit_route_fare_data
. list_size
. map_transit_data
. transit_route_number
. transit_route_segment_list
. . link_identity_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . transit_route_segment_cost
. . transit_route_segment_number
transit_route_number
transit_route_operational_data
. list_size
. transit_route_number
. transit_vehicle_passenger_operational_data
. . list_size
. . transit_route_segment_number
. . transit_vehicle_passengers
transit_route_origin
transit_route_schedule_number
transit_route_segment_cost
transit_route_segment_identity
. transit_route_number
. transit_route_segment_number
transit_route_segment_list
. link_identity_list
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. list_size
. transit_route_segment_cost
. transit_route_segment_number
transit_route_segment_number
transit_route_stop_data
. list_size
. transit_route_schedule_number
. transit_stop_scheduled_time
. . time
transit_route_stop_list
. list_size
. transit_route_stop_data
. . list_size
. . transit_route_schedule_number
. . transit_stop_scheduled_time
. . . time
. transit_route_stop_number
transit_route_stop_number
transit_route_use_time
transit_routes
. transit_routes_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_number
transit_routes_current_data
. list_size
. paratransit_destination
. paratransit_pickup_location
. . location_identity
. transit_passenger_capacities
. transit_route
. . route_cost
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
. transit_stop_locations
. . list_size
. . location_identity
. . transit_route_number
. . transit_route_stop_number
transit_routes_data
. list_size
. transit_route_number
. transit_route_segment_list
. . link_identity_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . transit_route_segment_cost
. . transit_route_segment_number
. transit_route_stop_number
transit_routes_request
transit_routes_updates
. transit_passenger_capacities
. transit_route
. . route_cost
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
. transit_stop_locations
. . list_size
. . location_identity
. . transit_route_number
. . transit_route_stop_number
transit_running_data_for_advisories
. list_size
. transit_route_number
. transit_route_segment_number
. transit_stop_scheduled_time
. . time
. transit_vehicle_achieved_time
. . time
. transit_vehicle_identity
. transit_vehicle_time
transit_running_data_for_advisory_output
. list_size
. transit_vehicle_eta
. . transit_route_number
. . transit_vehicle_identity

. . transit_vehicle_time
. transit_vehicle_passenger_loading
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_passengers
. transit_vehicle_running_times
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
transit_running_data_for_broadcast
. list_size
. transit_route_number
. transit_route_segment_number
. transit_stop_scheduled_time
. . time
. transit_vehicle_achieved_time
. . time
. transit_vehicle_identity
. transit_vehicle_time
transit_running_data_for_demand
. transit_vehicle_deviation_update
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_eta
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_passenger_loading
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_passengers
. transit_vehicle_running_times
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
transit_running_data_for_guidance
. transit_vehicle_eta
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_passenger_loading
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_passengers
. transit_vehicle_running_times
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
transit_schedule_current_data
. list_size
. paratransit_arrival_time
. . time
. paratransit_destination
. paratransit_pickup_location
. . location_identity
. paratransit_pickup_time
. transit_schedule_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_list
. . . list_size
. . . transit_route_stop_data
. . . . list_size
. . . . transit_route_schedule_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_route_stop_number
. . transit_schedule_identity
transit_schedule_data
. list_size
. transit_route_number
. transit_route_segment_list
. . link_identity_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . transit_route_segment_cost
. . transit_route_segment_number
. transit_route_stop_list
. . list_size
. . transit_route_stop_data
. . . list_size
. . . transit_route_schedule_number
. . . transit_stop_scheduled_time
. . . . time
. . transit_route_stop_number
. transit_schedule_identity
transit_schedule_identity
transit_schedule_request
transit_schedule_updates
. transit_route_number
. transit_route_segment_list
. . link_identity_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size

. . transit_route_segment_cost
. . transit_route_segment_number
. transit_route_stop_list
. . list_size
. . transit_route_stop_data
. . . list_size
. . . transit_route_schedule_number
. . . transit_stop_scheduled_time
. . . . time
. . transit_route_stop_number
. transit_schedule_identity
transit_schedules
. transit_schedule_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_list
. . . list_size
. . . transit_route_stop_data
. . . . list_size
. . . . transit_route_schedule_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_route_stop_number
. . transit_schedule_identity
transit_security_info_for_archive
. transit_emergency_data_for_archive
. . transit_emergency_data
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_severity
. . . incident_start_time
. . . . time
. . transit_emergency_details
. . . transit_driver_emergency_request
. . . transit_user_emergency_request
. . . transit_vehicle_location
. . . . transit_vehicle_identity
. . . . transit_vehicle_location_data
. . . . . location_identity
. . transit_media_emergency_interface_parameters
. transit_incident_info_for_archive
. . emergency_request_transit_details
. . . date
. . . time
. . . transit_emergency_request
. . . . traveler_identity
. . . . traveler_location_for_emergencies
. . . . . location_identity
. . transit_area_surveillance_information
. . transit_incident_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_severity
. . . incident_start_time
. . . . time
. . transit_media_incident_interface_parameters
. . transit_operator_security_action
. . . transit_incident_extra_data
. . . transit_incident_required_action
. . . transit_video_camera_command

transit_service_external_data
. map_transit_data
. transit_routes_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_number
. transit_schedule_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_list
. . . list_size
. . . transit_route_stop_data
. . . . list_size
. . . . transit_route_schedule_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_route_stop_number
. . transit_schedule_identity
transit_service_internal_data
. map_transit_data
. transit_routes_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_number
. transit_schedule_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_list
. . . list_size
. . . transit_route_stop_data
. . . . list_size
. . . . transit_route_schedule_number
. . . . transit_stop_scheduled_time
. . . . . time

. . . transit_route_stop_number
. . transit_schedule_identity
transit_service_planning_parameters
transit_service_raw_data
. transit_routes_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_number
. transit_schedule_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_list
. . . list_size
. . . transit_route_stop_data
. . . . list_size
. . . . transit_route_schedule_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_route_stop_number
. . transit_schedule_identity
transit_services
. map_transit_data
. transit_routes_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_number
. transit_schedule_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_list
. . . list_size
. . . transit_route_stop_data
. . . . list_size
. . . . transit_route_schedule_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_route_stop_number
. . transit_schedule_identity
transit_services_advisories_request
transit_services_changes_request
transit_services_changes_response
transit_services_data_for_output
. transit_routes_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_number
. transit_schedule_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_list
. . . list_size
. . . transit_route_stop_data
. . . . list_size
. . . . transit_route_schedule_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_route_stop_number
. . transit_schedule_identity
transit_services_demand_request
. tmc_identity
. transit_services_request
transit_services_demand_response_request
. transit_services_request
transit_services_for_advanced_fares
. transit_route_fare_data
. . list_size
. . map_transit_data
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
transit_services_for_advisories
transit_services_for_advisory_data
. transit_services
. . map_transit_data
. . transit_routes_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity

. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_number
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity

transit_services_for_broadcast
transit_services_for_corrections

. list_size
. transit_services
. . map_transit_data
. . transit_routes_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_number
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity

transit_services_for_demand

. transit_services
. . map_transit_data
. . transit_routes_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_number
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity

transit_services_for_demand_response

. transit_services
. . map_transit_data
. . transit_routes_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_number
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number

. . . transit_schedule_identity
transit_services_for_deployment
. transit_services
. . map_transit_data
. . transit_routes_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_number
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity
transit_services_for_eta
. transit_route_number
. transit_route_segment_list
. . link_identity_list
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . list_size
. . transit_route_segment_cost
. . transit_route_segment_number
. transit_route_stop_list
. . list_size
. . transit_route_stop_data
. . . list_size
. . . transit_route_schedule_number
. . . transit_stop_scheduled_time
. . . . time
. . transit_route_stop_number
transit_services_for_eta_request
. transit_route_number
. transit_route_schedule_number
. transit_vehicle_identity
transit_services_for_guidance
. transit_services_for_output
. . list_size
. . transit_route_number
. . transit_route_segment_cost
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
. traveler_identity
transit_services_for_kiosks
. kiosk_identity
. transit_services_for_output
. . list_size
. . transit_route_number
. . transit_route_segment_cost
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
transit_services_for_other_TRM
. transit_routes_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_number
. transit_schedule_data
. . list_size
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_stop_list
. . . list_size
. . . transit_route_stop_data
. . . . list_size
. . . . transit_route_schedule_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_route_stop_number
. . transit_schedule_identity
transit_services_for_output
. list_size
. transit_route_number
. transit_route_segment_cost
. transit_route_segment_number
. transit_stop_scheduled_time
. . time
transit_services_for_personal_devices
. transit_services_for_output
. . list_size
. . transit_route_number
. . transit_route_segment_cost
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
. traveler_identity
transit_services_for_roadside_fares
. transit_route_fare_data
. . list_size
. . map_transit_data
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size

. . . transit_route_segment_cost
. . . transit_route_segment_number
transit_services_for_scenarios
. list_size
. map_transit_data
. transit_services
. . map_transit_data
. . transit_routes_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_number
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity
transit_services_for_transit_drivers
. list_size
. transit_services
. . map_transit_data
. . transit_routes_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_number
. . transit_schedule_data
. . . list_size
. . . transit_route_number
. . . transit_route_segment_list
. . . . link_identity_list
. . . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . transit_route_segment_cost
. . . . transit_route_segment_number
. . . transit_route_stop_list
. . . . list_size
. . . . transit_route_stop_data
. . . . . list_size
. . . . . transit_route_schedule_number
. . . . . transit_stop_scheduled_time
. . . . . time
. . . . transit_route_stop_number
. . . transit_schedule_identity
transit_services_for_travelers
. transit_services_for_output
. . list_size
. . transit_route_number
. . transit_route_segment_cost
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
. traveler_identity
transit_services_for_vehicle_fares
. transit_route_fare_data
. . list_size
. . map_transit_data
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
transit_services_guidance_request
. destination
. . route_point
. origin
. . route_point
. traveler_identity
transit_services_kiosk_request
. destination
. . route_point
. kiosk_identity
. origin
. . route_point
transit_services_personal_request
. destination
. . route_point
. origin
. . route_point
. traveler_identity
transit_services_request
transit_services_roadside_data
. transit_services_for_travelers
. . transit_services_for_output
. . . list_size
. . . transit_route_number
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . traveler_identity
. transit_vehicle_arrival_time
. transit_vehicle_user_data
. . transit_route_number
. . transit_vehicle_time
transit_services_travelers_request
. destination
. . route_point
. origin
. . route_point
. traveler_identity
transit_stop_locations
. list_size

. location_identity
. transit_route_number
. transit_route_stop_number
transit_stop_scheduled_time
. time
transit_technician_data
. list_size
. transit_technician_detail
. . transit_technician_identity
. . transit_technician_seniority
. . transit_technician_work_assignment
. . . transit_technician_identity
. . . transit_vehicle_identity
. . . transit_vehicle_maintenance_work
. . transit_technician_work_hours
. . transit_technician_work_log
. . . date
. . . list_size
. . . time
. . . transit_vehicle_identity
. . . transit_vehicle_maintenance_work
. . transit_technician_work_preferences
. . transit_technician_work_skills
transit_technician_detail
. transit_technician_identity
. transit_technician_seniority
. transit_technician_work_assignment
. . transit_technician_identity
. . transit_vehicle_identity
. . transit_vehicle_maintenance_work
. transit_technician_work_hours
. transit_technician_work_log
. . date
. . list_size
. . time
. . transit_vehicle_identity
. . transit_vehicle_maintenance_work
. transit_technician_work_preferences
. transit_technician_work_skills
transit_technician_identity
transit_technician_info
. list_size
. transit_technician_detail
. . transit_technician_identity
. . transit_technician_seniority
. . transit_technician_work_assignment
. . . transit_technician_identity
. . . transit_vehicle_identity
. . . transit_vehicle_maintenance_work
. . transit_technician_work_hours
. . transit_technician_work_log
. . . date
. . . list_size
. . . time
. . . transit_vehicle_identity
. . . transit_vehicle_maintenance_work
. . transit_technician_work_preferences
. . transit_technician_work_skills
transit_technician_seniority
transit_technician_work_assignment
. transit_technician_identity
. transit_vehicle_identity
. transit_vehicle_maintenance_work
transit_technician_work_hours
transit_technician_work_log
. date
. list_size
. time
. transit_vehicle_identity
. transit_vehicle_maintenance_work
transit_technician_work_preferences
transit_technician_work_skills
transit_to_m_and_c
. env_probe_info_from_transit
. . env_probe_data
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_total_number
. m_and_c_plan_feedback_from_transit
. . m_and_c_plan_feedback
transit_updates
. parking_lot_transit_request
. planned_events
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. prediction_data
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_occupancy_predictions
. . route_segment_queue_delay_predictions
. . route_segment_speed_predictions
. . . vehicle_speed
. . route_segment_volume_delay_predictions
. traffic_data_for_transit
. . area_air_quality_index
. . current_incidents_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . list_size
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . traffic_flow_state
. . . current_road_network_use

Appendix D: Data Tree

. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . link_data_from_avl
. . . . link_journey_time
. . . . link_queue_time
. . . . link_speed
. . . . list_size
. . . link_data_from_tags
. . . . link_journey_time
. . . . link_queue_time
. . . . list_size
. . . ramp_signal_state
. . . . list_size
. . . . ramp_controls
. . . . ramp_list
. . . . . list_size
. . . . . ramp_identity
. . . . . indicator_identity
. . . . . location_identity
. . . . . unit_number
. transit_conditions_demand_request
. transit_ramp_priority_given
. . confirmation_flag
. transit_roadway_priority_given
. . transit_highway_priority_given
. . . confirmation_flag
. . transit_road_priority_given
. . . confirmation_flag
. transit_services_changes_request
. transit_services_demand_request
. . tmc_identity
. . transit_services_request
transit_user_advanced_payment_at_roadside
. parking_lot_cost
. . cost
. stored_credit
. toll_cost
. transit_fare
transit_user_advanced_payment_on_vehicle
. parking_lot_cost
. . cost
. stored_credit
. toll_cost
. transit_fare
transit_user_advisory_information
. advisory_data
. . planned_events_for_advisories
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . prediction_data_for_advisories
. . . list_size
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_occupancy_predictions
. . . route_segment_queue_delay_predictions
. . . route_segment_volume_delay_predictions
. . traffic_data_for_advisories
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . duration
. . . . . incident_location
. . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . hov_lane_vehicle_count
. . . link_identity
. . . . link_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_state
. . . pollution_state_area_collection
. . . . area_air_quality_index
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . pollution_state_roadside_collection
. . . . current_carbon_monoxide_pollution
. . . . current_hydrocarbon_pollution
. . . . current_nitrous_oxide_pollution
. . . . current_ozone_pollution
. . . . current_particulate_pollution
. . . . current_roadside_pollution_location
. . . . . location_identity
. . . . current_sulfur_dioxide_pollution
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . tmc_identity
. . transit_running_data_for_advisories
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number

. . . transit_stop_scheduled_time
. . . . time
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_services_for_advisories
transit_user_advisory_information_request
. advisory_data_scope
. advisory_display_type
transit_user_category
transit_user_emergency_request
transit_user_incident_input
transit_user_journey_end
. transit_route_segment_identity
. . transit_route_number
. . transit_route_segment_number
transit_user_journey_start
. transit_route_segment_identity
. . transit_route_number
. . transit_route_segment_number
transit_user_payments_transactions
transit_user_roadside_credit_identity
. credit_identity
transit_user_roadside_fare
. transit_fare
. transit_user_roadside_tag_identity
. . credit_identity
. . traveler_identity
transit_user_roadside_image
transit_user_roadside_information
transit_user_roadside_payment_response
transit_user_roadside_processed_fare_data
. transit_fare
. transit_route_number
. transit_route_segment_number
. transit_route_use_time
. transit_user_category
transit_user_roadside_ride
. transit_route_use_time
. transit_user_category
. transit_user_journey_end
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_journey_start
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_roadside_tag_identity
. . credit_identity
. . traveler_identity
transit_user_roadside_ride_data
. transit_route_use_time
. transit_user_category
. transit_user_journey_end
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_journey_start
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_roadside_tag_identity
. . credit_identity
. . traveler_identity
transit_user_roadside_tag_data
. credit_identity
. stored_credit
transit_user_roadside_tag_identity
. credit_identity
. traveler_identity
transit_user_transaction_buffer
. transit_user_transaction_record
. . credit_identity
. . transit_fare
. . transit_route_number
. . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
. . traveler_identity
transit_user_transaction_record
. credit_identity
. transit_fare
. transit_route_number
. transit_route_segment_number
. transit_route_use_time
. transit_user_category
. traveler_identity
transit_user_vehicle_credit_identity
. credit_identity
. stored_credit
transit_user_vehicle_fare
. transit_fare
. transit_user_vehicle_tag_identity
. . credit_identity
. . stored_credit
. . traveler_identity
transit_user_vehicle_image
transit_user_vehicle_information
transit_user_vehicle_payment_response
transit_user_vehicle_processed_fare_data
. transit_fare
. transit_user_vehicle_tag_identity
. . credit_identity
. . stored_credit
. . traveler_identity
transit_user_vehicle_ride
. transit_route_use_time
. transit_user_category
. transit_user_journey_end
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_journey_start
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_vehicle_tag_identity
. . credit_identity
. . stored_credit
. . traveler_identity
transit_user_vehicle_ride_data
. transit_route_use_time
. transit_user_category
. transit_user_journey_end
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_journey_start
. . transit_route_segment_identity
. . . transit_route_number
. . . transit_route_segment_number
. transit_user_vehicle_tag_identity
. . credit_identity
. . stored_credit
. . traveler_identity
transit_user_vehicle_tag_data
. credit_identity
. stored_credit
transit_user_vehicle_tag_identity
. credit_identity
. stored_credit
. traveler_identity
transit_vehicle_achieved_time
. time
transit_vehicle_advanced_payment_request
. advanced_charges

. . credit_identity
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_space_details
. . . date
. . . duration
. . . time
. . stored_credit
. . traveler_identity
. . vehicle_identity
. advanced_tolls
. . credit_identity
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . vehicle_identity
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
transit_vehicle_advanced_payment_response
. advanced_charges_confirm
. . confirmation_flag
. . credit_identity
. . parking_lot_cost
. . . cost
. . stored_credit
. advanced_tolls_confirm
. . confirmation_flag
. . credit_identity
. . stored_credit
. . toll_cost
. confirmation_flag
. transit_vehicle_identity
transit_vehicle_advisory_eta
. transit_route_number
. transit_vehicle_identity
. transit_vehicle_time
transit_vehicle_arrival_conditions
transit_vehicle_arrival_deviations
transit_vehicle_arrival_time
transit_vehicle_arrival_times
. list_size
. transit_route_number
. transit_route_segment_number
. transit_stop_scheduled_time
. . time
transit_vehicle_availability
transit_vehicle_collected_maintenance_data
. transit_vehicle_mileage_accumulated
. transit_vehicle_operating_condition
transit_vehicle_collected_maintenance_data_request
transit_vehicle_collected_trip_data
. transit_vehicle_passenger_loading
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_passengers
. transit_vehicle_running_times
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_stop_scheduled_time
. . . time
transit_vehicle_corrective_instructions
transit_vehicle_data
. list_size
. transit_vehicle_identity
. transit_vehicle_passenger_loading
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_passengers
transit_vehicle_data_for_archive
. transit_vehicle_data
. . list_size
. . transit_vehicle_identity
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. transit_vehicle_information
. . transit_vehicle_collected_maintenance_data
. . . transit_vehicle_mileage_accumulated
. . . transit_vehicle_operating_condition
. . transit_vehicle_collected_trip_data
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . . transit_vehicle_running_times
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_stop_scheduled_time
. . . . . time
. . transit_vehicle_deviation_update
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_identity
. . transit_vehicle_location
. . . transit_vehicle_identity
. . . transit_vehicle_location_data
. . . . location_identity
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
transit_vehicle_deviation_data
transit_vehicle_deviation_request
transit_vehicle_deviation_update
. list_size
. transit_route_number
. transit_route_segment_number
. transit_vehicle_identity
. transit_vehicle_time
transit_vehicle_deviations
transit_vehicle_deviations_details
. transit_vehicle_collected_trip_data
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. . transit_vehicle_running_times
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number

. . . transit_stop_scheduled_time
. . . . time
. transit_vehicle_deviation_update
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_eta
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
transit_vehicle_deviations_details_request
transit_vehicle_deviations_from_schedule
transit_vehicle_eta
. transit_route_number
. transit_vehicle_identity
. transit_vehicle_time
transit_vehicle_eta_for_advisory
. transit_route_number
. transit_vehicle_identity
. transit_vehicle_time
transit_vehicle_fare_collection_data
. list_size
. transit_fare_collection_data
. . transit_fare
. . transit_route_use_time
. . transit_user_category
. . transit_user_journey_end
. . . transit_route_segment_identity
. . . . transit_route_number
. . . . transit_route_segment_number
. . transit_user_journey_start
. . . transit_route_segment_identity
. . . . transit_route_number
. . . . transit_route_segment_number
transit_vehicle_fare_collection_method
transit_vehicle_fare_data
. transit_fares
. . transit_route_number
. . transit_route_segment_list
. . . link_identity_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
transit_vehicle_fare_payment_confirmation
. confirmation_flag
transit_vehicle_fare_payment_debited
. confirmation_flag
transit_vehicle_fare_payment_request
. transit_fare
transit_vehicle_identity
transit_vehicle_information
. transit_vehicle_collected_maintenance_data
. . transit_vehicle_mileage_accumulated
. . transit_vehicle_operating_condition
. transit_vehicle_collected_trip_data
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. . transit_vehicle_running_times
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. transit_vehicle_deviation_update
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_eta
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_identity
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
transit_vehicle_junction_priority
transit_vehicle_location
. transit_vehicle_identity
. transit_vehicle_location_data
. . location_identity
transit_vehicle_location_data
. location_identity
transit_vehicle_location_for_deviation
. transit_vehicle_identity
. transit_vehicle_location_data
. . location_identity
transit_vehicle_location_for_eta
. transit_vehicle_identity
. transit_vehicle_location_data
. . location_identity
transit_vehicle_location_for_store
. transit_vehicle_identity
. transit_vehicle_location_data
. . location_identity
transit_vehicle_maintenance
. transit_vehicle_maintenance_date
. . date
. transit_vehicle_maintenance_mileage
. transit_vehicle_maintenance_required
transit_vehicle_maintenance_data
. transit_vehicle_identity
. transit_vehicle_maintenance
. . transit_vehicle_maintenance_date
. . . date
. . transit_vehicle_maintenance_mileage
. . transit_vehicle_maintenance_required
transit_vehicle_maintenance_data_request
. transit_vehicle_identity
transit_vehicle_maintenance_data_update
transit_vehicle_maintenance_date
. date
transit_vehicle_maintenance_details
transit_vehicle_maintenance_info
. list_size

Appendix D: Data Tree

. transit_vehicle_identity
. transit_vehicle_operations_details
. . transit_vehicle_maintenance
. . . transit_vehicle_maintenance_date
. . . . date
. . . transit_vehicle_maintenance_mileage
. . . transit_vehicle_maintenance_required
. . transit_vehicle_maintenance_log
. . . transit_vehicle_maintenance_log_activity
. . . transit_vehicle_maintenance_log_date
. . . . date
. . . transit_vehicle_maintenance_log_mileage
. . . transit_vehicle_maintenance_log_time
. . . . time
. . transit_vehicle_maintenance_schedule
. . . transit_vehicle_maintenance_schedule_activity
. . . transit_vehicle_maintenance_schedule_date
. . . . date
. . . transit_vehicle_maintenance_schedule_mileage
. . transit_vehicle_maintenance_specs
. . . transit_vehicle_identity
. . . transit_vehicle_maintenance_details
. . . transit_vehicle_type
transit_vehicle_maintenance_information
transit_vehicle_maintenance_log
. transit_vehicle_maintenance_log_activity
. transit_vehicle_maintenance_log_date
. . date
. transit_vehicle_maintenance_log_mileage
. transit_vehicle_maintenance_log_time
. . time
transit_vehicle_maintenance_log_activity
transit_vehicle_maintenance_log_data
transit_vehicle_maintenance_log_date
. date
transit_vehicle_maintenance_log_mileage
transit_vehicle_maintenance_log_time
. time
transit_vehicle_maintenance_mileage
transit_vehicle_maintenance_required
transit_vehicle_maintenance_schedule
. transit_vehicle_maintenance_schedule_activity
. transit_vehicle_maintenance_schedule_date
. . date
. transit_vehicle_maintenance_schedule_mileage
transit_vehicle_maintenance_schedule_activity
transit_vehicle_maintenance_schedule_data
transit_vehicle_maintenance_schedule_date
. date
transit_vehicle_maintenance_schedule_mileage
transit_vehicle_maintenance_specs
. transit_vehicle_identity
. transit_vehicle_maintenance_details
. transit_vehicle_type
transit_vehicle_maintenance_specs_update
. transit_vehicle_identity
. transit_vehicle_maintenance_specs
. . transit_vehicle_identity
. . transit_vehicle_maintenance_details
. . transit_vehicle_type
transit_vehicle_maintenance_verification_results
. confirmation_flag
. transit_technician_identity
. transit_technician_work_assignment
. . transit_technician_identity
. . transit_vehicle_identity
. . transit_vehicle_maintenance_work
. transit_vehicle_identity
transit_vehicle_maintenance_work
transit_vehicle_mileage_accumulated
transit_vehicle_on_board_data
transit_vehicle_operating_condition
transit_vehicle_operating_data
. list_size
. transit_vehicle_collected_maintenance_data
. . transit_vehicle_mileage_accumulated
. . transit_vehicle_operating_condition
. transit_vehicle_collected_trip_data
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. . transit_vehicle_running_times
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. transit_vehicle_deviation_update
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_eta
. . transit_route_number
. . transit_vehicle_identity
. . transit_vehicle_time
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
transit_vehicle_operational_data
. list_size
. transit_vehicle_availability
. transit_vehicle_data
. . list_size
. . transit_vehicle_identity
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. transit_vehicle_passenger_data
. . transit_passenger_numbers
. . transit_route_number
. . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
. . transit_vehicle_fare_collection_data
. . . list_size
. . . transit_fare_collection_data
. . . . transit_fare
. . . . transit_route_use_time
. . . . transit_user_category
. . . . transit_user_journey_end
. . . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . . transit_user_journey_start
. . . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . transit_vehicle_identity
transit_vehicle_operations_data
. list_size
. transit_vehicle_identity
. transit_vehicle_operations_details

. . transit_vehicle_maintenance
. . . transit_vehicle_maintenance_date
. . . . date
. . . transit_vehicle_maintenance_mileage
. . . transit_vehicle_maintenance_required
. . transit_vehicle_maintenance_log
. . . transit_vehicle_maintenance_log_activity
. . . transit_vehicle_maintenance_log_date
. . . . date
. . . transit_vehicle_maintenance_log_mileage
. . . transit_vehicle_maintenance_log_time
. . . . time
. . transit_vehicle_maintenance_schedule
. . . transit_vehicle_maintenance_schedule_activity
. . . transit_vehicle_maintenance_schedule_date
. . . . date
. . . transit_vehicle_maintenance_schedule_mileage
. . transit_vehicle_maintenance_specs
. . . transit_vehicle_identity
. . . transit_vehicle_maintenance_details
. . . transit_vehicle_type
transit_vehicle_operations_details
. transit_vehicle_maintenance
. . transit_vehicle_maintenance_date
. . . date
. . transit_vehicle_maintenance_mileage
. . transit_vehicle_maintenance_required
. transit_vehicle_maintenance_log
. . transit_vehicle_maintenance_log_activity
. . transit_vehicle_maintenance_log_date
. . . date
. . transit_vehicle_maintenance_log_mileage
. . transit_vehicle_maintenance_log_time
. . . time
. transit_vehicle_maintenance_schedule
. . transit_vehicle_maintenance_schedule_activity
. . transit_vehicle_maintenance_schedule_date
. . . date
. . transit_vehicle_maintenance_schedule_mileage
. transit_vehicle_maintenance_specs
. . transit_vehicle_identity
. . transit_vehicle_maintenance_details
. . transit_vehicle_type
transit_vehicle_passenger_capacity
transit_vehicle_passenger_data
. transit_passenger_numbers
. transit_route_number
. transit_route_segment_number
. transit_route_use_time
. transit_user_category
. transit_vehicle_fare_collection_data
. . list_size
. . transit_fare_collection_data
. . . transit_fare
. . . transit_route_use_time
. . . transit_user_category
. . . transit_user_journey_end
. . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. . . transit_user_journey_start
. . . . transit_route_segment_identity
. . . . . transit_route_number
. . . . . transit_route_segment_number
. transit_vehicle_identity
transit_vehicle_passenger_loading
. list_size
. transit_route_number
. transit_route_segment_number
. transit_vehicle_identity
. transit_vehicle_passengers
transit_vehicle_passenger_operational_data
. list_size
. transit_route_segment_number
. transit_vehicle_passengers
transit_vehicle_passengers
transit_vehicle_pedestrian_priority
transit_vehicle_priority_request
transit_vehicle_ramp_priority
transit_vehicle_roadway_priorities
. transit_vehicle_junction_priority
. transit_vehicle_pedestrian_priority
. transit_vehicle_ramp_priority
. transit_vehicle_sign_priority
transit_vehicle_running_times
. list_size
. transit_route_number
. transit_route_segment_number
. transit_stop_scheduled_time
. . time
transit_vehicle_schedule_deviation
transit_vehicle_schedule_deviations
. list_size
. transit_route_number
. transit_route_segment_number
. transit_vehicle_achieved_time
. . time
. transit_vehicle_identity
transit_vehicle_sign_priority
transit_vehicle_status
. transit_vehicle_collected_maintenance_data
. . transit_vehicle_mileage_accumulated
. . transit_vehicle_operating_condition
. transit_vehicle_identity
. transit_vehicle_location
. . transit_vehicle_identity
. . transit_vehicle_location_data
. . . location_identity
transit_vehicle_time
transit_vehicle_type
transit_vehicle_user_data
. transit_route_number
. transit_vehicle_time
transit_video_camera_command
transit_video_camera_image
travel_services_data
. event_information_advisory_data
. yellow_pages_data
. . yellow_pages_general_information
. . . yellow_pages_history
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_local_customs
. . . . list_size
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_people
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_specific_information
. . . yellow_pages_food
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity

. . . . yellow_pages_service_type
. . . yellow_pages_gas_stations
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_hospitals
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_lodging
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_non_motorized_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_parking
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_parts_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_repair_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_rest_areas
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_special_events
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_activities
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_transaction_information
. . . yellow_pages_dining_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_lodging_reservations
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_ticket_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
travel_services_data_request
. event_information_advisory_requests
. yellow_pages_data_request
traveler_advanced_payments_confirm
. advanced_fares_confirm
. . confirmation_flag
. advanced_tolls_confirm
. . confirmation_flag
. . credit_identity
. . stored_credit
. . toll_cost
. advanced_traveler_charges_confirm
. . confirmation_flag
. . parking_lot_cost
. . . cost
. . stored_credit
. . traveler_identity
. traveler_identity
traveler_advanced_payments_request
. credit_identity
. parking_space_details
. . date

Appendix D: Data Tree

. . duration
. . time
. ride_segments
. . list_size
. . transit_route_segment_number
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. traveler_identity
traveler_archive_catalog
traveler_archive_catalog_request
traveler_archive_data
. traveler_archive_catalog
. traveler_data_for_archive
. . guidance_data_for_archive
. . . route_guidance_data_for_archive
. . . . list_size
. . . . vehicle_guidance_stored_data
. . . . . route_identity
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . vehicle_guidance_probe_data_for_archive
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . time
. . . . vehicle_identity
. . guidance_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . parking_lot_data_for_archive
. . . parking_lot_bookings_request
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_space_details
. . . . . date
. . . . . duration
. . . . . time
. . . . vehicle_identity
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_spaces
. . parking_lot_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . rideshare_for_archive
. . . rideshare_data_for_archive
. . . . rideshare_confirmation_data
. . . . . reservation_status
. . . . . confirmation_flag
. . . . . rideshare_selection_number
. . . . rideshare_details
. . . . rideshare_eligibility_data
. . . traveler_rideshare_request_for_archive
. . . . traveler_rideshare_request
. . . . . traveler_identity
. . . . . traveler_rideshare_constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . traveler_rideshare_data
. . . . . departure_time
. . . . . desired_arrival_time
. . . . . destination
. . . . . origin
. . . . . traveler_rideshare_preferences
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . rideshare_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions

. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . service_req_and_confirm_for_archive
. . . service_req_and_confirm_data
. . . . advisory_data_request_for_archive
. . . . . advisory_data_request
. . . . . . advisory_data_scope
. . . . . . transit_route_number
. . . . . . transit_vehicle_identity
. . . . . . vehicle_location_for_advisories
. . . . event_information_requests_for_archive
. . . . . event_information_advisory_requests_for_archive
. . . . . . event_information_advisory_requests
. . . . . traveler_event_information_request_for_archive
. . . . . . traveler_event_information_request
. . . . .
. . . . . . traveler_personal_event_information_request
. . . . traffic_data_kiosk_request_for_archive
. . . . . traffic_data_kiosk_request
. . . . . . kiosk_identity
. . . . . . traffic_data_request
. . . . traffic_data_personal_request_for_archive
. . . . . traffic_data_personal_request
. . . . . . traffic_data_request
. . . . . . traveler_identity
. . . . transit_deviation_kiosk_request_for_archive
. . . . . transit_deviation_kiosk_request
. . . . . . kiosk_identity
. . . . . . transit_vehicle_deviation_request
. . . . transit_deviations_personal_request_for_archive
. . . . . transit_deviations_personal_request
. . . . . . transit_route_number
. . . . . . transit_vehicle_deviation_request
. . . . . . traveler_identity
. . . . traveler_confirm_for_archive
. . . . . traveler_personal_trip_confirmation_for_archive
. . . . . . traveler_personal_trip_confirmation
. . . . . traveler_trip_confirmation_for_archive
. . . . . . traveler_trip_confirmation
. . . . traveler_route_accepted_for_archive
. . . . . traveler_route_accepted
. . . . . . route_identity
. . . . traveler_route_request_for_archive
. . . . . traveler_route_request
. . . . . . constraint_on_acceptable_travel_time
. . . . . . constraint_on_eta_change
. . . . . . constraint_on_number_of_mode_changes
. . . . . . constraint_on_number_of_transfers
. . . . . . constraint_on_special_needs
. . . . . . desired_arrival_time
. . . . . . destination
. . . . . . modes
. . . . . . origin
. . . . . . preferred_alternate_routes
. . . . . . preferred_ridesharing_options
. . . . . . preferred_route_segments
. . . . . . preferred_routes
. . . . . . preferred_transit_options
. . . . . . traveler_identity
. . . . . . traveler_location
. . . . . . traveler_route_accepted
. . . . traveler_trip_and_cond_requests_for_archive
. . . . . traveler_current_condition_request_for_archive
. . . . . . traveler_current_condition_request
. . . . .
. . . . . . traveler_personal_current_condition_request
. . . . . traveler_personal_trip_request_for_archive
. . . . . . traveler_personal_trip_request
. . . . . traveler_trip_request_for_archive
. . . . . . traveler_trip_request
. . . . traveler_yellow_pages_requests_for_archive
. . . . . traveler_personal_transaction_request_for_archive
. . . . . . traveler_personal_transaction_request
. . . . .
. . . . . .
. . . . . traveler_transaction_request_for_archive
. . . . . . traveler_transaction_request
. . . . .
. . . . . . traveler_yellow_pages_information_request
. . . . vehicle_guidance_route_accepted_for_archive
. . . . . vehicle_guidance_route_accepted
. . . . . . route_identity
. . . . vehicle_route_request_for_archive
. . . . . vehicle_route_request
. . . . . . constraint_on_acceptable_travel_time
. . . . . . constraint_on_ahs_lanes
. . . . . . constraint_on_eta_change
. . . . . . constraint_on_interstate
. . . . . . constraint_on_load_classification
. . . . . . constraint_on_special_needs
. . . . . . constraint_on_urban
. . . . . . constraint_on_vehicle_type
. . . . . . departure_time
. . . . . . desired_arrival_time
. . . . . . destination
. . . . . . origin
. . . . . . preferred_alternate_routes
. . . . . . preferred_route_segments
. . . . . . preferred_routes
. . . . . . vehicle_identity
. . . . . . vehicle_location_for_dynamic_guidance
. . . . yellow_pages_advisory_requests_for_archive
. . . . . yellow_pages_advisory_requests
. . . . . . advisory_data_scope
. . . . . . transit_route_number
. . . . . . transit_vehicle_identity
. . . . . . vehicle_location_for_advisories
. . . . . . yellow_pages_dining_reservation
. . . . . . yellow_pages_lodging_reservation
. . . . . . yellow_pages_non_motorized_reservation
. . . . . . yellow_pages_ticket_purchase
. . service_req_and_confirm_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time

. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . traveler_info_payments_transactions
. . . driver_map_update_payments_transactions
. . . traveler_map_update_payments_transactions
. . . traveler_rideshare_payments_transactions
. . . traveler_trip_payments_transactions
. . . yellow_pages_provider_payments_transactions
. . traveler_info_payments_transactions_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . trip_request_for_archive
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions
. . trip_request_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . usage_for_archive
. . . current_other_routes_use_for_archive
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . current_road_network_use_for_archive
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . usage_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time

. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
traveler_archive_data_request
traveler_archive_input
. traveler_archive_request
. . traveler_archive_catalog_request
. . traveler_archive_data_request
. traveler_archive_status
traveler_archive_request
. traveler_archive_catalog_request
. traveler_archive_data_request
traveler_archive_status
traveler_confirm_for_archive
. traveler_personal_trip_confirmation_for_archive
. . traveler_personal_trip_confirmation
. . . paratransit_service_confirmation
. . . . paratransit_service_identity
. . . . transit_confirmation_flag
. . . . traveler_identity
. . . traveler_identity
. . . traveler_rideshare_confirmation
. . . . credit_identity
. . . . reservation_status
. . . . . confirmation_flag
. . . . rideshare_selection_number
. . . . traveler_identity
. traveler_trip_confirmation_for_archive
. . traveler_trip_confirmation
. . . paratransit_service_confirmation
. . . . paratransit_service_identity
. . . . transit_confirmation_flag
. . . . traveler_identity
. . . traveler_identity
. . . traveler_rideshare_confirmation
. . . . credit_identity
. . . . reservation_status
. . . . . confirmation_flag
. . . . rideshare_selection_number
. . . . traveler_identity
traveler_contact_information
traveler_contact_setting
. traveler_contact_information
. traveler_name
traveler_current_condition_request
. kiosk_identity
traveler_current_condition_request_for_archive
. traveler_current_condition_request
. . kiosk_identity
traveler_data_for_archive
. guidance_data_for_archive
. . route_guidance_data_for_archive
. . . list_size
. . . vehicle_guidance_stored_data
. . . . route_identity
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_travel_time
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . vehicle_guidance_probe_data_for_archive
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . time
. . . vehicle_identity
. guidance_data_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. parking_lot_data_for_archive
. . parking_lot_bookings_request
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_space_details
. . . . date
. . . . duration
. . . . time
. . . vehicle_identity
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_spaces
. parking_lot_data_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied

. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. rideshare_for_archive
. . rideshare_data_for_archive
. . . rideshare_confirmation_data
. . . . reservation_status
. . . . . confirmation_flag
. . . . rideshare_selection_number
. . . rideshare_details
. . . rideshare_eligibility_data
. . traveler_rideshare_request_for_archive
. . . traveler_rideshare_request
. . . . traveler_identity
. . . . traveler_rideshare_constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . traveler_rideshare_data
. . . . . departure_time
. . . . . time
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . origin
. . . . . route_point
. . . . traveler_rideshare_preferences
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. rideshare_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. service_req_and_confirm_for_archive
. . service_req_and_confirm_data
. . . advisory_data_request_for_archive
. . . . advisory_data_request
. . . . . advisory_data_scope
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . vehicle_location_for_advisories
. . . . . location_identity
. . . event_information_requests_for_archive
. . . . event_information_advisory_requests_for_archive
. . . . . event_information_advisory_requests
. . . . traveler_event_information_request_for_archive
. . . . . traveler_event_information_request
. . . .
. . . . . traveler_personal_event_information_request
. . . traffic_data_kiosk_request_for_archive
. . . . traffic_data_kiosk_request
. . . . . kiosk_identity
. . . . . traffic_data_request
. . . traffic_data_personal_request_for_archive
. . . . traffic_data_personal_request
. . . . . traffic_data_request
. . . . . traveler_identity
. . . transit_deviation_kiosk_request_for_archive
. . . . transit_deviation_kiosk_request
. . . . . kiosk_identity
. . . . . transit_vehicle_deviation_request
. . . transit_deviations_personal_request_for_archive
. . . . transit_deviations_personal_request
. . . . . transit_route_number
. . . . . transit_vehicle_deviation_request
. . . . . traveler_identity
. . . traveler_confirm_for_archive
. . . . traveler_personal_trip_confirmation_for_archive
. . . . . traveler_personal_trip_confirmation
. . . . . paratransit_service_confirmation
. . . . . traveler_identity
. . . . . traveler_rideshare_confirmation
. . . . traveler_trip_confirmation_for_archive
. . . . . traveler_trip_confirmation
. . . . . paratransit_service_confirmation
. . . . . traveler_identity
. . . . . traveler_rideshare_confirmation
. . . traveler_route_accepted_for_archive
. . . . traveler_route_accepted
. . . . . route_identity
. . . traveler_route_request_for_archive
. . . . traveler_route_request
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_eta_change
. . . . . constraint_on_number_of_mode_changes
. . . . . constraint_on_number_of_transfers
. . . . . constraint_on_special_needs
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . modes
. . . . . origin
. . . . . route_point
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . preferred_transit_options
. . . . . traveler_identity
. . . . . traveler_location
. . . . . location_identity
. . . . . traveler_route_accepted
. . . . . route_identity
. . . traveler_trip_and_cond_requests_for_archive
. . . . traveler_current_condition_request_for_archive
. . . . . traveler_current_condition_request

. . . . . kiosk_identity
. . . .
. . . . . traveler_personal_current_condition_request
. . . . . traveler_identity
. . . . traveler_personal_trip_request_for_archive
. . . . . traveler_personal_trip_request
. . . . . traveler_identity
. . . . . traveler_rideshare_request
. . . . . trip_request
. . . . traveler_trip_request_for_archive
. . . . . traveler_trip_request
. . . . . traveler_identity
. . . . . traveler_rideshare_request
. . . . . trip_request
. . . traveler_yellow_pages_requests_for_archive
. . . . traveler_personal_transaction_request_for_archive
. . . . . traveler_personal_transaction_request
. . . . . yellow_pages_dining_reservation
. . . . . yellow_pages_lodging_reservation
. . . . . yellow_pages_ticket_purchase
. . . .
. . . . .
. . . . . traveler_identity
. . . . traveler_transaction_request_for_archive
. . . . . traveler_transaction_request
. . . . . yellow_pages_dining_reservation
. . . . . yellow_pages_lodging_reservation
. . . . . yellow_pages_ticket_purchase
. . . .
. . . . . traveler_yellow_pages_information_request
. . . . . kiosk_identity
. . . vehicle_guidance_route_accepted_for_archive
. . . . vehicle_guidance_route_accepted
. . . . . route_identity
. . . vehicle_route_request_for_archive
. . . . vehicle_route_request
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_load_classification
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . departure_time
. . . . . time
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . origin
. . . . . route_point
. . . . . preferred_alternate_routes
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . vehicle_identity
. . . . . vehicle_location_for_dynamic_guidance
. . . . . location_identity
. . . yellow_pages_advisory_requests_for_archive
. . . . yellow_pages_advisory_requests
. . . . . advisory_data_scope
. . . . . transit_route_number
. . . . . transit_vehicle_identity
. . . . . vehicle_location_for_advisories
. . . . . location_identity
. . . . . yellow_pages_dining_reservation
. . . . . yellow_pages_lodging_reservation
. . . . . yellow_pages_non_motorized_reservation
. . . . . yellow_pages_ticket_purchase
. service_req_and_confirm_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. traveler_info_payments_transactions
. . driver_map_update_payments_transactions
. . traveler_map_update_payments_transactions
. . traveler_rideshare_payments_transactions
. . traveler_trip_payments_transactions
. . yellow_pages_provider_payments_transactions
. traveler_info_payments_transactions_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. trip_request_for_archive
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban

. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions
. trip_request_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. usage_for_archive
. . current_other_routes_use_for_archive
. . . route_segment_guided_travelers
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . current_road_network_use_for_archive
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_journey_time
. . . route_segment_total_number
. . . route_segment_use_prediction
. . . . route_segment_guided_vehicles
. usage_for_archive_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
traveler_device_identity
traveler_device_setting
. device_setting
. traveler_device_identity
traveler_emergency_request
traveler_event_information
traveler_event_information_request
traveler_event_information_request_for_archive
. traveler_event_information_request
traveler_guidance_accepted
. route_identity
traveler_guidance_data
. constraint_on_acceptable_travel_time
. constraint_on_eta_change
. constraint_on_number_of_mode_changes
. constraint_on_number_of_transfers
. constraint_on_special_needs
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_ridesharing_options
. preferred_route_segments
. preferred_routes
. preferred_transit_options
traveler_guidance_instructions
traveler_guidance_request
traveler_guidance_route
. route_identity
. traveler_identity
. traveler_route
. . route_segment_description
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_mode
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
traveler_handicap_access_request
traveler_identity
traveler_identity_store
traveler_info_data_archive
. traveler_archive_catalog

Appendix D: Data Tree

. traveler_data_for_archive
. . guidance_data_for_archive
. . . route_guidance_data_for_archive
. . . . list_size
. . . . vehicle_guidance_stored_data
. . . . . route_identity
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . vehicle_guidance_probe_data_for_archive
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . time
. . . . vehicle_identity
. . guidance_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . parking_lot_data_for_archive
. . . parking_lot_bookings_request
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_space_details
. . . . . date
. . . . . duration
. . . . . time
. . . . vehicle_identity
. . . parking_lot_identity
. . . . location_identity
. . . . unit_number
. . . parking_lot_spaces
. . parking_lot_data_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . rideshare_for_archive
. . . rideshare_data_for_archive
. . . . rideshare_confirmation_data
. . . . . reservation_status
. . . . . confirmation_flag
. . . . . rideshare_selection_number
. . . . rideshare_details
. . . . rideshare_eligibility_data
. . . traveler_rideshare_request_for_archive
. . . . traveler_rideshare_request
. . . . . traveler_identity
. . . . . traveler_rideshare_constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . . traveler_rideshare_data
. . . . . departure_time
. . . . . desired_arrival_time
. . . . . destination
. . . . . origin
. . . . . traveler_rideshare_preferences
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . rideshare_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied

Appendix D: Data Tree

. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . service_req_and_confirm_for_archive
. . . service_req_and_confirm_data
. . . . advisory_data_request_for_archive
. . . . . advisory_data_request
. . . . . . advisory_data_scope
. . . . . . transit_route_number
. . . . . . transit_vehicle_identity
. . . . . . vehicle_location_for_advisories
. . . . event_information_requests_for_archive
. . . . . event_information_advisory_requests_for_archive
. . . . . . event_information_advisory_requests
. . . . . traveler_event_information_request_for_archive
. . . . . . traveler_event_information_request
. . . . .
. . . . . . traveler_personal_event_information_request
. . . . traffic_data_kiosk_request_for_archive
. . . . . traffic_data_kiosk_request
. . . . . . kiosk_identity
. . . . . . traffic_data_request
. . . . traffic_data_personal_request_for_archive
. . . . . traffic_data_personal_request
. . . . . . traffic_data_request
. . . . . . traveler_identity
. . . . transit_deviation_kiosk_request_for_archive
. . . . . transit_deviation_kiosk_request
. . . . . . kiosk_identity
. . . . . . transit_vehicle_deviation_request
. . . . transit_deviations_personal_request_for_archive
. . . . . transit_deviations_personal_request
. . . . . . transit_route_number
. . . . . . transit_vehicle_deviation_request
. . . . . . traveler_identity
. . . . traveler_confirm_for_archive
. . . . . traveler_personal_trip_confirmation_for_archive
. . . . . . traveler_personal_trip_confirmation
. . . . . traveler_trip_confirmation_for_archive
. . . . . . traveler_trip_confirmation
. . . . traveler_route_accepted_for_archive
. . . . . traveler_route_accepted
. . . . . . route_identity
. . . . traveler_route_request_for_archive
. . . . . traveler_route_request
. . . . . . constraint_on_acceptable_travel_time
. . . . . . constraint_on_eta_change
. . . . . . constraint_on_number_of_mode_changes
. . . . . . constraint_on_number_of_transfers
. . . . . . constraint_on_special_needs
. . . . . . desired_arrival_time
. . . . . . destination
. . . . . . modes
. . . . . . origin
. . . . . . preferred_alternate_routes
. . . . . . preferred_ridesharing_options
. . . . . . preferred_route_segments
. . . . . . preferred_routes
. . . . . . preferred_transit_options
. . . . . . traveler_identity
. . . . . . traveler_location
. . . . . . traveler_route_accepted
. . . . traveler_trip_and_cond_requests_for_archive
. . . . . traveler_current_condition_request_for_archive
. . . . . . traveler_current_condition_request
. . . . .
. . . . . . traveler_personal_current_condition_request
. . . . . traveler_personal_trip_request_for_archive
. . . . . . traveler_personal_trip_request
. . . . . traveler_trip_request_for_archive
. . . . . . traveler_trip_request
. . . . traveler_yellow_pages_requests_for_archive
. . . . . traveler_personal_transaction_request_for_archive
. . . . . . traveler_personal_transaction_request
. . . . .
. . . . . .
. . . . . traveler_transaction_request_for_archive
. . . . . . traveler_transaction_request
. . . . .
. . . . . . traveler_yellow_pages_information_request
. . . . vehicle_guidance_route_accepted_for_archive
. . . . . vehicle_guidance_route_accepted
. . . . . . route_identity
. . . . vehicle_route_request_for_archive
. . . . . vehicle_route_request
. . . . . . constraint_on_acceptable_travel_time
. . . . . . constraint_on_ahs_lanes
. . . . . . constraint_on_eta_change
. . . . . . constraint_on_interstate
. . . . . . constraint_on_load_classification
. . . . . . constraint_on_special_needs
. . . . . . constraint_on_urban
. . . . . . constraint_on_vehicle_type
. . . . . . departure_time
. . . . . . desired_arrival_time
. . . . . . destination
. . . . . . origin
. . . . . . preferred_alternate_routes
. . . . . . preferred_route_segments
. . . . . . preferred_routes
. . . . . . vehicle_identity
. . . . . . vehicle_location_for_dynamic_guidance
. . . . yellow_pages_advisory_requests_for_archive
. . . . . yellow_pages_advisory_requests
. . . . . . advisory_data_scope
. . . . . . transit_route_number
. . . . . . transit_vehicle_identity
. . . . . . vehicle_location_for_advisories
. . . . . . yellow_pages_dining_reservation
. . . . . . yellow_pages_lodging_reservation
. . . . . . yellow_pages_non_motorized_reservation
. . . . . . yellow_pages_ticket_purchase
. . service_req_and_confirm_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security

. . . standard_data_attribute
. . . standard_message_attribute
. . traveler_info_payments_transactions
. . . driver_map_update_payments_transactions
. . . traveler_map_update_payments_transactions
. . . traveler_rideshare_payments_transactions
. . . traveler_trip_payments_transactions
. . . yellow_pages_provider_payments_transactions
. . traveler_info_payments_transactions_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . trip_request_for_archive
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions
. . trip_request_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
. . usage_for_archive
. . . current_other_routes_use_for_archive
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . current_road_network_use_for_archive
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . usage_for_archive_attributes
. . . authorization_to_use
. . . collection_conditions
. . . collection_equipment
. . . data_aggregation
. . . data_concept_identifier
. . . data_reductions
. . . data_revision
. . . data_version
. . . date_archived
. . . . date
. . . . time
. . . date_created
. . . . date
. . . . time
. . . date_published
. . . . date
. . . . time
. . . equipment_status
. . . error_handling
. . . methods_applied
. . . owner_entities
. . . perishability_date
. . . . date
. . . . time
. . . personal_identification_status
. . . quality_control_attribute
. . . record_size
. . . security
. . . standard_data_attribute
. . . standard_message_attribute
traveler_info_payments_transactions

. driver_map_update_payments_transactions
. traveler_map_update_payments_transactions
. traveler_rideshare_payments_transactions
. traveler_trip_payments_transactions
. yellow_pages_provider_payments_transactions
traveler_info_payments_transactions_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
traveler_information
. traffic_data_for_advisories
. . current_incident_data
. . . current_incident_details
. . . . incident_description
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . . . incident_vehicles_involved
. . . list_size
. . hov_lane_vehicle_count
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . parking_lot_identity
. . . location_identity
. . . unit_number
. . parking_lot_state
. . pollution_state_area_collection
. . . area_air_quality_index
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . pollution_state_roadside_collection
. . . current_carbon_monoxide_pollution
. . . current_hydrocarbon_pollution
. . . current_nitrous_oxide_pollution
. . . current_ozone_pollution
. . . current_particulate_pollution
. . . current_roadside_pollution_location
. . . . location_identity
. . . current_sulfur_dioxide_pollution
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . tmc_identity
. transit_services_for_advisories
traveler_information_request
. advisory_data_scope
. transit_route_number
. transit_vehicle_identity
. vehicle_location_for_advisories
. . location_identity
traveler_input_request
traveler_location
. location_identity
traveler_location_for_autonomous_guidance
. location_identity
traveler_location_for_dynamic_guidance
. location_identity
traveler_location_for_emergencies
. location_identity
traveler_location_for_information
. location_identity
traveler_location_for_planning
. location_identity
traveler_map_database
traveler_map_update_payment_request
. credit_identity
. navigable_map_traveler_update_cost
. . cost
. traveler_identity
traveler_map_update_payment_response
. confirmation_flag
. credit_identity
. traveler_identity
traveler_map_update_payments_transactions
traveler_map_update_request
. credit_identity
. stored_credit
. traveler_identity
traveler_map_update_response
. confirmation_flag
. navigable_map_traveler_update_cost
. . cost
. stored_credit
. traveler_identity
traveler_message
. secure_area_broadcast_message
. transit_area_broadcast_message
traveler_name
traveler_other_services_payment_request
. credit_identity
. traveler_identity
. yellow_pages_dining_reservation
. yellow_pages_lodging_reservation
. yellow_pages_ticket_purchase
traveler_other_services_payment_result
. other_services_payment_confirm
. traveler_identity
traveler_payment_confirmation
. advanced_fares_confirm
. . confirmation_flag
. advanced_tolls_confirm
. . confirmation_flag
. . credit_identity

. . stored_credit
. . toll_cost
. advanced_traveler_charges_confirm
. . confirmation_flag
. . parking_lot_cost
. . . cost
. . stored_credit
. . traveler_identity
. credit_identity
. kiosk_identity
. stored_credit
. traveler_total_trip_cost
traveler_payment_information
. credit_identity
. kiosk_identity
. parking_space_details
. . date
. . duration
. . time
. ride_segments
. . list_size
. . transit_route_segment_number
. stored_credit
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
traveler_payment_request
. credit_identity
. parking_space_details
. . date
. . duration
. . time
. ride_segments
. . list_size
. . transit_route_segment_number
. stored_credit
. toll_route_segments
. . list_size
. . toll_segment_identity
. . . unit_number
. transaction_number
. traveler_identity
traveler_payment_response
. advanced_fares_confirm
. . confirmation_flag
. advanced_tolls_confirm
. . confirmation_flag
. . credit_identity
. . stored_credit
. . toll_cost
. advanced_traveler_charges_confirm
. . confirmation_flag
. . parking_lot_cost
. . . cost
. . stored_credit
. . traveler_identity
. transaction_number
traveler_personal_credit_identity
. credit_identity
. stored_credit
traveler_personal_current_condition_request
. traveler_identity
traveler_personal_current_condition_request_for_arch
. traveler_personal_current_condition_request
. . traveler_identity
traveler_personal_data
. traveler_personal_credit_identity
. . credit_identity
. . stored_credit
. traveler_personal_information
traveler_personal_data_update
. traveler_personal_display_update_cost
. . display_map_traveler_update_cost
. . stored_credit
. . traveler_identity
. traveler_personal_information_update
. traveler_personal_trip_costs
. . stored_credit
. . traveler_identity
. . traveler_total_trip_cost
traveler_personal_display_map_update_request
. credit_identity
. stored_credit
. traveler_identity
traveler_personal_display_map_update_response
. confirmation_flag
. display_map_traveler_update_cost
. stored_credit
. traveler_identity
traveler_personal_display_update_cost
. display_map_traveler_update_cost
. stored_credit
. traveler_identity
traveler_personal_display_update_payment_request
. credit_identity
. display_map_traveler_update_cost
. traveler_identity
traveler_personal_display_update_payment_response
. confirmation_flag
. credit_identity
. traveler_identity
traveler_personal_emergency_request
. traveler_identity
. traveler_location_for_emergencies
. . location_identity
traveler_personal_event_information
traveler_personal_event_information_request
traveler_personal_event_information_request_for_arc
. traveler_personal_event_information_request
traveler_personal_information
traveler_personal_information_update
traveler_personal_map_update_cost
. navigable_map_traveler_update_cost
. . cost
. stored_credit
. traveler_identity
traveler_personal_payment_confirmation
. advanced_fares_confirm
. . confirmation_flag
. advanced_tolls_confirm
. . confirmation_flag
. . credit_identity
. . stored_credit
. . toll_cost
. advanced_traveler_charges_confirm
. . confirmation_flag
. . parking_lot_cost
. . . cost
. . stored_credit
. . traveler_identity
. credit_identity
. stored_credit
. traveler_identity
. traveler_total_trip_cost
traveler_personal_payment_information
. credit_identity
. parking_space_details
. . date
. . duration
. . time
. ride_segments
. . list_size
. . transit_route_segment_number
. stored_credit
. toll_route_segments
. . list_size
. . toll_segment_identity

. . . unit_number
. traveler_identity
traveler_personal_regular_data
traveler_personal_requests_and_confirmation
. traveler_personal_current_condition_request
. . traveler_identity
. traveler_personal_payment_information
. . credit_identity
. . parking_space_details
. . . date
. . . duration
. . . time
. . ride_segments
. . . list_size
. . . transit_route_segment_number
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . traveler_identity
. traveler_personal_trip_confirmation
. . paratransit_service_confirmation
. . . paratransit_service_identity
. . . transit_confirmation_flag
. . . traveler_identity
. . traveler_identity
. . traveler_rideshare_confirmation
. . . credit_identity
. . . reservation_status
. . . . confirmation_flag
. . . rideshare_selection_number
. . . traveler_identity
. traveler_personal_trip_request
. . traveler_identity
. . traveler_rideshare_request
. . . traveler_identity
. . . traveler_rideshare_constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . traveler_rideshare_data
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . traveler_rideshare_preferences
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . trip_request
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions
traveler_personal_traffic_condition_request
. traveler_identity
. traveler_traffic_data_type_request
traveler_personal_transaction_confirmation
. credit_identity
. transaction_number
. traveler_identity
. yellow_pages_cost
. . cost
. yellow_pages_dining_reservation_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
. yellow_pages_lodging_reservation_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
. yellow_pages_ticket_purchase_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
traveler_personal_transaction_request
. yellow_pages_dining_reservation
. yellow_pages_lodging_reservation
. yellow_pages_ticket_purchase
traveler_personal_transaction_request_for_archive
. traveler_personal_transaction_request
. . yellow_pages_dining_reservation
. . yellow_pages_lodging_reservation
. . yellow_pages_ticket_purchase
traveler_personal_transit_condition_request
. traveler_identity
. traveler_transit_data_type_request
traveler_personal_travel_services_data
. traveler_personal_event_information
. traveler_personal_yellow_pages_data
. . traveler_identity
. . yellow_pages_general_information
. . . yellow_pages_history
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_local_customs
. . . . list_size
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_people
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_specific_information
. . . yellow_pages_food
. . . . list_size
. . . . yellow_pages_service_contact

Appendix D: Data Tree

. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_gas_stations
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_hospitals
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_lodging
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_non_motorized_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_parking
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_parts_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_repair_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_rest_areas
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_special_events
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_activities
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_transaction_information
. . . yellow_pages_dining_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_lodging_reservations
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_ticket_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type

traveler_personal_travel_services_requests

. traveler_personal_event_information_request
. traveler_personal_yellow_pages_requests
. . traveler_personal_payment_information
. . . credit_identity
. . . parking_space_details
. . . . date
. . . . duration
. . . . time
. . . ride_segments
. . . . list_size
. . . . transit_route_segment_number
. . . stored_credit
. . . toll_route_segments
. . . . list_size
. . . . toll_segment_identity
. . . . . unit_number
. . . traveler_identity
. . traveler_personal_transaction_request

. . . yellow_pages_dining_reservation
. . . yellow_pages_lodging_reservation
. . . yellow_pages_ticket_purchase
. . traveler_personal_yellow_pages_information_request
. . . traveler_identity
traveler_personal_trip_confirmation
. paratransit_service_confirmation
. . paratransit_service_identity
. . transit_confirmation_flag
. . traveler_identity
. traveler_identity
. traveler_rideshare_confirmation
. . credit_identity
. . reservation_status
. . . confirmation_flag
. . rideshare_selection_number
. . traveler_identity
traveler_personal_trip_confirmation_for_archive
. traveler_personal_trip_confirmation
. . paratransit_service_confirmation
. . . paratransit_service_identity
. . . transit_confirmation_flag
. . . traveler_identity
. . traveler_identity
. . traveler_rideshare_confirmation
. . . credit_identity
. . . reservation_status
. . . . confirmation_flag
. . . rideshare_selection_number
. . . traveler_identity
traveler_personal_trip_confirmation_information
. traveler_personal_payment_confirmation
. . advanced_fares_confirm
. . . confirmation_flag
. . advanced_tolls_confirm
. . . confirmation_flag
. . . credit_identity
. . . stored_credit
. . . toll_cost
. . advanced_traveler_charges_confirm
. . . confirmation_flag
. . . parking_lot_cost
. . . . cost
. . . stored_credit
. . . traveler_identity
. . credit_identity
. . stored_credit
. . traveler_identity
. . traveler_total_trip_cost
. traveler_personal_transaction_confirmation
. . credit_identity
. . transaction_number
. . traveler_identity
. . yellow_pages_cost
. . . cost
. . yellow_pages_dining_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_lodging_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_ticket_purchase_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. traveler_personal_trip_information
. . current_conditions
. . . fws_current_weather_observations
. . . . current_weather_observations
. . . . weather_observation_attributes
. . . fws_weather_forecasts
. . . . climatic_scale_weather_forecasts
. . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . weather_scale_forecast_data_attributes
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_start_time
. . . . time
. . . incident_type
. . paratransit_personal_schedule
. . . paratransit_service_cost
. . . . cost
. . . paratransit_service_details
. . . . paratransit_arrival_time
. . . . . time
. . . . paratransit_availability_time
. . . . paratransit_destination
. . . . paratransit_pickup_location
. . . . . location_identity
. . . . paratransit_pickup_time
. . . . paratransit_service_identity
. . . traveler_identity
. . rideshare_response
. . . rideshare_details
. . . rideshare_selection_number
. . . traveler_identity
. . route
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment
. . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_mode
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . traveler_identity
. . traveler_total_trip_cost
traveler_personal_trip_costs
. stored_credit
. traveler_identity
. traveler_total_trip_cost
traveler_personal_trip_information
. current_conditions
. . fws_current_weather_observations
. . . current_weather_observations
. . . weather_observation_attributes
. . fws_weather_forecasts
. . . climatic_scale_weather_forecasts

. . . meso_scale_weather_forecasts
. . . . weather_advisories
. . . . weather_forecast_details
. . . . weather_warnings
. . . . weather_watches
. . . miso_scale_weather_forecasts
. . . . weather_advisories
. . . . weather_forecast_details
. . . . weather_warnings
. . . synoptic_scale_weather_forecasts
. . . . weather_forecast_details
. . . . weather_watches
. . . weather_scale_forecast_data_attributes
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_start_time
. . . time
. . incident_type
. paratransit_personal_schedule
. . paratransit_service_cost
. . . cost
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. . traveler_identity
. rideshare_response
. . rideshare_details
. . rideshare_selection_number
. . traveler_identity
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. traveler_identity
. traveler_total_trip_cost

traveler_personal_trip_planning_requests

. transit_deviations_personal_request
. . transit_route_number
. . transit_vehicle_deviation_request
. . traveler_identity
. traveler_handicap_access_request
. traveler_identity
. traveler_personal_event_information_request
. traveler_personal_payment_information
. . credit_identity
. . parking_space_details
. . . date
. . . duration
. . . time
. . ride_segments
. . . list_size
. . . transit_route_segment_number
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . traveler_identity
. traveler_personal_traffic_condition_request
. . traveler_identity
. . traveler_traffic_data_type_request
. traveler_personal_transaction_request
. . yellow_pages_dining_reservation
. . yellow_pages_lodging_reservation
. . yellow_pages_ticket_purchase
. traveler_personal_transit_condition_request
. . traveler_identity
. . traveler_transit_data_type_request
. traveler_personal_trip_confirmation
. . paratransit_service_confirmation
. . . paratransit_service_identity
. . . transit_confirmation_flag
. . . traveler_identity
. . traveler_identity
. . traveler_rideshare_confirmation
. . . credit_identity
. . . reservation_status
. . . . confirmation_flag
. . . rideshare_selection_number
. . . traveler_identity
. traveler_personal_trip_request
. . traveler_identity
. . traveler_rideshare_request
. . . traveler_identity
. . . traveler_rideshare_constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . traveler_rideshare_data
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . traveler_rideshare_preferences
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . trip_request
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs

. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions
. traveler_profile
. . traveler_traffic_profile
. . . traveler_contact_setting
. . . . traveler_contact_information
. . . . traveler_name
. . . traveler_device_setting
. . . . device_setting
. . . . traveler_device_identity
. . . traveler_identity
. . . traveler_traffic_preference_setting
. . . . list_size
. . . . setting_identity
. . . . setting_preferences
. . . . setting_type
. . traveler_transit_profile
. . . traveler_contact_setting
. . . . traveler_contact_information
. . . . traveler_name
. . . traveler_device_setting
. . . . device_setting
. . . . traveler_device_identity
. . . traveler_identity
. . . traveler_transit_preference_setting
. . . . list_size
. . . . setting_identity
. . . . setting_preferences
. . . . setting_type
. traveler_yellow_pages_information_request
. . kiosk_identity
traveler_personal_trip_planning_responses
. traffic_data_for_personal_devices
. . current_data_for_broadcast
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . link_state_data_for_broadcast
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . . list_size
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . predicted_data_for_broadcast
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . source_identity
. . traveler_identity
. transit_deviations_for_personal_devices

Appendix D: Data Tree

. . list_size
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
. . traveler_identity
. transit_services_for_personal_devices
. . transit_services_for_output
. . . list_size
. . . transit_route_number
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . traveler_identity
. traveler_identity
. traveler_personal_event_information
. traveler_personal_payment_confirmation
. . advanced_fares_confirm
. . . confirmation_flag
. . advanced_tolls_confirm
. . . confirmation_flag
. . . credit_identity
. . . stored_credit
. . . toll_cost
. . advanced_traveler_charges_confirm
. . . confirmation_flag
. . . parking_lot_cost
. . . . cost
. . . stored_credit
. . . traveler_identity
. . credit_identity
. . stored_credit
. . traveler_identity
. . traveler_total_trip_cost
. traveler_personal_trip_information
. . current_conditions
. . . fws_current_weather_observations
. . . . current_weather_observations
. . . . weather_observation_attributes
. . . fws_weather_forecasts
. . . . climatic_scale_weather_forecasts
. . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . weather_scale_forecast_data_attributes
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_start_time
. . . . time
. . . incident_type
. . paratransit_personal_schedule
. . . paratransit_service_cost
. . . . cost
. . . paratransit_service_details
. . . . paratransit_arrival_time
. . . . . time
. . . . paratransit_availability_time
. . . . paratransit_destination
. . . . paratransit_pickup_location
. . . . . location_identity
. . . . paratransit_pickup_time
. . . . paratransit_service_identity
. . . traveler_identity
. . rideshare_response
. . . rideshare_details
. . . rideshare_selection_number
. . . traveler_identity
. . route
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment
. . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_mode
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . traveler_identity
. . traveler_total_trip_cost
. traveler_personal_yellow_pages_data
. . traveler_identity
. . yellow_pages_general_information
. . . yellow_pages_history
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_local_customs
. . . . list_size
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_people
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_specific_information
. . . yellow_pages_food
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_gas_stations
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type

Appendix D: Data Tree

. . . yellow_pages_hospitals
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_lodging
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_non_motorized_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_parking
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_parts_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_repair_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_rest_areas
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_special_events
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_activities
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_transaction_information
. . . yellow_pages_dining_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_lodging_reservations
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_ticket_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. traveler_transaction_confirmation
. . credit_identity
. . kiosk_identity
. . transaction_number
. . yellow_pages_cost
. . . cost
. . yellow_pages_dining_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_lodging_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_ticket_purchase_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number

traveler_personal_trip_request

. traveler_identity
. traveler_rideshare_request
. . traveler_identity
. . traveler_rideshare_constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . traveler_rideshare_data
. . . departure_time
. . . . time

Appendix D: Data Tree

. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . traveler_rideshare_preferences
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. trip_request
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions

traveler_personal_trip_request_for_archive

. traveler_personal_trip_request
. . traveler_identity
. . traveler_rideshare_request
. . . traveler_identity
. . . traveler_rideshare_constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . traveler_rideshare_data
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . traveler_rideshare_preferences
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . trip_request
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions

traveler_personal_yellow_pages_data

. traveler_identity
. yellow_pages_general_information
. . yellow_pages_history
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. . yellow_pages_local_customs
. . . list_size
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_people
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. yellow_pages_specific_information
. . yellow_pages_food
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_gas_stations
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_hospitals
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_lodging
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type

Appendix D: Data Tree

. . yellow_pages_non_motorized_services
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_parking
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_private_vehicle_parts_shops
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_private_vehicle_repair_shops
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_rest_areas
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_special_events
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_tourist_activities
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. . yellow_pages_tourist_services
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. yellow_pages_transaction_information
. . yellow_pages_dining_information
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . yellow_pages_lodging_reservations
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . yellow_pages_ticket_information
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
traveler_personal_yellow_pages_information_request
. traveler_identity
traveler_personal_yellow_pages_information_request_
. traveler_personal_yellow_pages_information_request
. . traveler_identity
traveler_personal_yellow_pages_requests
. traveler_personal_payment_information
. . credit_identity
. . parking_space_details
. . . date
. . . duration
. . . time
. . ride_segments
. . . list_size
. . . transit_route_segment_number
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. . traveler_identity
. traveler_personal_transaction_request
. . yellow_pages_dining_reservation
. . yellow_pages_lodging_reservation
. . yellow_pages_ticket_purchase
. traveler_personal_yellow_pages_information_request
. . traveler_identity
traveler_profile
. traveler_traffic_profile
. . traveler_contact_setting
. . . traveler_contact_information
. . . traveler_name
. . traveler_device_setting
. . . device_setting
. . . traveler_device_identity
. . traveler_identity
. . traveler_traffic_preference_setting
. . . list_size
. . . setting_identity
. . . setting_preferences
. . . setting_type
. traveler_transit_profile
. . traveler_contact_setting
. . . traveler_contact_information

. . . traveler_name
. . traveler_device_setting
. . . device_setting
. . . traveler_device_identity
. . traveler_identity
. . traveler_transit_preference_setting
. . . list_size
. . . setting_identity
. . . setting_preferences
. . . setting_type
traveler_profile_from_vehicle
. traveler_traffic_profile
. . traveler_contact_setting
. . . traveler_contact_information
. . . traveler_name
. . traveler_device_setting
. . . device_setting
. . . traveler_device_identity
. . traveler_identity
. . traveler_traffic_preference_setting
. . . list_size
. . . setting_identity
. . . setting_preferences
. . . setting_type
. traveler_transit_profile
. . traveler_contact_setting
. . . traveler_contact_information
. . . traveler_name
. . traveler_device_setting
. . . device_setting
. . . traveler_device_identity
. . traveler_identity
. . traveler_transit_preference_setting
. . . list_size
. . . setting_identity
. . . setting_preferences
. . . setting_type
traveler_regular_data
traveler_requests_and_confirmation
. traveler_current_condition_request
. . kiosk_identity
. traveler_payment_information
. . credit_identity
. . kiosk_identity
. . parking_space_details
. . . date
. . . duration
. . . time
. . ride_segments
. . . list_size
. . . transit_route_segment_number
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. traveler_trip_confirmation
. . paratransit_service_confirmation
. . . paratransit_service_identity
. . . transit_confirmation_flag
. . . traveler_identity
. . traveler_identity
. . traveler_rideshare_confirmation
. . . credit_identity
. . . reservation_status
. . . . confirmation_flag
. . . rideshare_selection_number
. . . traveler_identity
. traveler_trip_request
. . traveler_identity
. . traveler_rideshare_request
. . . traveler_identity
. . . traveler_rideshare_constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . traveler_rideshare_data
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . traveler_rideshare_preferences
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . trip_request
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions
traveler_rideshare_confirmation
. credit_identity
. reservation_status
. . confirmation_flag
. rideshare_selection_number
. traveler_identity
traveler_rideshare_constraints
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_special_needs
. constraint_on_urban
. constraint_on_vehicle_type
traveler_rideshare_data
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
traveler_rideshare_payments_transactions
traveler_rideshare_preferences
. preferred_alternate_routes

. preferred_ridesharing_options
. preferred_route_segments
. preferred_routes
traveler_rideshare_request
. traveler_identity
. traveler_rideshare_constraints
. . constraint_on_acceptable_travel_time
. . constraint_on_ahs_lanes
. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_special_needs
. . constraint_on_urban
. . constraint_on_vehicle_type
. traveler_rideshare_data
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. traveler_rideshare_preferences
. . preferred_alternate_routes
. . preferred_ridesharing_options
. . preferred_route_segments
. . preferred_routes
traveler_rideshare_request_for_archive
. traveler_rideshare_request
. . traveler_identity
. . traveler_rideshare_constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . traveler_rideshare_data
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . traveler_rideshare_preferences
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
traveler_roadside_credit_identity
. credit_identity
traveler_roadside_data
. traveler_roadside_credit_identity
. . credit_identity
. traveler_roadside_personal_information
traveler_roadside_data_update
. traveler_roadside_personal_information_update
. traveler_roadside_trip_costs
. . kiosk_identity
. . stored_credit
. . traveler_total_trip_cost
traveler_roadside_personal_information
traveler_roadside_personal_information_update
traveler_roadside_trip_costs
. kiosk_identity
. stored_credit
. traveler_total_trip_cost
traveler_route
. route_segment_description
. route_segment_end_point
. . location_identity
. route_segment_estimated_travel_time
. route_segment_mode
. route_segment_report_position_points
. . list_size
. . route_segment_way_point
. . . location_identity
. route_segment_start_point
. . location_identity
traveler_route_accepted
. route_identity
traveler_route_accepted_for_archive
. traveler_route_accepted
. . route_identity
traveler_route_request
. constraint_on_acceptable_travel_time
. constraint_on_eta_change
. constraint_on_number_of_mode_changes
. constraint_on_number_of_transfers
. constraint_on_special_needs
. desired_arrival_time
. . time
. destination
. . route_point
. modes
. origin
. . route_point
. preferred_alternate_routes
. preferred_ridesharing_options
. preferred_route_segments
. preferred_routes
. preferred_transit_options
. traveler_identity
. traveler_location
. . location_identity
. traveler_route_accepted
. . route_identity
traveler_route_request_for_archive
. traveler_route_request
. . constraint_on_acceptable_travel_time
. . constraint_on_eta_change
. . constraint_on_number_of_mode_changes
. . constraint_on_number_of_transfers
. . constraint_on_special_needs
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . modes
. . origin
. . . route_point
. . preferred_alternate_routes
. . preferred_ridesharing_options
. . preferred_route_segments
. . preferred_routes
. . preferred_transit_options
. . traveler_identity
. . traveler_location
. . . location_identity
. . traveler_route_accepted
. . . route_identity
traveler_to_m_and_c
. env_probe_info_from_isp
. . env_probe_data
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_total_number
. traffic_probe_info_from_info_provider
. . vehicle_probe_data_amalgamation
. . . list_size
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type

. . . . unit_number
. . . route_segment_journey_time
. vehicle_location_for_mcv
. . location_identity
traveler_total_trip_cost
traveler_traffic_condition_request
. kiosk_identity
. traveler_traffic_data_type_request
traveler_traffic_data_type_request
traveler_traffic_information_advisory_data
. traveler_traffic_information_data
. . planned_events
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . prediction_data
. . . list_size
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_occupancy_predictions
. . . route_segment_queue_delay_predictions
. . . route_segment_speed_predictions
. . . . vehicle_speed
. . . route_segment_volume_delay_predictions
. . traffic_data_for_advisory_output
. . . current_data_for_retrieval
. . . . area_air_quality_index
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . long_term_data_for_retrieval
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl

. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . predictive_model_data_for_retrieval
. . . . predicted_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . predicted_hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . predicted_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . predicted_parking_lot_data
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_occupancy
. . . . . parking_lot_state
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . predicted_road_network_use
. . . . . route_segment_guided_vehicles
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . source_identity
traveler_traffic_information_broadcast_data
. traveler_traffic_information_data
. . planned_events
. . . list_size
. . . planned_event_details
. . . . incident_duration
. . . . . duration
. . . . incident_location
. . . . . location_identity
. . . . incident_number
. . . . incident_severity
. . . . incident_start_time
. . . . . time
. . . . incident_traffic_impact
. . . . incident_type
. . prediction_data
. . . list_size
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_occupancy_predictions
. . . route_segment_queue_delay_predictions
. . . route_segment_speed_predictions
. . . . vehicle_speed
. . . route_segment_volume_delay_predictions
. . traffic_data_for_advisory_output
. . . current_data_for_retrieval
. . . . area_air_quality_index
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity

. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . long_term_data_for_retrieval
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . current_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . parking_lot_storage_data
. . . . . list_size
. . . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_state
. . . . traffic_flow_state
. . . . . current_road_network_use
. . . . . route_segment_identity
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . current_road_network_data
. . . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . vehicle_smart_probe_stored_data
. . . . . list_size
. . . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . wide_area_pollution_data
. . . . . list_size
. . . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . current_sulfur_dioxide_pollution
. . . predictive_model_data_for_retrieval
. . . . predicted_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed
. . . . predicted_hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . predicted_other_routes_use
. . . . . route_segment_guided_travelers
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . predicted_parking_lot_data
. . . . . list_size
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . . parking_lot_occupancy
. . . . . parking_lot_state
. . . . predicted_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . link_occupancy
. . . . . link_speed

Appendix D: Data Tree

. . . . predicted_road_network_use
. . . . . route_segment_guided_vehicles
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . source_identity
traveler_traffic_information_data
. planned_events
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. prediction_data
. . list_size
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_occupancy_predictions
. . route_segment_queue_delay_predictions
. . route_segment_speed_predictions
. . . vehicle_speed
. . route_segment_volume_delay_predictions
. traffic_data_for_advisory_output
. . current_data_for_retrieval
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . link_state_data
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . list_size
. . . . vehicle_count
. . . . vehicle_headway
. . . . vehicle_occupancy
. . . . vehicle_queue_length
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . long_term_data_for_retrieval
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data

Appendix D: Data Tree

. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . . location_identity
. . . . . . route_segment_type
. . . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . . link_delay
. . . . . . link_journey_time
. . . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . . list_size
. . . . . . list_size
. . . . . . ramp_identity
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . . vehicle_smart_probe_data_source_identity
. . . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . predictive_model_data_for_retrieval
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_hov_lane_data
. . . . hov_lane_vehicle_count
. . . . hov_lane_violation_count
. . . . list_size
. . . predicted_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_road_network_use
. . . . route_segment_guided_vehicles
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . source_identity

traveler_traffic_preference_setting

. list_size
. setting_identity
. setting_preferences
. setting_type

traveler_traffic_profile

. traveler_contact_setting
. . traveler_contact_information
. . traveler_name
. traveler_device_setting
. . device_setting
. . traveler_device_identity
. traveler_identity
. traveler_traffic_preference_setting
. . list_size
. . setting_identity
. . setting_preferences
. . setting_type

traveler_transaction_confirmation

. credit_identity

Appendix D: Data Tree

. kiosk_identity
. transaction_number
. yellow_pages_cost
. . cost
. yellow_pages_dining_reservation_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
. yellow_pages_lodging_reservation_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
. yellow_pages_ticket_purchase_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number

traveler_transaction_request

. yellow_pages_dining_reservation
. yellow_pages_lodging_reservation
. yellow_pages_ticket_purchase

traveler_transaction_request_for_archive

. traveler_transaction_request
. . yellow_pages_dining_reservation
. . yellow_pages_lodging_reservation
. . yellow_pages_ticket_purchase

traveler_transit_condition_request

. kiosk_identity
. traveler_transit_data_type_request

traveler_transit_data_type_request

traveler_transit_information

. traveler_transit_information_data
. . transit_running_data_for_advisory_output
. . . list_size
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . . transit_vehicle_running_times
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. . transit_services_for_advisory_data
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_stop_number
. . . . . transit_schedule_identity

traveler_transit_information_advisory_data

. traveler_transit_information_data
. . transit_running_data_for_advisory_output
. . . list_size
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . . transit_vehicle_running_times
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. . transit_services_for_advisory_data
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . transit_route_stop_number
. . . . . transit_schedule_identity

traveler_transit_information_broadcast_data

. traveler_transit_information_data
. . transit_running_data_for_advisory_output
. . . list_size
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . . transit_vehicle_running_times
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number

. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. . transit_services_for_advisory_data
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . . list_size
. . . . . . transit_route_stop_data
. . . . . . transit_route_stop_number
. . . . . transit_schedule_identity

traveler_transit_information_data

. transit_running_data_for_advisory_output
. . list_size
. . transit_vehicle_eta
. . . transit_route_number
. . . transit_vehicle_identity
. . . transit_vehicle_time
. . transit_vehicle_passenger_loading
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_identity
. . . transit_vehicle_passengers
. . transit_vehicle_running_times
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. . transit_vehicle_schedule_deviations
. . . list_size
. . . transit_route_number
. . . transit_route_segment_number
. . . transit_vehicle_achieved_time
. . . . time
. . . transit_vehicle_identity
. transit_services_for_advisory_data
. . transit_services
. . . map_transit_data
. . . transit_routes_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_number
. . . transit_schedule_data
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_list
. . . . . link_identity_list
. . . . . . link_identity
. . . . . . list_size
. . . . . list_size
. . . . . transit_route_segment_cost
. . . . . transit_route_segment_number
. . . . transit_route_stop_list
. . . . . list_size
. . . . . transit_route_stop_data
. . . . . . list_size
. . . . . . transit_route_schedule_number
. . . . . . transit_stop_scheduled_time
. . . . . transit_route_stop_number
. . . . transit_schedule_identity

traveler_transit_information_for_transit_advisories

. traveler_transit_information_data
. . transit_running_data_for_advisory_output
. . . list_size
. . . transit_vehicle_eta
. . . . transit_route_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_time
. . . transit_vehicle_passenger_loading
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_identity
. . . . transit_vehicle_passengers
. . . transit_vehicle_running_times
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_stop_scheduled_time
. . . . . time
. . . transit_vehicle_schedule_deviations
. . . . list_size
. . . . transit_route_number
. . . . transit_route_segment_number
. . . . transit_vehicle_achieved_time
. . . . . time
. . . . transit_vehicle_identity
. . transit_services_for_advisory_data
. . . transit_services
. . . . map_transit_data
. . . . transit_routes_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_number
. . . . transit_schedule_data
. . . . . list_size
. . . . . transit_route_number
. . . . . transit_route_segment_list
. . . . . . link_identity_list
. . . . . . list_size
. . . . . . transit_route_segment_cost
. . . . . . transit_route_segment_number
. . . . . transit_route_stop_list
. . . . . . list_size
. . . . . . transit_route_stop_data
. . . . . . transit_route_stop_number
. . . . . transit_schedule_identity

traveler_transit_preference_setting

. list_size
. setting_identity
. setting_preferences

. setting_type
traveler_transit_profile
. traveler_contact_setting
. . traveler_contact_information
. . traveler_name
. traveler_device_setting
. . device_setting
. . traveler_device_identity
. traveler_identity
. traveler_transit_preference_setting
. . list_size
. . setting_identity
. . setting_preferences
. . setting_type
traveler_travel_services_data
. traveler_event_information
. traveler_yellow_pages_data
. . kiosk_identity
. . yellow_pages_general_information
. . . yellow_pages_history
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_local_customs
. . . . list_size
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_people
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_specific_information
. . . yellow_pages_food
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_gas_stations
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_hospitals
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_lodging
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_non_motorized_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_parts_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_repair_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_rest_areas
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_special_events
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_activities
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_transaction_information
. . . yellow_pages_dining_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_lodging_reservations
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability

. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . . cost
. . . . . yellow_pages_service_date
. . . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_ticket_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . . cost
. . . . . yellow_pages_service_date
. . . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . . time
. . . . . yellow_pages_service_type

traveler_travel_services_requests

. traveler_event_information_request
. traveler_yellow_pages_requests
. . traveler_payment_information
. . . credit_identity
. . . kiosk_identity
. . . parking_space_details
. . . . date
. . . . duration
. . . . time
. . . ride_segments
. . . . list_size
. . . . transit_route_segment_number
. . . stored_credit
. . . toll_route_segments
. . . . list_size
. . . . toll_segment_identity
. . . . . unit_number
. . traveler_transaction_request
. . . yellow_pages_dining_reservation
. . . yellow_pages_lodging_reservation
. . . yellow_pages_ticket_purchase
. . traveler_yellow_pages_information_request
. . . kiosk_identity

traveler_travel_services_requests_for_archive

. event_information_requests_for_archive
. . event_information_advisory_requests_for_archive
. . . event_information_advisory_requests
. . traveler_event_information_request_for_archive
. . . traveler_event_information_request
. .
. . . traveler_personal_event_information_request
. traveler_yellow_pages_requests_for_archive
. . traveler_personal_transaction_request_for_archive
. . . traveler_personal_transaction_request
. . . . yellow_pages_dining_reservation
. . . . yellow_pages_lodging_reservation
. . . . yellow_pages_ticket_purchase
. .
. . . traveler_personal_yellow_pages_information_request
. . . . traveler_identity
. . traveler_transaction_request_for_archive
. . . traveler_transaction_request
. . . . yellow_pages_dining_reservation
. . . . yellow_pages_lodging_reservation
. . . . yellow_pages_ticket_purchase
. .
. . . traveler_yellow_pages_information_request
. . . . kiosk_identity

traveler_trip_and_cond_requests_for_archive

. traveler_current_condition_request_for_archive
. . traveler_current_condition_request
. . . kiosk_identity
.
. . traveler_personal_current_condition_request
. . . traveler_identity
. traveler_personal_trip_request_for_archive
. . traveler_personal_trip_request
. . . traveler_identity
. . . traveler_rideshare_request
. . . . traveler_identity
. . . . traveler_rideshare_constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . traveler_rideshare_data
. . . . . departure_time
. . . . . time
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . origin
. . . . . route_point
. . . . traveler_rideshare_preferences
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . trip_request
. . . . constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_load_classification
. . . . . constraint_on_number_of_mode_changes
. . . . . constraint_on_number_of_transfers
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . . preferences
. . . . . modes
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . preferred_transit_options
. . . . . preferred_weather_conditions
. traveler_trip_request_for_archive
. . traveler_trip_request
. . . traveler_identity
. . . traveler_rideshare_request
. . . . traveler_identity
. . . . traveler_rideshare_constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_special_needs

. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . traveler_rideshare_data
. . . . . departure_time
. . . . . time
. . . . . desired_arrival_time
. . . . . time
. . . . . destination
. . . . . route_point
. . . . . origin
. . . . . route_point
. . . . traveler_rideshare_preferences
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . trip_request
. . . . constraints
. . . . . constraint_on_acceptable_travel_time
. . . . . constraint_on_ahs_lanes
. . . . . constraint_on_eta_change
. . . . . constraint_on_interstate
. . . . . constraint_on_load_classification
. . . . . constraint_on_number_of_mode_changes
. . . . . constraint_on_number_of_transfers
. . . . . constraint_on_special_needs
. . . . . constraint_on_urban
. . . . . constraint_on_vehicle_type
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . . preferences
. . . . . modes
. . . . . preferred_alternate_routes
. . . . . preferred_ridesharing_options
. . . . . preferred_route_segments
. . . . . preferred_routes
. . . . . preferred_transit_options
. . . . . preferred_weather_conditions

traveler_trip_confirmation

. paratransit_service_confirmation
. . paratransit_service_identity
. . transit_confirmation_flag
. . traveler_identity
. traveler_identity
. traveler_rideshare_confirmation
. . credit_identity
. . reservation_status
. . . confirmation_flag
. . rideshare_selection_number
. . traveler_identity

traveler_trip_confirmation_for_archive

. traveler_trip_confirmation
. . paratransit_service_confirmation
. . . paratransit_service_identity
. . . transit_confirmation_flag
. . . traveler_identity
. . traveler_identity
. . traveler_rideshare_confirmation
. . . credit_identity
. . . reservation_status
. . . . confirmation_flag
. . . rideshare_selection_number
. . . traveler_identity

traveler_trip_confirmation_information

. traveler_payment_confirmation
. . advanced_fares_confirm
. . . confirmation_flag
. . advanced_tolls_confirm
. . . confirmation_flag
. . . credit_identity
. . . stored_credit
. . . toll_cost
. . advanced_traveler_charges_confirm
. . . confirmation_flag
. . . parking_lot_cost
. . . . cost
. . . stored_credit
. . . traveler_identity
. . credit_identity
. . kiosk_identity
. . stored_credit
. . traveler_total_trip_cost
. traveler_transaction_confirmation
. . credit_identity
. . kiosk_identity
. . transaction_number
. . yellow_pages_cost
. . . cost
. . yellow_pages_dining_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_lodging_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_ticket_purchase_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. traveler_trip_information
. . current_conditions
. . . fws_current_weather_observations
. . . . current_weather_observations
. . . . weather_observation_attributes
. . . fws_weather_forecasts
. . . . climatic_scale_weather_forecasts
. . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . weather_scale_forecast_data_attributes
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_start_time
. . . . time
. . . incident_type
. . kiosk_identity
. . paratransit_personal_schedule
. . . paratransit_service_cost
. . . . cost
. . . paratransit_service_details
. . . . paratransit_arrival_time
. . . . . time
. . . . paratransit_availability_time
. . . . paratransit_destination
. . . . paratransit_pickup_location
. . . . . location_identity
. . . . paratransit_pickup_time
. . . . paratransit_service_identity
. . . traveler_identity
. . rideshare_response
. . . rideshare_details
. . . rideshare_selection_number
. . . traveler_identity

Appendix D: Data Tree

. . route
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment
. . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . . location_identity
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_mode
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . route_cost
traveler_trip_information
. current_conditions
. . fws_current_weather_observations
. . . current_weather_observations
. . . weather_observation_attributes
. . fws_weather_forecasts
. . . climatic_scale_weather_forecasts
. . . meso_scale_weather_forecasts
. . . . weather_advisories
. . . . weather_forecast_details
. . . . weather_warnings
. . . . weather_watches
. . . miso_scale_weather_forecasts
. . . . weather_advisories
. . . . weather_forecast_details
. . . . weather_warnings
. . . synoptic_scale_weather_forecasts
. . . . weather_forecast_details
. . . . weather_watches
. . . weather_scale_forecast_data_attributes
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_start_time
. . . time
. . incident_type
. kiosk_identity
. paratransit_personal_schedule
. . paratransit_service_cost
. . . cost
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. . traveler_identity
. rideshare_response
. . rideshare_details
. . rideshare_selection_number
. . traveler_identity
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_cost
traveler_trip_payments_transactions
traveler_trip_planning_requests
. kiosk_identity
. transit_vehicle_deviation_request
. traveler_event_information_request
. traveler_payment_information
. . credit_identity
. . kiosk_identity
. . parking_space_details
. . . date
. . . duration
. . . time
. . ride_segments
. . . list_size
. . . transit_route_segment_number
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. traveler_traffic_condition_request
. . kiosk_identity
. . traveler_traffic_data_type_request
. traveler_transaction_request
. . yellow_pages_dining_reservation
. . yellow_pages_lodging_reservation
. . yellow_pages_ticket_purchase
. traveler_transit_condition_request
. . kiosk_identity
. . traveler_transit_data_type_request
. traveler_trip_confirmation
. . paratransit_service_confirmation
. . . paratransit_service_identity
. . . transit_confirmation_flag
. . . traveler_identity
. . traveler_identity
. . traveler_rideshare_confirmation
. . . credit_identity
. . . reservation_status
. . . . confirmation_flag
. . . rideshare_selection_number
. . . traveler_identity
. traveler_trip_request
. . traveler_identity
. . traveler_rideshare_request
. . . traveler_identity

. . . traveler_rideshare_constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . traveler_rideshare_data
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . traveler_rideshare_preferences
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . trip_request
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions
. traveler_yellow_pages_information_request
. . kiosk_identity
traveler_trip_planning_responses
. kiosk_identity
. traffic_data_for_kiosks
. . current_data_for_broadcast
. . . area_air_quality_index
. . . current_incident_data
. . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . . duration
. . . . . incident_location
. . . . . . location_identity
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . . time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . list_size
. . . current_roadway_network_data
. . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . . . link_identity
. . . . . . list_size
. . . . . . list_size
. . . link_state_data_for_broadcast
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . . list_size
. . . . vehicle_occupancy
. . . . vehicle_speed
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . roadway_environment_conditions
. . . . link_environment_conditions
. . . . link_list
. . . . . link_identity
. . . . . . link_type
. . . . . . link_type
. . . . . . location_identity
. . . . . . location_identity
. . . . . . unit_number
. . . . . . unit_number
. . . . . list_size
. . kiosk_identity
. . predicted_data_for_broadcast
. . . predicted_highway_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_highways
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity
. . . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . . predicted_parking_lot_data
. . . . list_size
. . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_occupancy
. . . . parking_lot_state
. . . predicted_road_network_data
. . . . link_delay
. . . . link_journey_time
. . . . link_list_for_roads
. . . . . link_identity
. . . . . . link_type
. . . . . . location_identity

. . . . . unit_number
. . . . . list_size
. . . . link_occupancy
. . . . link_speed
. . source_identity
. transit_services_for_kiosks
. . kiosk_identity
. . transit_services_for_output
. . . list_size
. . . transit_route_number
. . . transit_route_segment_cost
. . . transit_route_segment_number
. . . transit_stop_scheduled_time
. . . . time
. transit_vehicle_schedule_deviations
. . list_size
. . transit_route_number
. . transit_route_segment_number
. . transit_vehicle_achieved_time
. . . time
. . transit_vehicle_identity
. traveler_event_information
. traveler_payment_confirmation
. . advanced_fares_confirm
. . . confirmation_flag
. . advanced_tolls_confirm
. . . confirmation_flag
. . . credit_identity
. . . stored_credit
. . . toll_cost
. . advanced_traveler_charges_confirm
. . . confirmation_flag
. . . parking_lot_cost
. . . . cost
. . . stored_credit
. . . traveler_identity
. . credit_identity
. . kiosk_identity
. . stored_credit
. . traveler_total_trip_cost
. traveler_transaction_confirmation
. . credit_identity
. . kiosk_identity
. . transaction_number
. . yellow_pages_cost
. . . cost
. . yellow_pages_dining_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_lodging_reservation_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. . yellow_pages_ticket_purchase_confirmation
. . . confirmation_flag
. . . yellow_pages_service_reservation_number
. traveler_trip_information
. . current_conditions
. . . fws_current_weather_observations
. . . . current_weather_observations
. . . . weather_observation_attributes
. . . fws_weather_forecasts
. . . . climatic_scale_weather_forecasts
. . . . meso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . . weather_watches
. . . . miso_scale_weather_forecasts
. . . . . weather_advisories
. . . . . weather_forecast_details
. . . . . weather_warnings
. . . . synoptic_scale_weather_forecasts
. . . . . weather_forecast_details
. . . . . weather_watches
. . . . weather_scale_forecast_data_attributes
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_start_time
. . . . time
. . . incident_type
. . kiosk_identity
. . paratransit_personal_schedule
. . . paratransit_service_cost
. . . . cost
. . . paratransit_service_details
. . . . paratransit_arrival_time
. . . . . time
. . . . paratransit_availability_time
. . . . paratransit_destination
. . . . paratransit_pickup_location
. . . . . location_identity
. . . . paratransit_pickup_time
. . . . paratransit_service_identity
. . . traveler_identity
. . rideshare_response
. . . rideshare_details
. . . rideshare_selection_number
. . . traveler_identity
. . route
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment
. . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_mode
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . route_cost
. traveler_yellow_pages_data
. . kiosk_identity
. . yellow_pages_general_information
. . . yellow_pages_history
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_local_customs
. . . . list_size
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_people
. . . . list_size

. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_specific_information
. . . yellow_pages_food
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_gas_stations
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_hospitals
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_lodging
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_non_motorized_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_parking
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_parts_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_repair_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_rest_areas
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_special_events
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_activities
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_transaction_information
. . . yellow_pages_dining_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_lodging_reservations
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_ticket_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type

traveler_trip_request

. traveler_identity
. traveler_rideshare_request
. . traveler_identity
. . traveler_rideshare_constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_special_needs

. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . traveler_rideshare_data
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . traveler_rideshare_preferences
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. trip_request
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions

traveler_trip_request_for_archive

. traveler_trip_request
. . traveler_identity
. . traveler_rideshare_request
. . . traveler_identity
. . . traveler_rideshare_constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . traveler_rideshare_data
. . . . departure_time
. . . . . time
. . . . desired_arrival_time
. . . . . time
. . . . destination
. . . . . route_point
. . . . origin
. . . . . route_point
. . . traveler_rideshare_preferences
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . trip_request
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions

traveler_yellow_pages_data

. kiosk_identity
. yellow_pages_general_information
. . yellow_pages_history
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. . yellow_pages_local_customs
. . . list_size
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_people
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. yellow_pages_specific_information
. . yellow_pages_food
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_gas_stations
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_hospitals
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_lodging
. . . list_size

. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_non_motorized_services
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_parking
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_private_vehicle_parts_shops
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_private_vehicle_repair_shops
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_rest_areas
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_special_events
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_tourist_activities
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. . yellow_pages_tourist_services
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. yellow_pages_transaction_information
. . yellow_pages_dining_information
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . yellow_pages_lodging_reservations
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . yellow_pages_ticket_information
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
traveler_yellow_pages_information_request
. kiosk_identity
traveler_yellow_pages_information_request_for_archi
. traveler_yellow_pages_information_request
. . kiosk_identity
traveler_yellow_pages_requests
. traveler_payment_information
. . credit_identity
. . kiosk_identity
. . parking_space_details
. . . date
. . . duration
. . . time
. . ride_segments
. . . list_size
. . . transit_route_segment_number
. . stored_credit
. . toll_route_segments
. . . list_size
. . . toll_segment_identity
. . . . unit_number
. traveler_transaction_request
. . yellow_pages_dining_reservation
. . yellow_pages_lodging_reservation
. . yellow_pages_ticket_purchase
. traveler_yellow_pages_information_request
. . kiosk_identity
traveler_yellow_pages_requests_for_archive
. traveler_personal_transaction_request_for_archive
. . traveler_personal_transaction_request
. . . yellow_pages_dining_reservation
. . . yellow_pages_lodging_reservation
. . . yellow_pages_ticket_purchase
.
. . traveler_personal_yellow_pages_information_request
. . . traveler_identity
. traveler_transaction_request_for_archive
. . traveler_transaction_request
. . . yellow_pages_dining_reservation

. . . yellow_pages_lodging_reservation
. . . yellow_pages_ticket_purchase
. traveler_yellow_pages_information_request_for_archive
. . traveler_yellow_pages_information_request
. . . kiosk_identity
trip_information
. current_conditions
. . fws_current_weather_observations
. . . current_weather_observations
. . . weather_observation_attributes
. . fws_weather_forecasts
. . . climatic_scale_weather_forecasts
. . . meso_scale_weather_forecasts
. . . . weather_advisories
. . . . weather_forecast_details
. . . . weather_warnings
. . . . weather_watches
. . . miso_scale_weather_forecasts
. . . . weather_advisories
. . . . weather_forecast_details
. . . . weather_warnings
. . . synoptic_scale_weather_forecasts
. . . . weather_forecast_details
. . . . weather_watches
. . . weather_scale_forecast_data_attributes
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_start_time
. . . time
. . incident_type
. list_size
. multimodal_services_details
. . air_services_details
. . . air_services_costs
. . . . cost
. . . air_services_routes
. . . . air_services_route_details
. . . . . air_services_destination
. . . . . route_point
. . . . . air_services_intermediate_point
. . . . . route_point
. . . . . air_services_origin
. . . . . route_point
. . . air_services_schedules
. . . . air_services_schedule_details
. . . . . air_services_destination_arrival_time
. . . . . time
. . . . . air_services_intermediate_arrival_time
. . . . . time
. . . . . air_services_intermediate_depart_time
. . . . . time
. . . . . air_services_origin_depart_time
. . . . . time
. . ferry_services_details
. . . ferry_services_costs
. . . . cost
. . . ferry_services_routes
. . . . ferry_services_route_details
. . . . . ferry_services_destination
. . . . . route_point
. . . . . ferry_services_intermediate_point
. . . . . route_point
. . . . . ferry_services_origin
. . . . . route_point
. . . ferry_services_schedules
. . . . ferry_services_schedule_details
. . . . . ferry_services_destination_arrival_time
. . . . . time
. . . . . ferry_services_intermediate_arrival_time
. . . . . time
. . . . . ferry_services_intermediate_depart_time
. . . . . time
. . . . . ferry_services_origin_depart_time
. . . . . time
. . rail_services_details
. . . rail_services_costs
. . . . cost
. . . rail_services_routes
. . . . rail_services_route_details
. . . . . rail_services_destination
. . . . . route_point
. . . . . rail_services_intermediate_point
. . . . . route_point
. . . . . rail_services_origin
. . . . . route_point
. . . rail_services_schedules
. . . . rail_services_schedule_details
. . . . . rail_services_destination_arrival_time
. . . . . time
. . . . . rail_services_intermediate_arrival_time
. . . . . time
. . . . . rail_services_intermediate_depart_time
. . . . . time
. . . . . rail_services_origin_depart_time
. . . . . time
. paratransit_personal_schedule
. . paratransit_service_cost
. . . cost
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. . traveler_identity
. rideshare_response
. . rideshare_details
. . rideshare_selection_number
. . traveler_identity
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
. route_cost
. traveler_identity
. trip_request
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes

. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions
trip_planning_data
. paratransit_route_confirm
. . paratransit_service_details
. . . paratransit_arrival_time
. . . . time
. . . paratransit_availability_time
. . . paratransit_destination
. . . paratransit_pickup_location
. . . . location_identity
. . . paratransit_pickup_time
. . . paratransit_service_identity
. . traveler_identity
. paratransit_route_request
. . traveler_identity
. . trip_request
. . . constraints
. . . . constraint_on_acceptable_travel_time
. . . . constraint_on_ahs_lanes
. . . . constraint_on_eta_change
. . . . constraint_on_interstate
. . . . constraint_on_load_classification
. . . . constraint_on_number_of_mode_changes
. . . . constraint_on_number_of_transfers
. . . . constraint_on_special_needs
. . . . constraint_on_urban
. . . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferences
. . . . modes
. . . . preferred_alternate_routes
. . . . preferred_ridesharing_options
. . . . preferred_route_segments
. . . . preferred_routes
. . . . preferred_transit_options
. . . . preferred_weather_conditions
. route_guidance_data_for_archive
. . list_size
. . vehicle_guidance_stored_data
. . . route_identity
. . . route_segment_description
. . . route_segment_end_point
. . . . location_identity
. . . route_segment_estimated_travel_time
. . . route_segment_report_position_points
. . . . list_size
. . . . route_segment_way_point
. . . . . location_identity
. . . route_segment_start_point
. . . . location_identity
. supplied_route
. . route
. . . route_cost
. . . route_list
. . . . route_segment_number
. . . route_segment
. . . . route_segment_data
. . . . . route_segment_description
. . . . . route_segment_end_point
. . . . . location_identity
. . . . . route_segment_estimated_arrival_time
. . . . . route_segment_estimated_condition
. . . . . route_segment_estimated_travel_time
. . . . . route_segment_predicted_weather
. . . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . route_segment_start_point
. . . . . location_identity
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_mode
. . . route_start_time
. . . . date
. . . . time
. . . route_statistics
. . route_cost
. . traveler_identity
. traveler_route_accepted_for_archive
. . traveler_route_accepted
. . . route_identity
. traveler_route_request_for_archive
. . traveler_route_request
. . . constraint_on_acceptable_travel_time
. . . constraint_on_eta_change
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . modes
. . . origin
. . . . route_point
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . traveler_identity
. . . traveler_location
. . . . location_identity
. . . traveler_route_accepted
. . . . route_identity
. trip_request_for_archive
. . constraints
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_number_of_mode_changes
. . . constraint_on_number_of_transfers
. . . constraint_on_special_needs
. . . constraint_on_urban

. . . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferences
. . . modes
. . . preferred_alternate_routes
. . . preferred_ridesharing_options
. . . preferred_route_segments
. . . preferred_routes
. . . preferred_transit_options
. . . preferred_weather_conditions
. vehicle_guidance_probe_data_for_archive
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . time
. . vehicle_identity
. vehicle_guidance_route_accepted_for_archive
. . vehicle_guidance_route_accepted
. . . route_identity
. vehicle_route_request_for_archive
. . vehicle_route_request
. . . constraint_on_acceptable_travel_time
. . . constraint_on_ahs_lanes
. . . constraint_on_eta_change
. . . constraint_on_interstate
. . . constraint_on_load_classification
. . . constraint_on_special_needs
. . . constraint_on_urban
. . . constraint_on_vehicle_type
. . . departure_time
. . . . time
. . . desired_arrival_time
. . . . time
. . . destination
. . . . route_point
. . . origin
. . . . route_point
. . . preferred_alternate_routes
. . . preferred_route_segments
. . . preferred_routes
. . . vehicle_identity
. . . vehicle_location_for_dynamic_guidance
. . . . location_identity

trip_planning_parameters

trip_request

. constraints
. . constraint_on_acceptable_travel_time
. . constraint_on_ahs_lanes
. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_load_classification
. . constraint_on_number_of_mode_changes
. . constraint_on_number_of_transfers
. . constraint_on_special_needs
. . constraint_on_urban
. . constraint_on_vehicle_type
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
. preferences
. . modes
. . preferred_alternate_routes
. . preferred_ridesharing_options
. . preferred_route_segments
. . preferred_routes
. . preferred_transit_options
. . preferred_weather_conditions

trip_request_for_archive

. constraints
. . constraint_on_acceptable_travel_time
. . constraint_on_ahs_lanes
. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_load_classification
. . constraint_on_number_of_mode_changes
. . constraint_on_number_of_transfers
. . constraint_on_special_needs
. . constraint_on_urban
. . constraint_on_vehicle_type
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
. preferences
. . modes
. . preferred_alternate_routes
. . preferred_ridesharing_options
. . preferred_route_segments
. . preferred_routes
. . preferred_transit_options
. . preferred_weather_conditions

trip_request_for_archive_attributes

. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute

tro_equipment_status

tro_event_schedules

tro_incident_notification

tro_m_and_c_work_plans_for_rail

tro_railroad_schedule_feedback

tro_road_weather_info

. road_conditions
. . link_identity
. . . link_type

. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
tsf_equipment_availability_request
tsf_materials_status_request
tstws_archive_request
. surface_trans_weather_archive_catalog_request
. surface_trans_weather_archive_data_request
tstws_asset_treatment_info
tstws_env_info
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
tstws_env_sensor_data
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
tstws_env_sensor_data_from_traffic
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
tstws_roadway_env_sensor_data
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
tstws_roadway_env_sensor_status
. list_size
. sensor_device_status
. sensor_identity
. station_id
tstws_trans_weather_archive_status
tstws_trans_weather_info_request
tt_emergency_message

Appendix D: Data Tree

tt_emergency_response
tt_extra_trip_data_request
tt_guidance
tt_guidance_input_request
tt_guidance_map_update_response
tt_guidance_route_details
tt_personal_extra_trip_data_request
tt_personal_trip_planning_responses
tt_trip_planning_responses
tta_archive_status
tta_request_advanced_toll
tta_toll_price_changes_request
tta_transaction_reports
ttc_debited_driver_payment_at_vehicle
ttc_debited_fare_payment_at_roadside
ttc_debited_payment_at_parking_lot
ttc_debited_payment_at_personal_device
ttc_debited_payment_at_toll_plaza
ttc_debited_payment_on_transit_vehicle
ttc_debited_transit_user_payment_at_roadside
ttc_debited_transit_user_payment_at_vehicle
ttc_debited_traveler_parking_payment
ttc_debited_traveler_payment_at_roadside
ttc_request_fare_payment_at_roadside
ttc_request_fare_payment_on_transit_vehicle
ttc_request_payment_at_parking_lot
ttc_request_payment_at_toll_plaza
ttc_request_traveler_parking_payment
ttc_traveler_personal_information_update
ttc_traveler_remote_personal_information_update
ttd_batch_mode_data_transfer_status
ttd_corrective_instructions
ttd_emergency_information
ttd_paratransit_information
ttd_request_fare_transaction_mode_set_up
ttd_route_assignments
ttd_transit_vehicle_schedule_deviations
ttfm_coordination_request
ttfm_parameters
ttfm_paratransit_service
ttfm_passenger_loading_error
ttfm_proposed_corrections
ttfm_response_parameter_output
ttfm_technician_information
ttfm_transaction_reports
ttfm_transit_driver_information
ttfm_transit_services_output
ttfm_transit_vehicle_data
ttfm_transit_vehicle_maintenance_information
ttmp_work_schedule
tto_transaction_reports
ttop_archive_status
ttop_current_indicator_faults
ttop_current_sensor_faults
ttop_defined_incident_responses_data
ttop_demand_data
ttop_demand_forecast_data
ttop_demand_forecast_result
ttop_demand_management_outputs_FB
. ttop_demand_data
. ttop_demand_forecast_data
. ttop_demand_forecast_result
. ttop_demand_policy_activation_result
. ttop_demand_policy_information
ttop_demand_policy_activation_result
ttop_demand_policy_information
ttop_incident_information_display
ttop_incident_management_outputs_FB
. ttop_defined_incident_responses_data
. ttop_incident_information_display
. ttop_incident_video_image_output
. ttop_possible_defined_response_output
. ttop_possible_incidents_data
. ttop_undefined_response_details
ttop_incident_video_image_output
ttop_pollution_data_display
ttop_possible_defined_response_output
ttop_possible_incidents_data
ttop_resource_response
ttop_traffic_control_information_display
ttop_undefined_response_details
ttop_video_image_output
ttop_weather_information
ttop_wrong_way_detection
ttra_border_clearance_status
ttra_domestic_transportation_information
ttra_transportation_border_clearance
ttso_archive_status
ttso_emergency_request
ttso_media_parameters
ttso_potential_incidents_alarm
ttso_potential_security_problem
ttso_transaction_reports
ttso_transit_fare_output
ttso_video_image_data
ttu_advisory_information
ttu_other_services_roadside_confirmed
ttu_other_services_vehicle_confirmed
ttu_roadside_access_message
ttu_roadside_payment_confirmed
ttu_transit_information
ttu_transit_vehicle_information
ttu_traveler_information
ttu_vehicle_access_message
ttu_vehicle_payment_confirmed
twe_hri_status
twe_stop_highway_indication
twe_stop_train_indication
tws_env_info
. road_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_conditions
. road_weather_conditions
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . list_size
. . road_segment_weather_conditions
tws_env_sensor_data
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date

Appendix D: Data Tree

. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
tws_env_sensor_data_from_traffic
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
tws_roadway_env_sensor_data
. environment_sensor_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
. environment_sensor_output
. list_size
. sensor_identity
. station_id
tws_roadway_env_sensor_status
. list_size
. sensor_device_status
. sensor_identity
. station_id
tws_weather_archive_request
. weather_archive_catalog_request
. weather_archive_data_request
tws_weather_archive_status
typsp_provider_update_confirm
typsp_transaction_request
typsp_yellow_pages_info_request
undefined_incident_response
. incident_confidence_level
. incident_location
. . location_identity
. incident_severity
. incident_start_time
. . time
. incident_type
unit_number
unusual_congestion
. location_identity
unusual_data
. vehicle_count
. vehicle_headway
. vehicle_occupancy
. vehicle_queue_length
. vehicle_speed
update_routes
update_schedules
usage_for_archive
. current_other_routes_use_for_archive
. . route_segment_guided_travelers
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. current_road_network_use_for_archive
. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . route_segment_journey_time
. . route_segment_total_number
. . route_segment_use_prediction
. . . route_segment_guided_vehicles
usage_for_archive_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published

. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
user_defined_data
user_defined_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
user_defined_data_for_archive
. user_defined_data
. user_defined_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
user_defined_data_request
vehicle_accel_decel_data
vehicle_accel_decel_profile
. vehicle_accel_decel_data
vehicle_action_requests
. vehicle_change_position_requests
. . brake_commands
. . direction_commands
. . steering_commands
. . throttle_commands
. vehicle_crash_restraint_commands
vehicle_and_driver_safety_status
vehicle_attitude_data
vehicle_change_position_requests
. brake_commands
. direction_commands
. steering_commands
. throttle_commands
vehicle_characteristics
vehicle_class
vehicle_control_data
. ahs_accel_decel_profile
. . vehicle_accel_decel_data
. ahs_headway
. . vehicle_headway_data
. vehicle_accel_decel_profile
. . vehicle_accel_decel_data
. vehicle_standard_headway
. . vehicle_headway_data
vehicle_control_data_store
. ahs_accel_decel_profile
. . vehicle_accel_decel_data
. ahs_headway
. . vehicle_headway_data
. vehicle_accel_decel_profile
. . vehicle_accel_decel_data
. vehicle_standard_headway
. . vehicle_headway_data
vehicle_control_request
vehicle_control_status
vehicle_count
vehicle_crash_restraint_commands
vehicle_crash_sensor_data
vehicle_data
. ahs_route
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. vehicle_control_request
. vehicle_location_for_incidents
. . location_identity

Appendix D: Data Tree

vehicle_data_for_traffic_management
. ahs_operational_data
. . ahs_checking_records
. . . ahs_check_identity
. . . . location_identity
. . . . unit_number
. . . ahs_failed_checks_count
. . . ahs_successful_checks_count
. . . list_size
. . ahs_lane_use_data
. . . ahs_vehicle_count
. . . list_size
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . date
. . list_size
. . time
. vehicle_smart_probe_data
. vehicle_status_details_for_emissions
. . vehicle_status_details
. . . vehicle_security_status
. . . vehicle_system_status
vehicle_detection_data
. list_size
. sensor_identity
. station_id
. traffic_sensor_output
vehicle_display_definitions_data
vehicle_emergency_request
. processed_cargo_data
. vehicle_crash_sensor_data
. vehicle_identity
. vehicle_location_for_incidents
. . location_identity
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
vehicle_fleet_status_for_personnel
. m_and_c_fleet_status
. . current_fleet_maintenance_status
. . date
. . fleet_maintenance_record
. . list_size
. . materials_status
. . . date
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . m_and_c_materials_usage_rate
. . . time
. . mcv_crew_status
. . mcv_equipment_configuration
. . mcv_operator_status
. . mcv_vehicle_type
. . mcv_work_activity_status
. . operational_data_for_mcv
. . safety_data_for_mcv
. . . driver_safety_status
. . . vehicle_attitude_data
. . . vehicle_motion_data
. . . vehicle_proximity_data
. . . vehicle_safety_status
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity
. . vehicle_location_for_mcv_tracking
. . . date
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity
. m_and_c_view_of_road_network
. . current_data
. . . current_other_routes_use
. . . . route_segment_guided_travelers
. . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . route_segment_journey_time
. . . . route_segment_total_number
. . . parking_lot_storage_data
. . . . list_size
. . . . parking_lot_current_occupancy
. . . . . parking_lot_calculated_occupancy
. . . . . parking_lot_identity
. . . . . location_identity
. . . . . unit_number
. . . . parking_lot_state
. . . processed_data
. . . . hri_state_data
. . . . link_state_data
. . . . . link_list
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . vehicle_count
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_queue_length
. . . . . vehicle_speed
. . . . o_d_matrix
. . . . parking_lot_input_data
. . . . . list_size
. . . . . parking_lot_list
. . . . . list_size
. . . . . parking_lot_identity
. . . . . vehicle_count
. . . . . vehicle_queue_length
. . . . private_vehicle_occupants
. . . . ramp_data
. . . . . list_size
. . . . . private_vehicle_occupants
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . . . vehicle_headway
. . . . . vehicle_occupancy
. . . . . vehicle_speed
. . . . roadway_environment_conditions
. . . . . link_environment_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . roadway_traffic_conditions
. . . . . link_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . link_traffic_conditions
. . . . strategy_data
. . . . . strategy_data_for_highways
. . . . . crossing_data_for_highways

Appendix D: Data Tree

. . . . . hov_priority
. . . . . link_strategy_data
. . . . . strategy_data_for_roads
. . . . . crossing_data_for_roads
. . . . . hov_priority
. . . . . link_strategy_data
. . . . . pedestrian_data
. . . sensor_output_data
. . . . environment_sensor_data
. . . . . environment_sensor_output
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . hri_sensor_data
. . . . . closure_event_data
. . . . . hri_status
. . . . . hri_closure_data_response
. . . . . hri_state
. . . . . intersection_blocked
. . . . . rail_schedules_data
. . . . pedestrian_sensor_data
. . . . . node_list
. . . . . link_identity
. . . . . link_identity
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . list_size
. . . . . pedestrian_demand
. . . . traffic_sensor_data
. . . . . list_size
. . . . . sensor_identity
. . . . . station_id
. . . . . traffic_sensor_output
. . . . traffic_video_image
. . . stored_incident_data
. . . . current_incident_data
. . . . . current_incident_details
. . . . . incident_description
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . . . incident_vehicles_involved
. . . . . list_size
. . . . planned_event_data
. . . . . list_size
. . . . . planned_event_details
. . . . . incident_duration
. . . . . incident_location
. . . . . incident_number
. . . . . incident_severity
. . . . . incident_start_time
. . . . . incident_traffic_impact
. . . . . incident_type
. . . traffic_flow_state
. . . . current_road_network_use
. . . . . route_segment_identity
. . . . . location_identity
. . . . . route_segment_type
. . . . . unit_number
. . . . . route_segment_journey_time
. . . . . route_segment_total_number
. . . . . route_segment_use_prediction
. . . . . route_segment_guided_vehicles
. . . . current_roadway_network_data
. . . . . current_highway_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_highways
. . . . . current_road_network_data
. . . . . link_delay
. . . . . link_journey_time
. . . . . link_list_for_roads
. . . . hov_lane_data
. . . . . hov_lane_vehicle_count
. . . . . hov_lane_violation_count
. . . . . list_size
. . . . link_data_from_avl
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . link_speed
. . . . . list_size
. . . . link_data_from_tags
. . . . . link_journey_time
. . . . . link_queue_time
. . . . . list_size
. . . . ramp_signal_state
. . . . . list_size
. . . . . ramp_controls
. . . . . ramp_list
. . . . . list_size
. . . . . list_size
. . . . . ramp_identity
. . . traffic_management_storage_data
. . . . indicator_control_storage_data
. . . . . indicator_control_storage_data_for_highways
. . . . . indicator_control_data_for_highways
. . . . . indicator_control_storage_data_for_roads
. . . . . indicator_control_data_for_roads
. . . . indicator_input_storage_data
. . . . . indicator_input_storage_data_for_highways
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . . indicator_input_storage_data_for_roads
. . . . . indicator_response_state
. . . . . indicator_type
. . . . . list_size
. . . . selected_strategy
. . . . . selected_emergency_vehicle_strategy
. . . . . indicator_list
. . . . . ramp_list
. . . . . selected_emergency_strategy
. . . . . selected_parking_lot_control_strategy
. . . . . parking_lot_list
. . . . . selected_parking_lot_strategy_type
. . . . . selected_ramp_control_strategy
. . . . . ramp_list
. . . . . selected_ramp_strategy_type
. . . . . selected_roadway_control_strategy
. . . . . selected_highway_control_strategy
. . . . . selected_road_control_strategy
. . . traffic_video_image_data
. . . . list_size
. . . . traffic_video_camera_number
. . . . . location_identity
. . . . . unit_number
. . . . traffic_video_image
. . . vehicle_smart_probe_stored_data
. . . . list_size
. . . . vehicle_smart_probe_data_for_storage
. . . . . vehicle_smart_probe_data_indication
. . . . . vehicle_smart_probe_data_source
. . . . . vehicle_smart_probe_data_source_identity
. . . . . vehicle_smart_probe_data_source_location
. . . wide_area_pollution_data
. . . . list_size
. . . . pollution_state_area_collection
. . . . . area_air_quality_index
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution

. . . . . current_pollution_location
. . . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . . . pollution_state_roadside_collection
. . . . . current_carbon_monoxide_pollution
. . . . . current_hydrocarbon_pollution
. . . . . current_nitrous_oxide_pollution
. . . . . current_ozone_pollution
. . . . . current_particulate_pollution
. . . . . current_roadside_pollution_location
. . . . . location_identity
. . . . . current_sulfur_dioxide_pollution
. . env_info_for_road_network
. . . road_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_conditions
. . . road_weather_conditions
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . . road_segment_weather_conditions
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_response_status_from_emerg
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . link_state_data
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . list_size
. . . vehicle_count
. . . vehicle_headway
. . . vehicle_occupancy
. . . vehicle_queue_length
. . . vehicle_speed
. . predicted_road_network_data
. . . link_delay
. . . link_journey_time
. . . link_list_for_roads
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . roadway_environment_conditions
. . . link_environment_conditions
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size

vehicle_fleet_status_for_scheduler

. m_and_c_fleet_status
. . current_fleet_maintenance_status
. . date
. . fleet_maintenance_record
. . list_size
. . materials_status
. . . date
. . . list_size
. . . m_and_c_materials_quantity
. . . m_and_c_materials_type
. . . m_and_c_materials_usage_rate
. . . time
. . mcv_crew_status
. . mcv_equipment_configuration
. . mcv_operator_status
. . mcv_vehicle_type
. . mcv_work_activity_status
. . operational_data_for_mcv
. . safety_data_for_mcv
. . . driver_safety_status
. . . vehicle_attitude_data
. . . vehicle_motion_data
. . . vehicle_proximity_data
. . . vehicle_safety_status
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity
. . vehicle_location_for_mcv_tracking
. . . date
. . . time
. . . vehicle_id_for_mcv
. . . vehicle_location_for_mcv
. . . . location_identity

vehicle_guidance_probe_data

. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. time
. vehicle_identity

vehicle_guidance_probe_data_for_archive

. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. time
. vehicle_identity

vehicle_guidance_route

. route_identity
. route_segment_description
. route_segment_end_point
. . location_identity
. route_segment_estimated_travel_time
. route_segment_report_position_points
. . list_size
. . route_segment_way_point
. . . location_identity
. route_segment_start_point
. . location_identity
. vehicle_identity

vehicle_guidance_route_accepted

. route_identity

vehicle_guidance_route_accepted_for_archive

. vehicle_guidance_route_accepted
. . route_identity

vehicle_guidance_stored_data

. route_identity
. route_segment_description
. route_segment_end_point
. . location_identity
. route_segment_estimated_travel_time
. route_segment_report_position_points
. . list_size
. . route_segment_way_point
. . . location_identity
. route_segment_start_point

. . location_identity
vehicle_headway
vehicle_headway_control_data
. ahs_headway
. . vehicle_headway_data
. vehicle_standard_headway
. . vehicle_headway_data
vehicle_headway_data
vehicle_id_for_mcv
vehicle_identity
vehicle_identity_for_collision_notification_store
. vehicle_identity
vehicle_identity_for_driver_security_store
. vehicle_identity
vehicle_information
. ahs_route_request
. . constraint_on_acceptable_travel_time
. . constraint_on_ahs_lanes
. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_load_classification
. . constraint_on_special_needs
. . constraint_on_urban
. . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . modes
. . origin
. . . route_point
. . preferred_alternate_routes
. . preferred_route_segments
. . preferred_routes
. . preferred_weather_conditions
. emergency_message_auto_output
. position_warnings
. . position_warning_to_front
. . . position_advisory_message
. . . position_critical_state
. . position_warning_to_rear
. . . position_advisory_message
. . . position_critical_state
. . position_warning_to_side
. . . position_advisory_message
. . . position_critical_state
. safety_warnings
. . safety_warning_for_driver_condition
. . . safety_advisory_message
. . . safety_state_for_driver
. . safety_warning_for_road_condition
. . . safety_advisory_message
. . . safety_state_for_driver
. . safety_warning_for_vehicle_condition
. . . safety_advisory_message
. . . safety_state_for_driver
. vehicle_control_status
. vehicle_status_details_for_broadcast
. . vehicle_status_details
. . . vehicle_security_status
. . . vehicle_system_status
. vehicle_status_details_for_driver_security
. . vehicle_status_details
. . . vehicle_security_status
. . . vehicle_system_status
. vision_data
vehicle_input_data
. link_and_queue_data
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . link_journey_time
. . link_queue_time
. . link_state_data_for_broadcast
. . . link_list
. . . . link_identity
. . . . . link_type
. . . . . location_identity
. . . . . unit_number
. . . . list_size
. . . link_occupancy
. . . link_speed
. . . list_size
. . . vehicle_occupancy
. . . vehicle_speed
. . list_size
. vehicle_guidance_route
. . route_identity
. . route_segment_description
. . route_segment_end_point
. . . location_identity
. . route_segment_estimated_travel_time
. . route_segment_report_position_points
. . . list_size
. . . route_segment_way_point
. . . . location_identity
. . route_segment_start_point
. . . location_identity
. . vehicle_identity
vehicle_license
vehicle_location_analysis_outputs
vehicle_location_for_advisories
. location_identity
vehicle_location_for_autonomous_guidance
. location_identity
vehicle_location_for_cv
. location_identity
vehicle_location_for_dynamic_guidance
. location_identity
vehicle_location_for_emergencies
. location_identity
vehicle_location_for_emergency_services
. location_identity
. time
vehicle_location_for_incidents
. location_identity
vehicle_location_for_mcv
. location_identity
vehicle_location_for_mcv_operator
. date
. time
. vehicle_location_for_mcv
. . location_identity
vehicle_location_for_mcv_tracking
. date
. time
. vehicle_id_for_mcv
. vehicle_location_for_mcv
. . location_identity
vehicle_location_for_mcv_tracking_history
. date
. time
. vehicle_location_for_mcv_tracking
. . date
. . time
. . vehicle_id_for_mcv
. . vehicle_location_for_mcv
. . . location_identity
vehicle_location_for_transit
. location_identity
vehicle_map_database
vehicle_motion_data
vehicle_occupancy
vehicle_output_data
. vehicle_guidance_probe_data

. . route_segment_identity
. . . location_identity
. . . route_segment_type
. . . unit_number
. . time
. . vehicle_identity
. vehicle_guidance_route_accepted
. . route_identity
. vehicle_route_request
. . constraint_on_acceptable_travel_time
. . constraint_on_ahs_lanes
. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_load_classification
. . constraint_on_special_needs
. . constraint_on_urban
. . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point
. . origin
. . . route_point
. . preferred_alternate_routes
. . preferred_route_segments
. . preferred_routes
. . vehicle_identity
. . vehicle_location_for_dynamic_guidance
. . . location_identity
vehicle_parking_lot_characteristic_data
. vehicle_characteristics
. vehicle_identity
vehicle_pollution_alert
. pollution_data_violation
. vehicle_identity
. vehicle_license
vehicle_pollution_message
. vehicle_pollution_message_for_highways
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . pollution_output_message
. . . dms_pollution_message
. . . vehicle_identity
. vehicle_pollution_message_for_roads
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . pollution_output_message
. . . dms_pollution_message
. . . vehicle_identity
vehicle_pollution_message_for_highways
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. pollution_output_message
. . dms_pollution_message
. . vehicle_identity
vehicle_pollution_message_for_roads
. indicator_identity
. . indicator_type
. . location_identity
. . unit_number
. pollution_output_message
. . dms_pollution_message
. . vehicle_identity
vehicle_probe_data_amalgamation
. list_size
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time
vehicle_proximity_data
vehicle_queue_length
vehicle_route
. route
. . route_cost
. . route_list
. . . route_segment_number
. . route_segment
. . . route_segment_data
. . . . route_segment_description
. . . . route_segment_end_point
. . . . . location_identity
. . . . route_segment_estimated_arrival_time
. . . . route_segment_estimated_condition
. . . . route_segment_estimated_travel_time
. . . . route_segment_predicted_weather
. . . . route_segment_report_position_points
. . . . . list_size
. . . . . route_segment_way_point
. . . . . location_identity
. . . . route_segment_start_point
. . . . . location_identity
. . . route_segment_identity
. . . . location_identity
. . . . route_segment_type
. . . . unit_number
. . . route_segment_mode
. . route_start_time
. . . date
. . . time
. . route_statistics
vehicle_route_request
. constraint_on_acceptable_travel_time
. constraint_on_ahs_lanes
. constraint_on_eta_change
. constraint_on_interstate
. constraint_on_load_classification
. constraint_on_special_needs
. constraint_on_urban
. constraint_on_vehicle_type
. departure_time
. . time
. desired_arrival_time
. . time
. destination
. . route_point
. origin
. . route_point
. preferred_alternate_routes
. preferred_route_segments
. preferred_routes
. vehicle_identity
. vehicle_location_for_dynamic_guidance
. . location_identity
vehicle_route_request_for_archive
. vehicle_route_request
. . constraint_on_acceptable_travel_time
. . constraint_on_ahs_lanes
. . constraint_on_eta_change
. . constraint_on_interstate
. . constraint_on_load_classification
. . constraint_on_special_needs
. . constraint_on_urban
. . constraint_on_vehicle_type
. . departure_time
. . . time
. . desired_arrival_time
. . . time
. . destination
. . . route_point

. . origin
. . . route_point
. . preferred_alternate_routes
. . preferred_route_segments
. . preferred_routes
. . vehicle_identity
. . vehicle_location_for_dynamic_guidance
. . . location_identity
vehicle_safety_status
vehicle_security_status
vehicle_security_system_commands
vehicle_security_system_commands_request
vehicle_sign_data
. list_size
. vehicle_signage_output_data
. . environmental_data_for_signage
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . vehicle_signage_current_data
. . vehicle_signage_dms_data
. . vehicle_signage_fixed_data
. . vehicle_signage_incident_details
. vehicle_signage_output_identity
. . location_identity
. . unit_number
. vehicle_signage_traffic_data
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . vehicle_occupancy
. . vehicle_speed
vehicle_sign_data_for_highways
. indicator_control_data_for_highways
. . indicator_crossing_control_data_for_highways
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_ramp_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . . ramp_controls
vehicle_sign_data_for_roads
. indicator_control_data_for_roads
. . indicator_crossing_control_data_for_roads
. . . indicator_crossing_controls
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . list_size
. . indicator_junction_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_junction_controls
. . . list_size
. . indicator_pedestrian_control_data
. . . indicator_identity
. . . . indicator_type
. . . . location_identity
. . . . unit_number
. . . indicator_pedestrian_controls
. . . list_size
vehicle_sign_data_output_location
. location_identity
vehicle_sign_data_status
vehicle_sign_equip_status_for_m_and_c
. device_identity
. list_size
. roadside_device_status
. station_id
vehicle_signage_current_data
vehicle_signage_current_incident_data
. current_incident_details
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
. . incident_vehicles_involved
. list_size
vehicle_signage_data
. vehicle_sign_data_output_location
. . location_identity
. vehicle_signage_output_data
. . environmental_data_for_signage
. . . environment_sensor_data
. . . . environment_sensor_output
. . . . list_size
. . . . sensor_identity
. . . . station_id
. . vehicle_signage_current_data
. . vehicle_signage_dms_data
. . vehicle_signage_fixed_data
. . vehicle_signage_incident_details
. vehicle_signage_traffic_data
. . link_identity
. . . link_type
. . . location_identity
. . . unit_number
. . vehicle_occupancy
. . vehicle_speed
vehicle_signage_dms_data
vehicle_signage_fixed_data
vehicle_signage_incident_data
. vehicle_signage_current_incident_data
. . current_incident_details
. . . incident_description
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time
. . . incident_traffic_impact
. . . incident_type
. . . incident_vehicles_involved
. . list_size
. vehicle_signage_planned_event_data
. . list_size
. . planned_event_details
. . . incident_duration
. . . . duration
. . . incident_location
. . . . location_identity
. . . incident_number
. . . incident_severity
. . . incident_start_time
. . . . time

. . . incident_traffic_impact
. . . incident_type
vehicle_signage_incident_details
vehicle_signage_output_data
. environmental_data_for_signage
. . environment_sensor_data
. . . environment_sensor_output
. . . list_size
. . . sensor_identity
. . . station_id
. vehicle_signage_current_data
. vehicle_signage_dms_data
. vehicle_signage_fixed_data
. vehicle_signage_incident_details
vehicle_signage_output_identity
. location_identity
. unit_number
vehicle_signage_planned_event_data
. list_size
. planned_event_details
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_severity
. . incident_start_time
. . . time
. . incident_traffic_impact
. . incident_type
vehicle_signage_traffic_data
. link_identity
. . link_type
. . location_identity
. . unit_number
. vehicle_occupancy
. vehicle_speed
vehicle_smart_probe_data
vehicle_smart_probe_data_for_storage
. vehicle_smart_probe_data_indication
. vehicle_smart_probe_data_source
. . vehicle_smart_probe_data_source_identity
. . . unit_number
. . vehicle_smart_probe_data_source_location
. . . location_identity
vehicle_smart_probe_data_indication
vehicle_smart_probe_data_output
vehicle_smart_probe_data_source
. vehicle_smart_probe_data_source_identity
. . unit_number
. vehicle_smart_probe_data_source_location
. . location_identity
vehicle_smart_probe_data_source_identity
. unit_number
vehicle_smart_probe_data_source_location
. location_identity
vehicle_smart_probe_input_data
. vehicle_smart_probe_data
. vehicle_smart_probe_data_source_identity
. . unit_number
vehicle_smart_probe_stored_data
. list_size
. vehicle_smart_probe_data_for_storage
. . vehicle_smart_probe_data_indication
. . vehicle_smart_probe_data_source
. . . vehicle_smart_probe_data_source_identity
. . . . unit_number
. . . vehicle_smart_probe_data_source_location
. . . . location_identity
vehicle_speed
vehicle_speed_control_data
. ahs_accel_decel_profile
. . vehicle_accel_decel_data
. ahs_demand_accel_decel_profile
. . vehicle_accel_decel_profile
. . . vehicle_accel_decel_data
. vehicle_accel_decel_profile
. . vehicle_accel_decel_data
vehicle_standard_headway
. vehicle_headway_data
vehicle_status_details
. vehicle_security_status
. vehicle_system_status
vehicle_status_details_for_broadcast
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
vehicle_status_details_for_driver_security
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
vehicle_status_details_for_emergencies
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
vehicle_status_details_for_emissions
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
vehicle_status_traffic_inputs
. ahs_control_data
. . ahs_demand_accel_decel_profile
. . . vehicle_accel_decel_profile
. . . . vehicle_accel_decel_data
. . ahs_demand_headway
. . . vehicle_headway_data
. intersection_collision_avoidance_data
. traffic_sensor_data_for_automated_lane_changing
. . traffic_sensor_data
. . . list_size
. . . sensor_identity
. . . station_id
. . . traffic_sensor_output
vehicle_status_update
vehicle_system_status
vehicle_systems_control_by_mcv_operator
vehicle_tag_data
. vehicle_tag_data_source_identity
. . unit_number
. vehicle_tag_input_data
vehicle_tag_data_source_identity
. unit_number
vehicle_tag_data_source_location
. location_identity
vehicle_tag_for_charges
. parking_lot_tag_data
. . credit_identity
. . date
. . parking_lot_entry_lane_number
. . stored_credit
. . time
. vehicle_identity
vehicle_tag_for_tolls
. toll_tag_data
. . credit_identity
. . stored_credit
. . toll_segment_identity
. . . unit_number
. vehicle_identity
vehicle_tag_input_data
vehicle_toll_characteristic_data
. cv_vehicle_characteristics
. . cv_vehicle_configuration
. . cv_vehicle_size
. . cv_vehicle_weight
. vehicle_characteristics
. vehicle_identity
vehicle_toll_probe_data

Appendix D: Data Tree

. list_size
. route_segment_identity
. . location_identity
. . route_segment_type
. . unit_number
. route_segment_journey_time_from_tolls
vehicle_type
vehicle_type_for_charges
vehicle_type_for_tolls
. cv_tag_data
. . cv_carrier_number
. . cv_driver_number
. . cv_vehicle_number
. cv_vehicle_characteristics
. . cv_vehicle_configuration
. . cv_vehicle_size
. . cv_vehicle_weight
. vehicle_identity
. vehicle_type
vehicle_utilization_information
verified_emergency
. identified_emergency_details
. . incident_confidence_level
. . incident_description
. . incident_duration
. . . duration
. . incident_location
. . . location_identity
. . incident_number
. . incident_report_source
. . incident_reported_time
. . . time
. . incident_severity
. . incident_start_time
. . . time
. . incident_status
. . . incident_vehicles_involved
. . incident_traffic_impact
. . incident_type
. vehicle_status_details
. . vehicle_security_status
. . vehicle_system_status
video_camera_control_strategy
video_control_from_m_and_c
video_device_equip_status_for_m_and_c
. device_identity
. list_size
. roadside_device_status
. station_id
video_device_status
violation_information
. fare_violation_information
. . credit_identity
. . transit_fare
. . transit_route_number
. . transit_route_segment_number
. . transit_route_use_time
. . transit_user_category
. . transit_user_roadside_image
. . transit_user_vehicle_image
. . traveler_identity
. parking_lot_violation_information
. toll_violation_information
violation_type
vision_data
walkway_information
wayside_status
weather_advisories
weather_archive_catalog
weather_archive_catalog_request
weather_archive_data_request
weather_data
weather_data_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
weather_data_for_archive
. weather_data
. weather_data_attributes
. . authorization_to_use
. . collection_conditions
. . collection_equipment
. . data_aggregation
. . data_concept_identifier
. . data_reductions
. . data_revision
. . data_version
. . date_archived
. . . date
. . . time
. . date_created
. . . date
. . . time
. . date_published
. . . date
. . . time
. . equipment_status
. . error_handling
. . methods_applied
. . owner_entities
. . perishability_date
. . . date
. . . time
. . personal_identification_status
. . quality_control_attribute
. . record_size
. . security
. . standard_data_attribute
. . standard_message_attribute
weather_forecast_details
weather_observation_attributes
weather_scale_forecast_data_attributes
weather_service_emergency_information
weather_service_information
. fws_current_weather_observations
. . current_weather_observations
. . weather_observation_attributes
. fws_weather_forecasts
. . climatic_scale_weather_forecasts
. . meso_scale_weather_forecasts
. . . weather_advisories

. . . weather_forecast_details
. . . weather_warnings
. . . weather_watches
. . miso_scale_weather_forecasts
. . . weather_advisories
. . . weather_forecast_details
. . . weather_warnings
. . synoptic_scale_weather_forecasts
. . . weather_forecast_details
. . . weather_watches
. . weather_scale_forecast_data_attributes
weather_service_information_request
weather_warnings
weather_watches
wide_area_pollution_data
. list_size
. pollution_state_area_collection
. . area_air_quality_index
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
. pollution_state_roadside_collection
. . current_carbon_monoxide_pollution
. . current_hydrocarbon_pollution
. . current_nitrous_oxide_pollution
. . current_ozone_pollution
. . current_particulate_pollution
. . current_roadside_pollution_location
. . . location_identity
. . current_sulfur_dioxide_pollution
winter_dispatch_orders_to_mcv
. date
. m_and_c_center_identity
. mcv_winter_dispatch_instructions
. time
. vehicle_id_for_mcv
winter_maint_action_req_from_traffic
winter_treatment_plan
work_zone_activity_data
. center_control_of_on_board_work_zone_devices
. map_data_for_m_and_c_wz_status_display
. . map_data_for_m_and_c_display
. . . map_data_store_contents
. . . . map_digitized_data
. . . . map_gazetteer_data
. . . . map_hri_data
. . . . map_link_identity_data
. . . . map_transit_data
. work_zone_activity_plan
. work_zone_data_collection_parameters
. work_zone_device_operator_control
. work_zone_info_distribution_parameters
work_zone_activity_plan
work_zone_activity_status
. on_board_work_zone_device_status
. . device_fault
. . device_identity
. . device_status
. . list_size
. on_board_work_zone_device_status_for_operator
. . device_fault
. . device_identity
. . device_status
. . list_size
. roadside_crew_warning_given
. work_zone_device_status
. . device_fault
. . device_identity
. . device_status
. . list_size
. work_zone_warning_given_on_board
work_zone_data_collection_parameters
work_zone_data_for_archive
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
work_zone_data_for_archive_attributes
. authorization_to_use
. collection_conditions
. collection_equipment
. data_aggregation
. data_concept_identifier
. data_reductions
. data_revision
. data_version
. date_archived
. . date
. . time
. date_created
. . date
. . time
. date_published
. . date
. . time
. equipment_status
. error_handling
. methods_applied
. owner_entities
. perishability_date
. . date
. . time
. personal_identification_status
. quality_control_attribute
. record_size
. security
. standard_data_attribute
. standard_message_attribute
work_zone_data_for_display
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification

. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
work_zone_data_for_distribution
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
work_zone_data_for_status
. fomcm_work_zone_info
. work_zone_device_status
. . device_fault
. . device_identity
. . device_status
. . list_size
. work_zone_intrusion_warning_data
. . roadside_crew_warning_given
. . work_zone_intrusion_alert
. . work_zone_intrusion_detected
. . . device_identity
. . . intrusion_detection_device_output
. . work_zone_intrusion_video_image
. . work_zone_intrusion_warning_notification
. . . work_zone_intrusion_alert_on_board
. . . work_zone_warning_given_on_board
. work_zone_resource_status
. . work_zone_equipment_status
. . work_zone_identifier
. . work_zone_personnel_status
. . work_zone_vehicle_status
. work_zone_status_from_mcv
work_zone_device_control_data
. dms_data_from_m_and_c
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . list_size
. dms_data_from_mcv
. . dms_advisory_text
. . . dms_auto_treat_info
. . . dms_highway_open_close
. . . dms_incident_warning
. . . dms_weather_warning
. . indicator_identity
. . . indicator_type
. . . location_identity
. . . unit_number
. . lane_dms_controls
. . list_size
. har_data_from_m_and_c
. . har_identity
. . har_management_data
. . . har_mode
. . . har_schedule
. . har_program
. individual_vehicle_speed_for_display
. speed_warning_for_display
. work_zone_info_for_display
work_zone_device_operator_control
work_zone_device_status
. device_fault
. device_identity
. device_status
. list_size
work_zone_device_status_for_display
. device_fault
. device_identity
. device_status
. list_size
work_zone_equipment_status
work_zone_identifier
work_zone_images
work_zone_images_for_display
. fomcm_work_zone_images
. work_zone_images
. work_zone_intrusion_video_image
work_zone_images_for_distribution
. fomcm_work_zone_images
. work_zone_images
. work_zone_intrusion_video_image
work_zone_images_for_isp
. fomcm_work_zone_images
. work_zone_images
work_zone_images_for_traffic
. fomcm_work_zone_images
. work_zone_images
work_zone_incident_data
. video_control_from_m_and_c
. work_zone_images_for_traffic
. . fomcm_work_zone_images
. . work_zone_images
. work_zone_info_for_traffic
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
work_zone_info_distribution_parameters
work_zone_info_for_display

Appendix D: Data Tree

work_zone_info_for_emergency
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
work_zone_info_for_isp
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
work_zone_info_for_operator_display
work_zone_info_for_traffic
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
work_zone_info_for_transit
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
work_zone_intrusion_alert
work_zone_intrusion_alert_on_board
work_zone_intrusion_alert_on_board_for_in_vehicle_s
work_zone_intrusion_control
. intrusion_alert_device_control
. intrusion_alert_device_control_on_board
. intrusion_detection_device_control
. on_board_intrusion_detection_device_control
work_zone_intrusion_data
. work_zone_intrusion_alert
. work_zone_intrusion_alert_on_board
. work_zone_intrusion_detected
. . device_identity
. . intrusion_detection_device_output
. work_zone_intrusion_detected_on_board
. . device_identity
. . work_zone_intrusion_detection_on_board
work_zone_intrusion_detected
. device_identity
. intrusion_detection_device_output
work_zone_intrusion_detected_on_board
. device_identity
. work_zone_intrusion_detection_on_board
work_zone_intrusion_detection
work_zone_intrusion_detection_for_on_board
. device_identity
. intrusion_detection_device_output
work_zone_intrusion_detection_on_board
work_zone_intrusion_detection_on_board_output
. device_identity
. intrusion_detection_device_output
work_zone_intrusion_detection_output
. device_identity
. intrusion_detection_device_output
work_zone_intrusion_status
. intrusion_alert_device_status
. . device_fault
. . device_identity
. . device_status
. . list_size
. intrusion_alert_device_status_on_board
. . device_fault
. . device_identity
. . device_status
. . list_size
. intrusion_detection_device_status
. . device_fault
. . device_identity
. . device_status
. . list_size
. on_board_intrusion_detection_device_status

Appendix D: Data Tree

. . device_fault
. . device_identity
. . device_status
. . list_size
. work_zone_intrusion_detection_on_board_output
. . device_identity
. . intrusion_detection_device_output
. work_zone_intrusion_detection_output
. . device_identity
. . intrusion_detection_device_output
work_zone_intrusion_video_image
work_zone_intrusion_warning_data
. roadside_crew_warning_given
. work_zone_intrusion_alert
. work_zone_intrusion_detected
. . device_identity
. . intrusion_detection_device_output
. work_zone_intrusion_video_image
. work_zone_intrusion_warning_notification
. . work_zone_intrusion_alert_on_board
. . work_zone_warning_given_on_board
work_zone_intrusion_warning_notification
. work_zone_intrusion_alert_on_board
. work_zone_warning_given_on_board
work_zone_personnel_status
work_zone_resource_status
. work_zone_equipment_status
. work_zone_identifier
. work_zone_personnel_status
. work_zone_vehicle_status
work_zone_status_for_display
work_zone_status_from_mcv
work_zone_status_inputs
work_zone_surveillance_data
. speed_data_for_traffic_display
. . individual_vehicle_speed
. . . list_size
. . . sensor_identity
. . . speed_sensor_data
. . . timestamp
. . . . date
. . . . time
. . processed_speed_sensor_data
. speed_data_for_traffic_status
. . individual_vehicle_speed
. . . list_size
. . . sensor_identity
. . . speed_sensor_data
. . . timestamp
. . . . date
. . . . time
. . processed_speed_sensor_data
. t_other_rw_individual_vehicle_speed_to_dms
. t_other_rw_speed_warning_to_dms
. t_other_rw_work_zone_intrusion_detection
. . work_zone_intrusion_detection
. work_zone_images_for_isp
. . fomcm_work_zone_images
. . work_zone_images
. work_zone_info_for_isp
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
work_zone_to_roadway_m_and_c
. request_m_and_c_wz_status_display_update
. speed_data_for_m_and_c_display
. . individual_vehicle_speed
. . . list_size
. . . sensor_identity
. . . speed_sensor_data
. . . timestamp
. . . . date
. . . . time
. . processed_speed_sensor_data
. work_zone_data_for_display
. . work_zone_data_for_status
. . . fomcm_work_zone_info
. . . work_zone_device_status
. . . . device_fault
. . . . device_identity
. . . . device_status
. . . . list_size
. . . work_zone_intrusion_warning_data
. . . . roadside_crew_warning_given
. . . . work_zone_intrusion_alert
. . . . work_zone_intrusion_detected
. . . . . device_identity
. . . . . intrusion_detection_device_output
. . . . work_zone_intrusion_video_image
. . . . work_zone_intrusion_warning_notification
. . . . . work_zone_intrusion_alert_on_board
. . . . . work_zone_warning_given_on_board
. . . work_zone_resource_status
. . . . work_zone_equipment_status
. . . . work_zone_identifier
. . . . work_zone_personnel_status
. . . . work_zone_vehicle_status
. . . work_zone_status_from_mcv
. work_zone_data_for_status
. . fomcm_work_zone_info
. . work_zone_device_status
. . . device_fault
. . . device_identity
. . . device_status
. . . list_size
. . work_zone_intrusion_warning_data
. . . roadside_crew_warning_given
. . . work_zone_intrusion_alert
. . . work_zone_intrusion_detected
. . . . device_identity
. . . . intrusion_detection_device_output
. . . work_zone_intrusion_video_image
. . . work_zone_intrusion_warning_notification
. . . . work_zone_intrusion_alert_on_board
. . . . work_zone_warning_given_on_board
. . work_zone_resource_status
. . . work_zone_equipment_status
. . . work_zone_identifier
. . . work_zone_personnel_status
. . . work_zone_vehicle_status
. . work_zone_status_from_mcv
. work_zone_device_status_for_display
. . device_fault
. . device_identity
. . device_status
. . list_size
. work_zone_images_for_display
. . fomcm_work_zone_images

Appendix D: Data Tree

. . work_zone_images
. . work_zone_intrusion_video_image
. work_zone_info_for_operator_display
work_zone_vehicle_status
work_zone_warning_given_on_board
wrong_way_vehicle_detection
. incident_video_image
. traffic_video_image
. vehicle_detection_data
. . list_size
. . sensor_identity
. . station_id
. . traffic_sensor_output
. vehicle_identity
. vehicle_license
yellow_pages_advisory_data
. yellow_pages_cost
. . cost
. yellow_pages_data_for_advisories
. . list_size
. . yellow_pages_service_detail
. . . yellow_pages_service_availability
. . . yellow_pages_service_contact
. . . yellow_pages_service_cost
. . . . cost
. . . yellow_pages_service_date
. . . . date
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. yellow_pages_dining_reservation_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
. yellow_pages_lodging_reservation_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
. yellow_pages_ticket_purchase_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
yellow_pages_advisory_requests
. advisory_data_scope
. transit_route_number
. transit_vehicle_identity
. vehicle_location_for_advisories
. . location_identity
. yellow_pages_dining_reservation
. yellow_pages_lodging_reservation
. yellow_pages_non_motorized_reservation
. yellow_pages_ticket_purchase
yellow_pages_advisory_requests_for_archive
. yellow_pages_advisory_requests
. . advisory_data_scope
. . transit_route_number
. . transit_vehicle_identity
. . vehicle_location_for_advisories
. . . location_identity
. . yellow_pages_dining_reservation
. . yellow_pages_lodging_reservation
. . yellow_pages_non_motorized_reservation
. . yellow_pages_ticket_purchase
yellow_pages_cost
. cost
yellow_pages_data
. yellow_pages_general_information
. . yellow_pages_history
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. . yellow_pages_local_customs
. . . list_size
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_people
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. yellow_pages_specific_information
. . yellow_pages_food
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_gas_stations
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_hospitals
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_lodging
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_non_motorized_services
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_parking
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_private_vehicle_parts_shops
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_private_vehicle_repair_shops
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_rest_areas
. . . list_size

Appendix D: Data Tree

. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_special_events
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. . yellow_pages_tourist_activities
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. . yellow_pages_tourist_services
. . . list_size
. . . yellow_pages_service_contact
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_type
. yellow_pages_transaction_information
. . yellow_pages_dining_information
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . yellow_pages_lodging_reservations
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . yellow_pages_ticket_information
. . . list_size
. . . yellow_pages_service_detail
. . . . yellow_pages_service_availability
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_cost
. . . . . cost
. . . . yellow_pages_service_date
. . . . . date
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type

yellow_pages_data_for_advisories
. list_size
. yellow_pages_service_detail
. . yellow_pages_service_availability
. . yellow_pages_service_contact
. . yellow_pages_service_cost
. . . cost
. . yellow_pages_service_date
. . . date
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_time
. . . time
. . yellow_pages_service_type
yellow_pages_data_request
yellow_pages_dining_information
. list_size
. yellow_pages_service_detail
. . yellow_pages_service_availability
. . yellow_pages_service_contact
. . yellow_pages_service_cost
. . . cost
. . yellow_pages_service_date
. . . date
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_time
. . . time
. . yellow_pages_service_type
yellow_pages_dining_reservation
yellow_pages_dining_reservation_confirmation
. confirmation_flag
. yellow_pages_service_reservation_number
yellow_pages_food
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_gas_stations
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_general_information
. yellow_pages_history
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_time
. . . time
. . yellow_pages_service_type
. yellow_pages_local_customs
. . list_size
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_people
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
yellow_pages_history
. list_size

Appendix D: Data Tree

. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_time
. . time
. yellow_pages_service_type
yellow_pages_hospitals
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_information_data
. yellow_pages_data
. . yellow_pages_general_information
. . . yellow_pages_history
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_local_customs
. . . . list_size
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_people
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_specific_information
. . . yellow_pages_food
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_gas_stations
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_hospitals
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_lodging
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_non_motorized_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_parking
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_parts_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_repair_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_rest_areas
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_special_events
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_activities
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_transaction_information
. . . yellow_pages_dining_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_lodging_reservations
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost

Appendix D: Data Tree

. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_ticket_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
yellow_pages_local_customs
. list_size
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_lodging
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_lodging_reservation
yellow_pages_lodging_reservation_confirmation
. confirmation_flag
. yellow_pages_service_reservation_number
yellow_pages_lodging_reservations
. list_size
. yellow_pages_service_detail
. . yellow_pages_service_availability
. . yellow_pages_service_contact
. . yellow_pages_service_cost
. . . cost
. . yellow_pages_service_date
. . . date
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_time
. . . time
. . yellow_pages_service_type
yellow_pages_new_data_request
. yellow_pages_service_provider_identity
yellow_pages_non_motorized_reservation
yellow_pages_non_motorized_services
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_output
. yellow_pages_data
. . yellow_pages_general_information
. . . yellow_pages_history
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_local_customs
. . . . list_size
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_people
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_specific_information
. . . yellow_pages_food
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_gas_stations
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_hospitals
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_lodging
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_non_motorized_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_parking
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_parts_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_repair_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type

Appendix D: Data Tree

. . . yellow_pages_rest_areas
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_special_events
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_activities
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_transaction_information
. . . yellow_pages_dining_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_lodging_reservations
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_ticket_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . cost
. . . . . yellow_pages_service_date
. . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . time
. . . . . yellow_pages_service_type
yellow_pages_parking
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_people
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_private_vehicle_parts_shops
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_private_vehicle_repair_shops
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_provider_payments_transactions
yellow_pages_reservation_confirmation
. transaction_number
. traveler_identity
. yellow_pages_cost
. . cost
. yellow_pages_dining_reservation_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
. yellow_pages_lodging_reservation_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
. yellow_pages_ticket_purchase_confirmation
. . confirmation_flag
. . yellow_pages_service_reservation_number
yellow_pages_reservation_request
. yellow_pages_dining_reservation
. yellow_pages_lodging_reservation
. yellow_pages_ticket_purchase
yellow_pages_rest_areas
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_service_availability
yellow_pages_service_contact
yellow_pages_service_cost
. cost
yellow_pages_service_date
. date
yellow_pages_service_description
yellow_pages_service_detail
. yellow_pages_service_availability
. yellow_pages_service_contact
. yellow_pages_service_cost
. . cost
. yellow_pages_service_date
. . date
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_time

Appendix D: Data Tree

. . time
. yellow_pages_service_type
yellow_pages_service_location
. location_identity
yellow_pages_service_provider_area
yellow_pages_service_provider_attributes
yellow_pages_service_provider_contact
yellow_pages_service_provider_data
. list_size
. yellow_pages_service_provider_details
. . yellow_pages_service_provider_area
. . yellow_pages_service_provider_attributes
. . yellow_pages_service_provider_contact
. . yellow_pages_service_provider_name
. yellow_pages_service_provider_identity
yellow_pages_service_provider_details
. yellow_pages_service_provider_area
. yellow_pages_service_provider_attributes
. yellow_pages_service_provider_contact
. yellow_pages_service_provider_name
yellow_pages_service_provider_identity
yellow_pages_service_provider_name
yellow_pages_service_provider_registration_request
. credit_identity
. yellow_pages_service_provider_identity
yellow_pages_service_provider_registration_respons
. confirmation_flag
. yellow_pages_service_provider_identity
yellow_pages_service_reservation_number
yellow_pages_service_time
. time
yellow_pages_service_type
yellow_pages_special_events
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_specific_information
. yellow_pages_food
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_gas_stations
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_hospitals
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_lodging
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_non_motorized_services
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_parking
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_private_vehicle_parts_shops
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_private_vehicle_repair_shops
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_rest_areas
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_special_events
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
. yellow_pages_tourist_activities
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_time
. . . time
. . yellow_pages_service_type
. yellow_pages_tourist_services
. . list_size
. . yellow_pages_service_contact
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_type
yellow_pages_ticket_information
. list_size
. yellow_pages_service_detail
. . yellow_pages_service_availability
. . yellow_pages_service_contact
. . yellow_pages_service_cost
. . . cost
. . yellow_pages_service_date
. . . date
. . yellow_pages_service_description
. . yellow_pages_service_location
. . . location_identity
. . yellow_pages_service_time
. . . time
. . yellow_pages_service_type
yellow_pages_ticket_purchase
yellow_pages_ticket_purchase_confirmation
. confirmation_flag
. yellow_pages_service_reservation_number
yellow_pages_tourist_activities
. list_size
. yellow_pages_service_contact

Appendix D: Data Tree

. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_time
. . time
. yellow_pages_service_type
yellow_pages_tourist_services
. list_size
. yellow_pages_service_contact
. yellow_pages_service_description
. yellow_pages_service_location
. . location_identity
. yellow_pages_service_type
yellow_pages_transaction_information
. yellow_pages_dining_information
. . list_size
. . yellow_pages_service_detail
. . . yellow_pages_service_availability
. . . yellow_pages_service_contact
. . . yellow_pages_service_cost
. . . . cost
. . . yellow_pages_service_date
. . . . date
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. yellow_pages_lodging_reservations
. . list_size
. . yellow_pages_service_detail
. . . yellow_pages_service_availability
. . . yellow_pages_service_contact
. . . yellow_pages_service_cost
. . . . cost
. . . yellow_pages_service_date
. . . . date
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
. yellow_pages_ticket_information
. . list_size
. . yellow_pages_service_detail
. . . yellow_pages_service_availability
. . . yellow_pages_service_contact
. . . yellow_pages_service_cost
. . . . cost
. . . yellow_pages_service_date
. . . . date
. . . yellow_pages_service_description
. . . yellow_pages_service_location
. . . . location_identity
. . . yellow_pages_service_time
. . . . time
. . . yellow_pages_service_type
yellow_pages_update_request
yellow_pages_update_response
. yellow_pages_data
. . yellow_pages_general_information
. . . yellow_pages_history
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_local_customs
. . . . list_size
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_people
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_specific_information
. . . yellow_pages_food
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_gas_stations
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_hospitals
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_lodging
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_non_motorized_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_parking
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_parts_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_private_vehicle_repair_shops
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_rest_areas
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity

. . . . yellow_pages_service_type
. . . yellow_pages_special_events
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_activities
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_time
. . . . . time
. . . . yellow_pages_service_type
. . . yellow_pages_tourist_services
. . . . list_size
. . . . yellow_pages_service_contact
. . . . yellow_pages_service_description
. . . . yellow_pages_service_location
. . . . . location_identity
. . . . yellow_pages_service_type
. . yellow_pages_transaction_information
. . . yellow_pages_dining_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . . cost
. . . . . yellow_pages_service_date
. . . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_lodging_reservations
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . . cost
. . . . . yellow_pages_service_date
. . . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . . time
. . . . . yellow_pages_service_type
. . . yellow_pages_ticket_information
. . . . list_size
. . . . yellow_pages_service_detail
. . . . . yellow_pages_service_availability
. . . . . yellow_pages_service_contact
. . . . . yellow_pages_service_cost
. . . . . . cost
. . . . . yellow_pages_service_date
. . . . . . date
. . . . . yellow_pages_service_description
. . . . . yellow_pages_service_location
. . . . . . location_identity
. . . . . yellow_pages_service_time
. . . . . . time
. . . . . yellow_pages_service_type