

**Final Report: Mobile Surveillance and
Wireless Communication Systems Field
Operational Test
Volume 3: Appendices A-J Containing
Evaluation Data Gathered During the Anaheim
Special Event and I-5 Tests
Lawrence A. Klein**

**California PATH Research Report
UCB-ITS-PRR-99-8**



CALIFORNIA PATH PROGRAM
INSTITUTE OF TRANSPORTATION STUDIES
UNIVERSITY OF CALIFORNIA, BERKELEY

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This work was performed as part of the California PATH Program of the University of California, in cooperation with the State of California Business, Transportation, and Housing Agency, Department of Transportation; and the United States Department of Transportation, Federal Highway Administration.

The contents of this report reflect the views of the authors who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California. This report does not constitute a standard, specification, or regulation.

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**Final Report: Mobile Surveillance and Wireless
Communication Systems Field Operational Test**

**Volume 3: Appendices A – J Containing Evaluation
Data Gathered During the Anaheim
Special Event and I-5 Tests**

**Prepared by:
Lawrence A. Klein, Ph.D.**

**Prepared for:
University of California at Irvine**

January 1999

Preface

The Mobile Surveillance and Wireless Communication Systems Field Operational Test (FOT) contained two evaluation tests, the Anaheim Special Event Test and the Interstate-5 (I-5) Test. The Anaheim Special Event Test assessed the ability of the surveillance trailers to transmit video imagery to a traffic management center in support of arterial traffic signal control. This test occurred during the Spring of 1997 in conjunction with heavy traffic experienced during hockey playoff games at the Arrowhead Pond in Anaheim, CA. The I-5 Test evaluated the ability of the mobile surveillance and ramp meter trailers to transmit video imagery and data in support of freeway ramp metering. It occurred a year later in Spring 1998 along I-5 in Orange County, CA. The results of these tests and other conclusions from the FOT are presented in three volumes. The first volume serves as the Executive Summary of the FOT. It describes the project objectives, results, conclusions, and recommendations in condensed fashion. The second volume discusses the overall goals and objectives of the FOT and the design of the mobile surveillance and wireless communication system in more detail. Technical and institutional issues that surfaced before either of the two FOT tests was conducted are described. The specific objectives of the Anaheim Special Event and the I-5 Tests, lessons learned, test results, and recommendations are expanded upon in this volume. Photographs and drawings are used liberally to illustrate the types of equipment and test configurations that were tested. Volume 2 also incorporates revisions to the evaluation plans that were originally prepared by Pacific Polytechnic Institute (PPI). The evaluation plans and preliminary results from the planning and design phases of the FOT and the Anaheim Special Event Test were originally published by California Partners for Advanced Transit and Highways (PATH) under Report 97-C34. The third volume consists of ten appendices that contain data and other information gathered during the tests.

The test planning and execution were a cooperative effort among the partner agencies and companies. These were the Federal Highway Administration, California Department of Transportation divisions in Sacramento and Orange County, California Partners for Advanced Transit and Highways, University of California at Irvine Institute of Transportation Studies, California Highway Patrol, City of Anaheim Department of Public Works, Hughes Aircraft Company (now Raytheon Systems Company), Pacific Polytechnic Institute, and Lawrence A. Klein, Consultant.

This report was prepared in cooperation with the State of California, Business Transportation and Housing Agency, Department of Transportation. The material is based on work supported by the Federal Highway Administration, the State of California, Department of Transportation under prime contract number RTA-65A0012, and the Regents of the University of California.

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Table of Contents

PREFACE	iii
APPENDIX A: WRITTEN STATEMENTS FROM MEMBERS OF PROJECT MANAGEMENT TEAM	A-I
APPENDIX B: TRAILER SETUP AND MAINTENANCE PROCEDURES	B-I
APPENDIX C: TRAILER TRANSPORT DATA SHEETS FOR ANAHEIM SPECIAL EVENT TEST	C-I
APPENDIX D: CAMERA OPERABILITY DATA SHEETS FOR ANAHEIM SPECIAL EVENT TEST	D-I
APPENDIX E: TRAILER TRANSPORT DATA SHEETS FOR I-5 TEST	E-I
APPENDIX F: CAMERA OPERABILITY DATA SHEETS FOR I-5 TEST	F-I
APPENDIX G: VIP BELIEVABILITY DATA SHEETS FOR I-5 TEST	G-I
APPENDIX H: RAMP METER OPERABILITY DATA SHEETS FOR I-5 TEST	H-I
APPENDIX I: SURVEILLANCE TRAILER LOGS	I-I
APPENDIX J: QUANTITATIVE DATA USED TO EVALUATE SURVEILLANCE AND RAMP METER TRAILER PERFORMANCE ON THE I-5 FREEWAY	J-I

Appendix A:
Written Statements from Members of Project Management Team

Mobile Surveillance and Wireless Communication Systems Field Operational Test Individual Evaluation

**Nathaniel Behura
City of Anaheim**

This report is being provided to assist PPI in examining the test data and procedure that will determine the viability of the Mobile Surveillance and Communication Filed Operational Test (FOT). I was involved as Project Manager for the City of Anaheim, one of the partners in the test, and was responsible for ail liaison between the other test partners and Anaheim. I was ultimately responsible for all activities and support provided by Anaheim for this FOT.

My involvement began fairly late on the overall project schedule, at the stage when field tests were about to begin in Anaheim. I attended my first meeting regarding this project on February 20, 1997, at the Caitrans District 12 TMC. I had not had the benefit of knowing the details of the project or its goals as had my predecessors (Jim Paral, Chris Dahi, Yo Baba), and my role was concentrated on the implementation aspect of the project. Hence, my statements in this report are a combination of my first hand experience and any information I could gather from speaking to other participants or reviewing project files. My comments follow the format recommended in the report "Individual Evaluation Plan for Test #2 - City of Anaheim" prepared by PPI, and dated March 25, 1997.

Test Objective I- Examine Portability

Statement 1.1 - Site Selection

Initial site selection was based on the usefulness of the Mobile Surveillance Trailers (MST's) in providing visual data to the TMC Event Operators in Anaheim. Though there are several large avant generators in the City (Anaheim Stadium, Arrowhead Pond, Disneyland, Anaheim Convention Canter) only the Stahium and the Pond had distinct evening events that could dlstInguished from commuter traffic and required evening TMC traffic management. Of the two locations, only the Pond had various events regularly through out the year. Hence, the Pond was our first choice for an event generator.

Ingress and egress traffic flow vary in various aspects, the most important of these being that egress traffic has a more pronounced peak and shorter duration. These aspects make it easier to measure any impacts of mitigation actions on avant traffic. Of the various routes that egress traffic takes, Anaheim recommended three locations which are important intersections where it currently does not have cameras, and visual confirmation of field conditions at these locations would benefit the operators. These intersections, in order of their importance from a traffic management perspective are:

- 1.) Ball Road and Phoenix Club Drive
- 2.) Cerritos Avenue and Sunkist Stre
- 3.) State College Boulevard and Cerritos Avenue

To ensure that these sites are viable for traffic management, the City had to check for the following criteria.

- a.) The sites were actually available for tests, since these were on private property.
- b.) The sites had adequate space for parking the MST's
- c.) The sites allowed for proper vantage points or views to monitor the necessary traffic flowing in a specific direction.
- d.) The sites had adequate signal strength or line of sight to the relay station to receive the necessary signals and send video back.

Since the teams that carried out the above mentioned checks were not the same ones, the sites were not always selected with all these aspects in mind (8.g. when Signal strength checks were done, it was not checked to see whether the spot with the best strength had good camera perspectives).

The MST could not be located at Phoenix and Ball because there was not any space for parking. The MST was moved west, to the Ball Road and SR-57 on-ramp.

I had managed tasks a), b), and c), of this project after signal strength checks were completed already. initially, from an aerial map and from sit8 visits, we eliminated the corners of each intersection which would not meet criteria b) and c). I had identified and met with the property owners to ensure the sites were available for Upcoming event dates. Once the event dates were identified, I had prepared written agreements for property owners to sign and make their sites available for the FOT. It was imperative to convey both the importance of the tests to local traffic flow, and the appreciation of the test partners, to elicit cooperation. However it was most important to ensure the we created the least amount of intrusion in the owners' regular operation of these sites. It was also critical to inform the owners of the exact length of time the MST's would be on-site and of the precise locations.

Some of the problems in the field that were encountered were:

- I) Identifying and contacting the owners within a short time
- II) Getting permission to park the MSTs; concerns about hindering parking operation, duration of tests, and liability issues.
- III) Problem with swapping MST's - created more uncertainty about specifics that property owners like to know, and with availability of MST transportation personnel.
- IV) Blocked or poor camera view; since permission for space was acquired based on perceived camera views and signal strength. Set-ups had to be adjusted to improve camera view within the existing space confinements.
- V) Liability and theft problems. Though this was not a primary concern, it Was an issue With the owners for accidets and thefts that could occur on their property.

Test Objective 2-Trailers work for Traffic Management

Though my statement in this category is not required, I would like to indicate that the forms required to be completed for this assessment are cumbersome to some extent in their current form, and that the operator found it difficult and somewhat unnecessary to check the camera every 15 minutes.

Test Objective 3 - Assess Additional Surveillance

I provided the Data 3.1.1 on event duration, Please note that there is a significant variability in the "egress duration" based on the expertise of the individual operators, the actual field conditions (e.g. number of police on street, traffic signals under repair, TMC equipment or camera under repair, Caltrans Freeway CMS Status, etc.), and the accuracy Of the recorded times. Operators often take preemptive action to accommodate for traffic at these blind intersections in absence of cameras. Given this variability, the actual improvement with camera may be difficult measure.

For Data 3.1.2, the only known problem was that Trailer 11 at Ball and SR-57 ramps was not working.

Please contact me to record the attendance data for March events.

Test Objective 4- Resource Sharing Institutional Issues

Data 4.1.1 - Advantages of Resource Sharing

The following are a list of advantages that I perceive from such resource sharing:

1. Ability to monitor currently blind intersections.
2. Creates a framework for interagency cooperation.
3. Ability to us8 MST in future for intersections under construction (upcoming i-6).
4. Better understanding of the usefulness of camera at certain location for events (i.e. do we really need cameras here?)
5. Provides ideas for future projects.
6. Provides insight Into viability of new technology.

Data 4.2.1 - Disadvantages of Resource Sharing

The following are a list of disadvantages that I perceive from such resource sharing:

1. Interagency coordination is not smooth; various opinions and perspective of partners.
2. City cannot assume more liability to test new equipment.
3. There is some training involved for City Personnel.
4. The City has to arrange with the Police to monitor security at MST locations,

5. Permission required from private property owners.
6. Significant time and resource commitments are necessary from Anaheim which has limited manpower availability. The benefits may not be commensurate. Availability issues made it necessary to work in narrow windows of time, which was not always responded to by other participants.
7. Long time frame of project necessitated changes in Project Managers, which was detrimental to smooth and timely completion of project.

Data 4.2.1 - Cost of Resource Sharing

The following are a list of costs that may have been incurred from this resource sharing, by the City:

1. Participation Costs: This is our major item since our manpower is so limited. Such costs include direct manpower costs (by hours) for project managers, operators (training and meetings), field technicians, maintenance personnel, etc.
2. Indirect costs include the opportunity costs for all other projects and tasks that were postponed or cancelled to attend to this project with a short deadline.
3. Equipment costs for TMC installation.
4. Exposure to liability.

Test Objective 6 - Information Sharing: Institutional Issues

Data 6.1.1 - Advantages of Video Sharing

The following are a list of advantages that I perceive from such resource sharing:

1. Allows Caltrans to manage ramp operation in the vicinity of Arrowhead Pond (relevant to one location only.)
2. Creates a framework for interagency information sharing and cooperation.
3. Provides better understanding of each others operation.

Data 6.2.1 - Disadvantages of Video Sharing

The following are a list of disadvantages that 1 perceive from such resource sharing:

1. Video sharing requires prioritizing control, hence limits primary control for one agency.
2. Technical problems sometimes have precluded one agency from sharing controls.

Other Considerations:

There are a few other issues that need to be addressed that affect the success of this FOT. These issues may fall into one or more categories discussed before, I leave it to PPI to make such classifications, or determine if these issues are important enough to be discussed.

1. PMT Partners Buy-in and Support Currently projects such as this are based on initial agreements and discussions between some representatives of the participating agencies. However, some essential participants may not have been properly informed about the benefits of the project. It is necessary to get a thorough buy-in of the project from the participating agencies as this commitment may wear thin as time passes and the schedule is stretched. To correct this situation, management or senior level personnel should be fully committed at the beginning of the project and should have a full understanding of what resources and time commitments are necessary, and if and how the project is beneficial to the agency or to the community in general.
2. Paperwork Requirements from Participants: Many of the key people helping with the project are not used to writing statements or doing paperwork. This may seem trivial for a research organization, however, can pose difficult situations for some technical personnel. One suggestion would be to create a form with specific questions that may be helpful in getting the same information. The paperwork responsibility should be assumed by entities who are better equipped to handle it.
3. Time Coordination: It is important to understand that key agencies who are small will have shortage of resources, including personnel and time. Hence, when a time window is given by such an agency for another participant to be present or perform a task, it needs to be formed to. If a time window is missed, it is difficult for the small agency to reschedule such a task.
4. Fuel Issues: Fuel depletion was an unforeseen circumstance, and affected proper equipment checking as the MST's had to be put on "manual" mode. It was also an issue of manpower availability to refuel the MST's. This aspect needs to be preplanned.

Please contact me at (714) 254-5183 to discuss any of these and other related issues. An appointment is recommended.

4-15-97

TO: NATHAN BETHUNA

RE: MOBILE SURVEILLANCE COMMENTS

THE THREE DAYS THAT I WAS INVOLVED, I FOUND THE UNITS VERY USEFUL. THOUGH THE COMPLETE VERSION OF USE WAS NOT AVAILABLE NOR WAS IT TO BE TESTED AT THIS TIME, THEY WERE STILL VERY USEFUL FOR VISION PURPOSES ONLY.

THE ONLY PROBLEM ENCOUNTERED WAS THE ABILITY TO MOVE THESE TRAILERS AROUND FLUIDLY. I'M SURE WE LEARNED A GREAT DEAL AND AS WE USE THESE IN THE FUTURE, THE SYSTEM WILL IMPROVE.

Larry R. [Signature]
(714) 254-6914

Statement about FOT #2, Event 1 on Tuesday, April 1, 1997
Tadeo Lau, District 12

Notice of deployment was given to Maintenance approximately ten days prior to the deployment (Mar 26) of the trailers. Ed Hepko was briefed by Tadeo Lau about the sequence and dates of events and deployment to take place. His supervisor in turn compiled a list to present to his superintendent. Tadeo Lau met with the superintendent on Mar. 21 and went over the plan Maintenance was going to undertake to accommodate the test.

New database records and icons in the ATMS system for the trailers in Anaheim were created but not activated at Caltrans TMC prior to the deployment.

On Mar. 25, one day before the first trailer deployment, all three trailers were refilled with propane. I field checked all the three sites in Anaheim for the last time for space and building/tree blockage and identify the exact spots to park the trailers. I requested Lany Hazuka of Anaheim to place cones around two to three parking spaces at Sunkist/Cerritos either on the evening before or on the morning of deployment. Larry indicated that it was not necessary to cone off the area as plenty of parking space should be available at time of deployment. Ed Hepko confirmed that besides two maintenance persons to participate in the deployment on the first day of deployment, other personnel from his crew would also be available to assist in the ramp closure that was necessary at Ball/57. No provision of concrete blocks or sand bags was required for this test.

Prior to the deployment on Mar. 26, the new ATMS icons for the trailers were activated and the old ones were deactivated. When picking up trailer 111, the antenna and cameras were oriented to ensure safe mast-retraction. Trailer 111 was transported from I-5/Culver to Rte. 57/Ball. Once the trailer arrived near the site, I talked to Ed Hepko to coordinate how trailer would be backed up into the designated area. Brian Tankersley participated in the setup on the first day of deployment. Maintenance had two additional trucks and three additional crew members to facilitate the ramp closure. The closure started at around 9AM at the freeway on ramp. Once the trailer was backed up into the pull-out area, the ramp was re-open and the crew that assisted in the ramp closure left the site. Signal was checked and cameras were oriented while trailer was still hitched. However, the remote operability was not verified at this point because Maintenance crew wanted to finish hauling the second trailer. One of the four stabilizers could not be lowered.

Trailer 113 was transported from I-5/1st Street to Sunkist/Cerritos. After radio link was established, Anaheim TMC was asked to remotely activate the trailer. Larry Hazuka participated as observer for the setup only. Although Anaheim could control the cameras, it did not receive video. This was later fixed by Brian at Anaheim TMC. Caltrans TMC was asked to test the same but the trailer did not start up at all. Additional steps had to be performed by Caltrans in setting up the camera control processes.

I briefed two Caltrans shift leaders in the morning during the deployment as to the situation regarding the deployment of the three trailers. It was then followed by a memo in the afternoon describing the operation protocol between the two TMC's, and reporting of any urgent alarm to the Anaheim PD.. A trailer location map was also attached for their reference.

Two maintenance electricians participated in the transportation of trailer 115 from I-5/Main Place to State College/Cerritos on Mar. 27. No cones were used to mark off area for trailer and it turned out that it was not necessary. The exact spot was selected to avoid tree blockage of radio link and to obtain the best field of view for cameras. L-any Hazuka assisted in the setup of the trailer today as part of hands-on training. The mast was raised and oriented to establish the radio link. I turned on Trailer 113 and Anaheim TMC was asked to test control of both trailers and switch cameras back and forth between trailers. All operations were confirmed Caltrans still did not have control of any trailers.

I visited Trailer 111 at Ball Road and requested Anaheim TMC to remotely turn on the trailer and tested for video. Operability and receive of video were confirmed. All trailers were then put in manual mode to conserve fuel as no agency would likely use any of the trailers over the weekend. Brian turned all trailers to auto mode in the afternoon of the event and had Anaheim checked their operability before the event started. In the morning after the event, I went to all three trailers and shut them down and put them in manual mode again.

Statement about FOT#2, Event 2, on Friday April 4, 1997
Tadeo Lau, District 12

The day after Event 1, April 2, Trailers 113 and 115 locations were switched. Trailer 115 was first moved to the S/W corner across from Trailer 113. This turned out to have a better field of view for Anaheim. The mast was raised, signal was checked out, and Anaheim TMC was asked to test the trailer. After operation of 115 is confirmed Trailer 113 was moved from Sunkist/Cerritos to where Trailer 115 was once at. Although a user manual was not readily available at this time, Larry Hazuka assisted in the setup of the mast and requested Anaheim TMC to test the trailer and cameras.

The trailers were put into manual mode because there was concern about the reliability of the auto-gen-start circuit. The day after the event Brian and Tadeo visited the sites at different time to ensure the trailers generators were power down and put to manual mode.

The problem with using the ATMS icons to control the trailers during event 1 was solved. Again, the ATMS icons had to be moved on the map to reflect the changes in locations. TMC operators were notified of the trailer relocation,

Maintenance utilized two persons and a truck to swap the two trailers.

Hughes performed oil-change and checked water in batteries of all three trailer.

Statement about FOT #3, Event 3 on Wednesday April 9, 1997
Tadeo Lau, District 12

Trailer 111 and 115 were scheduled to exchange locations on April 7. However it was Saturday April 5 when Brian realized the two parking lots were being 'e-paved. Without full knowledge of the availability of the parking lots on the morning of April 7, while the ramp closure team and all participants assembled at the on-ramp, the swapping operation was called off as Maintenance crew did not want to be held up for too long. I visited the property management and received a confirmation from them that the re-paving would be halted for two weeks and Anaheim could continue using the parking lots as agreed.

Icons for Trailer 111 and 115 were adjusted on the map.

The relocation of trailers 111 and 115 was scheduled again for April 8. Trailer 111 was towed to Sunkist/Cerritos and was dropped off temporarily at the S-E corner, while the crew went to pick up 115 from the S-W corner and transported it to Rte-57/Ball. The radio link was checked and Anaheim was called to confirm that. Trailer 111 was then moved from the S-E corner to the S-W corner. Again, the antenna was oriented, radio was checked and confirmed. All three trailers were put to manual mode to conserve fuel until the afternoon of the event.

Maintenance had a truck and two persons assisted in this swap

All three trailers were refueled on April 9.

Anaheim should have more resources in training its personnel to setup and move trailers in the future.

On April 9 afternoon while I went through the trailers to put them in auto mode, I noticed the antenna and all camera positions were shifted. Checking the radio signal confirmed that, and it appeared that the high wind that day might have changed the direction of the mast. Rick Anderson re-visited the three trailers and adjusted all antenna positions before Anaheim could receive video during the event.

On April 10, all three trailers were transported back to their original sites on the I-5. One Maintenance person was assigned this time because of difficulties in scheduling. Database information was modified to reflect the move back on to the I-5. All Anaheim icons were deactivated and the trailer icons are re-activated on the freeway.

Maintenance suggested that Caltrans should consider hiring contractors to transport trailers if possible. This may help to avoid difficulty in scheduling and affect their other responsibilities.

April 16, 1997

Written Statement
for
Mobile Surveillance and Wireless Communication FOT
Anaheim Special Event Test No. 2
(by Lawrence Emerson, Caltrans New Technology and Research)

My comments will follow the Order of the six objectives and the measures listed in the Evaluation Plan.

Objective 1 - Ease of Movement and Setup

Pre-transport Preparations

- **Site Selection** - The intersections pick by Anaheim were to help with the “dark spots” around the pond. Nathan Behura can comment on coordination and getting permission from property owners. Caltrans provided a letter indicating that Anaheim would not have any major liability for possible damage to trailer as long as reasonable care was taken. It was probably easier for Anaheim to then get permission from property owners.
- **Site Survey** - Consideration of exact location of the trailers to optimize viewing of traffic and avoid trees was not done until actual deployment. This was done mainly by Caltrans initially. I believe some input on better location was made by Anaheim TMC staff after using trailers and becoming more familiar with them. Earlier in 1996, Caltrans and Hughes staff took a bucket truck to Anaheim’s proposed three locations to check line-of-sight and radio signal strength. On proposed location at Phoenix and Ball Road did not have enough space to locate the trailer easily. Caltrans staff decided to test signal strength to the east near 57 within Caltrans tight-of-way. This location was found satisfactory for signal strength and could still look back to Phoenix Road.
- **Site Readiness** - The mainly involved having Anaheim staff cone off the spots in the privately owned parking lots early in the morning or the night before to insure no cars were parked in the way. For the location at Ball Road in the Caltrans right-of-way, additional Caltrans vehicles were needed to provide temporary ramp closure while backing the trailer on to the spot from the freeway on ramp.
- **Trailer Readiness** - Caltrans staff pretty much knew what was needed to prepare and tow the trailers. The times I observed, however, they were using a truck that was much larger than necessary because a smaller one was not readily available.
- **ATMS Icon and Database Set Up at Caltrans TMC** - This was actually the first time that Caltrans staff (Tadeo Lau) need to set up the icons and database at the TMC for the trailers. The first time this was done by NET staff. So, there was a bit of a learning curve and the icons and database were not ready for the first event. Also, the ATMS had to be reset once the new locations were in place. This is something that were not aware of until it happened.

Time to hitch, transport, set, make operational Major difficulty was in positioning trailer in parking lots with the oversized truck. Use of a smaller truck in the future will allow greater ease of positioning trailers in tight spots. Training of Anaheim staff for field set up was a challenge because Hughes had not yet prepared a check off list of actions to perform, however, Anaheim staff did seem to pick up what was needed to be done when given the opportunity.

Objective 2 - Suitability for viewing event traffic

Comments on this should mainly come from Anaheim, however, from the video tape that Anaheim made during the events it was easy to discern between cars and trucks and the general number of vehicles. There was a little glare from some headlights which were pointed in the direction of the cameras, however, this did not really cause a problem to see the flow of traffic.

Objective 3 - Impact of Additional Video Surveillance

Comments on this should mainly come from Anaheim, however, the video tape of the traffic on Ball Road and the 57 Northbound Off Ramp made it fairly clear that the Caltrans signals at the off ramp and the City signals at Phoenix and Ball Road generally work well together and did not cause any significant back up of the outbound traffic from the pond. Anaheim staff (Curt) should be interviewed to determine if he made any adjustments to the signal to minimize any problem or if he just set it to maximize outbound traffic from the pond while at the same time allowing west bound flow on Ball Road to flow without backing up too long.

Objective 4 - Institutional Issues, Benefits, and Cost associated with Resource Sharing (Pros/Cons)

Advantages

- ✓ **Provides Surveillance to otherwise “dark” locations in Anaheim** - Yes
- ✓ **Facilitates inter-agency cooperation** - Yes, gave Caltrans TMS night shift chance to interact with local city and become more familiar with each other. Could view outbound activity from event going onto freeway. Allowed Caltrans TMS staff to become more aware of arterial roads which they do not normally view.
- ✓ **Opens the door and makes it easier for future cooperative efforts.**

Disadvantages

- ✓ **Requires Complex Interagency coordination** - Yes, but with good staff and cooperation this was made easier. Could have been more difficult or impossible. Good Partnering for mutual benefits, hopefully.
- ✓ **Required State to Limit City Liability** - This is done with a write a letter from Caltrans Project Manager to Anaheim Traffic Manager and due care on both sides.
- ✓ **Required City to acquire new expertise** - Caltrans had to write a letter to Anaheim Traffic Manager indicating appreciation of efforts after the first trailer setups and the importance of future assistance to ensure that Anaheim's field staff for the trailer moves would be available to learn.
- ✓ **Requires special security arrangements** - Anaheim coordinated involvement of Anaheim police. Caltrans provided photos of trailers for memo sent to Anaheim Police. Caltrans TMC staff were given map of trailer locations and phone number to Anaheim Police Dispatch if any alarms go off while in Anaheim.

Cost

- ✓ **State Delivery of Trailers** - Get comments from Tadeo Lau and Ed Hepco on Manhours/Vehicles/Coordination required.
- ✓ **City participation in Trailer Setup** - Get comments from Anaheim
- ✓ **Anaheim TMC equipment installation** - Get comments from Hughes
- ✓ **City Personnel Training (TMC & Field Setup)** - Some of the training was done by Hughes and included in the general cost of the FOT, however, I made three visits (total 6 hours) and several phone calls to coordinate and make sure Anaheim staff at TMC would be better prepared/trained. While setting up trailers in the field, training time was spent with Anaheim staff, Larry Hazuka. This extended time for setting up, but not significantly. Additional time is probably required for fuller confidence that Anaheim could set these up on their own.

Objective - Institutional Issues, Benefits, and Costs associated with Information Sharing (Pros/Cons)

Advantages of Event Traffic Video Sharing

- Ÿ **Allows Caltrans to better manage freeway operation in vicinity of the Arrow Pond on 57** - Not during these first events, however, if an accident had happened as traffic merged onto 57 from the on ramp, the back up would have been noticed at the ramp and one of the cameras could have been turned to view the situation on the freeway. Anaheim would probably have called Caltrans TMC to let them know and the problem could have been cleared up faster.
- Ÿ **Facilitates Interagency Cooperation** - Yes, gave Caltrans TMC night shift chance to interact with local city and become more familiar with each other. Could view outbound activity from which they do not normally view.

Disadvantage of Event Traffic Video Sharing

- Ÿ **Share Common controls at different facilities** - No Conflict occurred for these events.

Cost of Event Traffic Video Sharing

- Ÿ **Utility Consumption at State and City** - Electricity cost were minimal. LPG used was around 120 gallons or more (need to check with Tadeo) at a cost of \$1.85/gal including tax.

Appendix B:
Trailer Setup and Maintenance Procedures

Post Emplacement Checklist

A. Surveillance Trailer

1. Set all DC and AC circuit breakers in the trailer distribution units (gray boxes located on opposite ends of front inside of trailer) to ON except for the following:
At DC circuit breaker box:
 - Levelers OFF
 - Light OFFAt AC circuit breaker box:
 - Air Conditioner OFF
 - Outside Outlets OFF
 - Light OFF
2. Set all circuit breakers at DC and AC distribution panels on electronic cabinet 1 to ON.
3. Set Pullizi Intelligent Power Controller in electronic cabinet 1 to ON.
4. Set power strips at both electronic cabinets to ON.
5. Set Local/Remote switch at side of cabinet 2 in REMOTE position.
6. Set Auto Generator Start/Stop panel AUTO/MANUAL switch to AUTO.
7. Set Aries Processor (located behind Generator Start/Stop panel) to ON.
8. Unplug RS-232 connector (J3) of each camera control receiver/driver, except for surveillance camera (to prevent accidental movement of antenna and VIP cameras).
9. Set security system cell telephone module to ON (red push button located inside right security system box). Push-button light should be ON.
10. Open floor and roof fan vents (close and secure main roof hatch). Lock all trailer doors and set security system. If a Ramp Trailer is part of emplacement, set security system after completing Ramp Trailer check list below.

B. Ramp Trailer

1. Set all circuit breakers located in electronic cabinet to ON, with exception of the ALARM circuit breaker located on the Power Distribution Box.
Note: The ALARM circuit breaker no longer activates the trailer security system. The Ramp Trailer security is activated by having all other DC circuit breakers set to ON.
2. Set Auto Generator Start/Stop panel AUTO/MANUAL switch to AUTO.
3. Set Aries Processor (located behind Generator Start/Stop panel) to ON.
4. Set cabled Signal Head ON/OFF switch to ON and METER ON indicator switches to ON and AUTO TRAK.
5. If a remote signal head is used, then set its ON/OFF switch to ON and its radio to ON.

Surveillance Trailer Power Up Quick Reference

1. Ensure all circuit breakers and switches on the 120 VAC and +12 VDC panels located at electronic cabinet 1 are set to the OFF (down) position.
2. Ensure the AUTO/MANUAL switch on the Generator Auto Start/Stop Panel located at electronic cabinet 2 is set to MANUAL and the ARIES processor (located behind the panel) ON/OFF switch is set to OFF (down).
3. At trailer +12 VDC distribution box (gray box at side opposite to entry door), set the following circuit breakers to the ON (towards label) position in the order listed:

MAIN 12V, VENT FAN, ELECTRONIC DIST, LIGHTING, AUTO MAST

At the same +12 VDC distribution box, ensure the following are set to the OFF position:

STAB CONT

4. At trailer 120 VAC distribution box (gray box just to right of entry door), set the following circuit breakers to the ON (towards label) position in the order listed:

MAIN, GENERATOR, BAT CHARGER, AIR COMPRESSOR, 2 GFI DUPLEX (inside outlets), ELECTRONICS DIST, LIGHTING

At the same 120 VAC distribution box, ensure the following are set to the OFF position:

COMMERCIAL, AIR CONDITIONER, GFI RECEPTICAL (outside outlets)

5. Turn ON all circuit breakers and switches at both the +12 VDC and 120 VAC distribution panels located at electronic cabinet 1. Wait for the Wide Area Communications Controller (WACC) to boot up (approximately one minute). The single edge-mounted status indicator on each WACC circuit card will flash with a duty of cycle of approximately one second or less.
6. Ensure each power strip ON/OFF switch is set to the ON (up) position.
7. Set the Generator Auto Start/Stop Panel Aries Processor (located behind charge panel) ON/OFF switch to the 12 VDC ON (up) position. When the processor completes its boot up (less than five seconds), it will activate the generator off relay (relay closest to the processor) for 15 seconds. Observe light in relay when activated.
8. When the generator off relay is deactivated, set the Generator Auto Start/Stop Panel AUTO/MANUAL switch to the AUTO position.

Local Camera And Main Antenna Control Procedure

This procedure starts with the assumption that the surveillance trailer power up sequence is complete, the Generator Automatic Start/Stop Panel AUTO/MAN switch is set to AUTO, and the computer keyboard is connected to its wide area communications controller node.

1. At electronic cabinet 2, ensure that the REMOTE/LOCAL switch (located on the side of the cabinet and behind telephone jack) is set to the REMOTE position.
2. At the computer keyboard, set caps lock and type 8:A0 followed by return. This powers up the camera video and control systems and antenna movement control.
3. At the +12 VDC Distribution Panel located at electronic cabinet 1, set the RELAY BOARD switch to the OFF (down) position (allows local switching of cameras).
4. At electronic cabinet 2, set the REMOTE/LOCAL switch to the LOCAL position.
5. At electronic cabinet 2, ensure that the RS-232 cables are plugged into their respective camera control receiver/drivers.

At this point, the three mast mounted cameras and antenna can be controlled from the camera control keyboard.

6. Toggle the MON keyswitch until a 1 is displayed.
7. Select the unit to be controlled by entering its ID as shown in the table below. Then press the CAM keyswitch.

Unit ID	Description
xx	Surveillance Camera
lxx	VIP camera 1
2xx	VIP camera 2
3xx	Security Camera (This camera is fixed in position and, therefore, does not have a receiver/driver.)
4xx	Antenna

xx is the last two digits of the surveillance trailer license number.

8. To view a particular camera's video on the NTSC monitor, ensure the monitor is ON and select the video via switches 1 (surveillance), 2 (VIP 1), and 3 (VIP 2) on the video switcher located in electronic cabinet 2 (on the right). Switch 4 selects the security camera.
9. When finished, set REMOTE/LOCAL switch to REMOTE, RELAY BOARD switch at electronic cabinet 1 to ON, disconnect RS-232 cables from the antenna and VIP camera receiver/drivers (to prevent inadvertent remote movement), and type 8:K followed by return at the computer keyboard.

Surveillance Trailer Camera Selection Procedure

Each of the surveillance trailers has four cameras that can be selected via the single camera control keyboards located at the City of Anaheim TMC and the Caltrans District 12 TMC. The control keyboard at Caltrans is in the room that contains the Front End Processor (FEP). The cameras that can be controlled are: one color surveillance camera containing a zoom lens on a pan and tilt mechanism, two black and white cameras with fixed field of view (without a zoom lens) on pan and tilt heads, one black and white security camera with a fixed field of view directed towards the trailer access door (not on a pan and tilt mechanism). The single NTSC output of the video decoder installed at the Anaheim TMC is interfaced to Channel 22 of the video matrix switch. Only one video can be viewed at any one time at the Anaheim TMC.

To select a video image from a camera, perform the following at the camera control keyboard:

1. Ensure that a 1 is displayed on the LED display. If not displayed, depress and release the MON keyswitch until a 1 is displayed.
2. Select a camera at a particular trailer by entering the camera identification number (ID) followed by pressing the CAM keyswitch. The ID for each color surveillance camera is the last two digits of the license plate of the trailer on which the camera is located. Thus, the surveillance camera ID numbers are 09, 10, 11, 13, 14, and 15. IDs for the remaining cameras consist of the trailer ID preceded by a 1 (for VIP camera 1), 2 (for VIP camera 2), or 3 (for security camera). The number 4 allows control of the antenna. The table below lists the camera IDs for trailers 09 and 11 as examples.

Camera ID	Controlled Camera
09	Trailer 09 color surveillance camera
109	Trailer 09 VIP camera 1
209	Trailer 09 VIP camera 2
309	Trailer 09 security camera
11	Trailer 11 color surveillance camera
111	Trailer 11 VIP camera 1
211	Trailer 11 VIP camera 2
311	Trailer 11 security camera

As an example of actual keyswitch procedure, Trailer 11's black and white VIP camera 1 is selected by pressing the 1 keyswitch three times, and then pressing the CAM keyswitch. It may take several seconds for the video to appear on the monitor at the TMC due to the trailer powerup sequence and the time required for acquisition of the video data by the video decoder.

3. **IMPORTANT:** When finished viewing the desired surveillance trailer CCTV, turn off the trailer by entering surveillance camera ID (09, 10, 11, 13, 14, or 15). Then press OFF on the keyboard. When trailer operations are completed for the day, perform this OFF procedure for all six surveillance trailers to ensure that no trailers are accidentally left on due to a remote command. This will prevent waste of trailer generator fuel.

Maintenance Check List

1. GENERATOR

Place the trailer in manual mode when performing the following procedures on the generator. The keys for the security system cabinet are located in the long shelf above work bench.

- Check generator oil level every 150 hours of generator run time. Place AUTO/MANUAL switch located at charge panel to MANUAL before working on generator.
- Check generator air filter bimonthly and after strong wind conditions.
- Change oil and oil filter per Onan Owner's Manual instructions.
- Change fuel filter per Onan Owner's Manual instructions.

2. COMPRESSOR

- Compressor is self lubricated. No lubrication maintenance required.
- Check and clean air filter pad.

3. BATTERIES

- Check main battery fluid level at least twice a month.
- Check secondary battery fluid level at least twice a month.
- Check specific gravity of all batteries at least twice a month.
- Check and clean battery terminals and battery compartment as required.

4. MAST

Clean and oil mast whenever retracted. Clean with alcohol applied with cloth. Lubricate with TMD Mast Lubricant, Will Burt P/N 600. A can was supplied for each mast.

5. MISCELLANEOUS

- Check LPG tank fuel level.
- Ensure tires have adequate pressure (especially just prior to trailer movement).
- Ensure axles are adequately lubed (especially prior to trailer movement).
- Clean inside of trailer after heavy winds.

Appendix C:
Trailer Transport Data Sheets for Anaheim Special Event Test

Data Sheet in Support of Test Objective 1 (Examine Portability) of Individual Evaluation Plan for Test #2 - City of Anaheim					
Date:	3/26/97	Trailer Number:	111	Original Location: I-5 Northbound at Culver Drive	
Destination: Ball Road and SR-57 NB onramp			Towed By: Caltrans		
			Observed by: L. Klein		
Began	Hitched	Arrived	Set	Departed	Comments
7:48am					Tow vehicle arrived. Waited for Tadeo Lau to arrive before hooking up to trailer.
					Mast on trailer was extended when removal operations began.
8:00am					Oriented cameras and antenna for safe mast retraction
					- above task complete at 8:07am
					Manual mast retraction used as automatic mode not operational.
					Tadeo explaining to tow truck drivers how to park trailer at the destination.
	8:34am				
		8:59am			Phoenix Club Dr. and Ball Rd. Stopped to coordinate ramp closing with Ed Hepco so that trailer could be safely placed on the onramp pullout at SR-57 NB.
		9:06am			At ramp pullout location. Ramp closure to allow trailer to backup onto pullout area required 2 extra people.
		9:20am			Trailer at "preliminary" destination on pullout. Brian checking signal strength.
			9:24am		Trailer still hooked to tow vehicle. Mast raised. Checked camera FOV.
				9:45am	Stopped setup to go to the 2nd trailer (Trailer #113) so that Ed's tow crew could be released. Chock trailer tires, set outriggers. Right outrigger not working.
				9:48am	Tow vehicle detached. Tadeo and Brian will return either this afternoon or tomorrow to complete setup and test of video relay link.
				9:56am	Trailer door closed.
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					
Institutional Issue for future trailer use: Anaheim may not have vehicles nor funds to move trailers when the FOT ends.					
Perhaps funding will materialize if FOT demonstrates the benefits of the trailers for traffic management at special events.					
Anaheim must provide funding for training hours so that their personnel can learn how to setup and operate trailers.					

Data Sheet in Support of Test Objective 1 (Examine Portability) of Individual Evaluation Plan for Test #2 - City of Anaheim					
Date:	3/26/97	Trailer Number:	113	Original Location: I-5 Southbound at First Street	
Destination: Sunkist St. and Cerritos Ave.			Towed By: Caltrans		
(SE corner)			Observed by: L. Klein		
Began	Hitched	Arrived	Set	Departed	Comments
10:13am					Antenna rotated horizontally so it protrudes the least amount above the top railing during transport.
	10:35am				
		11:05am			
			11:20am		Trailer reoriented so that door faces Sunkist St.
					Setup ends with call to Anaheim TMC to see if they are receiving video.
					Could not turn on trailer from District 12 TMC because of an error in the programming of the new icons for the Anaheim FOT. Will be corrected this afternoon by Tadeo.
					Did turn on the trailer power and cameras from the Anaheim TMC at 12:10pm, but
					could not see video from Trailer #113 at the Anaheim TMC. Brian later fixed this problem at the Anaheim TMC.
				12:30pm	
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					

Data_115

Data Sheet in Support of Test Objective 1 (Examine Portability)					
of Individual Evaluation Plan for Test #2 - City of Anaheim					
Date:	3/27/97	Trailer Number:	115	Original Location: I-5 NB in Main Place Caltrans Pullout near CA-22 West offramp	
Destination: Cerritos Ave. and State College Blvd. (NE corner)			Towed By: Caltrans Observed by: L. Klein		
Began	Hitched	Arrived	Set	Departed	Comments
7:59am					Tadeo arrives.
8:01am					Tow vehicle arrives.
8:03am					Drop mast procedure begins.
8:24am					Raise hitch on trailer to better level trailer in tow.
8:30am					Safety chain clamps missing. Tadeo leaves to retrieve some clamps from a trailer moved yesterday.
8:50am					Tadeo returns with clamps.
	8:51am				
		9:12am			
			9:25am		Raise mast.
				9:52am	Anaheim TMC turned on the trailer remotely. Also verified that Anaheim TMC could turn on Trailers 111 and 113. Test complete.
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					

Data Sheet in Support of Test Objective 1 (Examine Portability)					
of Individual Evaluation Plan for Test #2 - City of Anaheim					
Date:	4/2/97	Trailer Number:	115	Original Location: State College and Cerritos (NE corner)	
Destination: Cerritos and Sunkist (SW corner)				Towed By: Caltrans	
				Observed By: L. Klein	
Began	Hitched	Arrived	Set	Departed	Comments
8:10am					Open trailer door, stop generator, record generator on time in log, lower mast, rotate and stow cameras and antenna, secure hatch, raise outriggers.
	8:27am				
		8:31am			
			8:45am		
				9:03am	Verified control by Anaheim TMC
				9:07am	Departed
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					

Data Sheet in Support of Test Objective 1 (Examine Portability)					
of Individual Evaluation Plan for Test #2 - City of Anaheim					
Date:	4/2/97	Trailer Number:	113	Original Location: Cerritos Ave. and Sunkist St. (SE corner)	
Destination: State College & Cerritos (NE corner)				Towed By: Caltrans	
				Observed By: L. Klein	
Began	Hitched	Arrived	Set	Departed	Comments
9:15am					Open trailer door, turn off generator, record generator on time (this generator was on manual), lower mast, rotate and stow cameras and antenna, secure hatch, raise outriggers.
9:25am					Began to back tow vehicle into position - tight space available in parking lot because of where other passenger cars were parked.
	9:34am				
		9:40am			Gardening crew temporarily parked in trailer site parking spaces.
			9:50am		Trailer in place.
				10:03am	Verified control by Anaheim TMC.
				10:10am	Depart
NOTES FOR KEYBOARD CONTROLS:					
8:A0 (ENTER) to turn on power controller in the trailer					
8:K (ENTER) to turn off (kill) power controller					
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					

Data Sheet in Support of Test Objective 1 (Examine Portability)					
of Individual Evaluation Plan for Test #2 - City of Anaheim					
Date: 4/8/97		Trailer Number: 111		Original Location: SR-57 and Ball Rd (NB on-ramp pullout area)	
Destination: Cerritos Av. & Sunkist Rd. (SW corner)				Towed By: Caltrans (smaller tow vehicle used)	
				Observed By: L. Klein	
Began	Hitched	Arrived	Set	Departed	Comments
9:00 a.m.					
9:12 a.m.					Prehitch preparations complete.
					Lower trailer hitch donut to better mate with tow vehicle.
	9:23 a.m.				Hitched.
	9:32 a.m.				Trailer lights checked. Electrical connector had to be pushed more securely into tow vehicle receptacle.
		9:44 a.m.			Temporarily stow trailer in SE corner parking lot. Plan is to move Trailer 115 to SR-57 and Ball Rd. Then move Trailer 111 into SW corner parking lot (in place vacated by 115) because the camera image is better from this location for viewing Pond egress traffic (less blockage by trees).
	10:56 a.m.				Tow vehicle at SE corner parking lot to hitch up to Trailer 111 for the second time.
	10:58 a.m.				Hitched to Trailer 111 in SE corner parking lot.
		11:01 a.m.			At SW corner parking lot.
			11:06 a.m.		Rotate antenna and cameras.
			11:16 a.m.		Trailer turned on by Anaheim TMC. Receiving a "good" image. Turned off by TMC.
				11:20 a.m.	Depart.
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					

[illegible]

Data Sheet in Support of Test Objective 1 (Examine Portability)					
of Individual Evaluation Plan for Test #2 - City of Anaheim					
Date:	5/6/97	Trailer Number:	115	Original Location: I-5 at Main Place Mall nr CA 22 west exit	
Destination: Cerritos Av & Sunkist St (SW corner)				Towed By: Caltrans large tow truck	
				Observed By: L. Klein	
Began	Hitched	Arrived	Set	Departed	Comments
7:35am					Battery dead. Tried to jump start, but trailer still did not start.
					Problem turned out to be a defective starter in the generator.
					The defective generator was replaced by Hughes in the afternoon with one from a trailer still on the Hughes lot.
8:35am					Finished stowing mast and other tasks in preparation for move to Cerritos & Sunkist.
	8:45am				
		9:02am			Arrived at Cerritos and Sunkist.
			9:15am		Outriggers deployed. Mast not deployed and signal transmission not checked because trailer could not be turned on.
					Comment by Larry Hazuka: The person driving the large tow truck appeared to be more skilled in backing the trailer into position than the previous crew.
					Therefore, the issue is one of tow-truck operator skill and not large vs. small tow truck that affects the time it takes to position the surveillance trailer.
				9:16am	
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					

[illegible]

Data Sheet in Support of Test Objective 1 (Examine Portability)					
of Individual Evaluation Plan for Test #2 - City of Anaheim					
Date:	5/6/97	Trailer Number:	113	Original Location: I-5 Southbound at First Street	
Destination: Ball Rd at SR-57 NB onramp			Towed By: Caltrans		
			Observed By: L. Klein		
Began	Hitched	Arrived	Set	Departed	Comments
9:32am					Arrived at I-5 and First Street.
9:42am					Finished stowing mast and other predeparture tasks.
	9:48am				Hitched.
	9:50am				Leave I-5 and First Street site.
		10:10am			Arrived at Ball Rd at SR-57 NB onramp.
			10:42am		Trailer turned on by Anaheim TMC. Picture at TMC was "changing color."
			10:45am		Tadeo and Hughes will try to improve the signal transmission link.
				10:55am	Left for Anaheim TMC to instruct the TMC operator for tonight's data collection and to observe the video reception.
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					

Appendix D:
Camera Operability Data Sheets for Anaheim Special Event Test

DATASH_2XLS

Camera Image and Control Operability Check Data Sheet Support of Test Objective 2 (Trailers Work for Traffic Management) Individual Evaluation Plan for Test #2 - City of Anaheim												
Date: 4/1/97 Event: HOCKEY Data taken by: CWT		Trailer Number: 111		Trailer Location: BALL 157 Weather/Visibility: CLEAR - WINDY								
PART 1												
Operability Check		Image	Camera 1 Pan	Tilt	Zoom	Image	Camera 2 Pan	Tilt	Image	Camera 3 Pan	Tilt	Camera 4 Image
6:00	1	X	X	X	X	X	X	X	X	X	X	X
6:30	2	X	X	X	X	X	X	X	X	X	X	X
	3											
	4											
	5											
	6											
	7											
	8											
	9											
	10											
	11											
	12											
	13											
	14											
	15											
	16											
Camera 1 = Surveillance camera (color) Camera 2 = VIP camera #1 (black and white) Camera 3 = VIP camera #2 (black and white) Camera 4 = Security camera (black and white)												
* positive response (camera image available or control available) * negative response (camera image not available or control not available)												

Brian & Scott went to trailer to check out the reason for the weak video.
Turn off trailer ^{from TMC} at 6:35pm per request from Brian when he reached trailer.

If cameras are useful for traffic mgmt at this event, then a different preprogrammed timing plan will be implemented for the affected signal.

Camera Image and Control Operability Check Data Sheet in Support of Test Objective 2 (Trailers Work for Traffic Management) of Individual Evaluation Plan for Test #2 - City of Anaheim									
Date: <u>4/8/97</u>	Trailer Number:			Trailer Location:					
Event: <u>HOCKEY</u>				Weather/Visibility:					
Data taken by:				PART 2					
For each x entered in Part 1 of the data sheet enter an explanation below to characterize the problem.									
Problem Number	Description								
1	"UNKNOWN"								
2									
3	BAD DATA CARD POSSIBLE								
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

DATASH_2XLS

Camera Image and Control Operability Check Data Sheet
in Support of Test Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #2 - City of Anaheim

Date: 8/1/97

Trailer Number: #113

Trailer Location:

CERRITOS/SUNKEST

Event: HOV 3+

Weather/Visibility:

CLEAR - WINDY at start of event

Data taken by: Curb

PART 1

Operability Check		Image	Camera 1 Pan	Tilt	Zoom	Image	Camera 2 Pan	Tilt	Image	Camera 3 Pan	Tilt	Camera 4 Image
6 PM	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6:40	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7:05	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7:30	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8:00	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8:30	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9:00	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	8											
	9											
	10											
	11											
	12											
	13											
	14											
	15											
	16											

Camera 1 = Surveillance camera (color)
Camera 2 = VIP camera #1 (black and white)
Camera 3 = VIP camera #2 (black and white)
Camera 4 = Security camera (black and white)

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Camera #1: SB approach of Sunkeist @ Cerritos.

Camera #2: WB of Cerritos at Sunkeist approach.

Camera #3: WB approach of Cerritos at Sunkeist.

Were able to switch bet. #113 & 115 trailers as often as needed to monitor traffic flow during

Camera Image and Control Operability Check Data Sheet									
in Support of Test Objective 2 (Trailers Work for Traffic Management)									
of Individual Evaluation Plan for Test #2 - City of Anaheim									
Date:		Trailer Number:		Trailer Location:					
Event:				Weather/Visibility:					
Data taken by:									
PART 2									
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem.									
Problem Number	Description								
1	IRIS OPENING TO BRIGHT								
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

D12 TMC: 724-2951
-2400

DATASH_2XLS

D-7

Camera Image and Control Operability Check Data Sheet
in Support of Test Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #2 - City of Anaheim

Date: 4/1/97
Event: HOCKEY
Data taken by: Curt

Trailer Number: 215

Trailer Location: CERRITOS/ST COLLEGE
Weather/Visibility: CLEAR - WINDY at start of event.

PART 1

Operability Check		Image	Camera 1 Pan	Tilt	Zoom	Image	Camera 2 Pan	Tilt	Image	Camera 3 Pan	Tilt	Camera 4 Image
6 PM	1	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6:45	2	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7:05	3	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7:35	4	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8:05	5	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8:35	6	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9:05	7	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	8											
	9											
	10											
	11											
	12											
	13											
	14											
	15											
	16											

Camera 1 = Surveillance camera (color)
Camera 2 = VIP camera #1 (black and white)
Camera 3 = VIP camera #2 (black and white)
Camera 4 = Security camera (black and white)

/ = positive response (camera image available or control available)
X = negative response (camera image not available or control not available)

Camera 1: WB approach of Cerritos @ State College Blvd.
Camera 2: " " " " " " " "

Camera 3: View EB ~~upper~~ traffic on ~~State~~ Cerritos Ave.

Three blocks more effective use of
1 Camera 215 (Camera 3) from observing EB traffic on Cerritos Ave.

DATA_2B.XLS

Camera Image and Control Operability Check Data Sheet in Support of Test Objective 2 (Trailers Work for Traffic Management) of Individual Evaluation Plan for Test #2 - City of Anaheim				
Date:	Trailer Number:	Trailer Location:		
Event:		Weather/Visibility:		
Data taken by:		PART 2		
For each x entered in Part 1 of the data sheet enter an explanation below to characterize the problem.				
Problem Number	Description			
1	IMAGE GRAINY CAMERA 2/15			
2	IMAGE TO BRIGHT CAMERA 3/15 Grainy ON 1/15			
3	Image too bright on camera 3/15			
4	Image Grainy (dark) on 1/15.			
5	Cannot tell if camera is P/T/2 because image is too dark.			
7:356	IMAGE GRAINY ON 15.			
8:057	"			
8:358	"			
9:059	"			
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Camera Image and Control Operability Check Data Sheet												
in Support of Test Objective 2 (Trailers Work for Traffic Management)												
of Individual Evaluation Plan for Test #2 - City of Anaheim												
Date: 9/4/97	Trailer Number: 111	Trailer Location: BALL RD / SR 57 FWY										
Event: HOCKEY	Weather/Visibility: CLEAR											
Data taken by: CSSB												
PART 1												
Operability	Camera 1				Camera 2			Camera 3			Camera 4	
Check	Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image	
1710 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1740 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1800 3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1900 4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2010 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2125 6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
Camera 1 = Surveillance camera (color)					W APPROACH AT BALL / SR 57 FWY							
Camera 2 = VIP camera #1 (black and white)					N/B OFF RAMP BALL / SR 57 FWY							
Camera 3 = VIP camera #2 (black and white)					QB BALL / SR 57 FWY							
Camera 4 = Security camera (black and white)												
✓ = positive response (camera image available or control available)												
x = negative response (camera image not available or control not available)												

THIS IS A BETTER POSITION FOR CAMERAS
THAT PREVIOUS SITE.

Outbound finished @ 10:55pm
from Pond Traffic. Baseball
on a football game.

Camera Image and Control Operability Check Data Sheet									
in Support of Test Objective 2 (Trailers Work for Traffic Management)									
of Individual Evaluation Plan for Test #2 - City of Anaheim									
Date:		Trailer Number:		Trailer Location:					
Event:				Weather/Visibility:					
Data taken by:									
				PART 2					
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem .									
Problem Number			Description						
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Camera Image and Control Operability Check Data Sheet
In Support of Test Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #2 - City of Anaheim

Date: 9/4/92 Trailer Number: 113 Trailer Location: ST. COLLEGE / CERRITOS
 Event: HOCKEY Weather/Visibility: CLEAR
 Data taken by: CSB

PART 1

Operability Check	Camera 1				Camera 2			Camera 3			Camera 4
	Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image
1710 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1740 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1800 3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1915 4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1920 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2025 6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2125 7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8											
9											
10											
11											
12											
13											
14											
15											
16											

LANES

Camera 1 = Surveillance camera (color) W/B APPROACH CERRITOS AT ST. COLLEGE
 Camera 2 = VIP camera #1 (black and white) W/B APPROACH CERRITOS AT ST. COLLEGE
 Camera 3 = VIP camera #2 (black and white) E/B TRAFFIC IN INTERSECTION CERRITOS / ST. COLLEGE
 Camera 4 = Security camera (black and white)

/ = positive response (camera image available or control available)
 x = negative response (camera image not available or control not available)

Camera Image and Control Operability Check Data Sheet	
in Support of Test Objective 2 (Trailers Work for Traffic Management)	
of Individual Evaluation Plan for Test #2 - City of Anaheim	
Date:	Trailer Number: Trailer Location:
Event:	Weather/Visibility:
Data taken by:	PART 2
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem .	
Problem Number	Description
1920 1	IMAGE TOO DARK - IRIS NEED ADJUSTING
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

Camera Image and Control Operability Check Data Sheet in Support of Test Objective 2 (Trailers Work for Traffic Management) of Individual Evaluation Plan for Test #2 - City of Anaheim												
Date: 4/4/97		Trailer Number: 115		Trailer Location: CERRITOS / SUNKIST								
Event: HOVBY		Weather/Visibility: CLEAR										
Data taken by: CSB												
PART 1												
Operability Check	Camera 1				Camera 2			Camera 3			Camera 4	
	Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image	
1710 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1740 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1800 3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1925 4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2015 5	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2230 6	X	✓	✓	✓	X	✓	✓	X	✓	✓	X	
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
Camera 1 = Surveillance camera (color)				W/B APPROACH CERRITOS AT SUNKIST								
Camera 2 = VIP camera #1 (black and white)				E/B LANES CERRITOS AT SUNKIST								
Camera 3 = VIP camera #2 (black and white)				S/B APPROACH CERRITOS AT SUNKIST								
Camera 4 = Security camera (black and white)												
/ = positive response (camera image available or control available)												
x = negative response (camera image not available or control not available)												

← REACCESSSED
TRAILER DOWND
NO PROBLEM W/
IMAGE

SUNKIST

Camera Image and Control Operability Check Data Sheet	
In Support of Test Objective 2 (Trailers Work for Traffic Management)	
of Individual Evaluation Plan for Test #2 - City of Anaheim	
Date:	Trailer Number:
Event:	Trailer Location:
Data taken by:	Weather/Visibility:
PART 2	
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem .	
Problem Number	Description
2015 1	IMAGE TOO DARK - IRI'S NEEDS ADJUSTING
22302	COLOR BARS MISSING S/G.M.1 CAMERAS 15/1157 215/215
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

Camera Image and Control Operability Check Data Sheet													
in Support of Test Objective 2 (Trailers Work for Traffic Management)													
of Individual Evaluation Plan for Test #2 - City of Anaheim													
Date: 4/9/97		Trailer Number: 111		Trailer Location: CERRITOS / SUNKIST									
Event: HOCKEY		Weather/Visibility: CLEAR - WINDY											
Data taken by: CSB													
PART 1													
Operability Check		Camera 1				Camera 2			Camera 3			Camera 4	
		Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image	
1730	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1830	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1830	3												
1930	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2035	5	X	✓	✓	✓	X	✓	✓	X	✓	✓	X	
2124	6	X	✓	✓	✓	X	✓	✓	X	✓	✓	✓	
	7												
	8												
	9												
	10												
	11												
	12												
	13												
	14												
	15												
	16												
S/B APPROACH SUNKIST & CERRITOS													
(E/S LANES CERRITOS W/O SUNKIST)													
S/B APPROACH SUNKIST & CERRITOS													
Camera 1 = Surveillance camera (color)													
Camera 2 = VIP camera #1 (black and white)													
Camera 3 = VIP camera #2 (black and white)													
Camera 4 = Security camera (black and white)													
/ = positive response (camera image available or control available)													
x = negative response (camera image not available or control not available)													

Duplicate event: Baseball @ Anaheim Stadium + Hockey at the Pond. Hockey game ended before the baseball game.

D-16

DATASH_2.XLS

Camera Image and Control Operability Check Data Sheet									
in Support of Test Objective 2 (Trailers Work for Traffic Management)									
of Individual Evaluation Plan for Test #2 - City of Anaheim									
Date:	Trailer Number:	Trailer Location:							
Event:			Weather/Visibility:						
Data taken by:	PART 2								
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem .									
Problem Number	Description								
20351	FLAKY IMAGE (COLORBARS) ALL CAMERAS								
21242	"								
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Camera Image and Control Operability Check Data Sheet												
In Support of Test Objective 2 (Trailers Work for Traffic Management)												
of Individual Evaluation Plan for Test #2 - City of Anaheim												
Date: 4/9/97	Trailer Number: 113	Trailer Location: CERRITOS / ST. COLLEGE										
Event: HOCKEY	Weather/Visibility: CLEAR - WINDY											
Data taken by: CSB												
PART 1												
Operability	Camera 1				Camera 2			Camera 3			Camera 4	
Check	Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image	
1745 1	X	X	X	X	X	X	X	X	X	X	X	
1855 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1935 3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2040 4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2127 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
Camera 1 = Surveillance camera (color) E/B LAJES CERRITOS E/O ST. COLLEGE												
Camera 2 = VIP camera #1 (black and white) E/B APPROACH CERRITOS AT ST. COLLEGE												
Camera 3 = VIP camera #2 (black and white) W/B TRAFFIC MID-INTERSECTION												
Camera 4 = Security camera (black and white)												
/ = positive response (camera image available or control available)												
x = negative response (camera image not available or control not available)												

Camera Image and Control Operability Check Data Sheet									
In Support of Test Objective 2 (Trailers Work for Traffic Management)									
of Individual Evaluation Plan for Test #2 - City of Anaheim									
Date:	Trailer Number:		Trailer Location:						
Event:			Weather/Visibility:						
Data taken by:			PART 2						
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem .									
Problem Number	Description								
1745	1	TRAILER NON-RESPONSIVE							
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
	11								
	12								
	13								
	14								
	15								
	16								
	17								
	18								
	19								
	20								
	21								
	22								
	23								
	24								
	25								

* Rick Anderson was already working the problem at the trailer.
 Realigned the antenna to increase signal strength.

Camera Image and Control Operability Check Data Sheet												
in Support of Test Objective 2 (Trailers Work for Traffic Management)												
of Individual Evaluation Plan for Test #2 - City of Anaheim												
Date: 4/7/97	Trailer Number: 115	Trailer Location: BALL RD. / SR-57 FREEWAY										
Event: HOCKEY	Weather/Visibility: CLEAR - WINDY											
Data taken by: CSB												
PART 1												
Operability	Camera 1 *				Camera 2			Camera 3			Camera 4	
Check	Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image	
1753 1	X	✓	✓	✓	X	✓	✓	X	✓	✓	✓	
1850 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1940 3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2043 4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2130 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
Camera 1 = Surveillance camera (color) W/B APPROACH BALL RD / SR-57 FREEWAY												
Camera 2 = VIP camera #1 (black and white) N/B OFF RAMP SR-57 FWY / BALL												
Camera 3 = VIP camera #2 (black and white) E/B LANES BALL W/D N/B OFF RAMP												
Camera 4 = Security camera (black and white)												
/ = positive response (camera image available or control available)												
x = negative response (camera image not available or control not available)												
* = IMAGE GRAINY & DARK AFTER DUSK												

D-20

DATASH_2.XLS

Camera Image and Control Operability Check Data Sheet									
In Support of Test Objective 2 (Trailers Work for Traffic Management)									
of Individual Evaluation Plan for Test #2 - City of Anaheim									
Date:		Trailer Number:		Trailer Location:					
Event:				Weather/Visibility:					
Data taken by:									
				PART 2					
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem .									
Problem Number				Description					
1753 1				FLAKEY IMAGE (COLOR-BARS) CAMERA 15, 115, 1213					
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Camera Image and Control Operability Check Data Sheet												
In Support of Test Objective 2 (Trailers Work for Traffic Management)												
of Individual Evaluation Plan for Test #2 - City of Anaheim												
Date:	5/6/97	Trailer Number:	113	Trailer Location:	Ball + SR-57C NB on ramp)							
Event:	Ducks Playoff Game			Weather/Visibility:								
Data taken by:	Toan Tran											
Caltrans Number:	724-2607											
PART 1												
Operability	Camera 1 (Color)				Camera 2			Camera 3			Camera 4	
Check	Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image	
5:30 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6:30 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
7:30 3	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	
8:30 4	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	
9:30 5	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	
10:30 6	x	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
Camera 1 = Surveillance camera (color)												
Camera 2 = VIP camera #1 (black and white)												
Camera 3 = VIP camera #2 (black and white)												
Camera 4 = Security camera (black and white)												
/ = positive response (camera image available or control available)												
x = negative response (camera image not available or control not available)												

Interview of Toan by L. Klein on 5/7/97 @ 3 PM:
 Imagery from the trailer ^(on Cerritos and Sunkist) was useful in setting timing plan for traffic exiting the Pond & turning left on Sunkist, heading towards Katella. When building the timing plan to allow for maximum left signal timing.

Camera Image and Control Operability Check Data Sheet									
in Support of Test Objective 2 (Trailers Work for Traffic Management)									
of Individual Evaluation Plan for Test #2 - City of Anaheim									
Date:	5/6/97	Trailer Number:	113	Trailer Location:					
Event:		Weather/Visibility:							
Data taken by:									
PART 2									
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem .									
Problem Number	Description								
X 1	good image, but fast picture flash too much about 1/sec								
2									
3									
4									
5									
X 6	good image, flashing too much.								
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Interview of Toan by L. Klein on 5/7/97 @ 3 PM:

Flashing means video was changing color.

Larry Kiehl
(714) 996-9066

Datash_2.xls

D-23

Camera Image and Control Operability Check Data Sheet												
in Support of Test Objective 2 (Trailers Work for Traffic Management)												
of Individual Evaluation Plan for Test #2 - City of Anaheim												
Date: 5/6/97		Trailer Number: 115			Trailer Location: Cerritos + SunKist							
Event: Ducks Playoff Game		Weather/Visibility:										
Data taken by: Toan Tran												
PART 1												
Operability	Camera 1 (Color)				Camera 2			Camera 3			Camera 4	
Check	Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image	
5:35 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6:35 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
7:35 3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
8:35 4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
9:35 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
10:35 6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
Camera 1 = Surveillance camera (color)												
Camera 2 = VIP camera #1 (black and white)												
Camera 3 = VIP camera #2 (black and white)												
Camera 4 = Security camera (black and white)												
/ = positive response (camera image available or control available)												
x = negative response (camera image not available or control not available)												

Camera Image and Control Operability Check Data Sheet									
in Support of Test Objective 2 (Trailers Work for Traffic Management)									
of Individual Evaluation Plan for Test #2 - City of Anaheim									
Date: 5/6/07	Trailer Number: 115	Trailer Location:							
Event:			Weather/Visibility:						
Data taken by:									
			PART 2						
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem .									
Problem Number	Description								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Datash_2.xls

D-25

Camera Image and Control Operability Check Data Sheet in Support of Test Objective 2 (Trailers Work for Traffic Management) of Individual Evaluation Plan for Test #2 - City of Anaheim												
Date 5-8-97		Trailer Number 113			Trailer Location Ball & Phoenix							
Event HOCKEY GAME					Weather/Visibility							
Data taken by NIVINE GEORGES												
PART 1												
Operability Check		Camera 1				Camera 2			Camera 3			Camera 4
		Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image
6:00	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7:00	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8:00	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9:00	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10:00	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11:00	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	7											
	8											
	9											
	10											
	11											
	12											
	13											
	14											
	15											
	16											

Camera 1 = Surveillance camera (color)
 Camera 2 = VIP camera #1 (black and white)
 Camera 3 = VIP camera #2 (black and white)
 Camera 4 = Security camera (black and white)

/- positive response (camera image available or control available)
 x- negative response (camera image not available or control not available)

Camera Image and Control Operability Check Data Sheet	
in Support of Test Objective 2 (Trailers Work for Traffic Management)	
of Individual Evaluation Plan for Test #2 - City of Anaheim	
Date:	Trailer Number:
Event:	Trailer Location:
Data taken by:	Weather/Visibility:
PART 2	
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem.	
Problem Number	Description
1	
2	
3	
4	camera 1: picture not clear (snowy)
5	"
6	"
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

Comments:

- Picture of camera 1:
not very clear, little
bit fuzzy (when it is dark
outside)
- The camera was not used for
inbound because most cars
come in ... on Ball Rd.
& Katella.

The camera would have been
used for outbound, except
that outbound didn't start
until 12:30 and camera
was turned off after 11pm
check.

Datash_2.xls

D-27

Camera Image and Control Operability Check Data Sheet in Support of Test Objective 2 (Trailers Work for Traffic Management) of Individual Evaluation Plan for Test #2 - City of Anaheim												
Date 5-8-97 Trailer Number: 115				Trailer Location: Carrizos & Sunlight								
Event HOCKEY GAME				Weather/Visibility:								
Data taken by: NIVINE GEORGES												
PART 1												
Operability Check	Camera 1				Camera 2			Camera 3			Camera 4	
	Image	Pan	Tilt	Zoom	Image	Pan	Tilt	Image	Pan	Tilt	Image	
1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												

Camera 1 = Surveillance camera (color)
 Camera 2 = VIP camera #1 (black and white)
 Camera 3 = VIP camera #2 (black and white)
 Camera 4 = Security camera (black and white)

/ = positive response (camera image available or control available)
 x = negative response (camera image not available or control not available)

D-28

Datash_2.xls

Camera Image and Control Operability Check Data Sheet in Support of Test Objective 2 (Trailers Work for Traffic Management) of Individual Evaluation Plan for Test #2 - City of Anaheim									
Date	Trailer Number:	Trailer Location:							
Event	Weather/Visibility:								
Data taken by	PART 2								
For each x entered in Part 1 of the data sheet, enter an explanation below to characterize the problem									
Problem Number	Description								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
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21									
22									
23									
24									
25									

Appendix E:
Trailer Transport Data Sheets for I-5 Test

Data Sheet in Support of Test Objective 1 (Examine Portability)					
of Individual Evaluation Plan for Test #1 - Interstate 5					
Date:	4/10/97	Trailer Number:	111	Original Location: Cerritos Ave & Ball Rd	
Destination: I-5 NB at Culver Drive on-ramp				Towed By: Caltrans using small boom truck as tow vehicle	
				Observed By: L. Klein	
Began	Hitched	Arrived	Set	Departed	Comments
8:09 a.m.					
	8:24 a.m.				Going to Orange Caltrans Yard to inflate trailer tires.
		8:45 a.m.			At Caltrans Yard.
		8:55 a.m.			Leave Caltrans Yard.
		9:12 a.m.			At I-5 and Culver Drive site.
			9:17 a.m.		Begin to raise mast and turn on equipment.
					To save time, antenna not aligned with Union Bank relay site. Tadeo will return
					next week to complete setup. Setup time is an issue this day because of
					scheduled 2 p.m. meeting at D12. Need to assure that all trailers are deployed
					along I-5 before 2 p.m.
				9:27 a.m.	Depart.
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					

Data Sheet in Support of Test Objective 1 (Examine Portability)					
of Individual Evaluation Plan for Test #1 - Interstate 5					
Date: 4/10/97		Trailer Number:		115	Original Location: SR-57 NB on-ramp at Ball Road
Destination: I-5 at Main Place					Towed By: Caltrans using small boom truck as tow vehicle
(near SR-22 Westbound exit)					Observed By: L. Klein
Began	Hitched	Arrived	Set	Departed	Comments
11:05 a.m.					
	11:14 a.m.				
		11:40 a.m.			Did not add air to this trailer's tires. Tow vehicle made wrong turn on fwy, adding time to the move.
			11:45 a.m.		Color bar noise at Anaheim TMC when they turned on the trailer. Moved trailer location several times in the parking area in an attempt to improve the signal strength.
				12:40 a.m.	Depart.
					Suggestion by tow vehicle operator: Replace the hooks on the brake safety chain with a hook that has a spring latch to close the opening when it is attached to the tow vehicle.
Number of minutes to Hitch = "Began" - "Hitched":					
Number of minutes to Transport = "Hitched" - "Arrived":					
Number of minutes to Setup = "Arrived" - "Set":					
Number of minutes to Make Operational = "Set" - "Departed":					

Data Sheet in Support of Test Objective 1 (Examine Portability) of Individual Evaluation Plan for Test #1 - Interstate 5				
Date:	6/3/97	Trailer Number:	110 (Surv. Trailer)	Original Location: Hughes Fullerton lot
Destination: I-5 NB on-ramp at Jamboree Rd.				Towed By: Caltrans large boom truck
				Observed By: L. Klein
Began	Hitched	Arrived	Set	Departed
9:27am				
	9:52am			
	10:05am			
	10:15am			
		10:55am		
			11:13am	
			11:57am	
			12:12pm	
			12:25pm	
			12:35pm	
			1:10pm	
Comments				
Lower hitch on trailer to better align with hitch on tow truck				
Brake lights on trailer not working. Isolated problem to wiring on trailer. Brake lights work if flashers are on. Will travel with flashers on.				
Wash trailer at Hughes				
Leave Hughes lot				
Arrive at I-5 location				
Mast raised				
Good signal from relay site: measured about 8.0 volts				
Lower mast to adjust stops on color surv camera to allow viewing of NB & SB traffic				
Cameras and antenna operational again				
Trailer turned on from Anaheim TMC (icons not installed at D12 TMC). Good video at Anaheim TMC.				
Start verifying sequence of ramp meter signals in response to commands from 170 controller. Once this task is complete, plan is to set up AutoScope detection zones on the ramp and see if the ramp meter signal responds properly to vehicles crossing the detection zone.				
Number of minutes to Hitch = "Hitched" - "Began":				
Number of minutes to Transport = "Arrived" - "Hitched":				
Number of minutes to Setup = "Set" - "Arrived":				
Number of minutes to Make Operational = "Departed" - "Set":				

Data Sheet in Support of Test Objective 1 (Examine Portability) of Individual Evaluation Plan for Test #1 - Interstate 5					
Date:	6/3/97	Trailer Number:	19280 (Ramp Trailer)	Original Location: Hughes Fullerton lot	
Destination:	I-5 NB on-ramp at Jamboree Rd.			Towed By: Caltrans large sign truck	
				Observed By: L. Klein	
Began	Hitched	Arrived	Set	Departed	Comments
9:09am					Start backup of tow truck to trailer
	9:15am*				Wash trailer at Hughes before towing to I-5
	10:15am				Leave Hughes lot
		10:55am			Arrive at I-5 on-ramp, which was already closed in anticipation of trailer arrival
		11:17am			Ramp meter trailer located at side of ramp. Begin setup of signal head.
			11:34am		Level signal head base & place sand bags under & on signal head base
			11:46am		Boom in place to lift upper part of signal head onto base
			11:49am		Upper signal head bolted onto base section
			11:53am		Reposition base so that car at stop line can see lower set of signals
			12:12pm		Place plastic bag covers over the permanent signal heads to indicate they are not in use. Align upper signal head of temp. signal with the ramp lane geom.
					Tape over "Two cars per green" sign on upper signal head.
			12:35pm		Finished with above tasks.
			12:41pm		Bring "Meter On" sign and solar panel to their location at ramp entrance
			1:05pm		Meter On sign installed at entrance to on-ramp
			1:10pm		Start verifying sequence of ramp meter signals in response to 170 commands
Number of minutes to Hitch = "Hitched" - "Began":					
Number of minutes to Transport = "Arrived" - "Hitched":					
Number of minutes to Setup = "Set" - "Arrived":					
Number of minutes to Make Operational = "Departed" - "Set":					
* Need to add hooks to tow truck for properly attaching the trailer's safety brake cable.					

Data Sheet in Support of Test Objective 1 (Examine Portability)					
of Individual Evaluation Plan for Test #1 - Interstate 5					
Date: 6/14/97		Trailer Number: 109 (Surv. Trailer)		Original Location: Hughes Fullerton lot	
Destination: I-5 NB at Grand Avenue				Towed By: Caltrans large boom truck (Driver + assistant)	
				Observed By: L. Klein	
Began	Hitched	Arrived	Set	Departed	Comments
5:48a.m.					Trailer equipment (mast, cameras) were stowed before boom truck arrived.
5:50a.m.					Raise hitch on trailer to mate with tow truck.
					Discussion of low air pressure in trailer tires.
6:09a.m.					Hitched (except for safety chain). Brake lights work with flashers on.
	6:25a.m.				Search for "D-clamps" for safety chain connection to tow truck - chain attached.
	6:29a.m.				Wash trailer.
	7:18a.m.				Tires pumped. Depart Hughes.
		7:50a.m.			
		8:11a.m.			Reset trailer so that door faces freeway.
			8:30a.m.		Mast up. Check camera FOV.
			8:47a.m.		Pull trailer forward (farther from ramp) to get better view of ramp traffic and to layout ramp passage, demand, and queue detection zones.
			8:55a.m.		Trailer set again. Adjust electronic limit stops on color and B/W cameras.
			9:55a.m.		Stops adjusted. Mast raised. Align antenna for maximum signal strength.
			10:30a.m.		Update AutoScope operating software with new version supplied by Econolite.
			10:35a.m.		Start to connect ramp meter power supply to signal head on left side of ramp.
			11:00a.m.		Set up AutoScope ramp detection zones.
			11:10a.m.		Check ramp signals as controlled by 170.
			11:15a.m.		Signals work.
			11:20a.m.		Meter-on sign not working.
			11:23a.m.		Brain and Tadeo continue setup until 12:30p.m. Further details on ramp meter trailer log.
				1:00p.m.	Depart
Number of minutes to Hitch = "Hitched" - "Began":					
Number of minutes to Transport = "Arrived" - "Hitched":					
Number of minutes to Setup = "Set" - "Arrived":					
Number of minutes to Make Operational = "Departed" - "Set":					

Data Sheet in Support of Test Objective 1 (Examine Portability) of Individual Evaluation Plan for Test #1 - Interstate 5					
Date:	6/14/97	Trailer Number:	17368 (Ramp Trailer)		Original Location: Hughes Fullerton lot
Destination:	I-5 NB at Grand Avenue				Towed By: Caltrans large sign truck (Driver only)
					Observed By: L. Klein
Began	Hitched	Arrived	Set	Departed	Comments
6:00a.m.					
6:03a.m.					Raise hitch.
	6:15a.m.				Difficult to attach safety chain to tow truck because of small chain clearance on truck..
					Move signal light section with solar panel toward rear of ramp trailer so that the
					tow truck does not hit the panel when making turns.
	7:18a.m.				Trailer washed, tires pumped, depart Hughes.
		7:50a.m.			First stop at bottom of ramp to remove meter-on sign. Ramp already closed when
					we arrived. Additional 2 pickup trucks and 2 small boom trucks with 5 other Caltrans
					personnel were at the ramp to effect the closure and assist with assembling the
					ramp meter signal heads and meter-on sign.
		8:12a.m.			Start to unload meter-on sign and solar panel at bottom of ramp.
			8:35a.m.		Meter-on sign and solar panel set. Rotated solar panel to align with sun.
			8:45a.m.		Begin setup of ramp signals at top of ramp.
			9:20a.m.		Right-side ramp signal set and solar panel aligned with sun.
			9:42a.m.		Left-side ramp signal set. Had to tilt upper signal head downward by adjusting
					allen set screws at bottom of signal head.
					On Monday, June 16, Brian and Tadeo returned to the site to change the antenna on
					the ramp trailer that communicates with the meter-on sign. It was changed from
					the stubby green antenna to a 10-inch whip with more gain. Brian also "tapped"
					the meter on time delay relay in the meter control box and reconnected the coax
					cables. These actions resulted in the meter-on sign working.
Number of minutes to Hitch = "Hitched" - "Began":					
Number of minutes to Transport = "Arrived" - "Hitched":					
Number of minutes to Setup = "Set" - "Arrived":					
Number of minutes to Make Operational = "Departed" - "Set":					

Data Sheet in Support of Test Objective 1 (Examine Portability) of Individual Evaluation Plan for Test #1 - Interstate 5					
Date:	6/18/97	Trailer Number: 114 (Surv Trailer)		Original Location: Hughes Fullerton lot	
Destination: I-5 NB at Tustin Ranch Road				Towed By: Caltrans large boom truck	
				Observed By: L. Klein	
Began	Hitched	Arrived	Set	Departed	Comments
7:20 a.m.					Tow trucks arrived.
	7:35a.m.				
	8:05a.m.				Washed trailers and then departed for freeway.
		9:00a.m.			Resurvey site to find best location for surveillance trailer to minimize damage to plants, mulch, and sprinkler heads. Plants and sprinklers were added at site since the last survey. Mulch made ground too soft to drive into area previously selected. Investigated area to right of the onramp as new location for surv. trailer.
					Used small bucket truck to check line of sight to relay in Santa Ana.
			11:10a.m.		Picture and transmission from surv. trailer confirmed by Anaheim TMC. Camera limit stops reset so that private property alongside onramp cannot be viewed.
			11:45a.m.		Reconfirm trailer control and video transmission by Anaheim TMC. Lunch break.
			12:45p.m.		Resumed check out of ramp signal control by 170.
			2:05p.m.		Signal control still intermittent. Possibly from problem with synchronization SSR on ramp trailer with SSR in surv. trailer.
			2:10p.m.		Open ramp. Setup AutoScope detection zones on the ramp. Because placement of surv. trailer at right of onramp locates it further from the mainline (than if it were on the freeway shoulder), AutoScope detection zones could not be setup on the mainline.
			2:30p.m.		AutoScope ramp detection zones operational. Ramp signal working.
				2:40p.m.	
Number of minutes to Hitch = "Hitched" - "Began":					
Number of minutes to Transport = "Arrived" - "Hitched":					
Number of minutes to Setup = "Set" - "Arrived":					
Number of minutes to Make Operational = "Departed" - "Set":					

Data Sheet in Support of Test Objective 1 (Examine Portability) of Individual Evaluation Plan for Test #1 - Interstate 5				
Date:	6/18/97	Trailer Number: 17369 (Ramp Trailer)		Original Location: Hughes Fullerton lot
Destination: I-5 NB at Tustin Ranch Road				Towed By: Caltrans large sign truck
				Observed By: L. Klein
Began	Hitched	Arrived	Set	Departed
7:20a.m.				
	7:35a.m.			
	8:05a.m.			
		9:00a.m.		
			10:45a.m.	
			11:00a.m.	
Number of minutes to Hitch = "Hitched" - "Began":				
Number of minutes to Transport = "Arrived" - "Hitched":				
Number of minutes to Setup = "Set" - "Arrived":				
Number of minutes to Make Operational = "Departed" - "Set":				

Appendix F:

Camera Operability Data Sheets for I-5 Test

Data sheets are ordered by: (1) north to south sequence of evaluation sites as Main Place, Grand Avenue, First Street, Tustin Ranch Road, Jamboree Road, Culver Drive and by (2) date data were acquired.

F-4

Trailer 115 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
 in Support of Objective 2 (Trailers Work for Traffic Management)
 of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98

Trailer Number: 115

Trailer Location: NB I-5 @ Main Place

Problem Number	Comment/Description of Problem
weak signal	1 X1 = no image; reddish smear
	2 X2 = no image; flashing b/white pattern overlay image residue
	3 X3 = same image as X2
system off	4 X4 = display contains frozen surveillance camera image
	5 X5 = same image as X4
	6 X6 = black w/ green many spots
	7 X7 = view doesn't include ramp stop bar (is this how it should be?)
	8 seems to match ^{initial} surveillance map
	9
	10
	11
	12
	13
	14
	15
	16
	17
	18
	19
	20

F-5

Date: 1/21/98
Trailer Number: 109
Trailer Location: NB I-5 @ Grand Ave.

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-6

Trailer 109 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

- 1 ✓ 1 too dark to see road / on ramp
- 2 image frozen
- 3 X3 not working from ATMS; back room cabinet locked
- 4 ✓ 4 kinda bright due to glare
- 5 ✓ 5 rising sun glares out upper left corner
- 6 X6 CANNOT PAN, TILT, OR ZOOM
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

F-1

Date: 1/21/58

Trailer Location: SB I-5 @ First St.

[illegible]

x = negative response (camera image not available or control not available)

F-8

Trailer 113 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98

Trailer Number: 113

Trailer Location: SB I-5 @ First St.

Problem
Number

Comment/Description of Problem

- 1 X1 = color mosaic intermittent with grey block
- 2 X2 = Has image, but color pattern interrupt.
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

F-9

Date: 1/21/98
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Road

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-10

Trailer 114 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98

Trailer Number: 114

Trailer Location: NB I-5 @ Tustin Ranch Road

Problem
Number

Comment/Description of Problem

- 1 X1 = color mosaic intermittent - grey black ; then gone
- 2 ✓2 = too dark to see road ; headlight blurs observable
- 3 X3 = PT2 not working from ATMS ; back room cabinet locked
- 4 X4 = security cameras appear to be pointing @ ground, w/extra images?
- 5 ~~WTF = very bright~~ X5 = yuck! grey blur
- 6 X6 = CANNOT PAN, TILT, OR ZOOM
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

F-11

Date: 1/21/98
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-12

Trailer 110 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98

Trailer Number: 110

Trailer Location: NB I-5 @ Jamboree Road

Problem

Number

Comment/Description of Problem

1 ✓ 1, very bright glare makes images tough to view

2 ✓ 2; rising sun amplified

3 X 3 = CANNOT PAN, TILT, OR ZOOM

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

F-13

Date: 1/21/58
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

F-14

Trailer 111 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

Problem
Number

Comment/Description of Problem

- 1 ✓ 1 image bright (odd for this time of day ?) Reflection on door.
- 2 X2 PT2 not working from ATMS; back room door locked
- 3 ✓ 3 glare persists; b&w images improved
- 4 X4 = CANNOT PAN, TILT, OR ZOOM
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

F-15

Date: 1/22/98

Trailer Location: NB I-5 @ Main Place

[illegible]

x = negative response (camera image not available or control not available)

F-16

Trailer 115 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 115

Trailer Location: NB I-5 @ Main Place

Problem
Number

Comment/Description of Problem

1	OFF THE ON-RAMP LOCATION
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

1/22/98 F-17

Date:

Use 1 set of data sheets
for "Daily" data.

Trailer Location: NB I-5 @ Grand Ave.

DATE:

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

Trailer 109 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

1	
2	
3	
4	
5	
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7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

F-19

Trailer Number: 113
Trailer Location: SB I-5 @ First St.

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

F-20

Trailer 113 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 113
Trailer Location: SB I-5 @ First St.

Problem
Number

Comment/Description of Problem

1	X1: NO IMAGE COLOR ON TOP GREY ON BOTTOM
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Trailer 114 Camera Operability

Date & Time

Trailer Location: NB I-5 @ Tustin Ranch Road

F-21

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-22

Trailer 114 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Road

Problem
Number

Comment/Description of Problem

1	X1: NO IMAGE - COLOR ON TOP - GREY IN BOTTOM
2	
3	
4	
5	
6	
7	
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9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Trailer 110 Camera Operability

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date: 1/22/98 F-23

Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-24

Trailer 110 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 110

Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

1	
2	
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**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

F-25

Trailer Location: NB I-5 @ Culver Road

[illegible]

x = negative response (camera image not available or control not available)

F-26

Trailer 111 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

Problem
Number

Comment/Description of Problem

1	
2	
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18	
19	
20	

Date: 1/27/98
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 115

Trailer Location: NB I-5 @ Main Place

Problem
Number

Comment/Description of Problem

- 1 X1 : Not focus @ the security door.
- 2 X2 : The same image as security screen - no motion
- 3 X3 : NO IMAGE, JUST BLACK SCREEN
- 4 X4 : WITH ONE PRESS RESULTED IN CONTINUOUS (NON-STOPPING) ZOOM
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

**Camera Image and Control Operability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Trailer Location: NB I-5 @ Grand Ave.

Use 1 set of datasheets
for "Daily" data.

1/27/98. F-29

DATE: 9

[illegible]

x = negative response (camera image not available or control not available)

Describe or comment on reverse side.

F-30

Trailer 109 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

- 1 X1: The same image appear on Trailer 115 - no motion
- 2 X2: CONTAINS FROZEN SURVEILLANCE CAMERA IMAGE OF TRAILER 109
- 3 X3: Image frozen showing last image from Culver Sec. Cam. Caption on picture
- 4 changes to reflect the ~~correct~~ selected camera, but the image does not change.
- 5 X4: Contains frozen surveillance camera image of trailer 109, selects camera but
- 6 image doesn't change
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

F-32

Trailer 113 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 113
Trailer Location: SB I-5 @ First St.

Problem
Number

Comment/Description of Problem

- 1 X1 : Take same image w/ Trailer 115 - NO motion.
- 2 X2 : IMAGE MIXED WITH STRANGE PATTERNS OF COLORS SHIFTING
- 3 X3 : NO IMAGE AT ALL ; JUST HAVING SHIFTING PATTERNS OF COLORS
- 4 X4 Weak signal.
- 5 X5 : Can see only random color pixels.
- 6 X6 : The same image with trailer 115
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Trailer 114 Camera Operability

F-33

Trailer Number: 114

Trailer Location: NB I-5 @ Tustin Ranch Road

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-34

Trailer 114 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 114

Trailer Location: NB I-5 @ Tustin Ranch Road

Problem

Number

Comment/Description of Problem

- 1 X1 - take same image w/ other trailers - no motion
- 2 X2 - OUT OF FOCUS
- 3 ~~X3 - BRING UP TRAILER~~
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

**Camera Image and Control Operability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

1/27/98

F-35

Trailer Location: NB I-5 @ Jamboree Road

[illegible]

x = negative response (camera image not available or control not available)

Describe or comment on reverse side.

F-36

Trailer 110 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

- 1 X1 - The image are the same as other trailer - No motion
- 2 X2 - CAMERA POINTING AT GROUND AND COULDN'T BE MOVED
- 3 X3 - Camera pointing at ground, can't be moved up.
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

F-37

Date: 1/27/98.
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

F-38

Trailer 111 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

Problem
Number

Comment/Description of Problem

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Trailer 115 Camera Operability

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date: 1/29/98

F-39

Trailer Number: 115

Trailer Location: NB I-5 @ Main Place

[illegible]

/ = positive response (camera image available or control available)

x = negative response (camera image not available or control not available)

F-40

Trailer 115 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 115

Trailer Location: NB I-5 @ Main Place

Problem
Number

Comment/Description of Problem

- 1 ~~1~~ : OFF THE ON RAMP LOCATION (Image includes ramp + mainline).
- 2 X1 . won't be able to zoom in - out the image was far away
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Trailer 109 Camera Operability

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Use 1 set of data sheets
Date: 1/29/93 for "weekly" data.
Number: 109

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

F-41

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-42

Trailer 109 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 109
Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Date: 1/29/98 F-43
Trailer Number: 113
Trailer Location: SB I-5 @ First St.

Trailer Number: 113
Trailer Location: SB I-5 @ First St.

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

F-44

Trailer 113 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 113
Trailer Location: SB I-5 @ First St.

Problem
Number

Comment/Description of Problem

1	X1 No image - colors on top - Grey on bottom
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Use one set of data sheets
for the 3 weeks of weekly checks.
-Date- 1/29/98

Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Road

Date -

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-46

Trailer 114 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 114

Trailer Location: NB I-5 @ Tustin Ranch Road

Problem
Number

Comment/Description of Problem

1	X1: white image
2	X2: Very dark image.
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Trailer 110 Camera Operability

Camera Image and Control Operability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/29/98

F-47

Trailer Number: 110

Trailer Location: NB I-5 @ Jamboree Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-48

Trailer 110 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

- | | |
|----|----------------------------------------------------------------------|
| 1 | X1 : will not enable will not turn around, but have pan/tilt control |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |
| 17 | |
| 18 | |
| 19 | |
| 20 | |

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Trailer Location: NB I-5 @ Culver Road

[illegible]

x = negative response (camera image not available or control not available)

F-50

Trailer 111 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

Problem
Number

Comment/Description of Problem

1	X1 - Pan will not turn around, but have pan/tilt control
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Trailer 115 Camera Operability

Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: F-51
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

Date	Time	Operator's Initials	Mainline VIP Camera Image	On-Ramp VIP Camera Image	Surveillance Camera Image	Surveillance Camera Control			Security Camera Image
						Pan	Tilt	Zoom	
1/28	7:40	PB	✓	✓	✓	✓	✓	✓	vandals cut
1/28	11:41	PB	✓	✓	✓	✓	✓	✓	video cable
3/3	4:30	BJ	✓	✓	✓	✓	✓	✓	video cable cut #1
	3:00 PM	HC	✓	✓	✓	✓	✓	✓	video cable cut (No Image - Black)
3/4	8:30	HC	✓	✓	✓	✓	✓	✓	(black - no image) video cable cut
3/5	3:36	PB	✓	✓	✓	✓	✓	✓	Black screen - cable cut
3/6									
3/9	0830	SS	✓	✓	✓	✓	✓	✓	
	3:00	HC	✓	✓	✓	✓	✓	✓	✓
3/10	0830	JG	✓	✓	✓	✓	✓	✓	✓
	3:30	HC	✓	✓	✓	✓	✓	✓	No Image - Black
3/11	09:11	PB	✓	✓	✓	✓	✓	✓	No Image - Black
3/11	3100	RB	✓	✓	✓	✓	✓	✓	No Image - Black
3/12	0830	RG	✓	✓	✓	✓	✓	✓	No Image - Black
3/13	8130	FN	✓	✓	✓	✓	✓	✓	
	3 17	HC	✓	✓	✓	✓	✓	✓	No Image - Black

/ = positive response (camera image available or control available)

x = negative response (camera image not available or control not available)

Trailer 115 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

F-53

Problem
Number

Comment/Description of Problem

- 1 ATMS NOT GIVING CONTROL COMMANDS / USED FOT KEY PAD IN EQUIP. ROOM
- 2 NO IMAGE, ONLY STILL SHOT
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

F-54

Trailer 109 Camera Operability

Camera Image and Control Operability Check Data Sheet
 in Support of Objective 2 (Trailers Work for Traffic Management)
 of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

Use 1 set of datasheets
 for "Daily" data.

DATE

Date	Time	Operator's Initials	Mainline VIP Camera Image	On-Ramp VIP Camera Image	Surveillance Camera Image	Surveillance Camera Control Pan	Tilt	Zoom	Security Camera Image
1/28	7:44	PB	✓	✓	✓	✓	✓	✓	✓
1/28	11:44	PB	✓	✓	✓	✓	✓	✓	
3/3	8:30	BJ	✓	✓	✓	✓	✓	✓	#2 ✓
	3:04	HC	✓	✓	✓	✓	✓	✓	✓
3/4	8:33	HC	✓	✓	✓	✓	✓	✓	✓ #2
3/5	15:47	PB	✓	✓	✓	✓	✓	✓	✓
3/9	0840	SS	✓	✓	✓	✗	✗	✗	CAMERA WENT PAN PAST 90° MARK LINE
	3:03	HC	✓	✓	✓	✓	✓	✓	✓
3/10	08:30	JG	✓	✓	✓	✓	✓	✓	✓
	3:33	HC	DOWN	DOWN	DOWN	✗	✓	✓	DOWN
3/11	09:24	PB?	✓	✓	✓	✓	✓	✓	✓
3/11	3:05	RG	✓	✓	✓	✓	✓	✓	✓
3/12	0834	RG	✓	✓	✓	✓	✓	✓	very Bright
3/13	8:38	FN	✓	✓	✓	✗	✓	✓	Not pass 90° right
	3:19	HC	✓	✓	✓	✓	✓	✓	✓

/ = positive response (camera image available or control available)

x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.

Describe or comment on reverse side.

Trailer 109 Camera Operability

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date:

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

F-55

Use 1 set of data sheets
for "weekly" data.

DATE

ASCOPE 2

ASCOPE I

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date:

Trailer Location: NB I-5 @ Grand Ave.

Use 1 set of data sheets
for "Monthly" data

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

**Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.**

Trailer 109 Camera Operability

F-57

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 109
Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

- 1 ATMS Not Giving Control / USED FOT KEYBOARD IN EQUIP. ROOM
IMAGE IS CORRECT HOWEVER IT IS BRIGHT
- 2 UNCLEAR IF THE IMAGE SHOWN IS THE CORRECT ONE, TOO MUCH LIGHT VERY BRIGHT
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

F-58

Trailer 113 Camera Operability

Weak radio link.
May not be able to receive video.
Date:
Trailer Number: 113
Trailer Location: SB I-5 @ First St.

Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

	Time	Operator's Initials	Mainline VIP Camera Image	On-Ramp VIP Camera Image	Surveillance Camera Image	Surveillance Camera Control			Security Camera Image
						Pan	Tilt	Zoom	
1/28	7:48	PB	X1	X1	X1	-	-	-	✓
1/28	11:47	PB	X2	X2	X2	-	-	-	X2
3/3/08	8:30	BJ	✓	✓	✓	✓	✓	✓	✓ #4
	3:07	HC	✓	✓	✓	✓	✓	✓	✓
3/4	8:36	HC	✓	✓	✓	✓	✓	✓	✓
3/1	15:59	PB	✓	✓	✓	✓	✓	✓	✓
3/19	8:47	FN	✓	✓	✓	✓	✓	✓	✓
	8:10	HC	✓	✓	✓	✓	✓	✓	✓
3/10	08:37	SG	✓	✓	✓	✓	✓	✓	✓
	3:35	HC	✓	✓	✓	✓	✓	✓	✓
3/11	9:28	PB	X1-Down	X1 Down	X Down	Down	Down	Down	X1-Down
3/11	3:10	RG	X	X	X	Not Responding	Down	Down	Not Responding (No Image) Blank
3/12	08:39	RG	α	α	α	Down	Down	Down	Down
3/12	16:00	BJ	✓	✓	✓	✓	✓	✓	✓
3/13	8:4	FN	X	X	X	X	X	X	No movement (No Image) Same View on all
	3:22	HC	X	X	X	X	X	X	

/ = positive response (camera image available or control available)

x = negative response (camera image not available or control not available)

Trailer 113 Camera Operability

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date:

F-59

Trailer Number: 113

Trailer Location: SB I-5 @ First St.

[illegible]

/ = positive response (camera image available or control available)

x = negative response (camera image not available or control not available)

F-60

Trailer 113 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 113
Trailer Location: SB I-5 @ First St.

Problem
Number

Comment/Description of Problem

- 1 X1: Same as Security image for camera 113
- 2 X2: Colored pixels flash on and off
- 3 ATMS Not giving control / USED FOT KEYBOARD IN EQUIP. ROOM
- 4 IMAGE EXTREMELY BRIGHT
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Daily Checks - Use 1 set of Data Sheet for all 5 days of daily checks.

Trailer 114 Camera Operability

Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

F-61

Trailer Number: 114

Trailer Location: NB I-5 @ Tustin Ranch Road

Date/Time

Date	Time	Operator's Initials	Mainline VIP Camera Image	On-Ramp VIP Camera Image	Surveillance Camera Image	Surveillance Camera Control Pan	Tilt	Zoom	Security Camera Image
1/28	7:52	PB	✓	✓	X1 ✓	X1	X1	X1	✓
1/28	11:50	PB	✓	✓	✓	X2	X2	X2	✓
3/3	8:30	BJ	✓	✓	✓	✓	✓	✓	✓ #4
	3:10	HC	✓	✓	✓ #5	✓	✓	✓	#4
3/4	8:38	HC	✓	✓	✓ #5	✓	✓	✓	#4
3/5	15:58	PB	✓	✓	✓ #5	✓	✓	✓	#4 #4
3/9	9:04	FN	✓	✓	✓	✓	✓	✓	✓
3/15	3:15	HC	✓	✓	✓	✓	✓	✓	✓
3/10	0845	JG	✓	✓	✓	✓	✓	✓	✓
	3:38	HC	✓	✓	✓	✓	✓	✓	✓ (very bright)
3/11	9:32	PB	✓	✓	✓	✓	✓	✓	✓ (very bright)
3/11	3:20	RG	✓	✓	✓	✓	✓	✓	✓ (very bright)
3/12	08:40	RG	✓	✓	✓	✓	✓	✓	✓ (very bright)
3/12	1620	BJ	#6	#6	✓	✓	✓	✓	#6
3/13	8:56	FN	✓	✓	X	X	✓	✓	Picture Dark
	3:24	HC	✓	✓	✓	✓	✓	✓	Too Bright

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

Trailer 114 Camera Operability

Use one set of data sheets
for the 3 weeks of weekly checks.

~~Date:~~

Trailer Number: 114

Trailer Location: NB I-5 @ Tuftin Ranch Road

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date

Ascope 2

Ascope

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

Trailer 114 Camera Operability

F-63

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Road

Problem
Number

Comment/Description of Problem

- 1 X1: Cannot pan, tilt, or zoom
- 2 X2: Cannot pan, tilt, or zoom
- 3 ATMS NOT GIVING CONTROL/USED FOT KEY BOARD IN EQUIP. ROOM
- 4 IMAGE TOO BRIGHT, HARD TO SEE
- 5 IMAGE TOO DARK
- 6 SURVEILLANCE CAMERA ONLY SHOWS
- 7 NO IMAGE
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

F-64

Trailer 110 Camera Operability

Camera Image and Control Operability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

Date	Time	Operator's Initials	Mainline VIP Camera Image	On-Ramp VIP Camera Image	Surveillance Camera Image	Surveillance Camera Control			Security Camera Image
						Pan	Tilt	Zoom	
1/28	7:59	PB	✓	✓	✓	✓	✓	✓	✓
1/28	11:53	PB	✓	✓	✓	✓	✓	✓	✓
3/3	8:30	BJ	✓	✓	✓	✓	#3 ✓	✓	✓ #2
	3:13	HC	✓	✓	✓	✓	✓	✓	✓
3/4	8:39	HC	✓	✓	✓	✓	✓	✓	✓
3/5	16:04	PB	✓	✓	✓	✓	✓	✓	✓
3/9	9:06	FN	✓	✓	✓	✓	✓	✓	✓
	3:18	HC	✓	✓	✓	✓	✓	✓	✓
3/10	08:53	JG	✓	X4	✓	✓	✓	✓	✓
	3:40	HC	✓	✓	✓	✓	✓	✓	✓
3/11	9:36	PB	✓	✓	✓	✓	✓	✓	✓
3/11	3:25	RG	✓	✓	✓	✓	✓	✓	✓
3/12	08:44	RG	✓	✓	✓	✓	✓	✓	✓
3/12	16:00	BJ	✓	✓	✓	✓	#2 ✓	✓	✓ #2
3/13	8:59	FN	✓	✓	✓	X	✓	✓	No view passed left
	3:25	HC	✓	✓	✓	✓	✓	✓	✓

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

F-65

Date:
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

**Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.**

F-66

Trailer 110 Camera Operability

Camera Image and Control Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

- 1 ATMS NOT GIVING CONTROL / USE FOT KEYBOARD IN EQUIP. ROOM
- 2 IMAGE TOO BRIGHT HARD TO MAKE OUT PICTURE
- 3 CAMRA WIL NOT TURN LEFT AFTER MID WAY (LOOKS STRAIT ATROSS BUT NOT FURTHER)
- 4 NO IMAGE Shown, JUST ~~IS~~ BLUE STATIC
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Trailer 111 Camera Operability

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date:
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

F-67

Date	Time	Operator's Initials	Mainline VIP Camera Image	On-Ramp VIP Camera Image	Surveillance Camera Image	Surveillance Camera Control			Security Camera Image
						Pan	Tilt	Zoom	
1/28	8:04	PB	✓	✓	✓	✓	✓	✓	✓
1/28	11:56	PB	✓	✓	✓	✓	✓	✓	✓
3/3	8:30	BJ	✓	✓	✓ #3	✓	✓	✓	#2 ✓
	3:15	HC	✓	✓	✓ #3	✓	✓	✓	✓
									#4, ###
3/4	8:42	HC	No Image	No image.	No Image ✓	✓	✓	✓	✓
3/5	16:07	PB	✓	✓	✓	✓	✓	✓	✓
3/9	9:12	FN	✓	✓	✓	OK ✓	✓	✓	Pre-9 AM & PC right side monitoring
	3:20	HC	✓	✓	✓	✓	✓	✓	✓
3/10	08:55	JG	✓	✓	✓	✓	✓	✓	✓
	3:42	HC	✓	✓	✓	✓	✓	✓	✓
3/11	7:41	PB	✓	✓	✓	✓	✓	✓	✓
3/11	3:30	RGN	✓	✓	✓	✓	✓	✓	✓
3/12	08:48	RGN	✓	✓	✓	✓	✓	✓	✓
3/12	16:10	BJ	✓	✓	✓ #3	✓	✓	✓	✓
3/13	9:05	FN	✓	✓	✓	✓	✓	✓	✓
	3:27	HC	✓	✓	✓	✓	✓	✓	✓

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Trailer 111 Camera Operability

**Camera Image and Control Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date:

Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Camera Image and Control Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

Problem
Number

Comment/Description of Problem

- 1 ATMS NOT GIVING CONTROL /USED FOT KEYBOARD IN EQUIP. ROOM
- 2 IMAGE BRIGHT
- 3 LENSE NEEDS CLEANING WATER MARKS OR SMUDGING IN CENTER OF PICTURE
- 4 No Image - color path.
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Appendix G:

VIP Believability Data Sheets for I-5 Test

Data sheets are ordered by: (1) north to south sequence of evaluation sites as Main Place, Grand Avenue, First Street, Tustin Ranch Road, Jamboree Road, Culver Drive and by (2) date data were acquired.

G-3

Date: 1/21/98
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place
No VIP ^{camp} at Main Place Ramp

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-4

Trailer 115 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

Problem Number	Comment/Description of Problem
1	Loop status X1 = Lane 1 is "No Resp" and Lane 2 "Suspect"
2	X2 = VIP status is "no responses"
3	X3 = Loop status "Some Loops Bad" : HOV1, HOV2, LANE 1 ← "No Resp"
4	: and LANE 3 ← slips between "OK & Suspect"
5	X4 VIP Data changed (7), 13, 53 313 @ 8:15
6	X5 = Loop status "Some Loops Bad" : HOV1, HOV2, LANE 1 ← "No Resp"
7	: and LANE 2 ← "Failed"
8	X6 = No VIP VDS - Window opened for 5 mins.
9	X7 = Some loops bad, #2 "Failed", HOV#1 & HOV2 "No Resp"
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-5

Date: 1/21/98
Trailer Number: 109
Trailer Location: NB I-5 @ Grand Ave.

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

Date: 1/21/98

Trailer Location: NB I-5 @ Grand Ave.

1
2
3
4
5

Note problems by placing an x followed by a # in the appropriate box.

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min

Mainline ATMS data on CMS screen

On-ramp ATMS data on RMS screen

VIP Availability and Believability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

- 1 X1 = Meter off and Mode "Disabled"
- 2 X2 = Status "unknown"; window blank
- 3 X3 = Window opened for 10 minutes - no data
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Trailer 113 VIP Believability

G-9

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/58
Trailer Number: 113
Trailer Location: SB I-5 @ First Street

Problem
Number

Comment/Description of Problem

- 1 X1 = @ 4TH ST; 22, 25, 39, because 1ST ST status "No Response"
- 2 X2 = moved to 4TH ST
- 3 X3 = VIP UDS Status No response
- 4 X4 = Window opened for 10 minutes - no data
- 5 X5 = SUM loops bad, ^{loop} 5 failed
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Date: 1/21/58

Trailer Location: NB I-5 @ Tustin Ranch Rd.

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

VIP Availability and Believability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Managment)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Rd.

[illegible]

3. Ovrflo = QU = 30-sec occupancy

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min
Mainline ATMS data on CMS screen
On-ramp ATMS data on RMS screen

G-12

Trailer 114 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98

Trailer Number: 114

Trailer Location: NB I-5 @ Tustin Ranch Rd.

Problem
Number

Comment/Description of Problem

- 1 X1 Status "No Response"
- 2 X2 numbers on loop ATMS window "greyed out", 100/min rate
- 3 X3 No VIP VDS Data - Window opened for 7 mins
- 4 X4 Ramp Meter Loop status "Good", DM "S Failed", Metering Rate 10 veh/min
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

VIP Availability and Believability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

G-13

Trailer Location: NB I-5 @ Jamboree Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

Trailer 110 VIP Believability

Date: 1/21/98
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

[illegible]

4. Mtr = Metering rate in veh/min
Mainline ATMS data on CMS screen
On-ramp ATMS data on RMS screen

VIP Availability and Believability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98

Trailer Number: 110

Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

- 1 X1 Mainline VIP Data Status "No Response"
- 2 X2 Loop VDS Status some loops bad; lane #2 "S Failed"
- 3 X3 DM Status "S Failed" PA Status "S Failed" QO Status "OK" alternate w "suspect"
- 4 X4 VIP VDS no data - Window opened 5 mins.
- 5 X5 DM Status "S Failed"
- 6 X6 Some Loops Bad; #2 "S Failed"
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

G-16

VIP Availability and Believability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

No video image processing @ Culver Road Ramp.

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

XI

SUM
LEADS
BCL

ML
SM
1072

x
70

Trailer 111 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98 G-17
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

Problem
Number

Comment/Description of Problem

- Loop VDS
- 1 X1 Status "Some Loops Bad"; Lane 5 "Suspect"; Lane 6 "S Failed"
 - 2 X2 VIP VDS Status "No Response"
 - 3 X3 VIP VDS no data; window open 5+ minutes
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
 - 11
 - 12
 - 13
 - 14
 - 15
 - 16
 - 17
 - 18
 - 19
 - 20

G-18

Trailer 111 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/21/98

Trailer Number: 111

Trailer Location: NB I-5 @ Culver Road

Problem
Number

Comment/Description of Problem

- Loop VDS
- 1 X1 Status "Some Loops Bad"; Lane 5 "Suspect"; Lane 6 "S Failed"
 - 2 X2 VIP VDS Status "No Response"
 - 3 X3 VIP VDS no data window open 5+ minutes
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
 - 11
 - 12
 - 13
 - 14
 - 15
 - 16
 - 17
 - 18
 - 19
 - 20

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-20

Trailer 115 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 115

Trailer Location: NB I-5 @ Main Place

Problem
Number

Comment/Description of Problem

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-21

Date: 1/22/98
Trailer Number: 109
Trailer Location: NB I-5 @ Grand Ave.

[illegible]

4. Mtr = Metering rate in veh/min
Mainline ATMS data on CMS screen
On-ramp ATMS data on RMS screen

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

1	VI - Says on Dec 31 16:00:00
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-23

Date: 1/22/08
Trailer Number: 113
Trailer Location: SB I-5 @ First Street

LOOP STATUS

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-24

Trailer 113 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 113
Trailer Location: SB I-5 @ First Street

Problem Number	Comment/Description of Problem
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

STATUS LOOP STATUS

Date: 1/22/03 6-25
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Rd.

[illegible]

Note problems by placing an x followed by a # in the appropriate box.

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min

Mainline ATMS data on CMS screen

On-ramp ATMS data on RMS screen

G-26

Trailer 114 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Rd.

Problem
Number

Comment/Description of Problem

1	X1 = Stays @ Dec 31 16:06:00
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Trailer 110 VIP Believability

**VIP Availability and Believability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date: 1/22/98

Trailer Number: 110

Trailer Location: NB I-5 @ Jamboree Road

STATUS

LOOP STATUS

[illegible]

/ = positive response (data or "check mark" entered)

x = negative response (data not available)

1. Demand = DM = 30-sec volume

2. Passg = PA = 30-sec volume

3. Ovrflo = QU = 30-sec occupancy

Note problems by placing an x followed by a # in the appropriate box.

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min

Mainline ATMS data on CMS screen

On-ramp ATMS data on RMS screen

G-28

Trailer 110 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

1	X1: Stays @ Dec 31 16:00:00
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Date: 1/22/08 G-29
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-30

Trailer 111 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

Problem
Number

Comment/Description of Problem

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-31

Date: 1/27/98
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

LOOP STATUS

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-32

Trailer 115 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

Problem
Number

Comment/Description of Problem

- 1 X1 = Data stays at Jan 27 7:42:00
- 2 X2 = Data stays at Jan 27 12:18:00
- 3 X3 = Data stays at Jan 27 14:50:30
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

**VIP Availability and Believability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

STATUS	LOOP STATUS
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
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36	36
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39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
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51	51
52	52
53	53
54	54
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58	58
59	59
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62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99

[illegible]

4. Mtr = Metering rate in veh/min
Mainline ATMS data on CMS screen
On-ramp ATMS data on RMS screen

G-34

Trailer 109 v.. Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 109
Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

1	XI = Data stays at Dec 31 16:00:00
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Date: 1/27/98

Trailer Location: SB I-5 @ First Street

LOOP STATUS

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-36

Trailer 113 Vir Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 113

Trailer Location: SB I-5 @ First Street

Problem
Number

Comment/Description of Problem

- 1 X1 = Data stays at Jan 27 07:40:00
- 2 X2 = Data stays at Jan 27 15:00:30
- 3 X3 = Data stays at Jan 27, 15:15:30
- 4 X4 = Data stays at Jan 27, 15:20:00

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

**VIP Availability and Believability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

STATUS	Loop STATUS
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99

/ = positive response (data or "check mark" entered)
 x = negative response (data not available)
 1. Dmnd = DM = 30-sec volume
 2. Passg = PA = 30-sec volume
 3. Ovrflw = QU = 30-sec occupancy

4. Mtr = Metering rate in veh/min
Mainline ATMS data on CMS screen
On-ramp ATMS data on RMS screen

G-38

Trailer 114 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 114

Trailer Location: NB I-5 @ Tustin Ranch Rd.

Problem
Number

Comment/Description of Problem

1 X1 = Data stays at Dec 31 16:00:00

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

VIP Availability and Believability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

1/27/98 G-39

Trailer Location: NB I-5 @ Jamboree Road

LOOP STATUS

On-ramp ATMS data on RMS screen

G-40

Trailer 110 V₁₁ Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

1	X1 = Data stays at Dec 31 16:00:00
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-41

Date: 1/22/98
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

LOOP STATUS

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-42

Trailer 111 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

Problem Number	Comment/Description of Problem
1	V1 = Data stays at Jan 27 22:51:30
2	V2 = Data stays at Jan 27 15:22:30
3	V3 = Data stays at Jan 27 15:32:30
4	V4 = Data stays at Jan 27 15:29:30
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-43

Date: 1/28/98
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

LOOP STAGE

1x
2x
2x
2x
2x
3x
4x
5x

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-44

Trailer 115 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/28/98

Trailer Number: 115

Trailer Location: NB I-5 @ Main Place

Problem Number	Comment/Description of Problem
X1	Data stays at Jan 28 07:29:00
X2	For Lane #5, Occupancy = 100 Estimated = 70
X3	Data stays at Jan 28 15:27:00
X4	Data stays at Jan 28 15:34:00
X5	Data stays at Jan 28 15:41:00
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	

G-45

Date: 1/28/98
Trailer Number: 109
Trailer Location: NB I-5 @ Grand Ave.

/ = positive response (data or "check mark" entered)
 x = negative response (data not available)
 1. Dmnd = DM = 30-sec volume
 2. Passg = PA = 30-sec volume

4. Mtr = Metering rate in veh/min
Mainline ATMS data on CMS screen
On-ramp ATMS data on RMS screen

G-46

Trailer 109 V.. Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

1/20/19

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

X1 Data stops at Dec 31 16:00:00

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

G-47

Date: 1/28/98
Trailer Number: 113
Trailer Location: SB I-5 @ First Street

LOOP STEP 15

X)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-48

Trailer 113 Vlr Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/28/98
Trailer Number: 113
Trailer Location: SB I-5 @ First Street

Problem
Number

Comment/Description of Problem

X1 Data entry at Jan 28 15:49:00

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

Date:

1/28/93

Trailer Location: NB I-5 @ Tustin Ranch Rd.

STATUS

LOOP STATUS

[illegible]

Note problems by placing an x followed by a # in the appropriate box.

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min

Mainline ATMS data on CMS screen

On-ramp ATMS data on RMS screen

G-50

Trailer 114 VIT Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/28/08
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Rd.

Problem
Number

Comment/Description of Problem

X1 Data stops at Dec 31 16:00:00

2

3

4

5

6

7

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15

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17

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19

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Trailer 1 10 VIP Believability

**VIP Availability and Believability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date: 1/28/08. G-51

Trailer Number: 110

Trailer Location: NB I-5 @ Jamboree Road

STATUS	LOOP STATUS
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99

[illegible]

/ = positive response (data or "check mark" entered)

x = negative response (data not available)

1. Demand = DM = 30-sec volume

2. Passq = PA = 30-sec volume

3. Ovrflo = QU = 30-sec occupancy

Note problems by placing an x followed by a # in the appropriate box.

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min

Mainline ATMS data on CMS screen

On-ramp ATMS data on RMS screen

G-52

Trailer 110 V. Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/28/98
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

X1 Data stays at Dec 31 16:00:00

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

**VIP Availability and Believability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date: 1/28/98
Number: 111
G-53

Trailer Number: 111

Trailer Location: NB I-5 @ Culver Road

STATUS

LOOP STATUS

[illegible]

/ = positive response (camera image available or control available)

x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.

Describe or comment on reverse side.

G-48

Trailer 113 Vlr Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/28/98
Trailer Number: 113
Trailer Location: SB I-5 @ First Street

Problem
Number

Comment/Description of Problem

X1 Data entry at Jan 28 15:49:00

2

3

4

5

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10

11

12

13

14

15

16

17

18

19

20

Date:

1/28/93

Trailer Location: NB I-5 @ Tustin Ranch Rd.

STATUS

LOOP STATUS

[illegible]

Note problems by placing an x followed by a # in the appropriate box.

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min

Mainline ATMS data on CMS screen

On-ramp ATMS data on RMS screen

G-50

Trailer 114 VIT Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/28/08
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Rd.

Problem
Number

Comment/Description of Problem

X1 Data stops at Dec 31 16:00:00

2

3

4

5

6

7

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9

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11

12

13

14

15

16

17

18

19

20

Trailer 1 10 VIP Believability

**VIP Availability and Believability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date: 1/28/08. G-51

Trailer Number: 110

Trailer Location: NB I-5 @ Jamboree Road

STATUS	LOOP STATUS
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
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41	41
42	42
43	43
44	44
45	45
46	46
47	47
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49	49
50	50
51	51
52	52
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54	54
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56	56
57	57
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62	62
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66	66
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69	69
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75	75
76	76
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84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99

[illegible]

/ = positive response (data or "check mark" entered)

x = negative response (data not available)

1. Demand = DM = 30-sec volume

2. Passq = PA = 30-sec volume

3. Ovrflo = QU = 30-sec occupancy

Note problems by placing an x followed by a # in the appropriate box.

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min

Mainline ATMS data on CMS screen

On-ramp ATMS data on RMS screen

G-52

Trailer 110 V. Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/28/98
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

X1 Data stays at Dec 31 16:00:00

2

3

4

5

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12

13

14

15

16

17

18

19

20

**VIP Availability and Believability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date: 1/28/98
Number: 111
G-53

Trailer Number: 111

Trailer Location: NB I-5 @ Culver Road

STATUS

LOOP STATUS

[illegible]

/ = positive response (camera image available or control available)

x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.

Describe or comment on reverse side.

6-54

Trailer 111 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/28/98

Trailer Number: 111

Trailer Location: NB I-5 @ Culver Road

Problem
Number

Comment/Description of Problem

X1	Data stays at Jan 28 08:24:00
X2	Data stays at Jan 28 08:28:00
X3	Data stays at Jan 28 12:21:00
X4	Data stays at Jan 28 12:25:30
X5	Data stays at Jan 28 16:17:00
X6	Data stays at Jan 28 16:17:30
X7	Data stays at Jan 28 16:21:00
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-55

Date: 1/29/98
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-56

Trailer 115 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/29/98
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

Problem
Number

Comment/Description of Problem

X 1 For Lane # 5 Occupancy = 100 Estimated Speed = 70

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

VIP Availability and Believability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

[illegible]

On-ramp ATMS data on RMS screen

6-58

Trailer 109 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/29/98

Trailer Number: 109

Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

X 1 Data stays at Dec 31 16:00:00

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

Trailer 113 VIP Believability

VIP Availability and Believability Check Data Sheet in Support of Objective 2 (Trailers Work for Traffic Management) of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/29/98 G-59
Trailer Number: 113
Trailer Location: SB I-5 @ First Street

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

**Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.**

G-60

Trailer 113 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/29/98
Trailer Number: 113
Trailer Location: SB I-5 @ First Street

Problem
Number

Comment/Description of Problem

X1 Data stays at Jan 29 8:15:00

X2 Data stays at Jan 1998 8:35:00

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

Date: 1/29/98
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Rd.

[illegible]

Note problems by placing an x followed by a # in the appropriate box.

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min

Mainline ATMS data on CMS screen

On-ramp ATMS data on RMS screen

G-62

Trailer 114 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/29/98
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Rd.

Problem
Number

Comment/Description of Problem

X1 Data stays at Dec 31 16:00:00

2

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4

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8

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12

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14

15

16

17

18

19

20

G-63

Date: 1/29/98
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

[illegible]

Note problems by placing an x followed by a # in the appropriate box.

Describe or comment on reverse side.

4. Mtr = Metering rate in veh/min

Mainline ATMS data on CMS screen

On-ramp ATMS data on RMS screen

G-64

Trailer 110 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/29/98

Trailer Number: 110

Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

X 1 Data stays at Dec 31 16:00:00

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

**VIP Availability and Believability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date: 1/29/98 G-65
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-66

Trailer 111 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/29/98
Trailer Number: 111
Trailer Location: NB I-5 @ Culver Road

Problem Number	Comment/Description of Problem
X1	Data stays at Jan 29 9:16:00
X2	Data stays at Jan 29 9:22:00
X3	Data stays at Jan 29 9:25:00
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-671

Date: 2/3/78
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-68

Trailer 115 VIP Believability

IP Availability and Believability Check Data Sheet Side Two
Support of Objective 2 (Trailers Work for Traffic Management)
f Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 2/3/98
Trailer Number: 115
Trailer Location: NB I-5 @ Main Place

Problem
Number

Comment/Description of Problem

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-70

Trailer 109 VIP Believability

Date: 2/3/98

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Trailer Number: 109
Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-71.

Date: 2/3/98
Trailer Number: 113
Trailer Location: SB I-5 @ First Street

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

**Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.**

G-72

Trailer 113 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 2/3/23

Trailer Number: 113

Trailer Location: SB I-5 @ First Street

Problem
Number

Comment/Description of Problem

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-74

Trailer 114 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 2/3/03
Trailer Number: 114
Trailer Location: NB I-5 @ Tustin Ranch Rd.

Problem Number	Comment/Description of Problem
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

G-75

Date: 2/3/23
Trailer Number: 110
Trailer Location: NB I-5 @ Jamboree Road

/ = positive response (data or "check mark" entered) Note problems by placing an x followed by a # in the appropriate box.
 x = negative response (data not available) Describe or comment on reverse side.
 1. Dmnd = DM = 30-sec volume 4. Mtr = Metering rate in veh/min
 2. Passg = PA = 30-sec volume Mainline ATMS data on CMS screen
 3. Ovrflw = QU = 30-sec occupancy On-ramp ATMS data on RMS screen

G-76

Trailer 110 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 2/3/98

Trailer Number: 110

Trailer Location: NB I-5 @ Jamboree Road

Problem Number	Comment/Description of Problem
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

**VIP Availability and Believability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway**

Date: 1/3/98 G-77

Trailer Number: 111

Trailer Location: NB I-5 @ Culver Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

G-78

Trailer 111 VIP Believability

VIP Availability and Believability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 2/3/98

Trailer Number: 111

Trailer Location: NB I-5 @ Culver Road

Problem Number	Comment/Description of Problem
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
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Appendix H:

Ramp Meter Operability Data Sheets for I-5 Test

Data sheets are ordered by: (1) north to south sequence of evaluation sites as Grand Avenue, Tustin Ranch Road, and Jamboree Road and by (2) date data were acquired.

This site has an overflow loop that can be seen from VIP Camera.

Ramp Meter 368 Operability

Auto Scope
S/W Version 4.05

H-3

Ramp Meter Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

5:55am

Readjusted R.M. detection
zone. VIP Camera has been displaced from calib. position.

Date: 4/21/98

Trailer Number: 368

Trailer Location: NB I-5 @ Grand Ave.

Time	Operator's Initials	Ramp Meter "Signal" On/Off ①	Ramp Meter "Meter On" Sign On/Off	Vehicle Present Treatment	Vehicle Absent Treatment	Ramp Overflow
5:55am	TL	On ①	on	X2	X2	
6:15am	TL	On	On	✓	✓	
6:30am	TL	On	On	✓	✓	
6:40am	TL	On	On	X3	X3	
6:55am	TL	On	On	X4	X4	
7:05am	TL	On	On	✓	✓	
7:45am	TL	On	On	✓	✓	
8:00am	TL	On	On	✓	✓	
9:00am	TL	On	On	✓	✓	No overflow observed during the test.
9:30am	TL	On	On	✓	✓	
<hr/>						
11:30pm	T.L.	ON	ON	✓	✓	
1500	TL	ON	ON	✓	✓	
1600	TL	ON	ON	✓	✓	
1700	TL	ON	ON	✓	✓	
1800	TL	ON	ON	✓	✓	
1900	TL	Turned off	OFF	✓	✓	

Moderating Rate

after reboot

3/lane: 16T
TOD Mode
16: TOD Mode

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

7:15am dark - colored vehicles aren't activating
(raised) mainline VIP detectors positioned over middle of lane (which has a darker color),
repositioned bottom detectors in lanes 1 & 2: Auto Scope now detecting more dark vehicles, but still missing some.

H-4

Ramp Meter Operability Check Data Sheet Side Two
 In Support of Objective 2 (Trailers Work for Traffic Management)
 of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:

Trailer Number: 368

Trailer Location: NB I-5 @ Grand Ave.

Problem
 Number

Comment/Description of Problem

- 1 Controller is set to run "Time-of-Day" table with "^{Main line} ~~Traffic~~ Responsive".
- 2 Green/red on signals ^{lights} fell behind commands issued by 170. Rebooted WACC.
- 3 Same comment as on line 2 - rebooted 170 to green balls to restart cycle. Didn't help.
- 4 Reboot WACC: Fixed problem.
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- 19
- 20

Ramp Meter 368 Operability

H-5

Ramp Meter Operability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/22/98 Thu.

Trailer Number: 368

Trailer Location: NB I-5 @ Grand Ave.

Time	Operator's Initials	Ramp Meter "Signal" On/Off	Ramp Meter "Meter On" Sign On/Off	Vehicle Present Treatment	Vehicle Absent Treatment	Ramp Overflow
0545	TL	OFF	OFF	N/A	N/A	
0550	TL	ON	ON	✓	✓	
0605	TL	ON	ON	✓	✓	16, 16, 22, 16
0630	TL	ON	ON	✓	✓	16, 16, 16, 16
0700	TL	ON	ON	✓	✓	
0730	TL	ON	ON	✓	✓	
0800	TL	ON	ON	X1	X1	
0910				X2	X2	
0915	TL	ON	ON	✓	✓	16, 18, 16, 16
0930	TL	OFF	OFF	N/A	N/A	22, 20, 16, 16
1430	TL	ON	ON	✓	✓	16, 16, 16, 16
1500	TL	ON	ON	✓	✓	20, 16, 16, 16
1530	TL	ON	ON	✓	✓	16, 16, 18, 16
1600	TL	ON	ON	✓	✓	16, 20, 16, 16
1630	TL	ON	ON	✓	✓	
1700	TL	ON	ON	✓	✓	
1730	TL	ON	ON	✓	✓	
1800	TL	ON	ON	✓	✓	16, 18, 18, 16
1830	TL	ON	ON	X3	✓	16, 18, 18, 16
1900	TL	ON	ON	X4	✓	16, 18, 18, 16

Metering Mode

TOD 1
ML Resp. 1.

TOD
TOD (TIME-OF-DAY TAB)

T.O.D. 16

T.O.D. 16

TOD 16

TOD 16

TOD 16

/ = positive response (camera image available or control available)

x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.

Describe or comment on reverse side.

H-6

Ramp Meter Operability Check Data Sheet Side Two
 in Support of Objective 2 (Trailers Work for Traffic Management)
 of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
 Trailer Number: 368
 Trailer Location: NB I-5 @ Grand Ave.

Problem
 Number

Comment/Description of Problem

- 1 3-4 sec. delay in signal head following the 170 command. Fix from IMS
- 2 Delay corrected @ 9:10 AM
- 3 Autoscope did not detect "demand loop" twice.
- 4 After 170 dropped out of Ramp Metering @ 7pm. WACC did not
- 5 recognize it and continue power to Autoscope & cameras.
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- 20

was to change digital
 input board delay from
 5 sec to 100 msec.
 Old delay dropped an
 interrupt → went from
 { edge triggered } to polled
 { interrupt which }
 was being
 dropped

→ configuration which
 does not require an
 interrupt.

Cable harness to boom mounted components is too short. The end at the trailer roof
 has pulled the water-proof fitting out of the roof. the trailer when it rains.
 Water will now leak into

Ramp Meter Operability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1-27-98 Tue.

Trailer Number: 368

Trailer Location: NB I-5 @ Grand Ave.

Time	Operator's Initials	Ramp Meter "Signal" On/Off	Ramp Meter "Meter On" Sign On/Off	Vehicle Present Treatment	Vehicle Absent Treatment	Ramp Overflow
0550	TL	ON	ON	✓	✓	
0600	TL	ON	ON	✓	✓	27.28-1,27 16.16
0735	TL	ON	ON	✓	✓	16 TOD
0800	TL	ON	ON	✓	✓	
0830	TL	ON	ON	✓	✓	
0900	TL	ON	ON	✓	✓	
0930	TL	Metering OFF	OFF	N/A	N/A	
1430	TL	ON	ON	✓	✓	
1500	TL	ON	ON	✓	✓	
1530	TL	ON	ON	✓	✓	
1600	TL	ON	ON	✓	✓	
1630	TL	ON	ON	✓	✓	
1700	TL	ON	ON	missed 1 call	✓	
1730	TL	ON	ON	missed 2 calls	✓	
1800	TL	ON	ON	✓	✓	
1830	TL	ON	ON	missed 1 call	✓	
1900	TL	ON	ON	✓	✓	

TOD 1.

/ = positive response (camera image available or control available)

x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.

Describe or comment on reverse side.

H-8

Ramp Meter 368 Operability

Ramp Meter Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date:
Trailer Number: 368
Trailer Location: NB I-5 @ Grand Ave.

Problem
Number

Comment/Description of Problem

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AM/PM. Daily.

H-G

Date: 1-28-98 Wed, 1-29, 2-2
Trailer Number: 368 Thu Tue
Trailer Location: NB I-5 @ Grand Ave.

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

Ramp Meter Operability Check Data Sheet
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Hourly.

Date: 1/28/98 Wed.

Trailer Number: 369

Trailer Location: NB I-5 @ Tustin Ranch Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

Ramp Meter 369 Operability

Ramp Meter Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1/28/98

H-11

Trailer Number: 369

Trailer Location: NB I-5 @ Tustin Ranch Road

Problem
Number

Comment/Description of Problem

- 1 After sunset, Autoscope detectors mostly rely on vehicle headlights
- 2 for detection. Therefore, if detector is not set up in path of
- 3 headlight trail, there could be no detection.
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Ramp Meter Operability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Hourly-

Date: 1-29-98 Thu.

Trailer Location: NB I-5 @ Tustin Ranch Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

Ramp Meter 369 Operability

H-13

Ramp Meter Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 1-29-98

Trailer Number: 369

Trailer Location: NB I-5 @ Tustin Ranch Road

Problem
Number

Comment/Description of Problem

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Ramp Meter Operability Check Data Sheet in Support of Objective 2 (Trailers Work for Traffic Management) of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 3/3/98 AM/PM
Trailer Number: 369
Trailer Location: NB I-5 @ Tustin Ranch Road H-14

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

2

H-15

Ramp Meter 369 Operability

Ramp Meter Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 3/3/98

Trailer Number: 369

Trailer Location: NB I-5 @ Tustin Ranch Road

Problem
Number

Comment/Description of Problem

① Received complaints of long back-up onto street.

② Missed one container truck.

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A-16

3/3/98

Trailer Location: NB I-5 @ Jamboree Road[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

H-17

Ramp Meter 280 Operability

Ramp Meter Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 3/3/98

Trailer Number: 280

Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

- ① 1 Red LED Signal head "bleeds" before meter goes to metering mode.
2 Vehicles were stopping in front of the signal & wait for green light.
3 Red is very dim (upper head) but glows slowly after 2 seconds.
- ② 4 "Meter-on" went out after 1/2 hour. Reset "Watch-dog" in Error cabinet.
- ③ 5 Ramp trailer generator could not start. Radio in ramp trailer lost comm whenever
6 trailer tried to start. Hence, comm link dropped and meter is turned off.
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ATION

Ramp Meter Operability Check Data Sheet
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 3/10/98 Hourly. H-18

Trailer Number: 369

Trailer Location: NB I-5 @ Tustin Ranch Road

[illegible]

/ = positive response (camera image available or control available)
x = negative response (camera image not available or control not available)

**Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.**

H-19

Ramp Meter 369 Operability

Ramp Meter Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 3/10/98

H-19

Trailer Number: 369

Trailer Location: NB I-5 @ Tustin Ranch Road

Problem
Number

Comment/Description of Problem

1	MISSED "DEMAND" CALLS TWICE
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HOURLY

Trailer Location: NB I-5 @ Jamboree Road

[illegible]

Note problems/difficulties by placing a # in appropriate box.
Describe or comment on reverse side.

Ramp Meter 280 Operability

H-21

Ramp Meter Operability Check Data Sheet Side Two
In Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 3/12/98

Trailer Number: 280

Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

- ① 1 OPTICAL-ISOLATOR WAS REPLACED WHEN "BLEEDING" & "DIM" OUTPUT WAS OBSERVED LAST WEEK.
2 NOW FUNCTIONING OK.
- ② 3 MISSED "DEMAND" CALLS A COUPLE OF TIMES.
- ③ 4 LONG QUEUE OBSERVED. ADJUSTED METERING RATE FROM 12 VPM TO 15 VPM
5 BETWEEN 1600 HRS AND 1700 HRS.
- ④ 6 USING EXISTING "METER ON" SIGN BECAUSE MOBILE SIGN RADIO DOES NOT WORK.
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Ramp Meter 280 Operability

H-23

Ramp Meter Operability Check Data Sheet Side Two
in Support of Objective 2 (Trailers Work for Traffic Management)
of Individual Evaluation Plan for Test #1 - Interstate 5 Freeway

Date: 3/13/98

Trailer Number: 280

Trailer Location: NB I-5 @ Jamboree Road

Problem
Number

Comment/Description of Problem

① 1 MISSED DETECTOR CALLS

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Appendix I:

Surveillance Trailer Logs

Surveillance trailer logs are ordered by north to south sequence of evaluation sites as Main Place, Grand Avenue, First Street, Tustin Ranch Road, Jamboree Road, and Culver Drive

Main Place Surveillance Trailer Logs

Surveillance Trailer Generator Use Log: Trailer # 115

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)	
7/31/97	1310	905.4	Gen. off in auto.	T.L.
"	1500	907.0	Setup Ascope/LTO. Equip off.	Left auto
8/4	1355	912.2	Gen off in auto	T.L.
8/7	1015	916.6	Gen off auto. Started equip for testing.	Auto T.L.
8/7	1640	920.6	Tuned equip off. Left auto.	T.L.
8/11	10:15	925.4	BATT = 11.91V LPG 1/2. TURNED WACC & RADIO ON GEN	TRIED TO START
"	"	"	ONCE BUT FAILED. STARTED IN MANUAL.	
"	3:45	928.2	SWITCHED BACK TO AUTO. W/ GEN ON. TESTED FROM TAC. TURNED ON REVERCTRL	
"	"	"	I COULD SEE CAM IMAGE & PAU 2 T. BUT NOT TMC	
"	"	"	ENERDYNE (BUEC) DID NOT FOLLOW ON?	
8/11	3:45	928.2	TURNED OFF WACC & RADIO. L.E.D WAS RED!	
"	"	"	BUT GEN HAD NOT STARTED ON OWN.	
"	"	"	HAD TO START IN MANUAL BUT DIFFICULT.	
"	"	"	NEED TO CHECK SPARK PLUGS? TUNED UP?	
"	"	"	LEFT IN AUTO.	
8/19	0930	937.6	Possibly dead on 8/16 Jump started. Left in auto.	T.L.
8/21	0900	940.7	LPG refilled Gen off. Tuned equip on.	Gen started FL. J.L.
8/21	1640	946.3	Gen off. Tuned equip off. Left in	auto. T.L.
8/27	1330	953.6	Gen off in auto.	T.L.
9/1	"	"	"	
9/15	0805	977.5	DC at main batt 12.15. DC at processor is 11.85. steady yellow	
9/15	0814	"	Turned on equipment. Generator kicked on automatically.	
9/15	0855	978.1	Gen off Equip on.	
9/16	11:00	980.5	Left auto. BATT 11.83. LPG 1/2 OIL OKAY.	
9/17	1300	982.0	Bypass #6 zone Armed	T.L.
9/30	1440	998.7	Gen running in auto.	T.L.
10/7	0810	1007.4	Gen. off in auto.	T.L.
10/9	15:15	1010.5	EVERYTHING OK. VISIT W/ STUDENT REPT	G.E.
10/16	0845	1019.1	Tuned equip on for testing in TMC	T.L.
10/16	1530	1024.5	Tuned off equip. Gen stopped in auto.	T.L.
10/21	1745	1031.2	SAT DRY RUN	T.L.
11/10	0945	1058.6	LPG 1/2. Tuned equip on.	T.L.
11/10	1630	1063.2	Tuned equip off	T.L.
11/15	1715	1069.8	SAT performed	T.L.

Surveillance Trailer Generator Use Log: Trailer # 115

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
10/7/11 11/17	1835	1077.4	Turned off equip Left auto. T.L.
12/12	2130	1097.3	Gen off in auto-red. Turned gen on man. Left in auto.
12/19	1430	1110.2	Gen off in auto-red. Turned gen on man.
			LPG filled 12/4
12/16		1120?	OIL & FILTER, SPARK PLUG CHANGE LOAD BANKING
12/17		1122	SAY SAME LAST NIGHT, BUT STARTED TO LED ON RED, BUT BATTERY OKAY CHARGE TURNED ARIES PROCESS OFF TO RESET SET TO MANUAL. TURNED ARIES ON 5 SEC TURNED ON TO AUTO. GEN STARTED RIGHT AWAY. LED TO YELLOW. AFTER ONLY A FEW MINUTES WENT TO GREEN AND TURNED BATTERY CHARGE OKAY OFF
			ARIES PROCESSOR ACTING DIFFERENT FROM OTHER TRAILERS!
12/23		1123.6	LED WENT BACK TO RED?? FOUND WIRE TO GEN & RECONNECTED BAT = 7.5V. JUMP STARTED BUT HAD SOME DIFFICULTY STARTING. RESET ALARM. PHASE. Everything in Auto now. ADJUSTED ANTENNA ON 64K RADIO V = 7.7 ±
1/8/98	1220	1154.0	LPG < 1/2
1/14	1100	1162.6	Auto scope T.L.
1/19	1930	1171.0	LPG 3/4 Refueled 1/15 Turned equip to standby T.L.
1/21	9:00 AM	1201.3	Appears to be turning off/on in short durations. AT BATT 12.70V OFF AT BATT 12.45 ON AGAIN w/ WACK & EQ ON TRAILER CAMERAS COULD BE RETURNED ON FROM TMC BUT TMC COULD NOT VIEW. SAW RED LED ON AD BACK BOX NEEDS TO BE CHECKED BY SOMEONE TURNED BACK TO SLEEP MODE TO CONSERVE FUEL UNTIL PROBLEM RESOLVED. LPG = 1/2 OIL LEVEL @ 1/2 HATCH. Add oil to top oil to 15-20 oz?
			LEFT IN SLEEP MODE
			WIRE PROBLEM RESOLVED
1/21	1320	1203.3	RESET ANTENNA V = 7.8 @ 64K Radio
1/22	0540	1203.3	Turned equip to standby T.L.
1/22	1715	1211.0	Turned off equip. Alarm off. All off auto. LPG 1/2
1/26	1250	1211.0	Turned on alarm to auto. LPG filled 1/23 T.L.
1/27	2230	1211.4	Turned on equip T.L.
1/29	1705	1266.3	Turned off equip. standby T.L.
2/4	1245	1295.8	LPG < 3/4. Filled 1/30 Running in auto. T.L.
2/5	1030	1300.8	Red Light Steady
2/10			

LAST LOAD BANKING, OIL/FILTER CHANGE = 1120

+150

1270

NEXT
OIL/FILTER
CHANGE

Surveillance Trailer Generator Use Log: Trailer # 115

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
2/10/98	12:50 PM	1307.3	R. Anderson - Phone WAS off. YELLOW SOLID
2/10/98	10:43 PM	1310.6	R. Anderson - Trailer off. Y-ON
2/11	1530	1310.6	OFF IN YELLOW AUTO. LPG 7 1/2. Difficult to start.
2/13	17	1311.1 ~	BATT = 11.83. Did not start well. HAD to jump start. Bt still not really in starting.
			24K RADIO STRENGTH VARIES GREATLY. NEED TO CHECK CONNECTIONS. TESTED AUTO shut down timer from TMC but it did not appear to work?
	19:50 pm	1312.2	TURNED OFF WATER EQUIPMENT. GEN RUNNING AND CHARGING BATT = 13.02. DID MANUAL STOP ON GEN. BATT = 12.6 v. NEED OIL. BELOW HATCH. Added to TOP.
2/13	18:00	1312.3	RESTARTED GEN.
2/17	1500	1313.9	BATT = 7.35V. LED = FLASH RED SLOW. JUMP STARTED AFTER 10M. LPG filled 2/18. TURNED EVERYTHING OFF.
2/19	1500	1318.4	YELLOW SOLID LED. 11.9V. TRIED MAN. START. COULDN'T. BATT = 12V.
2/19		11	LED.
2/23	1300	1318.6	TRIED TO START GEN MAN. FAILED. JUMP STARTED. EQUIP ON.
2/24	11:00	1331.8	GEN RUNNING. BATT = 13.14. w/o Phone & Alarm. BUT WITH WATER SWITCHES ON. 3. Reset Antenna 24K = 8V BUT 256 = 2.5V. TURNED OFF CAMERAS AND GEN WENT OFF RED? CHECKED BATT = 12.54. INSTALLED PULSE. TEST TO BATTERY TO DEFLAMMABLE.
2/24			Had 1002 oil. LPG = 5/8. BATT w/ Gen & LED on = 13.18. LED = GREEN. TURNED OFF CAMERAS. GEN TURNED OFF AUTOMATICALLY. BATT = 12.59V w/ water. LOWERED MAST. REMOVED PHONE, ALARM. TIGHTEN SLIGHTLY. RADIO V = 7.7V. 256 = 7.9V. TURNED OFF WATER. LEFT IN AUTO. LPG = 1/2. Added 1002 oil. BATT = 12.6 after 5 min Gen on. Removed Pulse Tech from Battery.
2/24	12:20	1332.6	TURNED OFF CAMERAS. GEN TURNED OFF AUTOMATICALLY. BATT = 12.59V w/ water. LOWERED MAST. REMOVED PHONE, ALARM. TIGHTEN SLIGHTLY. RADIO V = 7.7V. 256 = 7.9V. TURNED OFF WATER. LEFT IN AUTO. LPG = 1/2. Added 1002 oil. BATT = 12.6 after 5 min Gen on. Removed Pulse Tech from Battery.
2/26		1356.3	BATT = 12.45. TURNED ON MAIN SWITCHES.
2/26	16:25	1356.3	BATT = 12.45. TURNED ON MAIN SWITCHES.
2/26		11	BATT = 12.45. TURNED ON MAIN SWITCHES.
3/2	1635	1359.3	Tested equip. Turned equip off auto. T.L.
3/3	0745	1360.0	Turned on equip. RM EVALUATION. T.L.
3/3	17:15	1388.3	Turned off equip. T.L.
3/9	0710	1391.1	Turned on equip. LPG filled 3/6. T.L.
3/14	1150	1450.9	GEN ON. SHUT OFF EQUIP. OIL FULL. T.L.
3/16	10:30	1451.4	GENERATOR DID NOT START. RED LED FLASHING. RA..
3/16	5:30 pm	1455.9	INSTALLED DROP OUT RELAY. LEFT IN SLEEP MODE - AUTO. RESET LOW CUT OFF RELAY IN BOX NEXT TO DC BREAKER.
3/19	11:15	1456.0	RESET LOW CUT OFF RELAY IN BOX NEXT TO DC BREAKER.

PUT TO SLEEP

Added OIL →

32
14
13

n 13/27 km

PULSE TECH

PULSE TECH

Reset Low cut off

Reinstall Floppy Drive to WACC
Steve H. Testing Software.
64K RADIO = 7.7V
TURNED ON WATER & EQUIP, ARIES
LOW CUT OFF ACTIVATED INCL
LY.

I-6

Main Place

Surveillance Trailer Generator Use Log: Trailer # 115

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)	
3/19	1650	1461.3	Turned gen off. LPG 3/4	& ARIES
3/21	1035	1461.3	Turned all equip off, incl. alarm	T.L.
3/30	1430	1461.3	V=123 LPG 3/4 All off	
4/10	1130	1464.3	Started gen manually. OK. Turned it off after 2 min.	T.L.
5/5	1100	1464.7	TRAILER DOOR (MAIN) WAS FIXED DROP OUT RELAY	OPEN RJA
			START WORK - GEN STARTED OK	EDWIN OK
4/23		1464.3	COMPING CAL PACIFIC ADDED NEW ISOLATED BATTERY FOR STARTUP. ALSO DID GEN LOAD BANKING AND OIL & FILTER CHANGE	
4/24	Thur		MIGHTY POWER INSTALLED GEN VENT ROOF HOOD	
5/5			INSTALLED NEW 6V X 2 GEL BATTERIES @ 1470.0	
5/5			Rewired - Trip CKT and Battery Charge. Stated lights + AUX 12VDC needs tie in to AUX BATTERY	RJA
5/5		1470.0	FINISHED SETUP, LEFT EQUIP ON, ARIES IN MOT	
5/6	13:30	1470.0	BATTERY V. 6.18. SMALL BAT 12.90	
5/7	7:30	1484.6	STARTED GEN SYS. ON - 6.18 + 6.12 P.M.	
5/7	3:50	1484.8	GEL BAT 6.65 + 6.69V	
5/11	1500	1507.0	TURNED GEN OFF. SMALL BAT 13.58V	
5/11	1700	1507.5	GEL BAT 6.5 + 6.55 GEN ON P.M.	
5/12	11:00	1507.5	SYSTEM ON	
5/12	14:00	1512.2	6.70 + 6.74 GEL BAT	
5/13	17:00	1512.2	AUTO GEN ON. LED YELLOW NOT FLASHING.	P.M.
5/14	13:30	1512.2	GEL BAT 6.6 + 6.65 V STARTED GEN. BAT 6.23 + 6.23	
5/15	19:25	1513.1	FINISHED DISCUSSING CHARGES LEFT BIPASS ON, 64K RELAY ON.	
5/15	11:05	1530.9	GEN WAS RUNNING ALL DAY. 12V OFF RELAY ON NORMAL	P.M.
5/18	1300	1604.2	Moved trailer to Corona Mighty Mower	11:00 OFF EXCEPT AUTO GEN T.L.

DO NOT
& STABILIZER

10/5/98: Tades: Propane costs approximately \$1.75/gallon.

Grand Avenue Surveillance Trailer Logs

Surveillance Trailer Generator Use Log: Trailer # 109

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
9/30/97	1535	532.6	Gen off in auto. T.L.
10/6	1505	546.7	Tested trailer Left in auto. T.L.
10/8	1550	552.6	Retested 10/7 Tested trailer. Gen off T.L.
10/15	0845	568.3	In Auto. Conditions OK. W. 11 perform SAT dry run. BTH. oil ok.
10/20	0955	578.0	T.L.
11/13	0915 - 1740	642.9	S.A.T. Done T.L.
11/14		653.9 ?	TURNED ON RADIO/WACC TO ALLOW SWITCH TEST
11/15	8:30	653.9	LP6 = 1/2. Added 202 oil.
11/17	1820	664.5	TURNED OFF WACC/RADIO S
			Turned equip off. Left auto.
11/20		671.9	BATTERY = 12.35, ADDED 2-602 OIL
11		FOUND RAMP METER	LP6 = 3/4
11		ARIES PROCESSOR OFF	RAMP METER - I STARTED GEN, SWITCHED TO MANUAL BEFORE TURNING ARIES
12/2	72L	699.3	PROCESSOR ON. WAITED 1-2 MINUTES, THEN SWITCHED TO AUTO.
12/4	1700	705.1	OFF IN AUTO. LP6 1/4 T.L.
12/9	NOON +	715.8	Tested R.M. LP6 filled T.L.
			LP6 3/4, Add 2-302 oil.
	Ramp Meter Dead		
	Turned off all switches including Aries		
	RAMP LP6 = 1/2		
12/11	1130	719.9	GENERATOR MAINT BY CUMMINS CAL PAR
		"	OIL & OIL FILTER CHANGE
		"	AIR FILTER OKAY, A
		"	CHANGED SPARK PLUGS
			NEXT LOAD BANK & ADJUSTMENTS
12/15	0915	728.7	
12/16		731.3	Revised Elevated Mast LOAD BANKING DONE JAC
12/17	8:00	733.3	Found Generator charging.
12/23	11:00	761.6	OIL LEVEL AT MIDDLE OF MAX H. ADDED SEVERAL OUNCES TO TOP.
12/29	1400	769.6	Found dead 12/26. VDC = 5V T.L.
12/30	0900	778.8	Jump started. LP6 3/5 OIL OK. Left auto
12/30	1500	782.5	Gen off in auto. Run 3 hrs test on auto scope T.L.
1/6/98	0810	799.0	Tested R.M. Left auto T.L.
1/6	1100	804.2	OFF IN AUTO.
			IN AUTO. LP6 = 3/4-

5 hrs. Day
(.) 30 min
4K SSR ON.
since when?

Surveillance Trailer Generator Use Log: Trailer # 109

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)	
1/13/98	1020	817.0	OFF IN AUTO. Start 1/32	T.L.
1/19/98	1700	857.9	LPG < 3/4 Turned equip to standby.	Tested RM. T.L.
1/21	0550	892.7	Started R.M. evaluation	T.L.
1/21	1830	905.2	R.M. evaluation	T.L.
1/22	1900	929.6	Turned off equip. Alarm	T.L.
1/23	0950	932.8	off in auto.	auto mode. T.L.
1/26	0900	999.5	Has been running for 3 days.	T.L.
1/27	0530	1011.5	Gen running Started equip for RM	T.L.
1/28	0625	1035.1	Gen running. Metering	T.L.
1/28	1645	1044.8	Metering.	T.L.
1/29	1700	1068.2	Metering	T.L.
1/29	1915	1070.4	Turned equip off. Auto.	T.L.
2/4	1230	1075.6	LPG 3/4. Filled on 1/30. Difficult to start.	T.L.
2/5	1230	1075.8	BATT = 10.35 TO LOW TO START FOUND LED FLASHING RED.	
"	"	"	JUMP STARTED & LEFT IN MANUAL TO CHARGE UP	
"	"	"	NOTE: PHONE FOUND OFF. MAJOR VOLTAGE HAD DROPPED BELOW WORKING THRESHOLD.	
"	"	"	BUT ALARM WENT OFF WITH THE OPENING RAMP METER POOR	
"	"	"	BATT = 12.75 after 5 min on charger	
"	16:00	1079.0	BATT = 12.84 GEN RUNNING. SWITCHED TO AUTO. GEN KEPT RUNNING	
2/9	14:45	1079.8	NO POWER INDICATION IN THE SWITCH	
2/11		11	BATT = 4.02V. TRY JUMP STARTING LPG = 3/4	
2/17	1440	1173.1	Gen running. ARIBS turned off. Turned ARIBS on. Left in auto off. No LED's? Auto gen doesn't seem to start gen when commanded. Turned gen off incl. phone.	
2/23	1620	1173.6	Turned gen on. Gen fixed 2/21 Turned equip on.	
2/25	915	1177.7	Turned gen & equip on	
2/26	14:45	1186.9	FOUND ANTENNA CABLE (CONTROL)	LOOSE
2/26	15:05	1207.2	BLINDERED FIRST CHECKED ALL CONNECT OILED HOLES WITH OIL CAN.	
2/26	15:05	1207.2	OIL IN GEN TOO FULL.	
2/26	16:45	1208.9	Reset the Amesfield Proc. FROM CHECKED OUT OPERATION O.K. BY	
2/27	1440	1208.9	Tested RM. Ramp trailer LPG < 1/2. TIGHTEN GAS LET LOWER GREEN BULB BROKEN. DOOR ALARM WIRE	
3/2	1530	1209.0	Replaced green bulb. Tested RM.	T.L.

1/30/98
TWO NEW
BATTERIES
INSTALLED.

I-10

Surveillance Trailer Generator Use Log: Trailer # 109

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
3/4	1845	1234.8	RM Evaluation Gen running auto. Equip ON
3/5	0730	1236.8	R.M. signal out of sync with W70
3/5	1900	1246.5	Turned off equip. TL
3/9	0650	1249.7	Turned equip on TL
3/10	1130	1271.0	Put Trailer in MAP. RTA STARTED GEN.
3/12	9:25	1294.9	BATT = 12.44, GEN RUNNING ON SURV. RAMP METERING TRAILER NOT OPERATIVE
11	1	11	64K RADIO 7.2 ~ 7.6 VOLTS
	12:00	1296.4	BATT = 12.38, GEN OFF OIL VERY LOW ONLY SHOWED AT TOP OF DIP STK. Added to
			COLLECTED 170 & WAC DATA ON LAPTOP FULL (TOP OF HATCH) CAME OUT W/ STEVE HUIZENGA TO
	1:00	1297.4	BATT = 13.10V. TURNED GEN OFF SWITCHED BACK TO AUTO. BATT = 12.6V
3/14	1130	1322.7	CAM ON. ADDED OIL SHUT OFF EQUIP. LPG 1/2 T.L.
3/17	0545	1322.7	LED SOLID RED. TURNED ON EQUIP. GEN DIDN'T TRY TO START. START GEN MA. LPG-filled 3/16. Adjust autoscopes loops
3/18	0700	1344.7	R.M. ON. T.L.
3/19	1100	1364.6	GEN NOT RUNNING, BATT = 12.25 ADDED OIL FROM BOTTOM OF HATCH. JL
			TOOK SPARE BATTERIES TO FIRE (113).
3/19	18:30	1367.9	REMOVED SEE 170 "BPAH" STOPPED RAMP METERING. REINSTALLED FLOPPY DRIVE STEVE H. TESTING GOFT CAR
11	11	11	
3/19	1645	1368.2	TURNED ON R.M. T.L.
3/21	1000	1391.3	Gen off. V = 12.3 LPG 1/4 Turned equip off. Added oil. T.L. Ramp LPG 5/8. Bat 12.0V
3/24	0820	1395.0	Turned equip on. Gen started
	0915	1395.8	Turned equip off. T.L.
3/25	0720	1395.9	LED RED TURNED EQUIP ON. GEN STARTED AFTER 2 MIN T.L.
3/26	1700	1421.2	R.M., FLASHING GRN LED. TURNED EQUIP OFF. OIL OIL
3/31	13:34	1422.1	LED = RF, BATT = 10.20V BUT PHONE 24KHZ SYS STILL ON. JUMP STARTED TURNED ON 64K RADIO = 3.6V ANTENNA BLOWN OFF DIRECTION. REAL! 64K RADIO = 8.7V GOOD BUT 256K RADIO = 4.0V BAD.
4/1	0830	1440.9	Gen running. V = 13.14. shut off gen & 12.2
4/1	1150	1440.9	START GEN FOR SETTING RAMP METERING TRAILER V SETT.
	1300	1442.1	SET NEW RAMP V HIGH = 13.8 NEW RAMP V LOW = 12.0

4/1

15:00

1442.1

TURNED OFF GEN, LEFT IN AUTO
W/ARIES, WAC & RADIOS ON.
TURNED OFF WAC & EQUIP
ARIES IN AUTO.

512 & FILTER
HATCH
1243.7 3/5

OIL →

170
NEW SOFTW

Surveillance Trailer Generator Use Log: Trailer # 109

[illegible]

Surveillance Trailer Generator Use Log: Trailer # 17368 with 109.

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
1/19/98	1715	13.8	T. L. Turned radio to stand by
1/30/98		37.2	GEN CHECK BATT CHECK BY CUMMINS CAL PACIFIC
2/5/98	12:30	39.4	BATT = 12.0 V
2/10/98	11:40	42.2	NO LED LIGHT ON ARIES? BATT = 4.89 V JUMP STARTED W/ARIES OFF. STARTED OKAY. W/Charge on BATT = 13.86V. IT FIRST THEN STABILIZED TO BATT = 13.25 TURNED ARIES ON IN MANUAL THEN TO AUTO.
"	12:05	42.4	BATT = 12.11 V
2/26	18:00	47.9 ~ 48.0	
3/5	0730	54.2	OIL OK LRG 3/5
3/12	09:20	?	BATT = 11.74 RAMP METER GEN NOT RUN AND RAMP METER NOT OPERATING
3/12	9:30	61.8	NEW GEN STARTED ON ITS OWN. BATT = 13.4 AND CHARGING. RADIO SWITCHES ALL ON.
3/12	9:35?	61.8	JUST NOW GEN STOPPED RUNNING BATTERY MOST BE CHARGED UP
3/21	1000	79.0	Gen off. LRG 5/8 Batt 12V.
3/28			ALARM CAME TO TAIL GEN DOOR OR 13 FUEL 6 B ? TADDED ? CANCEL
3/31	1424	90.0	BATT = 4.0 TURNED OFF RADIO, REM, FLOWDR. JUMP STARTED. BATT INITIAL = 13.7 AFTER A FEW MINUTES DROPPED TO 13.4 LEFT IN MANUAL TO CHARGE UP.
"	"	"	
4/1	0840	108.7	Gen on. ARIES OFF. V = 14.0 TURN OFF GEN. TURN ON ARIES LRG out V = 13.2
4/1	1600 ±		BATT = 12.67 V GEN OFF. START GEN IN MANUAL BATT V JUMP TO = 13.6 V ARIES 30-40A B = 14.0
"		109.6	TURNED BATTERY THRESHOLDS RESET FROM MOBILE TRAILER. NEW RAMP V HIGH = 13.8
"	100pm	"	SET ARIES TO NEW RAMP V LOW = 12.0 AUTO. LEFT 19.2 RAMP ON.
4/7	1700	118.9	LPG 1/4. Gen off yellow. Radio on. V = 12.5. Gen man starts OK. OIL
4/16	1630	141.5	VH = 13.6 on 4/14 changed.
4/30	-	166.7	OIL & FILTER CHANGE BY CUMMINS CAL PACIFIC.
5/5	19:00	175.8 1/2?	BATT = 12.00 LRG = 1/4 GEN AUTO STARTED AFTER I CHECKED VRL SIGNAL RELAY, SIGNAL POWER RADIOS SWITC ALL FOUND ON AND LEFT ON.
"	"		BATT VOLT = 13.4 HAS BEEN RUNNING A GOOD 10-15 MINUTES. STILL CHARGE
"	"	176.1	GEN JUST STOPPED?
5/22	10:00C	202.4	BATT = 12.22 LRG = 3/4 NOTE: SIGNAL RELAY, SIGNAL POWER AND RADIO SWITCH ON.
"		"	SEEMS THAT ALARM MAY BE ACTIVATED. LED (RED) AT TOP OF CABINET IS FLASHING
7/14	0915		Shut down & moved to Batavia T.L

First Street Surveillance Trailer Logs

Surveillance Trailer Generator Use Log: Trailer # 113

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
7/29/97	10:00	908.9	GEN ON BATT = 12.72V LPG = 5/8 FULL
"	1620	913.4	Turned gen. equip off. auto T.L.
"	1730	"	"
7/30	1525	914.3	Gen off in auto. Tested controller T.L.
8/4	14.15	926.7	Gen off in auto. Gen started shut off
"	1530	928.0	Gen off in auto.
8/5	12:00	929.4	BATT 11.94/11.68 LPG 1/2 Full OIL AT BOTTOM OF TANK. ADD 1/2 QT! USED AIR COND. FILLING HAD GENERATOR HAD DIFFICULTY IN STARTING WENT UP IN MANUAL 20-30 SECS. CHECK TUNING? SPARK PLUGS?
8/11	"	924.5	Gen start failed in 5 tries. Started manually. Left in auto T.L.
8/5	1340	929.9	Gen off in manual. Red slow flashing. Cannot manually start
8/7	1250	933.7	Jump started Left gen on in auto T.L.
8/11	9:50	935.3	BATT = 7.53V? (could not start in manual) TURNED OFF ALL SWITCHES. LPG - 1/2 1/4 qt oil added
8/13	1500	935.7	Jump started ok. Left in auto mode. Security on. Brian
8/19	1500	1079.5	Gen on in auto. Have been running 2 or 3 days. Turned off Left in auto T.L.
			In 12VDC box "MAIN 12V" WAS - IF Found out 12V box "ELECTRONICS" & "GFI" OFF. Turned them
8/21	0850	1079.5	Gen off auto. LPG filled. Turned equip on.
8/21	1700	1079.5	Gen kept stopping. Turned equip off. Left in auto T.L.
8/24	0600	1090.4	APPLIED 1QT OIL.
8/27	1410	1090.6	OFF in auto T.L.
8/28	1300	1092.4	OFF in auto T.L.
"	"	"	"
9/16	10:30	1124.2	LPG = 1/2 BATT = 11.98 OIL OKAY. J.E.
9/18	10:45	1127.5	BATT = 11.93 LPG = 1/2 FOUND BLACK WIDEN NEAR BOTTOM OF MAIN
9/21	5:00	"	"
10/7	0800	1159.3	Gen off in auto T.L.
10/7	1545	1159.7	LPG filled T.L.
10/10	11:15	1175.0	Added 1/2 qt oil. LPG 5/8 TURNED ON WASH & DRYER
"	"	"	TURN ON POWER CORD, BUT CHECKED CORD PATTERN.
10/16	1600	1178.7	TURNED OFF CORD GEN STOPPED IN AUTO T.L.
10/21	1550	1187.3	SAT DRY RUN T.L.

13 hrs / 7 days
Less 2 hrs / day

THE CH-
DRIAGE WAS

Surveillance Trailer Generator Use Log: Trailer # 113

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
11/4	11038 9:00	1210.8	LPG = 1/2 Testbed 11/4 ✓ Oil = Add 1/3 qt. Siren went off TMC Rel
11/15	12:50	1229.1	BAT = 7.98V BATTERY WATER CHECK BASICALLY OKAY. TURNED OFF MAIN SWICH.
11	11	11	AUTOGEN SWICH. ATTRES PROCESSOR DON'T KNOW HOW TO TURN OFF ALARM
11	11	11	IT JUST KEPT BEEPING. LPG = 1/2 OIL OKAY. TOPPED OFF W/ 4-6 OZ.
11/15	2000	1231.0	SAT performed T.L.
11/19		1242.6	CHARGING OKAY, BATT = 12.22V LPG = 3/8 OIL OKAY
12/2	2:00	1253.9	Found Butcher Connect, 12/2 ^{12/2} 12/2 ^{12/2}
12/16		1255.9	OIL CHANGE & FILTERS SPARK PLUGS CARBON BUILDUP
			BANK LOADING
12/17		1264.4	Gen must have started on about 9:15 to charge up low battery. (was 7.2V) TURNED ON WACC & RADIOS ARIES TRIED TO TURN ON THREE TIME BUT FAILED! GENERATOR DID LOTS OF SHAKING. I DID MANUAL START. 12/17 ^{12/17} 12/17 ^{12/17}
12/23		1265.4	FOUND WIRE TO GEN ON PLUGS JUMP STARTED, B-T D. DIFFICULT LEFT IN AUTO TO CHARGE BAT WAS 3.5V
1/8/98	1430	1306.1	LPG < 1/2
1/13	1305	1316.2	LPG 11:00 clock.
1/13	1345	1316.4	Fixed antenna control & SURV. Cam control. T.L.
1/14	1345	1319.3	Autoscope TL
1/19	2100	1329.8	LPG refueled 1/15 Turned equip to standby T.L.
1/21	0945 AM	1366.4	BAT = 13.4V Gen running and WACC ON LPG = 1/2. TRIED Reap. Antenna Strength vs 7.60-7.70 Bump/Secas. V = 7.5
1/22	1645	1397.5	Turned off equip Left in alarm mode. Ant. LPG 7/4
1/26	1530	1415.6	LPG refueled 1/23 T.L.
1/29	1720	1471.3	Turned off equip. Auto TL.
2/4	1300	1520.2	LPG > 1/2. Filled 1/30. Stopped in auto. TL.
2/11	1615	1572.9	LPG 1/4 OFF IN AUTO. RED TL.
2/13	1815	1579.3	BAT = 12.22V BAT OIL VERY LOW Added 1 qt of oil. Still a little low. OIL
2/17	1535	1579.3	LPG < 1/4. Gen off yellow. BAT 11.02V. Can't start auto.
			Found conn. disconnected at gen. Connect But bat too low to start. Can't jump start.

LAST BANK LOADING & OIL/FILTER CHANGE = 1255.5
1450
1400 1626.5

OIL &
FILTER
CHANGED

Added
1 qt OIL?

Surveillance Trailer Generator Use Log: Trailer # 113

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
2/24	12:30	1579.6	JUMP STARTED. BATT WAS 12.2 BUT NOT STRONG ENOUGH. GALK = 7.6 EV 256 = 6.8 V
"	"	"	TURNED ON WACC & SWITCHES BATT = 13.03 W/ CAMERAS OFF. LEFT IN AM
2/26		1593.5	AED RED. TURNED OFF ALL SWITCHES PHONE & ALARM
3/2	1700	1593.8	Jump started. Left running in auto. Equip off. T.L.
3/3	0800	1600.9	Turned equip on. FOT. EVALUATION
3/5	1700	1600.5	Turned off equip. T.L.
3/9	0720	1665.0	Trailer dead. LPG filled 3/6 > 1/2 full. Jump started. Turned on equip. Oil filled T.L.
3/11	11:15	1703.9	JENIS ON BUT RED LIGHT FLASHING. PHONE NOT WORKING. TURNED OFF SWITCHES. P.M.
			PER T.L. WANTED TO CHECK THE OIL. IT WAS PRESURED AND BURNED OUT. RAN FIELD WITH OIL!
3/12	9:50	1703.9	JUMP STARTED. BATT = 7.8
"	"	"	ARIES WAS ON. WACC REG OFF.
"	"	"	AFTER START BATT = 16.22 BUT CHARGER
"	"	"	MAIN SWITCH WAS OFF. TURNED ON BATT = 12.8
"	"	"	TURNED ON WACC & EG CABINET &
"	"	"	64K RADIO = 7.6+ BATT = 12.8 BUT FLUCTUATING 2.05 J.C.
3/12	1:15	1707.4	BATT 12.49, IN AUTO W/ WACC ON
3/12	1830	1711.4	Gen stopped auto. T.L.
3/17	0800	1713.7	Gen died 3/13
3/17	1800	1723.8	Jump started trailer. Left man on. T.L.
3/18	18:45	1744.9	Gen on main 13.0 V. Turned off to auto.
			BATT = 13.1. TURNED GEN RUNNING IN "YF"
			TURNED OFF LAIR REG EXCEPT ARIES.
			GEN AUTOMATICALLY TURNED OFF.
			TURNED WACC & 64K RADIO BACK ON.
			BATTERY VOLTAGE DROPPED RAPIDLY
			FROM 13.1 ~ 12.15 THEN ARIES
			TRIED TO START MORE THAN 3 TIME
			DID NOT STOP TRYING. I TURNED O:
			ARIES. BATTERY NO GOOD. OR SHORT AN
			ARIES KEEP TRYING TO START. LPG = 1/2
	1:20	1744.9	Charged B.U. and S.U. START
3/19	1:40	1745.1	USED ALL BATTERIES & FRESH BATT.
3/21	1045	1764.0	REINSTALLED FLOPPY DRIVE. STEVE R. TEST.
3/21	1500	1795.1	GEN ON - SAW WACC REEPS REBOOTING.
3/31	1500	1795.1	V = 12.50 OIL OK LPG < 1/2
			TURNED EQUIP. WACC REEPS REBOOTING T.L.
			V = 12.58
			LPG & YA BATT = 5.8 V GALK = 7.65
			OIL LOW @ 1/2 HATCH, FILLED TO TOP.
			JUMP STARTED.
			ALSO REMOVED DISK DRIVE. RESET TO
			EPROM.
4/2/93	300	1825.2	WACC TURNED THE SYSTEM
4/7	1645	1825.8	OFF. P.M.
			V = 11.83 OIL OK
			LPG VERY LOW. DID NOT JUMP. T.L.

I-17

[illegible]

Tustin Ranch Road Surveillance Trailer Logs

Tustin Ranch Road
Surveillance Trailer Generator Use Log: Trailer # 114

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)	
1/24/97	1350	23.0	Brian Tankersley	In Auto 13.5 V at start
6/18/97	1620	60.4	Moved to Tustin Off in man.	T.L.
6/19/97	NOON ⁺	60.4	BAT = 12.8 V LPG FULL (3/4)	J.E.
—	Added Some Oil (May appear low because Trailer Filled)			
—	Found in Manual Left in Manual. OFF ANTS?			
—	NEED ANT SPRAY?			
6/19/97	1515	60.6	Gen on. Left in Auto. Ramp Tank in auto.	6/24 - WHY?
6/23/97	1401	140.6	Replaced 19.2 radio Added 4 QTS OF OIL	T.L./B.D.
6/24/97	09:15	141.1	FOUND IN AUTO. YELLOW LED ON. GEN OFF LPG LESS 1/2 (7/6)	
"	10:20	142.0	GEN ON? CHECKED BATS W/ANALOG METER LARGE BAT 12.01V, SMALL BATE 11.5V	
"	"	"	ALARM INDICATES LOW BAT ZONE 18	
6/25/97	9:49am	155.4	GEN OFF. BAT VOLT = 11.51 LED YELLOW ON. LPG = 3/8	J.E.
"	"	"	SAME. LEFT LPG TANK DOOR OPEN. ALARM ON	
6/25/97	1430	158.6	Repaired HOIN Door Removed yellow lights from Ramp	RED
6/26	1500	170.2	SAT performed Left in auto	T.L.
6/30	16:40	210.6	Alarm ON. GEN START FUEL 2 1/2	AUTO/ON
7/1	10:40	210.6	YELLOW LED LIGHT ON SOLID LPG 1/2 TANK ALARM OK.	GEN OFF
7/3		213.0	BAT 11.82/11.53 BUT BODIE NEEDS CHECK GEN ALARM DIDNT	60 OFF.
"	"	"	ADDED 1 QT OIL (NEEDS MORE)	
"	"	"	LPG TANK = 1/2 TANK	
"	"	"	MAIN DOOR ALARM WENT OFF	
"	"	"	ADD DETECTED AT T.M.C. NO STRAB.	
"	5:45 [±] pm	213.0	BATT = 11.55/11.27. GEN DID NOT START YET ADDED 2 QTS OIL OIL LEVEL AT BOTTOM	
"	"	"	NOTICED RAMP METER GEN WAS RUNNING. LPG BAD RAMP	OF HATCH MARI
7/8	9:30 am	220.5	BATT = 11.52/11.44V. YELLOW LED ON SOLID 7 1/2 HRS RUN ON GEN. LPG = 1/2 TANK	1 1/2 TANK.
"	"	"	GEN STARTED RIGHT AFTER I DIALED CELLPHONE BATT = 12.64 V W/GEN ON; NEED TO CHECK OIL	
"	9:40 AM.	220.6	RAMP METER TRAILER ALSO STARTED AS I CAME. LPG = 1/2 TANK.	J.E.
7/8	5:30 pm	221.1	BAT 11.61/11.34V. GEN FULT SINCE A.M. GEN ON 1/2 HR. Add 1/3 qt oil.	HOT
7/9	1435	222.2	OFF IN AUTO Charged EPROM. Gen started in auto	11.2
7/10	1520	225.6	Run. 12 in auto. Turned gen on. Propane	T.L.
7/15	10:00	226.7	GEN OFF. YELLOW LED ON SOLID BATT = 11.83/11.44V. LPG = 1/2 TANK	filled T.L.
"	"	"	WACC ON 6.4K RADIO ON.	
"	"	"	ADD 1 1/2 QTS OIL to Bottom of HATCH.	
"	"	"	GEN STARTED WHILE I WAS HERE. AFTER 5 MIN BAT = 12.60/12.27 V	J.E.

MISS READ
283.7?

6/24 1/16 - 7/16 = 5/16 used 80 hrs = 3 days + 4 hrs

GEN OFF. BATT = 11.90/11.56V
Added 1 qt oil
GEN STARTED. BATT = 12.27V
USED 1/16 of tank in 1 day = 1/8 tank

Tustin Ranch Road
Surveillance Trailer Generator Use Log: Trailer # 114

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)	
7/18	12:55	318.3	Ronald LGW	
7/21	1415	350.3	Running gen auto. Turned off gen & equip	LPG filled, Left auto. 11.6L
7/22	1015	359.3	GEN WAS RUNNING. LPG 1/2 FULL BAT = 12.92/12.56V, GEN WENT OFF	
"	"	"	Added 3/4 QT OIL TO NEAR BOTTOM OF HATCH MARK	
7/22	1400		Started gen man. Left in auto. Equip on.	T.L.
7/23	1320	371.4	Gen running. Turned equip off. Left	12-4V auto. T.L
7/29	930	371.4	BAT = 5.60V FOUND IN MANUAL! LPG = 5/8 FULL	
"	"	"	ADD 1/2 QT OIL TO BOTTOM OF TURNED OFF SWITCH IN BOXES	HATCH MARK BAT = 6.12V
"	1345	372.4	Jump started. Equip off. Left ON	unif. T.L.
7/30	1400	381.0	Gen off. Equip off. Left auto. T.L	
8/5	11:30	393.8-9	BAT = 11.84/11.50 LPG = 1/2 FULL ADDED 1/2 QT OIL. USED AIR CONDITIONING	
8/6	1600	395.5	Gen off in auto Checked auto scope	T.L.
8/7	1615	400.8	Turned equip off after fasting. OFF in auto	T.L.
8/11	9:30	406.7	Gen off. BAT = 12.06. LPG = 1/2 EQUIP TURNED ON, CAMERA OK	BAT NOT NTL
8/11	16:00	410.2	TURNED OFF WATER PUMP LEFT IN AUTO. ADD 1/2 QT OIL	Bottom of HATCH
8/19	1400	515.0	Gen off. Just out of gas. BAT still OK	T.L.
8/20	1640	515.0	LPG refilled. Started gen man. Switch to auto. Gen off	T.L.
8/24	9:20	620	Gen kept running off Added 1 1/2 qt oil. Equip runs OK.	
8/24	16:30	627.	LED RED. BIL LOW. Added 2 QTs NEED MAX. STARTED UP IN MANUAL. LED FLASHING RED.	
8/26	16:30	627.4	CHARGER ON. 90% GREEN LED COMING ON & LEFT IN AUTO. LPG CLOSE TO EMPTY.	
"	16:30	627.4	ADDED 1/2 QT OIL. TURNED OFF MAIN BREAKERS	
"	FOUND FUSE CASE NEAR GENERATOR BROKEN			
"	NEED DUCK TAPE OR NEW CASE? MAY BE			
"	REASON			LPG refilled on 8/27
8/28	0800	627.4	Taped fuse together. Gen started OK. Left auto. T.L	
9/2	0830	641.5	Added 1/3 QT OIL. TURNED ON BATT. EQUIPMENT	
9/3	15:45	645.4	Added 1/2 QT OIL. TURNED OFF WATER PUMP	
"	"	"	"	
"	"	"	"	
9/16	1600	675.1	LPG = 7/16. BAT = 12.03 PLACED MAX/MIN THERMOMETER IN CHARGER COMPARTMENT BTWN CHARGER & GEN COMPARTMENT W/	
			Added 1/2 QT OIL to bottom of Hatch Mark.	

100 P.H.S.

14 hrs / 6 = 2.2 hrs

10 hrs / 6 days

Less 2 hrs

I-21

Tustin Ranch Road
Surveillance Trailer Generator Use Log: Trailer # 114

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
9/17			
9/18	9:45	718.3	FOUND GEN RUNNING LPG VERY LOW?
"	"	"	AUTO START PANEL FLASHING GREEN. Added 1 qt OmniMax oil
"	"	"	TURNED TO MANUAL AND SHUT OFF GEN RESET TO AUTO, LED FLASHING YELLOW
"	ORDERING LPG REFUEL.		BUT GAS IS OFF and not starting again.
"			ARMED WITH BYPASS OF LPG DOOR. NEED TO REFUEL.
9/18	17:00 ±	724.3	FOUND GEN ON w/ GREEN LED. FLASHING. BATT = 13.5 MAY TEMP IN CHARGER
"	"	"	COMPARTMENT BTWN CHARGER AND GEN COMPARTMENT (+134°F)
"	"	"	CHECKED FUSE IN GEN COMPARTMENT LOOKS LIKE IT BAME LOOSE AGAIN
9/18	17:20		RETAPEd NOW AUTO START NOT FLASHING LOOKS OKAY.
9/24	10:10	771.4	Gen running. Flashing fast. Found fuse holder loose.
9/24	16:15	771.9	Retaped both trailers. Replaced fuse holder.
9/30	9:10	777.9	Added 1 1/3 qts oil.
"	"	"	MAX TEMP IN TRAILER BODY = 116°F LPG = 5/8, OIL @ Bottom of TATCH OKAY
10/2	8:45	781.2	VISIT TO TRAILERS w/ CAMMINS MIGHTY MOWERS, HUGHES, CATRANS TO DISCUSS GEN MAINTENANCE VENTILATION OF GEN COMPARTMENT REDUCING HEAT FOR GEN & CHARGER. (NOTE: Max Temp in Trailer 102°F)
10/2	11:25	783.5	Tested gen in auto.
10/13	8:10:51	804.6	Auto Gen panel yellow on. on fan testing.
10/14	10:30	807.4	Auto Gen panel off.
10/14	12:50	807.4	Added oil (1/2 qt). Turned BYE generator on.
10/16	10:50	813.2	LPG = 3/4, OIL IN TANK AREA OKAY TURNED ON GEN, HUGHES, ALTHOUGH INIT PHASE IN WENT ON (2 CODES) NO IMAGE RELEASE AT TMC. TV PROVIDED ALSO COULD NOT TURNED ON.
10/16	18:30	813.8	STOPPED TO CHECK STATUS RAN OUT 1/4 (6 hrs) to charge up & E.
10/20	0827	821.6	Trailer condition OK. SAT DRY RUN DONE
10/30	1230	843.7	Gen off in auto.
11/6	1418	878.4	BATT Dead. Oil low / Add 1 1/2.
11/15	1235	894.4	S.A.T. Performed
11/17	1020	898.8	Turned equip oil

11/2 9:30 940

12/9

953.5

LOAD
BACKING

12/16

968hrs

Back
Loading

LPG 5/8, OIL OKAY
Max Temp in Battery

(Oct-Nov)

LPG = 1/4, BATT = 12.10
Add 1/2 qt oil to top of TATCHED
(FORGOT TO LEAVE LOWER BECAUSE OF SEA)
Disconnect Black Wire (#9) on Alarm
(Troubleshooting False Smoke Alarms)
Temp Max in Charger Compartment
next to Gen Wall = 128

Surveillance Trailer Generator Use Log: Trailer # 114

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
12/23	10:00	971.2	FOUND BATT = 5.5V WIRE DISCONNECTED. COULD NOT TURN OFF MAIN BREAKERS AND ARIES, TEL, SECURITY SYS. COULD NOT TURN OFF LIGHTS ON INTELLIGENCE POWER. HOWEVER, STARTED WATER AND GALE RISK COMMAND ON KEYBOARD TO SUCCESSFULLY TURN OFF 4 LIGHTS.
12/29	1600	980.7	FOUND DEAD ON 12/26. Jump started after 15 min try. Turned off everything, incl. phone & security. Left Auto gen start/stop on. Checked the oil against the Antenna, LPG 5/8, reconnected security. Phone line / 88° temp
1/6/98	0800	1011.3	DIFF IN AUTO. IRON MOUNT. Turned off phone & alarm T. LPG filled up 1/6/98
1/8/98		1037.6	GEN FND RUNNING IN AUTO. BAT V = 13.74 (I DIDN'T TURN OFF?). LPG = 1/2-. TURNED OF IN MANUAL & RESET TO AUTO. Add 200 cc oil to fuel tank
			SWAPPED CELLULAR PHONE TO 343-9623
1/8	1400	1041.1	Tested R.M. LPG 3/8
8	1700	1042.1	? when leaving? FOUND TRAILER RUNNING. BATT VOLT = 13.6. TURNED OFF ALARM, CELL PHONE & AUTO GEN, MAIN SWITCHES UNTIL WE FIND OUT WHY GEN SO MUCH?
4/13	9:30	1042.2	Added 10-2000 off. TURNED ALL SLIDE ON, incl. WACC. TMC Activated for. but Monitor and Image at TMC did not show image. They were able to see CCTV. TURNED OFF WACC & MISC SWIT. LEFT IN AUTO CHARGING MODE. went to GREEN THEN SHOT GEN OFF, NOW SOUND YELLOW LED.
1/15		1050.0	GEN WARM, BATT = 12.59. LED = YELLOW. TMC turned on but image flickering.
		1050.4	GAK Read to V < 7.6 about 7.5. Readjusted to V = 7.65±
1/15	1600	1054.1	Tested R.M. LPG refueled
1/15		1054.6	FOUND GEN. VOLTAGE BATT = 13.5. TMC ALARM LEFT IN AUTO
1/19	1840	1063.5	LPG 5/8. Turned equip on to standby
1/20	7:10	1076.5	13 hrs gen. A. Christine. BATT = 13.4 w/ Gen E. LPG = (1/2-). Not BURNTED. Run
1/21	8:20	1101.6	BATT = 13.45V Running. PUT ADDING A FEW OZ OUT OF LPG MAY HAVE TO SHUT DOWN TO SLEEP MODE UNTIL LPG IS REFUELED.
1/22	10:50	1125.6	LPG = EMPTY. ENGINE OIL LOW BELOW NAT NEAR BOTTOM OF STICK. ADD OIL close to top. Engine had Rubber burn smell. May have been getting to hot. Disconnected Alarm. TURNED OFF PHONE & TEL MAIN SWITCHES

343-9286

CIRAND

TUSTIN

I-23

Surveillance Trailer Generator Use Log: Trailer # 114

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
1/23	11:00	1126.0	INSTALLED NEW STARTER. INSTALLED PULSE TECH ON BATTERY.
11	11:45	1126.4	TO REMOVE SLOTTION IF ANY EXISTS LEFT GEN RUN IN AUTO. FORGE GEN STOP IN NOTE
"	1:20	1126.8	R. Anderson
1/26	1600	1197.4	Gen stopped. LPG refilled 1/22 Running out of LG.
8.25 { 1/27	0845	1197.4	Turned equip on. LPG filled. TL
1/27	1700±	1204.9	Looking for Volt Meters. 2 FOUND IN MANUAL. TURNED OFF LOACC/CAMERA EQUIP. LEFT IN AUTO DID FORGE STOP IN AUTO GEN. BUT GENERATOR STARTED UP IN A FEW MINUTES. SO TURNED OFF ALARMS ALARM AND PHONE UNTIL TOMORROW. Added 10-2002 G/1 to mid HATCH.
"	"	1205.1	Turned on equip. Started RM. T.L.
1/28	0600	1205.1	Gen off in auto.
1/28	1400	1211.3	Then started automatically. T.L.
1/29	0600	1222.3	R.M. T.L.
1/29	1710	1231.2	RAMP METERING. BATT = 13.5 after 10k = 5.
1/29	1910	1233.0	Turned equip off. Auto. T.L.
OIL FILTER → CHANGED 1/30		LPG refilled. 1233.6	OIL CHANGE etc
2/3	10:25	1233.7	FOUND LED RED (SLOW FLASH) COULD NOT START BATTERY LOW. TURNED OFF POWER, ALARM, PHONE. X
"	"	"	
2/4	1700	1233.7	LPG 5/8 Jump started. Left running auto. T.L.
2/5	845	1243.8	BATT = 12.5V. LED SOLID YELLOW. Earliest V = 12.49, After Revision 8, 24V. (BATT = 5.45 V. OIL @ 1/2 HATCH. TRIED JUMP STARTING BUT FAILED.)
2/10	11:08	12	AFTER HOOKING UP BATTERY WENT UP TO 12.24, BUT COULDN'T START GENERATOR
→ 2/14			LEFT PHONE ALARMS ALARMS OFF CARRIAGE ETC ETC STARTED. BATT IN AUTO
2/17		1338.2	BATT = 13.81 V. HAD BEEN RUNNING 3-DAY. Week-end. LPG = 1/4 T Added OIL TO TOP of HATCH WAS BELOW STICKER 4k Redic V = 7.6-7.7. with wacc 17L. ALARMS PHONE ON BATTERY = 12.38V
		1338.7	SHUTDOWN IN A FUNNY WAY. LEFT JET LED LIGHTS ON FOUND ANTENNA TURNED 90% away from Relay like P? RESET ANTENNA THEN HAD CONTROL FROM JMC AGAIN. LEFT IN AUTO. LPG BYPASS.
2/19		1338.9	BATT = 12.19. TRIED STARTING BUT COULD NOT. TURNED OFF ALARM/ID
2/23	1015	1339.1	EVERYTHING OFF. TURNED EQUIP ON

I-24

Tustin Ranch Road
Surveillance Trailer Generator Use Log: Trailer # 114

TOSTIN

53
39
14
on 14 hrs / 23 hrs

OIL & FILTER
1418
MAR 5

LINEAR
RADIO
INSTALLED

Date	Time (To minute)	Generator hours (To tenths)	Person Recording warm (Print)	Plug in Alarm
2/24	9:30 [±]	1352.8	GEN OFF. ALL EQUIP ON EXCEPT CAMERAS BATT = 12.37. LPG = 5/8. GAK = 7.6-7.7	
1/		"	REMOVED PULSE TECH FROM BATTERY (1/23 - 2/24 AFTER A MONTH)	
1/	10:55	1352.9	STARTED GEN AND TURNED EQUIPMENT BACK ON. BATT = 12.91	
2/26	11:53	1376.6	GEN RUNNING, LAUNCHED HALL. CHECKED CONNECTIONS, RESET.	
		1377.6		
2/26	18:30	1379.8	GEN OFF. TURNED OFF WACC ETC LEFT IN AUTOGEN.	
2/27	1340	1379.8	Tested R.M. LPG 1/2.	T.L.
3/2	1500	1384.7	Tested R.M.	
3/3	0710	1386.0	Turned equip on. R.M. Evaluation	T.L.
3/4	0820	1406.7	Gen auto. R.M. Evaluation	T.L.
3/5	0600	1413.5	R.M. Evaluation	T.L.
3/5	1815	1422.0	Turned off equip	T.L.
3/8	1800	1422.1	Turned on equip	T.L.
3/9	0620	1433.5	Meter on.	T.L.
3/10	0930	1451.9	Meter on	TL
3/12	2000	1485.1	GEN OFF. LED Y BATT = 12.36 LPG = 3/4. Added oil to above	middle of HAZ
3/14	1100	1504.1	GEN OFF. SHUT OFF EQUIP. LPG 1/4	T.L.
3/17	0835	1507.0	Gen off auto. LPG filled 3/16	T.L.
3/17	0910	1507.7	Turned equip on BATT = 13.04 V GAK 7.7 V ENDING RAMP METERING.	T.L.
NOTE: HUGHES TECHNICIAN INSTALLED NEW LINEAR RADIOS. PROBLEM W/ ZONE 08, 11 GROUP 08, 11 FUEL				
3/18	1630	1526.6	METER HEAD NO OUTPUT. FOUND CABLE CUT. TURN OF R.M. TL.	
3/21	0925	1554.8	Gen on. 13V Turned equip off. LPG 1/2. Turned gen off when 12.8V	
			Added ~ 1 1/4 qt oil. Ramp. < 1/2 LPG 12V.	
3/24	1145	1558.1	Repaired cut cable (signal). Tested OK.	T.L.
3/25	0735	1562.9	Turned on equip. RM started	T.L.
3/26	1630	1585.9	R.M. Flashing green. Turned equip off. Gen shuts off. Added oil	
3/26	1800	1585.9	BATT = 12.6. Alarm skipped 11 hrs Fuel OK. 9. Left alarm off but there are	
4/1	0730	1590.5	LED yellow. Oil OK LPG 7/8 4 hrs / day V = 12.2	
			Ramp trailer. LED RED Gen stopped V = 12.2	
4/7	1445	1604.2	V = 11.3 START gen. alarm V = 13.2 Left gen running slowly charging	
4/9	9:00	1607.6	Gen off yellow. OPL OK LPG < 1/2 V = 12.48 BATT = 12.34 LPG filled 4/8	

NOTE: ALARM FAULT 08 Gen De
BAMP TRAIL
BAD LINEAR RADIO WORKING

I-25

[illegible]

Jamboree Road Surveillance Trailer Logs

next
c/fk

Jamboree Road

Surveillance Trailer Generator Use Log: Trailer # 110

7.7-7.9
OIL OKAY
-OKAY

GET PROPER OIL FOR REFILLING GEN

TURNED ON WALL & EQUIP FOR
TESTING FROM TMC, LEFT A/C ON. ~~✓~~

TURNED OFF WAKE RADIOS - TO ~~STOP~~ SLEEP MODE

011 1N 1.017C.

TESTED GEN-STARTED OKAY
NEED OIL SUPPLY IN TRAILER.

SWITCHED CELL PHONE # TO JUSTIN 343-9732

BAT = 12.30 V, Add 802 01!
CHG = 5/8. TURNED ON WACC & TMC ACT.

TURNED OFF WACC
LEFT IN AUTO GEN.

Answer

L.E.D on Yellow.
BEST Paper showing 12V & 120V SWITCH
SETT

TESTED FROM THE TYPE I WANT AN OKAY BUT
THE OPERATOR NOTED IMAGE VERY WHITE ON HP.

Antenna V = 7.8 Good. LAG = 5/8 -

LP6 1 o'clock.
Turned equip to standby
2 Feb 1964 14 hrs 00 min 00 sec

TESTED LOCAL CONTROL OF CAMEL (SURN) GOOD

BUT REACTOR CONTROL HAD PROBLEM. COULD NOT.
TURNED OFF WACC TO CHECK GEN OIL

ONLY ADDED A FEW OR TO TOP OFF. GOOD.
TURN WACC & EG BACK ON.

LP6 = $\frac{1}{4} +$
CET ON BY PASS $\frac{1}{8}$ In No. 0/11

Left 1885 Dec 10 1885

TURNED OFF WACC

R. Anderson (start 2nd testing)
Found yellow eye-tailed.

LPG refueled 1/23 Running in auto.	TL.
---------------------------------------	-----

135813

BAIT = 1291 • FIRST
TURNED OFF WACC ONLY AUTO GEN ON. P. 2 M.

After 5 min BATT = 12.74 V OKAY.
 FPG = 1/2 - Add 2002 Oil still LG

After 5 move, $PAT = 12.60 / 12.38$ OK!
BUT ARIES PROCESSOR LED = RED.

Green - Red leaf $V = 12.24$
Green - #1 $V = 2$

BUT LED SHOWS RED

PROBLEM WITH ARIES

1464.0

OUT BACK TO AEROBIC

I-28

Jamboree Road

Surveillance Trailer Generator Use Log: Trailer # 110

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
1/29	16:45	1071.1	BATT = 13.4 @ Arries = 13.4 TURN ON WACC 8 RADIOS.
"	"	"	DID FORCE STOP BATT = 13.10 BUT AFTER 10K PH2 Voltage
"	"	"	down to 10.9V LEFT IN Autogen sleep Mode.
1/30		1075.6	GEN MAINT. 2. L. DEFILTE CHANGE
2/3	10:00 ±	1100.4	LED = SOLID RED, BATT = 12.65 STARTED GEN, BATT = 13.60. STOPPED
"	"	"	BED. LEFT IN AUTO. LED RED COULD NOT RESET. RED LED.
"	"	"	LEFT IN AUTO. LPG = 1/2 LEFT GAL CONTAINER OF 1/2
2/4	1545-1645	1107.3	Replaced opto isolator. OFF IN AUTO. Tested R.M. T.L.
2/5	1300	1113.6	OFF IN AUTO Tested R.M. T.L.
2/10	9:50	1143.1	BATT = 12.6 OKAY, but LED = SOLID RED LPG = 3/4. GAK = 7.8V GOOD
			TURND ON WACC 72 GEN STARTED UP. 64K RADIO SWITCHES.
2/11	1700	1151.6	LPG > 3/4 OFF IN AUTO - RED. GEN OK. T.L.
2/12	9:15	1155.7	BATT = 12.28. LED YELLOW ON SOLID OIL BELOW HATCH.
			GAK RADIO V = 7.6-7.7 OKAY
2/17	2:00 pm	1155.7	BATT = 11.85. LED SOLID RED STARTED UP AFTER TURNING ON (4k Radio)
			and inverter (WACC) (LPG = 3/4)
2/17			GAK Radio V = 7.8 ± OK. (NOTE Vm = 13.2 VL = 12.0 in TMC)
"	17:04	1158.4	TURND WAS RUNNING. TURND OFF WACC SHAP. LEFT IN AUTO. STILL RUNNING
"		"	DID MANUAL SHUTDOWN. OIL FULL. RESET TO AUTO. GEN OFF
2/19	8:25	1162.7	LEFT ALARM TC BY PASS LPG DROIC BATT = 12.15. LED YELLOW. GAK = 7.7
2/19	16:00	1162.7	BATT = 12.07. TURND ON GAK = 7.8V T.B. WACC & EQUIP. GENERATOR STARTED ON.
			TMC ACTIVATED CAMERAS. CHECK UPS: "S" received at TMC. F.E.
	16:30	1163.0	for Jamboree & Culien. But ONLY CULIER ATMS VPS DATA OKAY.
			TURND OFF WACC & EQUIP. BATT = 13.02 LEFT RUNNING IN AUTO.
2/23	1005	1170.4	SOLID YELLOW. GEN OFF AUTO. TURNED EQUIP ON.
2/24	9:00 AM	1185.3	GEN RUNNING. BATT = 13.00V LPG = 5/8. GAK Radio = 7.7 V
2/24	1100	1186.9	Tested R.M. T.L.
2/26	10:50	1212.2	RED OPTO ISOLATOR DUT. T.L.
		1213.0	LOWERED MAST. OIL OILED MAST. Tight CONNECTIONS. RESET. Added 10-70.
2/26	18:30	1215.9	TURND OFF WACC ETC LEFT IN AUTOGEN.
2/27	1300	1215.9	Replaced RED OPTO ISOLATOR Tested R.M. LPG 1/2

GEN
MAINT30 hrs / 5 days
6 hrs / day2/12
IMS INSTALLED
NEW CHIP FOR
BETTER HIGH/LOW
VOLT CONTROL

Ran 15/23 hrs

Jamboree Road

I-29

Surveillance Trailer Generator Use Log: Trailer # 110

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)
3/4	1750	1246.5	Gen off in auto. Equip on. T.L.
3/5	9:30	1253.3	GEN NOT RUNNING, BATT = 12.02, WATER ETC. LPG = 3/8. 64K VOLTS = 7.7V.
"			OIL AT 1/2 HATCH. ADD OIL, but overfilled by accident.
"			STARTED UP ON GEN WHILE I WAS CHECKING RAMP METER. MUST HAVE DROPPED TO 12V SETTING.
"	10:00	1253.4	NOW BATT = 12.89 and changing to 13.2
"	NOON	1255.4	OIL & FILTER(S) CHANGE by Cummins.
"	17:30 ±	1258	GEN OFF, TURNED WATER, RADIO'S ETC. LEFT IN "SLEEP" MODE IN AUTO.
3/9	0800	1262.8	LPG filled 3/6 Turned equip on. Started RM. T.L.
3/10	1630	1282.8	LPG filled Replaced RED opto-ISO. Ramp metering T.L.
3/12	8:50	1311.7	FOUND RAMP METERING - Gen Running 64K = 7.7V, BATT = 13.2
3/12	7:40	1318.2	GEN OFF, LED Y. CHECKED OIL. BELOW HATCH. FILLED TO TOP OF HATCH. Y/E
3/14	10:30	1342.4	Gen ON. LED Y. TURNED EQUIP OFF. GEN SHUT OFF. LPG < 1/2 T.L.
3/16	1830		
3/16	1650	1343.9	Gen off LPG < 1/2 T.L.
3/17	0815	1344.0	Gen off solid red. Turned on equip Aries does not start. Turn on man.
3/17	08:40	1344.6	Gen Running. 7.70 appears to be metering. BUT RAMP METER NOT. TAILOR TAILOR BATT = 13.00
"	"	" 9	64K VOLTS = 7.65 ±. BUT SIGNALS NOT RAMP METERING. TAPED BATT STARTED 1 FOR CHARGE
3/21	0850	1400.2	Gen on auto. Turned equip off V = 12.8. Filled oil. LPG 1/4
			Turned off alarm & phone to preserve LPG. LPM aries on.
3/24	0730	1400.3	LED - STEADY RED V = 11.95 TURNED ON EQUIP. GEN STARTS AT 11.70V
		1400.5	TURNED OFF EQUIP
3/25	1540	1409.2	TURNED EQUIP OFF. LPG filled 3/4
3/26	8:30	1409.2	BATT = 12.02 OIL AT BOTTOM OFF HATCH TAPPED OFF OIL. TEST STARTED GEN BATT V JUMP UP TO 13.2-13.3 ALMOST IMMEDIATELY NEED NEW BATTERY
		1409.7	INSTALLED NEW BATTERY WITH GEN ON BATT = 13.2 ~ 13.4 w/o load (GENY ARIES ON)
3/26	17:30	1410.3	COULD POSSIBLY RESET VH = 13.3 or 13. TURNED OFF WATER EQUIP. BATTERY V. 11.6 DROPPED FROM TMC WAS SOLID AND GOOD.
		"	LEFT IN AUTO CHARGE. "Sleep"
4/7	1410	1431.4	Gen off yellow. LPG > 1/2 V = 12.44 OIL OK.
4/8	8:30	1431.5	TURNED ON EQUIP FOR FLOW DEMO.
4/9	8:30	49.15	TURNED OFF EQUIP. BATT WAS 13.00 LEFT ARIES ON. OIL OKAY, LPG = 1/2 HRS SEEM TOO HIGH. NOW EVER NEW BATT BOLT = 12.65 AT 5-10 MINS.

OIL & FILTER
CHANGELINEAR
RADIO
WORK (?)NOTE: ALARM FAULTS 05 Gen. DE
15 FUEL 8 0 ??

Jamboree Road

110

[illegible]

5/days
2.2 mg/day

Culver Drive Surveillance Trailer Logs

I-32

Test #2 Deployment & Then Back to Culver Drive.
 Surveillance Trailer Remote On/Off Command Log Trailer 111

Generator
 Hour
 348 2

Date	Trk #	Time of Day	Meter Run Time	Person Recording (Print)
		On Command Time Run (To minute) Time	Off Command Time (To minute)	
3/27/97			Manually 12:00	Leave in Auto T.L.
3/28/97	HH	0835	355.2	Panel at 12.15 VDC. Gen off BYH
"		0900		when stab activated Gen started.
4/1/97		0940	391.0	Turned mast/antenna left auto T.L.
4/1/97		1524	393.1	Generator off In auto BYH
4/2/97		1203	395.2	Generator on In auto (remote on) BYH
4/4/97		1507	403.8	Generator off. In auto. BYH
4/5/97		0817	413.2	Generator was off. 12.00 VDC Left in manual to conserve fuel.
4/8/97		1120	413.6	Moved to Sunset Left in Auto TL. ←
4/8		1640	416.7	OFF in Auto Left in man TL.
4/9		10:18	416.8	No smell of LPG. GEN ON AT 11.93V OFF AT 11.93V
4/9		1610	417.1	Turned on gen. Left in auto TL Filled up tank
4/9		0810	425.0	OFF in Auto PUT in man.
4/9		0920	425.2	Raised mast. Moved to Culver. Man off TL. ←
4/16/97		1200	426.0	Aligned Antenna, Raised Lowered Mast, Replace battery (V.D.)
4/21		1400	463.2	Running in auto. TL
4/23		1610	492.4	Camera on 29 hrs since 11AM 4/22 TM. Turned off in man. Left auto TL.
4/28		1640	538.5	OFF IN AUTO TL.
5/1		1115	567.4	OFF IN AUTO TL
5/6		1410	621.3	OFF IN AUTO TL
5/7		1530	635.4	Running in auto. CAM ON Shut off 8 Left in man TL.
9 May 97		1600	637.5	Removed GEN START Mast Retract Panels (V.D.)
5/15		1100	637.5	Man. turned on gen TL.
5/15		18:30 ±	644.9	SWITCHED ON - GEN SET RECHARGER (V.D.)
19 May 97		1300	662.5	INSTALLED AUTO GEN & Mast Retract Panels (V.D.)
5/21/97		17:00 ±	662.5	TURNED ON GENERATOR TO CHARGE BATTERIES - LED DID NOT LIGHT UP. (V.D.)
5/22/97		08:30 ±	667.8	TURNED OFF GENERATOR. USE 1/2 TANK LPG. Now 1/4 full. CHARGE LED 90% (V.D.)
5/27		0700	677.8	Turned on gen in man TL.
5/27/97		1545	684.6	INSTALLED + SUD MOD & 1120 to Processor (V.D.)
6/3/97		08:30 ±	684.6	STARTED GEN TO CHARGE BATTERIES (1/2 + LPG TANK) (V.D.)
6/3/97		15:30 ±	691.6	TURNED OFF GEN. (V.D.)

I-33

Culver Drive
Surveillance Trailer Remote On/Off Command Log Trailer 111

Date	Trlr #	On Command Time of (To minute) Day	Off Command Time Gen (To minute) Run	Person Recording (Print)	
6 Jun 97	111	10:00	10:45 692.0	Installed New E-From & Software.	
9 Jun 97		9:40 AM	9:40 692.8	Left Gen in Auto TURNED GEN ON IN AUTO BUT SHUT DOWN GEN AFTER	WRD DID THREE TIMES. (LPG 1/2 TANK)
6/10	111	1505	697.3	Off in auto	
6/11		1000	711.3	Dead in auto. Jump	started in man: TL
6/12		1700	718	TURNED OFF GEN	
6/19		7:00 AM	718	LPG TANK FULL (3/4 TANK) BATTERY BASICALLY DEAD	8.1 V! NEVER USED
			TOPPED OFF GEN B'L	AUTO START PANEL	
		BUY MORE OIL		SECURITY SYS =	NOT USE
6/23		1030		Jump started	TL
6/24		08:50	740.4	Left in auto AUTO DIODE LIGHTS NOT WORKING, GEN O.	
11		9:50	741.4	BATTERY STILL NOT CHARGED CHECKED BAT VOLTAGE W/ LARGE BAT = 12.5 SMALL	LPG = 5/8 ANALOG METER BAT = 12.0 ± V
6/25		9:10 AM	751.9	Left in auto AUTO PANEL NOT FUNCTIONING HIGH PITCH SOUND HEARD	ALARM SYS = OPEN CKT
25 Jun 97	111	1215 PM	753.6	Reported Auto Gen LED's Jump started Gen	WRD
6/26		0845	760.7	Refueled Jump started	
				SAT performed	T.L.
6/26		2100	773.0	Left in man	T.L..
6/30	111	1213	773.1	Turned off man	
6/30	111	1630	776.4	Left in AUTO - ALARM ON	
7/1	111	09:45	777.0	RED LED FLASHING, TRIED TO START GEN BUT BATTERY TOO LOW! L.E	
7/3		9:30	781.0	CAN'T SET ALARM CA	
"		"	"	L.BAT = 8.25V S.BAT 8.00V RED L.E.D. FLASHING. LPG = 5/8 CELLULAR PHONE'S ALARM DON'T WORK	
7/8		9:00 AM	790.5-6	BAT = 10.29/10.06V, GEN OFF BUT H	
"		"	"	LPG = 5/8 FULL, LED RED ON L.E	
"		"	"	TURNED ON GEN W/O MAN START SWITCH YELLOW LED WAS FLASHING. AFTER A FEW MINUTES GREEN LED WENT ON AND GEN	
7/9		1415	792.4	VOLTAGE WAS 13.84V LED GOES BACK TO RED BUT GEN STAYS	
7/10		0900	811.3	BAT died in auto. 10 V Changed battery, left running in.	T.L.

LPG USAGE APPROX 8 TANKS 24 HRS or $\frac{1}{8}$ of 6 . . . AND 2 6 DAY'S WITH GEN ON 24 HRS

I-34

Culver Drive 1

Surveillance Trailer Remote On/Off Command Log *Trailer 111*

Date	Trlr #	On Command Time of (To minute) Day	Off Command Time Gen (To minute) Run	Person Recording (Print)
7/10	111	1500	816.3	Propane filled up Turned equip on. Gen started ant T.L.
7/15		09:15	869.4	LPG 1/2 FULL. BATT = 5.14V OIL IN GEN FULL. PANEL IN AUTO. BATT NO. C. 1.5 WAS WATER IN BATTERY CHECKED? WHEN WAS LAST OIL FILTER CHANGED? BATT = 4.43V
7/17		14:00	"	BATT = 4.4V
7/21		14:00	"	Batt = 3.57V
7/22		9:30		BAT = 2.5 TURNED OFF ALL BREAKERS
7/29		9:00	SAME	BAT = 2.89
8/5		1:00	"	BAT = 2.43 LPG 1/2 FULL. TANK COOL
9/4		0845	869.4	HOOKED UP SHORE-POWER TURNED EQUIP ON
9/11				WACC ON, GAL RADIO ON 170 FOLING BATT = 17.85, CHARGE LED NOT GREEN
9/16		9:30	"	BATT = 12.85 TURNED CHARGE OFF LED ON AND START STOP PANEL WENT TO RED (LOW BATT) SLOW. BATT MEASUR. 11.27V AND KEPT DROPPING! CHARGE LED GREEN LIGHT FOR 90% CHARGE NOT ON. BATTERY NEED REPLACING. MAKE THAT BATTERIES
9/18		9:15		BATT = 17.85, CHARGE LED NOT GREEN
10/2		1600		FOUND NO POWER TO ANT EQUIP. INCL. ALARM. TURNED CHARGER BACK ON.
10/16		10:30		HAD THE TURBIDITY CAMERA SEEMING TO BE WORKING
10/21		4:45		ACCIDENTLY GET OFF ALARM CALLED TMC AFTER DISCONNECTED ALARM FROM CELLULAR PHONE. PULL KING INDICATED ALARM OCCURED.
11/4		8:45		
11/14		0800 - 1015		SAT. DONE
11/17		9:15		HAD TMC ACTIVATE CAMERA
12/2		9:00	4.1	BATT = 13.36V CAMERAS OFF
12/4				BATT = 13.36V CAMERAS OFF, WACC ON
12/16			869.8	4/10 th & Noon doing LOAD BANKING?
12/17		11:30 - 12:30	"	CAME TO ADJUST ANTENNA TO GET MAX SIGNAL STRENGTH ANTENNA ALIGNMENT AFFECTED BY 40 MPH WINDS 50 MPH WINDS Adjusted to about 7.65 Tested from TMC, OKAY

400FE-?

11/24?
New Battery

Level Bank

Culver Drive
Surveillance Trailer Generator Use Log: Trailer # 111

I-35

Date	Time (To minute)	Generator hours (To tenths)	Person Recording (Print)	
12/22	9:30 AM	870.0	STARTED GEN TO SEE HOW IT WOULD WORK. TRICK SEVERAL TIMES BEFORE STARTING.	25
12/23	6:00 PM	11	RESETTING ANTENNA AGAIN. LAST STEP MUST HAVE INCLUDED CHECK IF SWITCH IS STRIPPED (NEED TO).	
"	"	"	V = 7.6 ± @ 6.4K READING	
12/30/97	9:25		WACC CAMERAS ON. 64K RADIO FOR STRENGTH = 7.7 BATT = 13.45V. STARTED GEN. KITH (600) BUT HAD TO REVERSE POSN START (30 SECS) FOR MANY SECONDS.	
1/8/98	8:15	870.0	STARTED GEN LEFT SWITCH ON 5 SEC TO START. LFG = 1/2"	
1/14	1500		Autoscope	T.L.
1/15	10:00	870.1	STARTED UP GEN. 10 SEC TO SEE HANDLING. FOUND ALL SWITCHES FOR WACC OPERATIONS.	
"	"	870.3	TURNOFF GEN OFF. BATT = 13.4 W/EQUIP & GEN RUNNING.	
1/20	6:30 AM	"	ATTEMPT TO BE RUNNING. ST. JS LIGHT ON J2 LIGHT OFF?	
1/21	7:30 AM	870.3-5	STARTED GEN TO RUN. TOOK TWO TRIES TO GET IT STARTED.	
1/29	8:00 AM	870.5-7	STARTED GEN ONE TRY 10 SEC. TURNED OFF GEN. BATT = 13.5/13.1	
1/30			GEN MAINT. CHANGE BATTERY CONNECTION. CLEAN.	
2/1	9:00		VISIT WITH RESEARCHERS. BATT = 13.7	
2/2	NOON		WACC & 170 NO POWER. ANTENNA 5' E. FOUND PROBLEM W/DC-AC INVERTER. PLUGGED CORDS. WALL AC OUTLET HAD 200V BUT 170 STILL DEAD??	
2/10	9:40	870.7 ~ 871.0	STARTED GEN. TOOK 15 SEC. GTHRADO = 7.7 GOOD. Someone working from TMC. Video On. TURNED GEN OFF.	
"	"	"		
2/11	1640		Replaced blown 170 fuse.	T.L.
2/13	900		64K Radio V = 7.70 ± GOOD. BATT V = 13.74V. TMC ACTIVATED CAMERA.	
"	"	871.0	WDS DATA COMMING IN. Tested Gen - started in about 10 sec.	
"	"	871.1 ~ 3	Test started Gen (started in 1 sec.) 64K Radio V = 7.6 ±	
2/19	9:15	871.3 ~	Tested Antenna station feature (3 min.) Test started Gen. 10 sec to start. BATT = 13.8	
"	"	"	CAMERAS WERE OFF.	
2/24	9:00	871.5-6	BATT = 13.8V. TEST STARTED GEN. STARTED IN 10 SEC. 64K Radio V = 7.6 ±	
2/26	9:30	871.6-872.5	LOWERED MAST. CHECKED CABLE CONNECTIONS. OILED MAST AND CLEANED RESET.	
"		"	Test Gen Generator	
3/8	17:00	872.5	LEFT CLIP BOARDS. TEST STARTED GEN WITHIN 10 (10) SEC. O.KAY	
"	"	872.6	BATT = 13.65, 64K Radio = 7.8V GOOD.	
3/15	9:00	872.6-873.1	BATT = 13.80, 64K Radio = 7.7 GOOD. TEST STARTED GEN WITHIN 10 SEC. VCC	
3/19	8:30	873.1 ~ 873.2	BATT = 13.81, 64K Radio = 7.7-8 GOOD. Test started Gen 10-15 sec.	

I-36

Culver Drive

Surveillance Trailer Generator Use Log: Trailer # 111

[illegible]

Appendix J:
Quantitative Data Used to Evaluate Surveillance and Ramp Meter Trailer
Performance on the I-5 Freeway

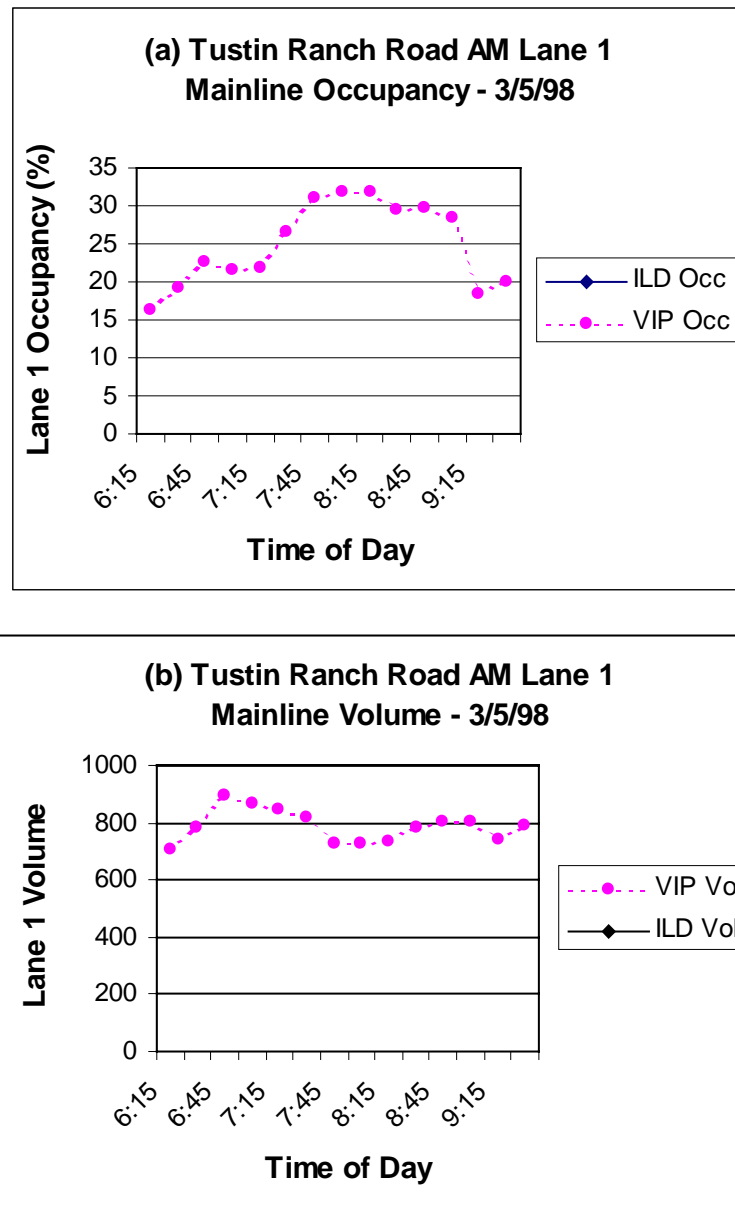


Figure J-1. Lane 1 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/5/98

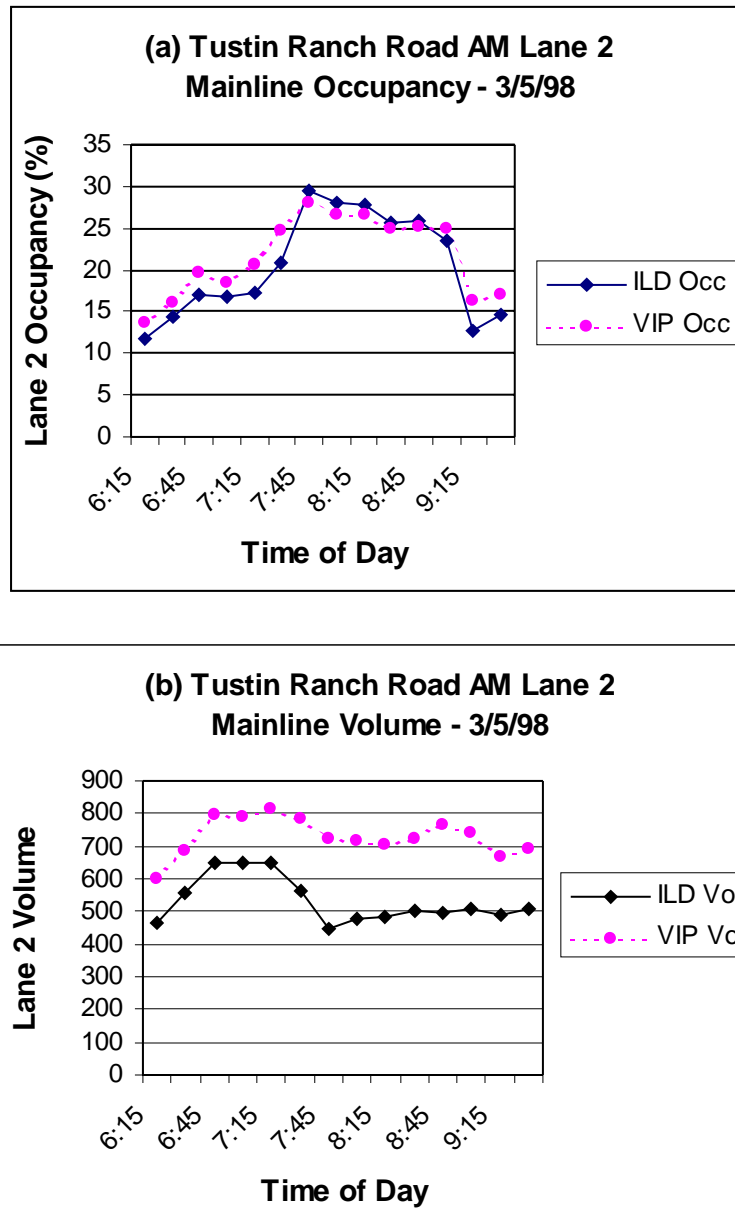


Figure J-2. Lane 2 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/5/98

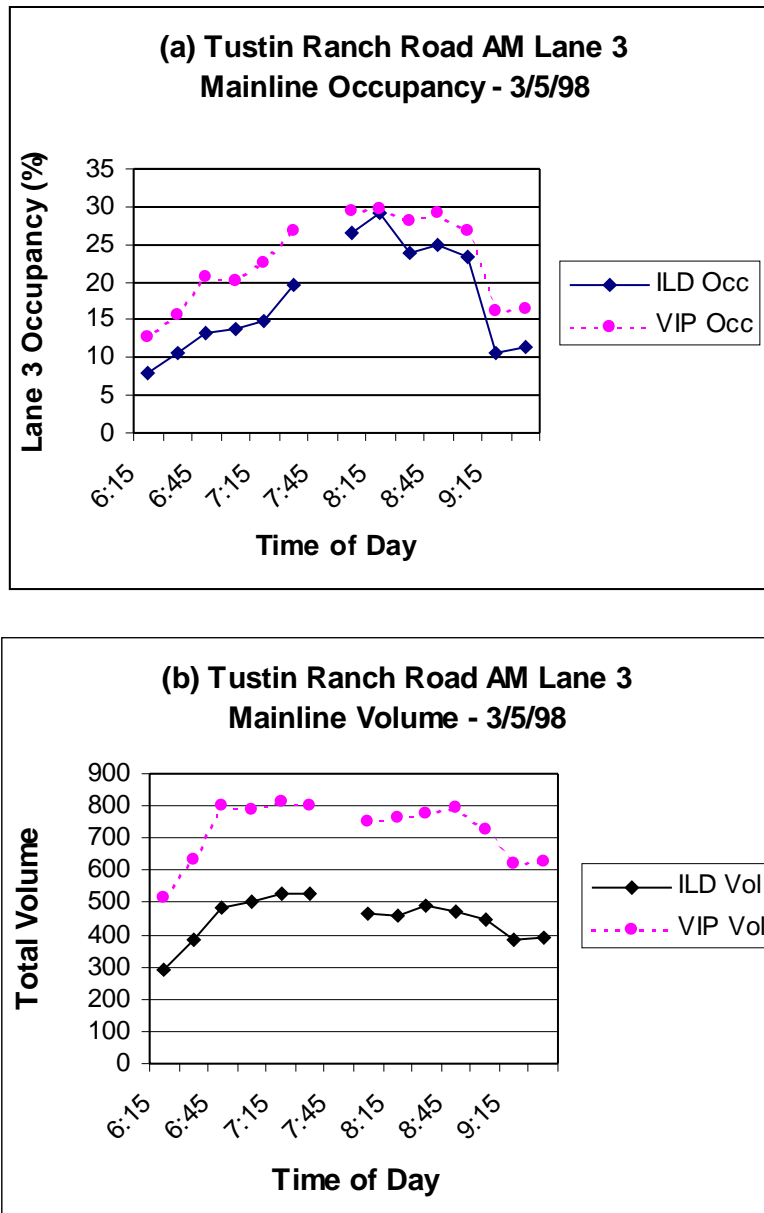


Figure J-3. Lane 3 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/5/98

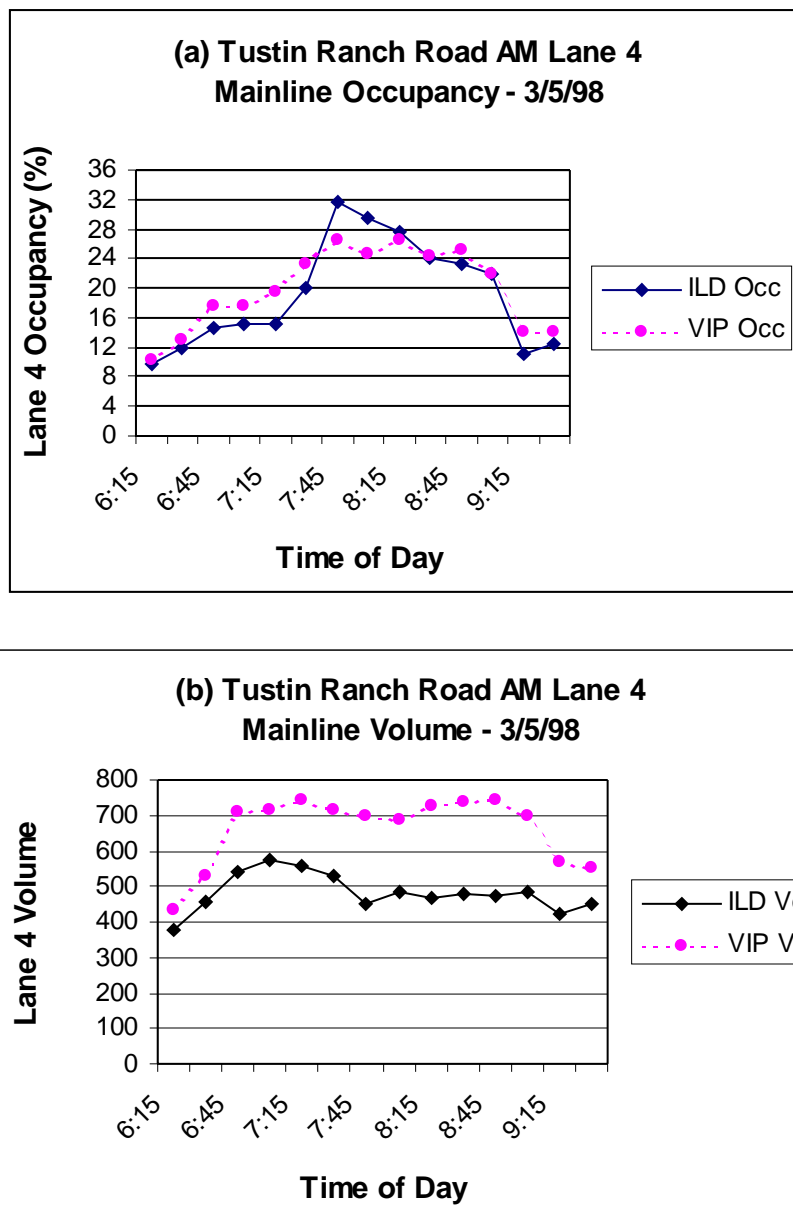


Figure J-4. Lane 4 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/5/98

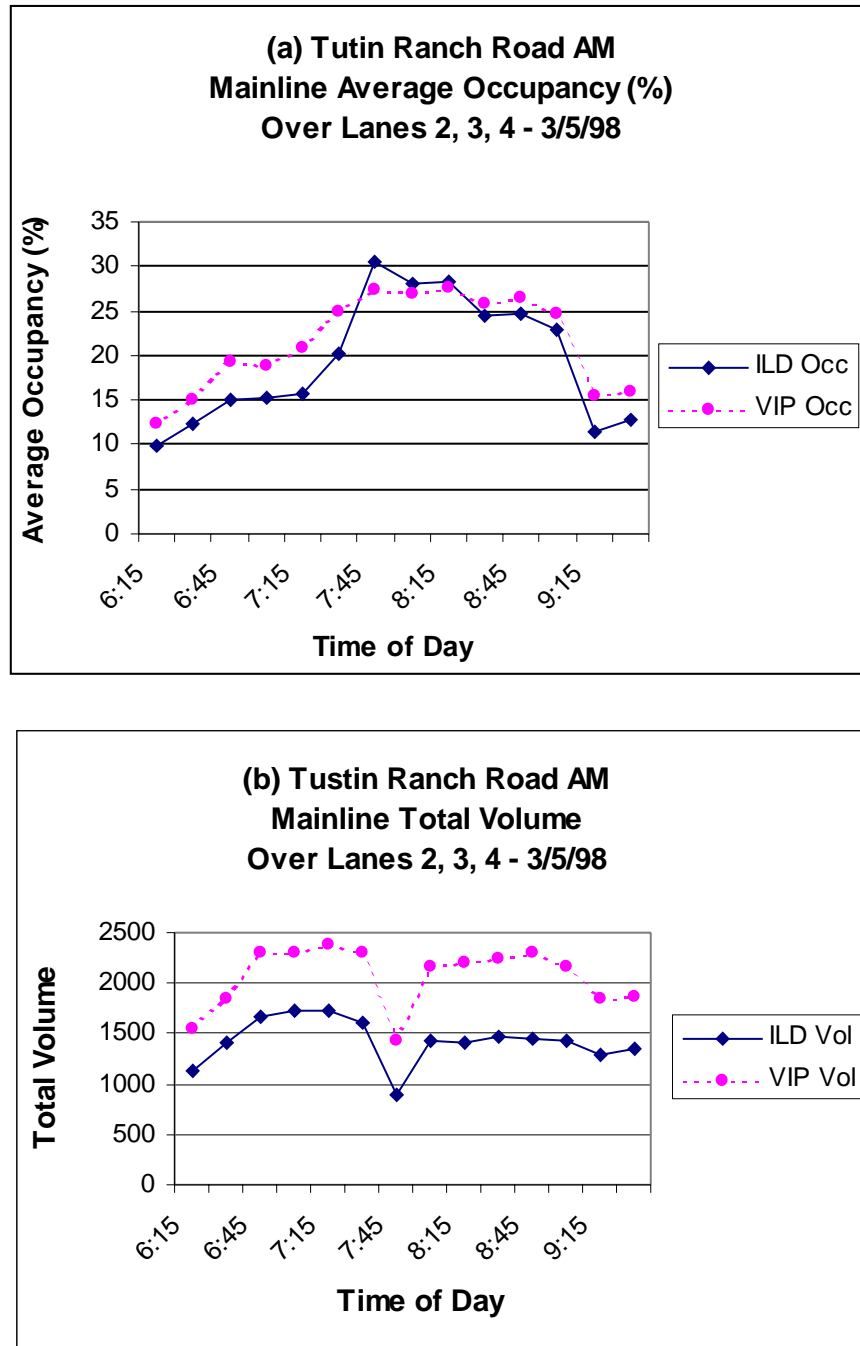


Figure J-5. Average lane (a) occupancy and total (b) volume measured by the ILDs and VIP over lanes 2, 3, and 4 at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/5/98

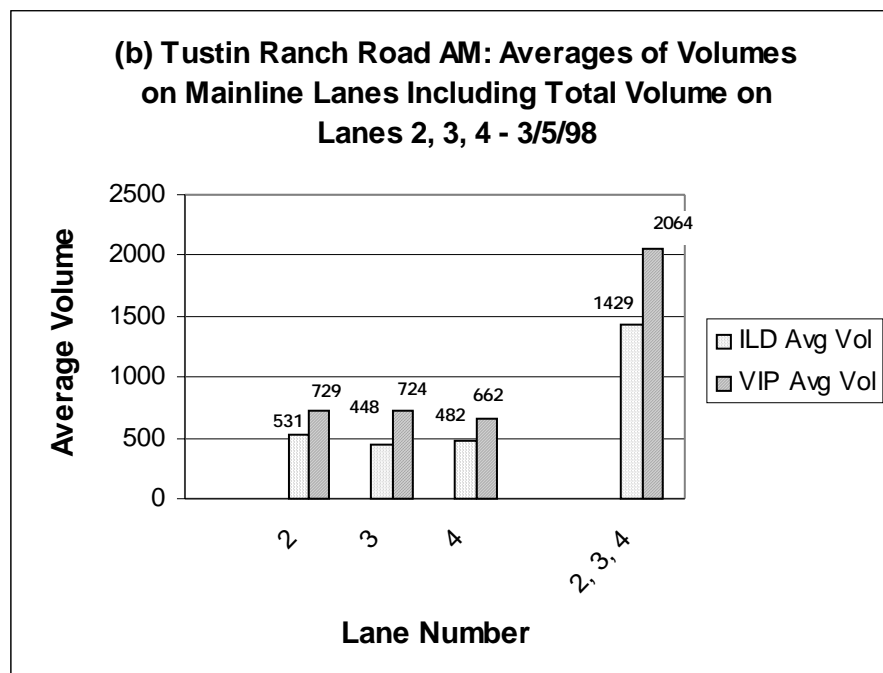
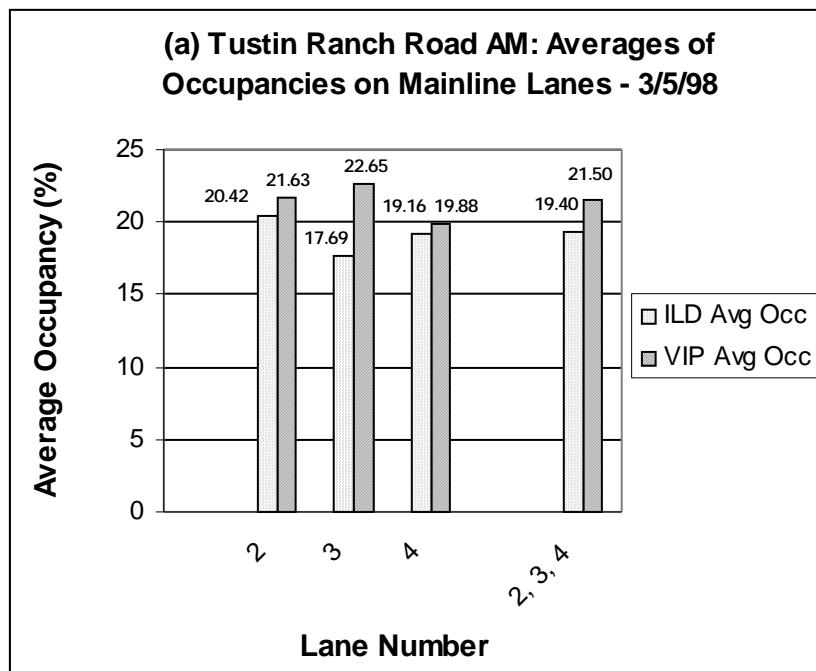


Figure J-6. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/5/98

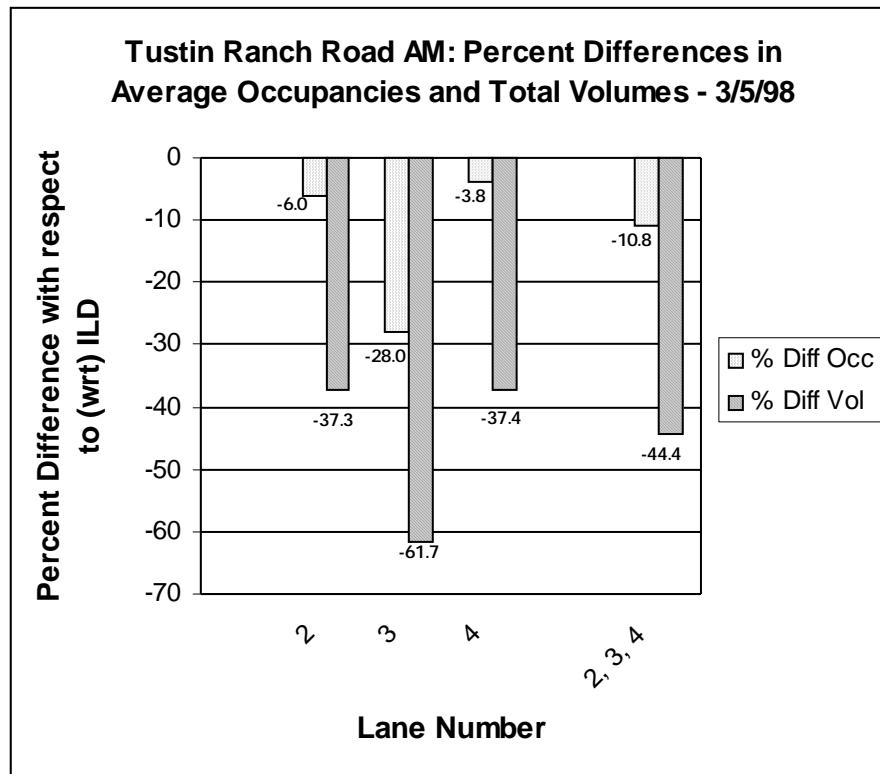


Figure J-7. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/5/98

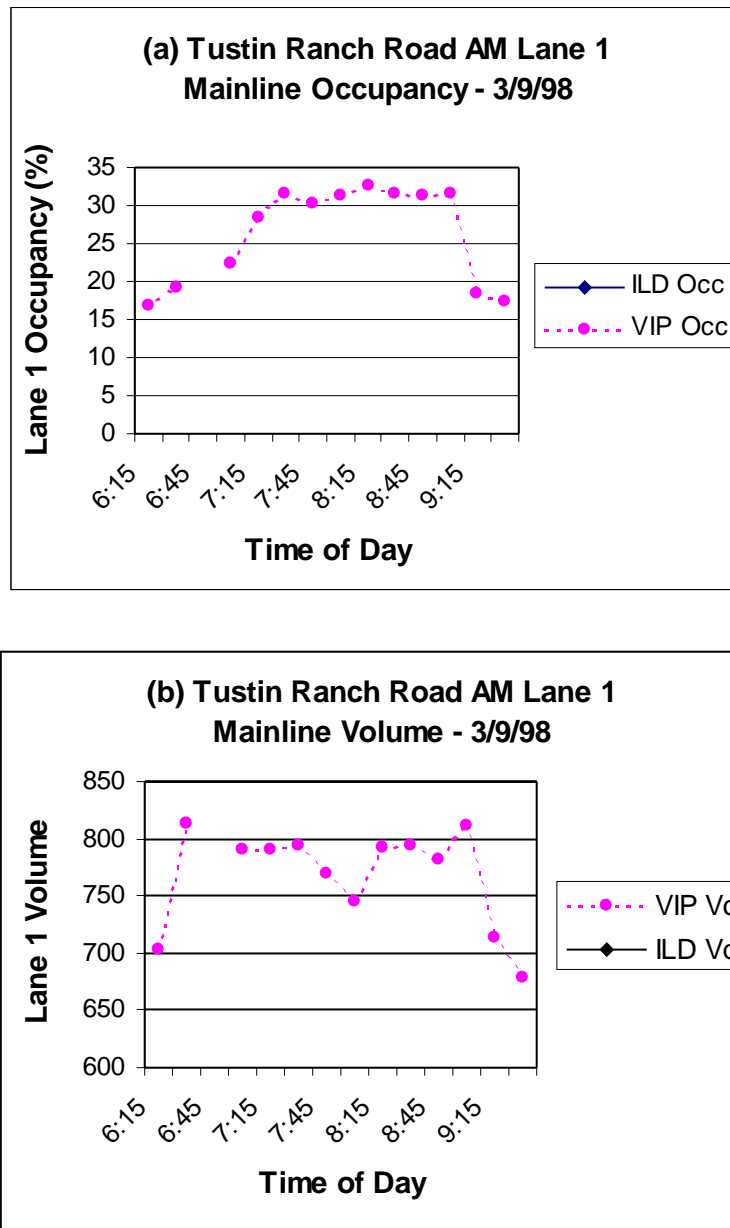


Figure J-8. Lane 1 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/9/98

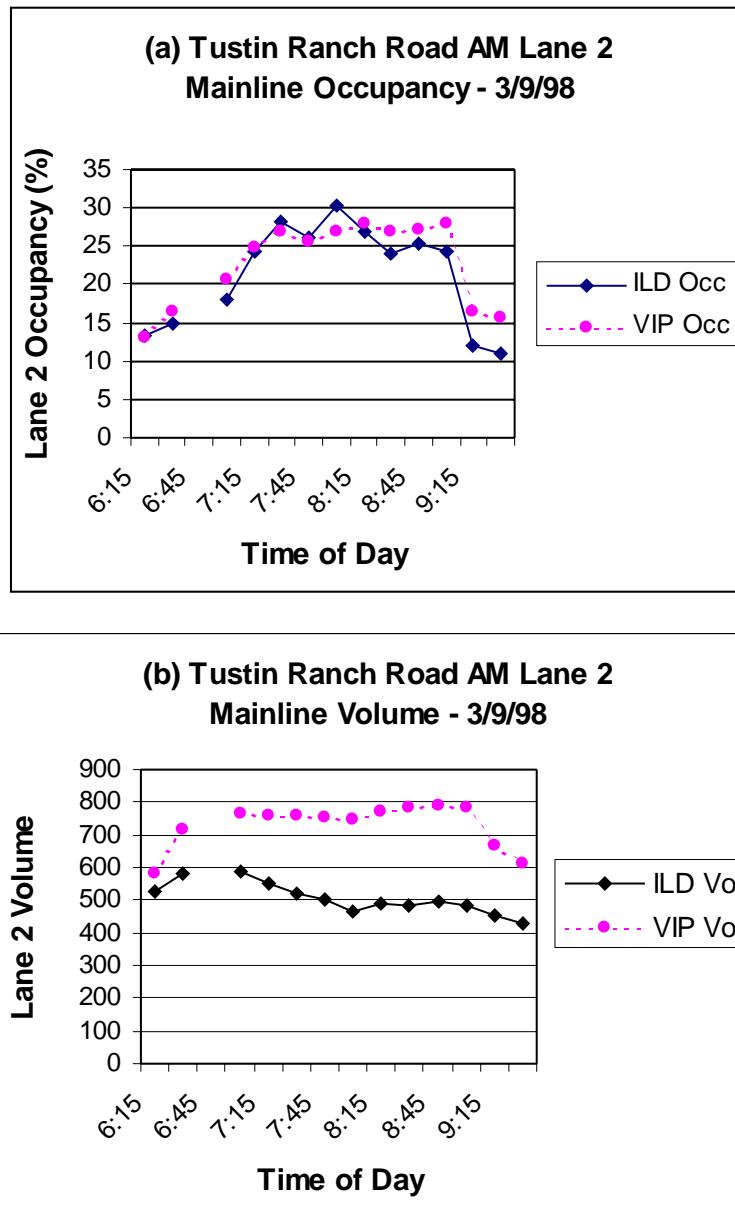


Figure J-9. Lane 2 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/9/98

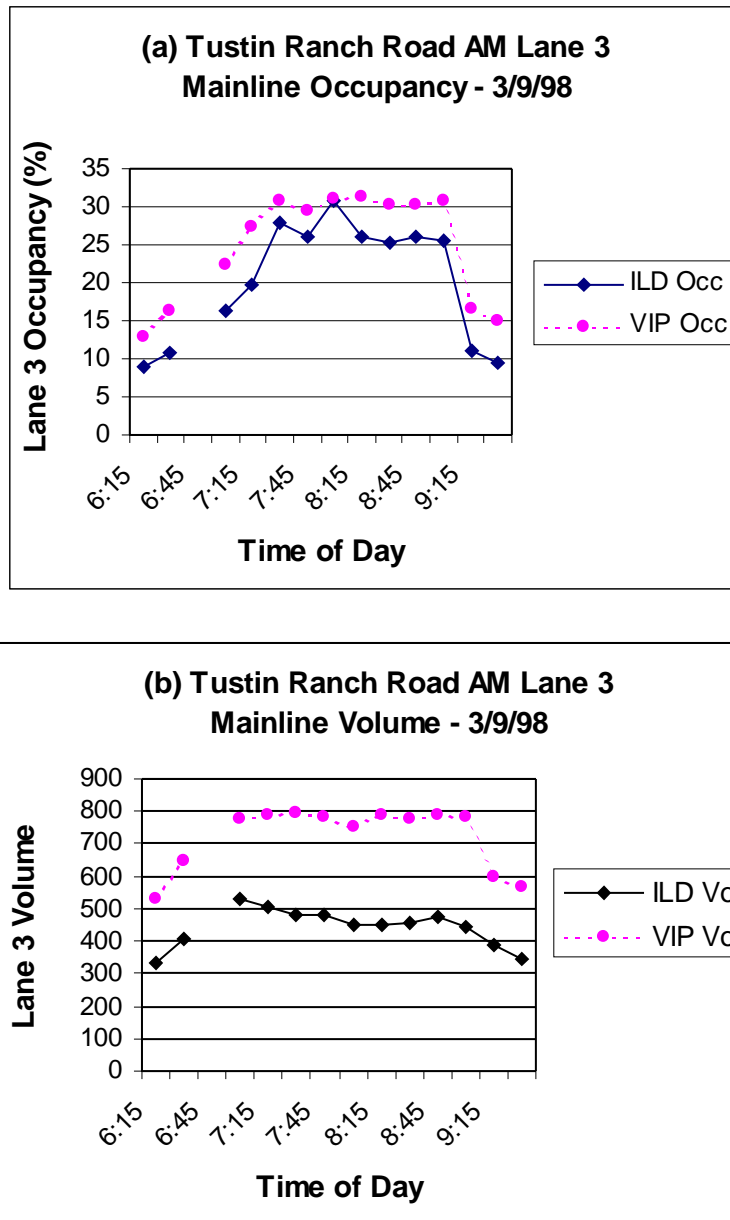


Figure J-10. Lane 10 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/9/98

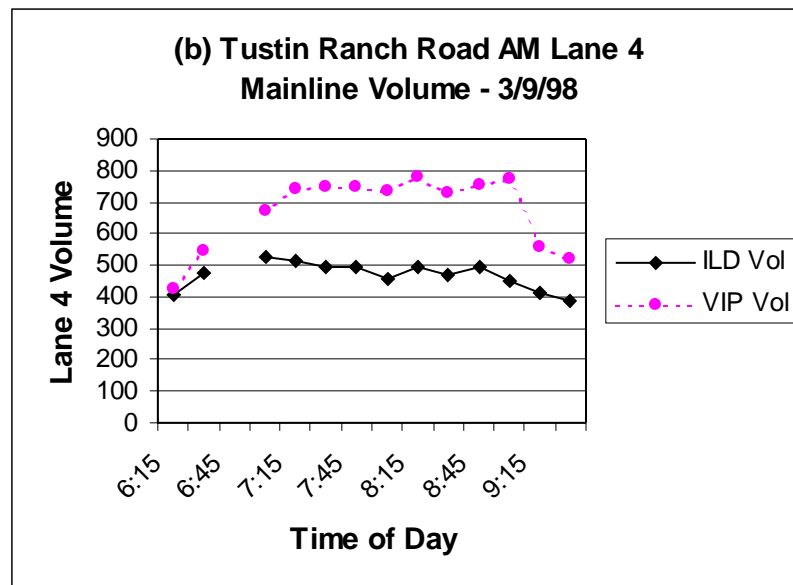
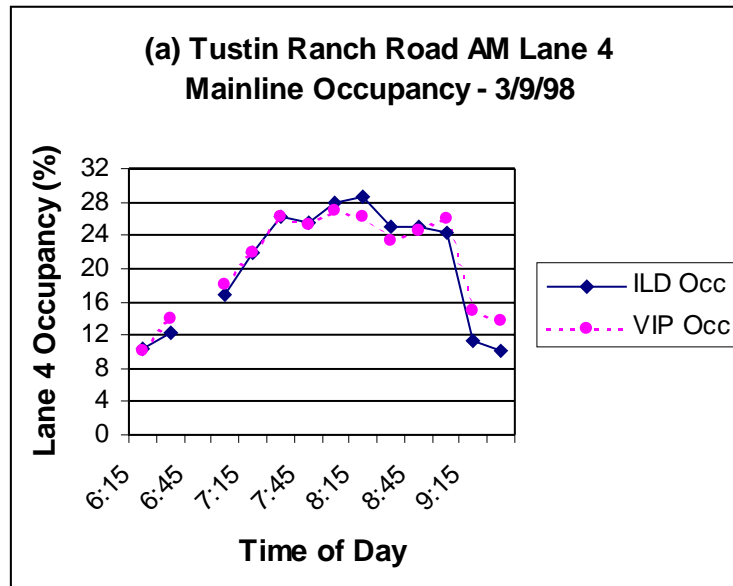


Figure J-11. Lane 4 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/9/98

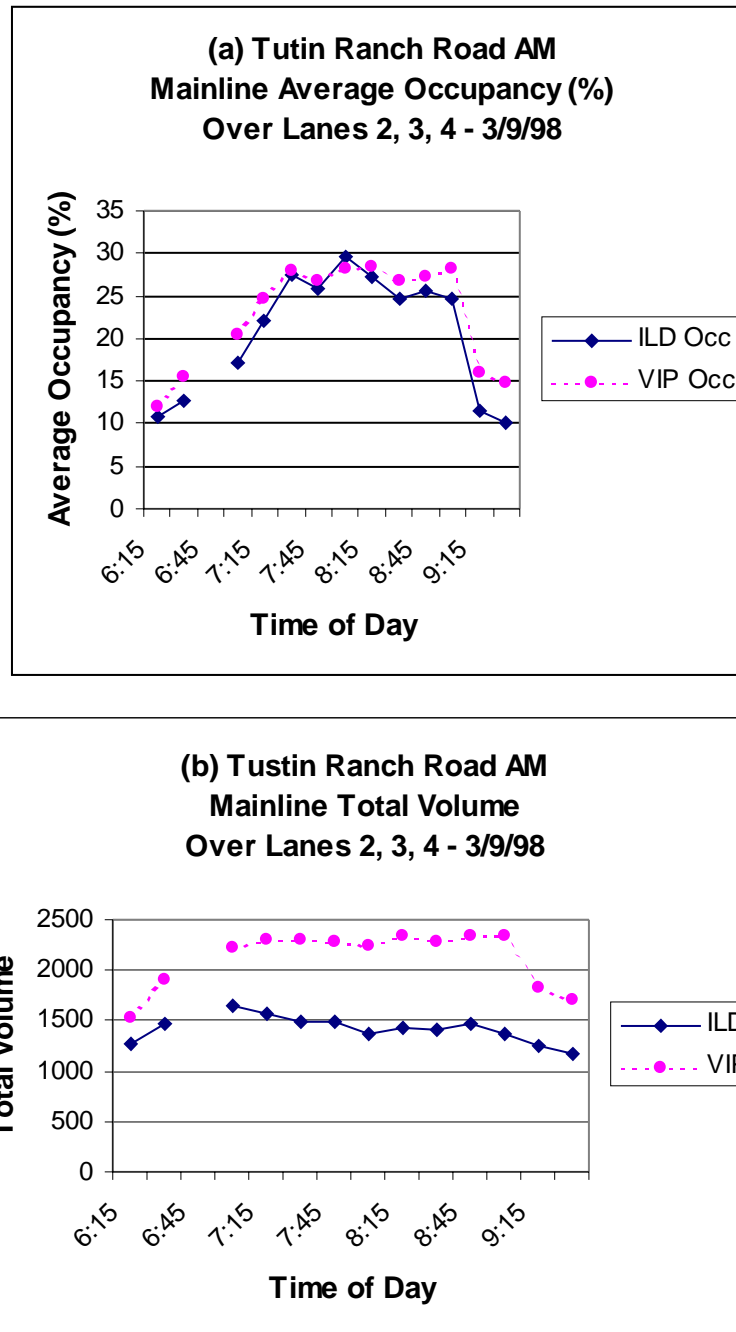


Figure J-12. Average lane (a) occupancy and total (b) volume measured by the ILDs and VIP over lanes 2, 3, and 4 at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/9/98

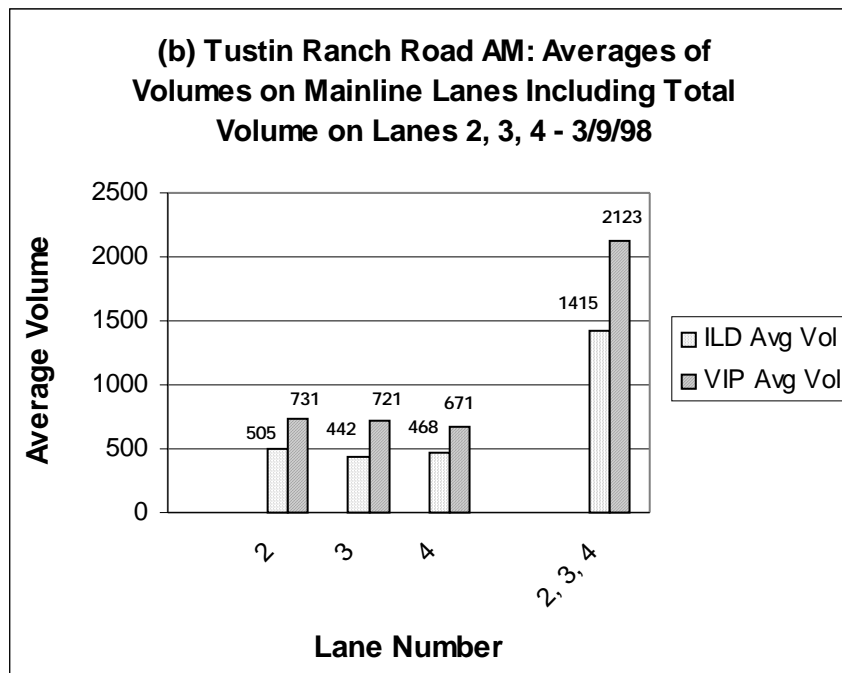
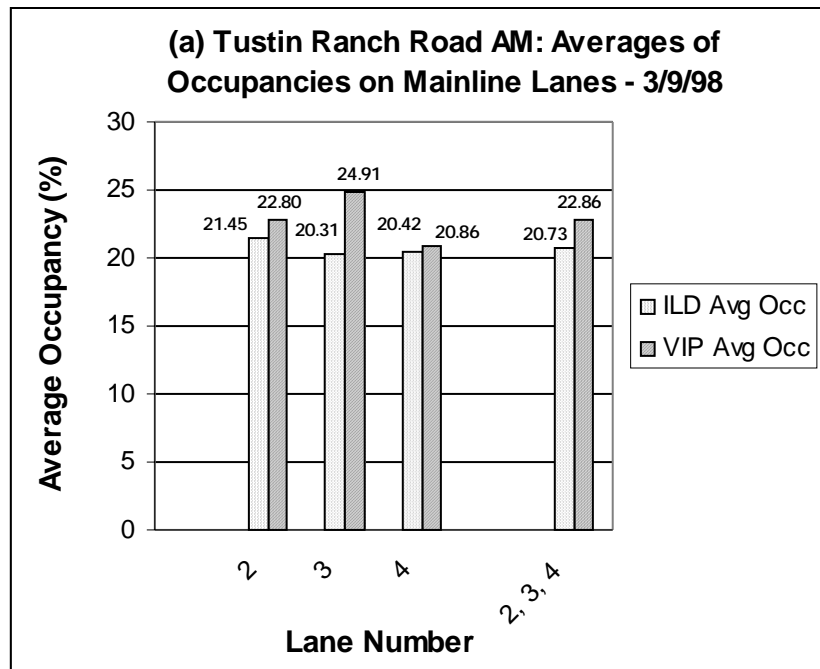


Figure J-13. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/9/98

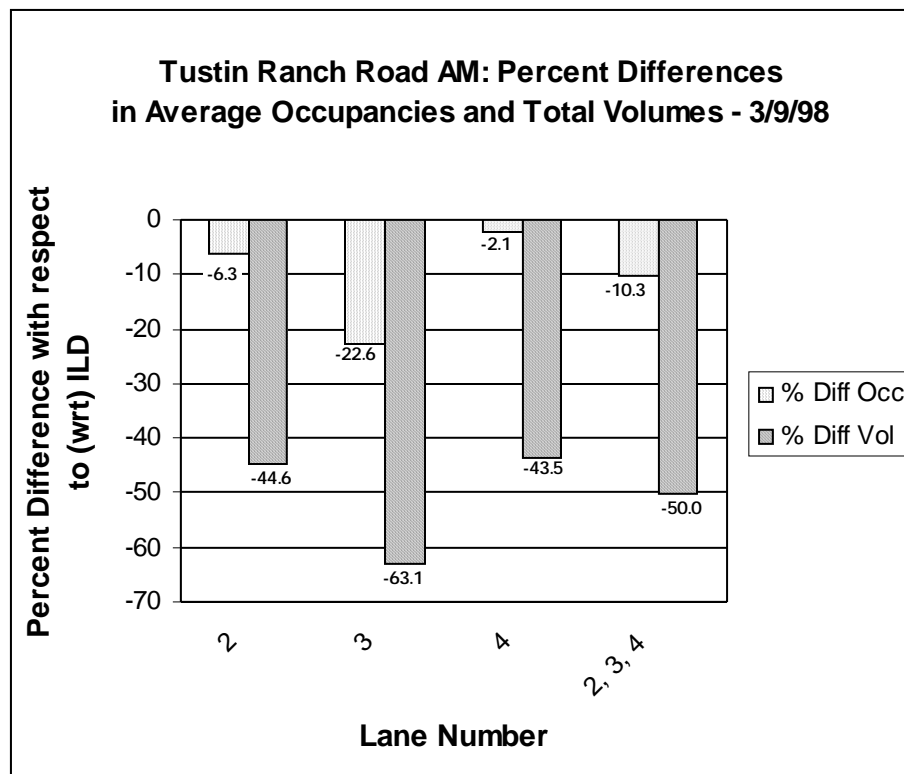


Figure J-14. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/9/98

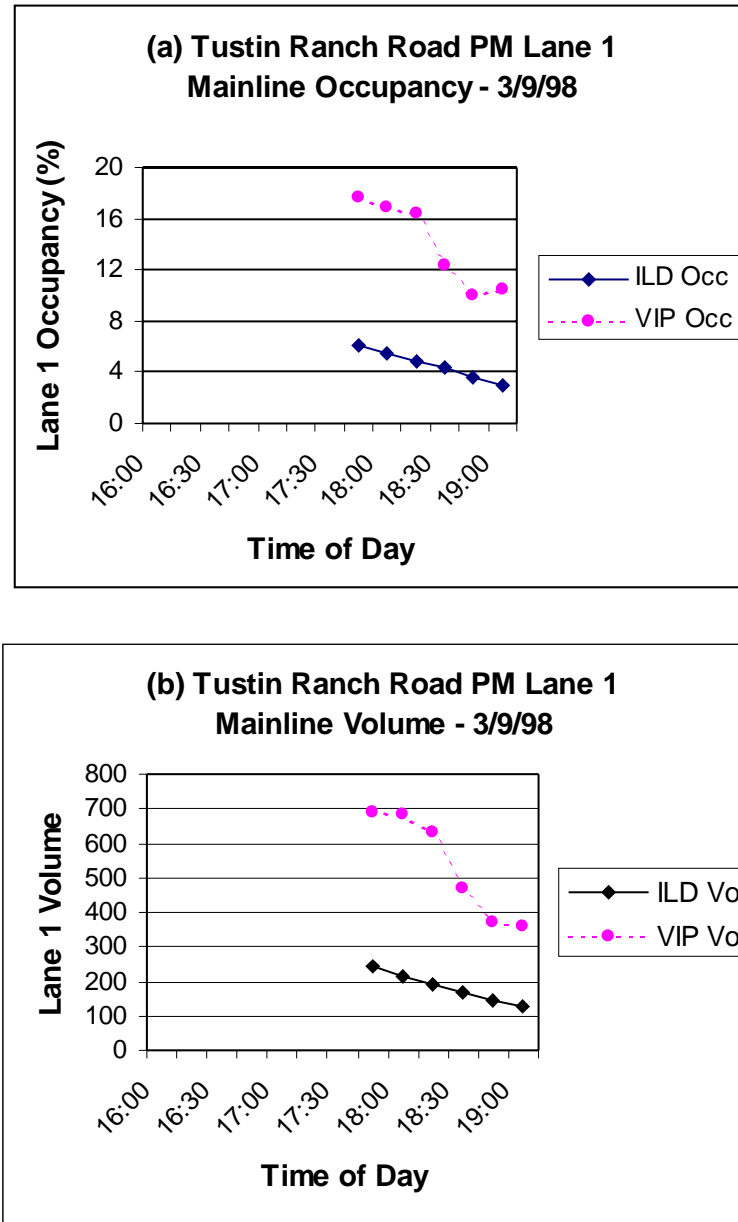


Figure J-15. Lane 1 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/9/98

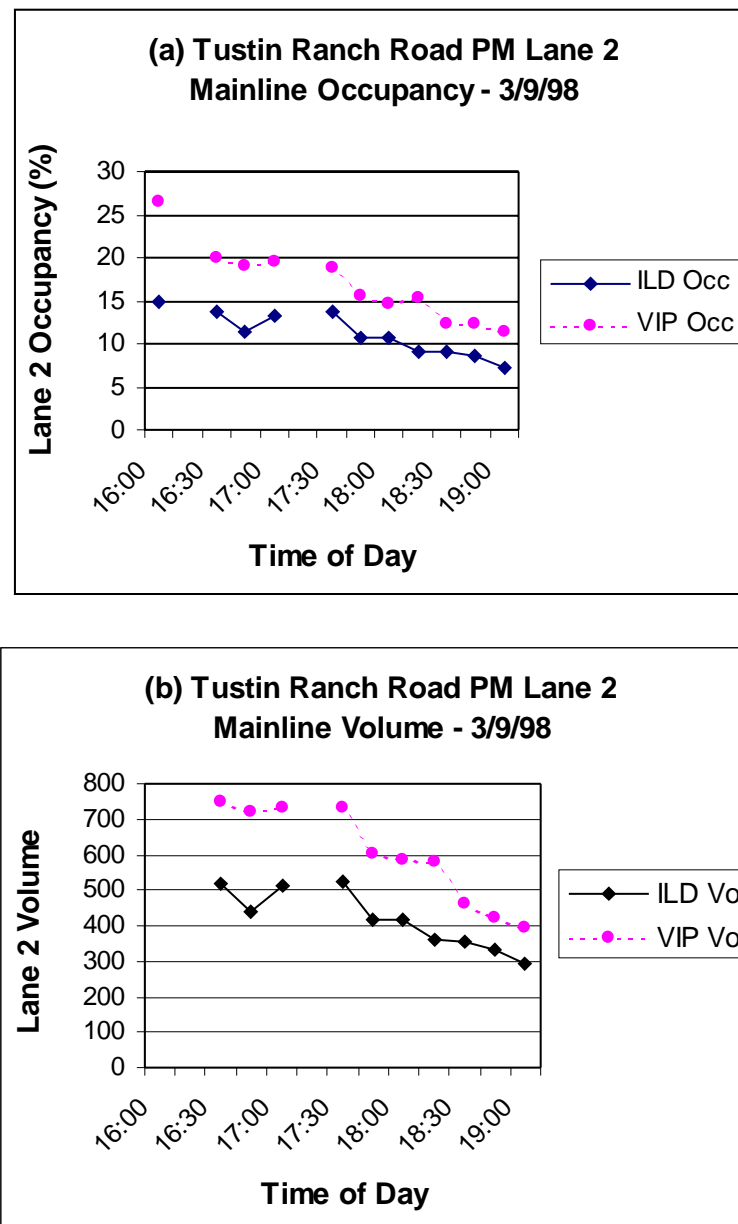


Figure J-16. Lane 2 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/9/98

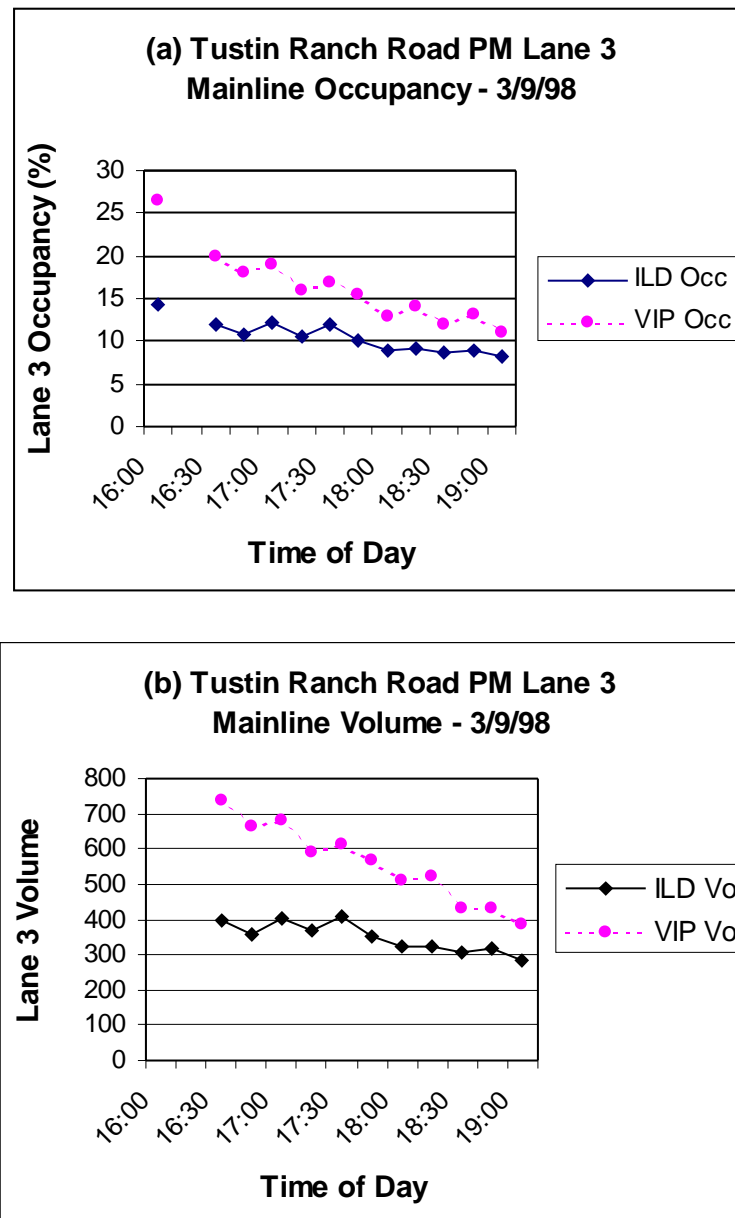


Figure J-17. Lane 3 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/9/98

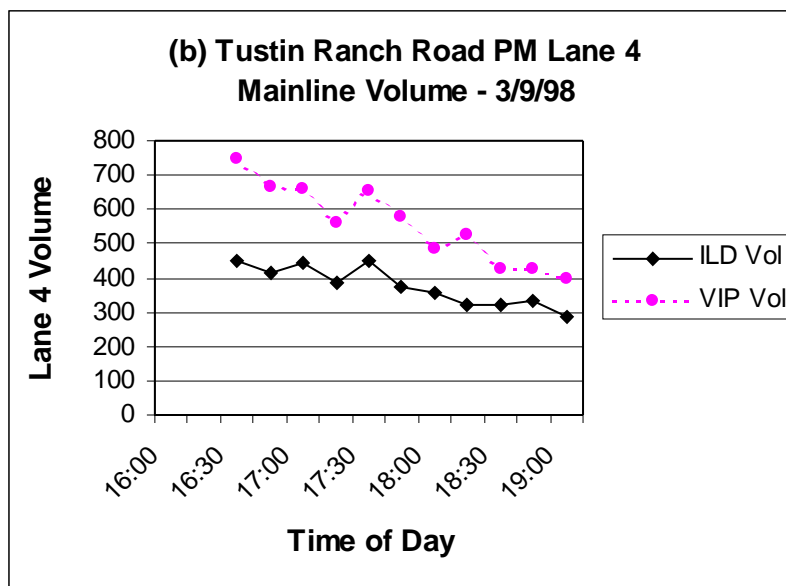
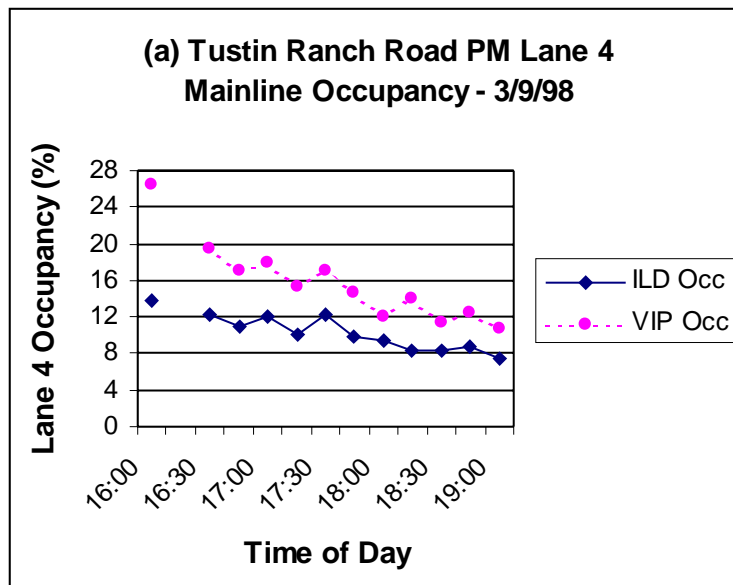


Figure J-18. Lane 4 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/9/98

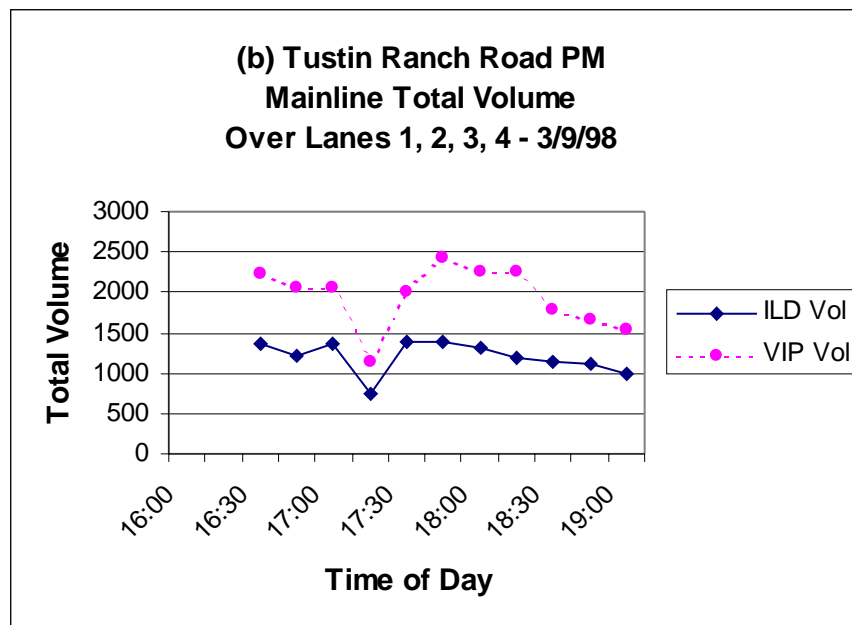
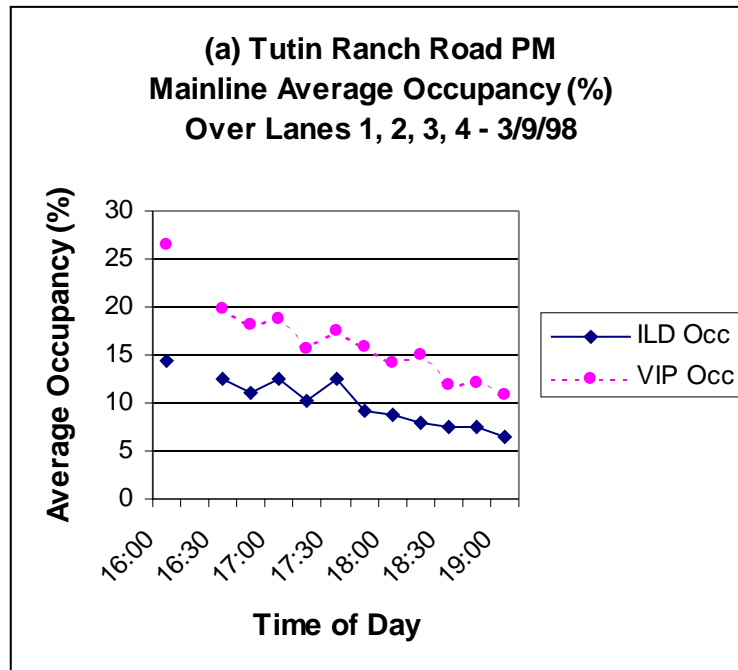


Figure J-19. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over all lanes at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/9/98

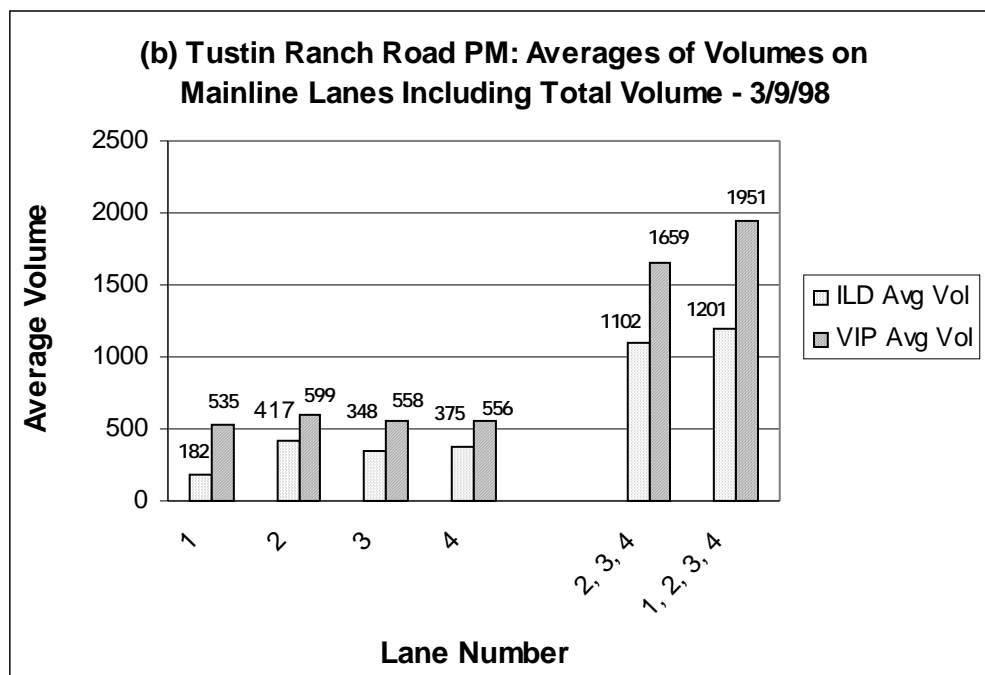
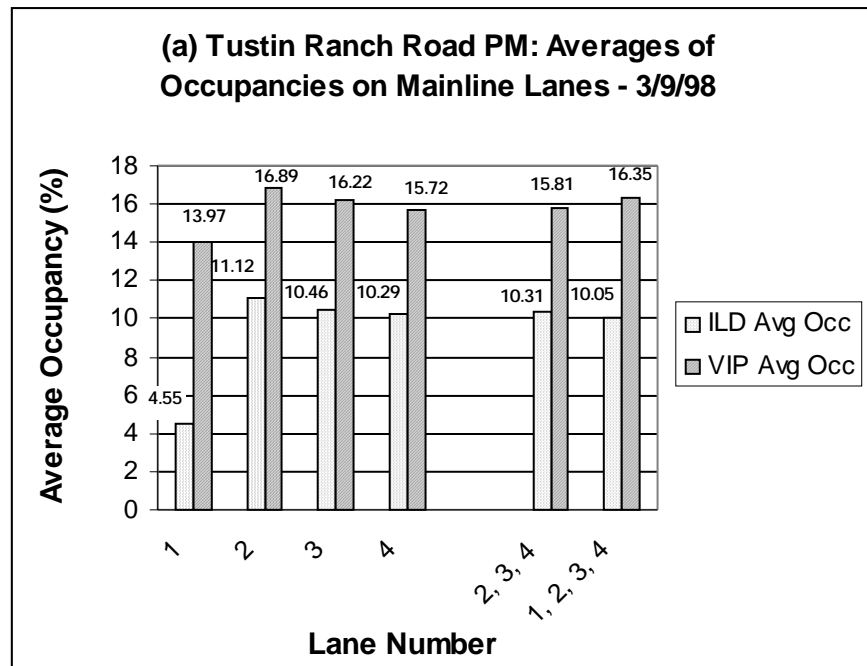


Figure J-20. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/9/98

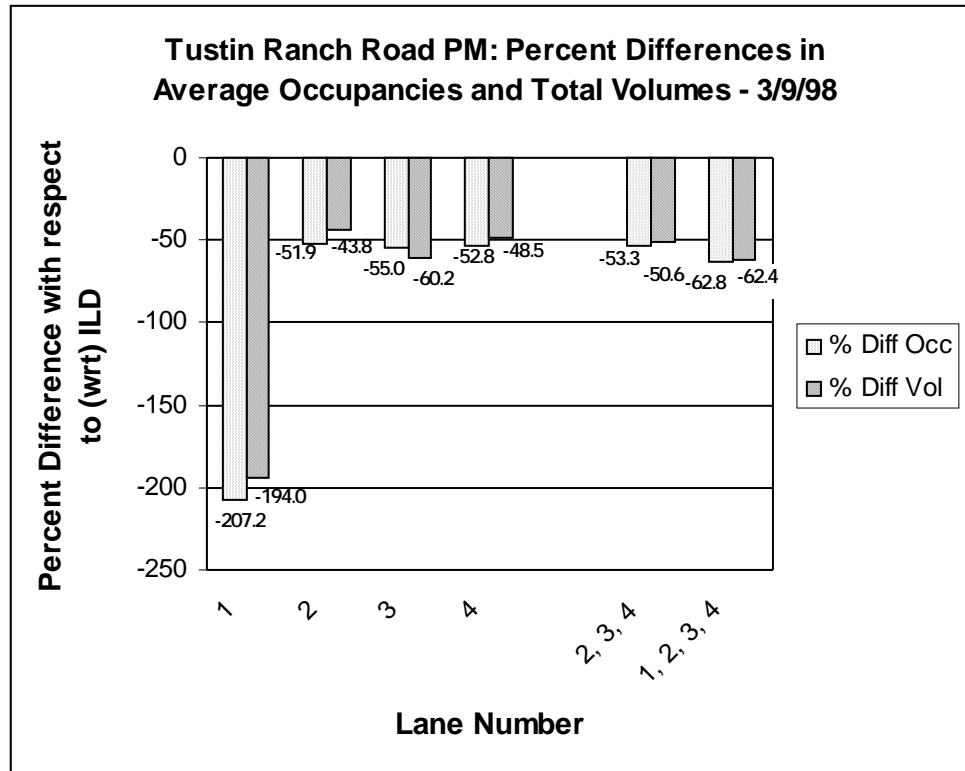


Figure J-21. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/9/98

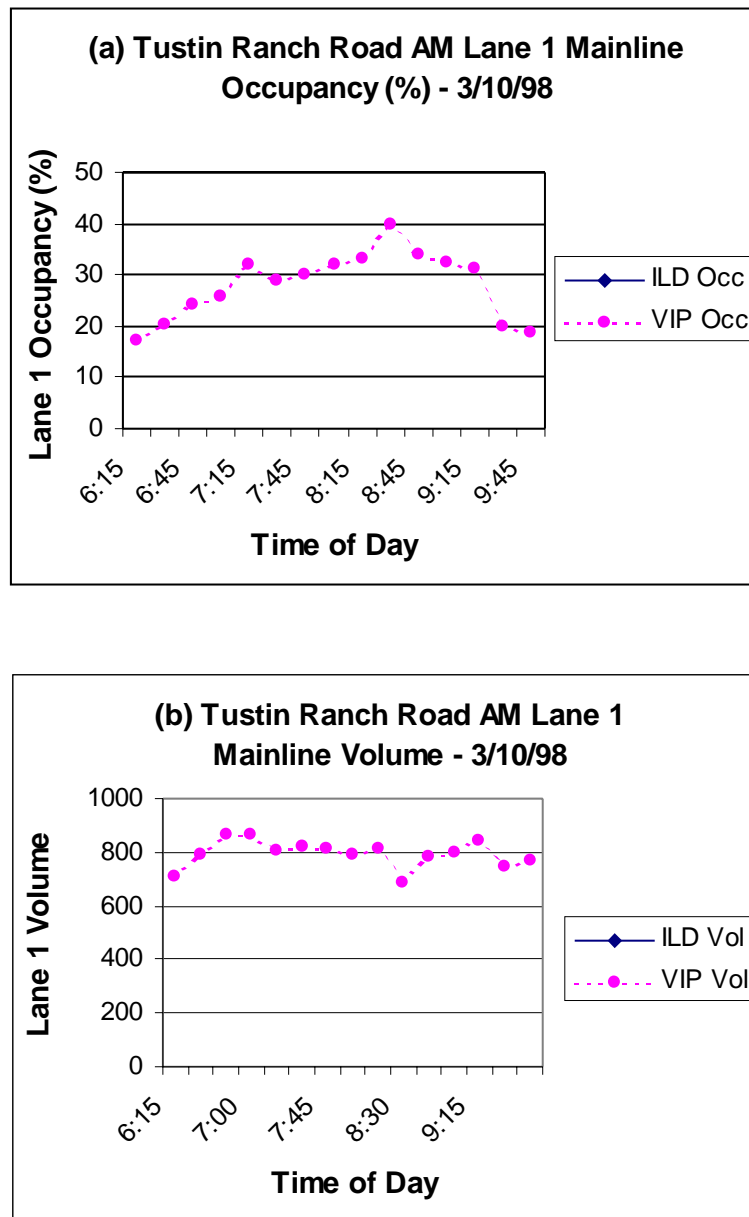


Figure J-22. Lane 1 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/10/98

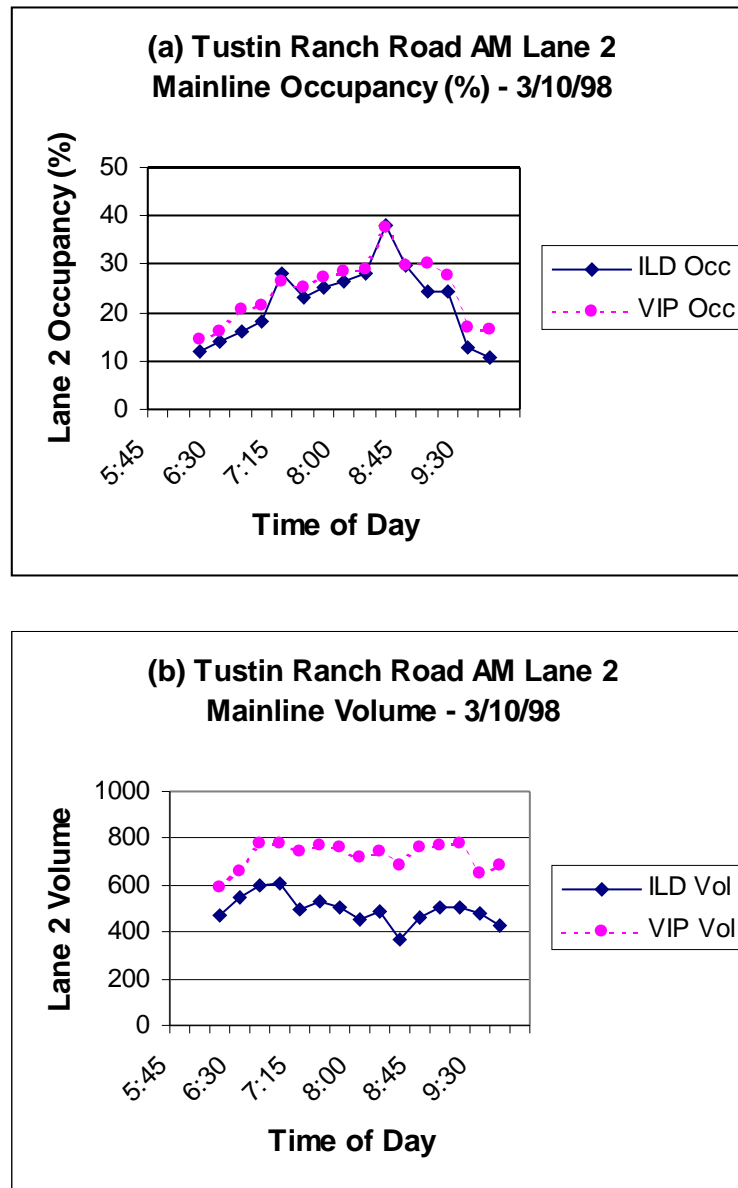


Figure J-23. Lane 2 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/10/98

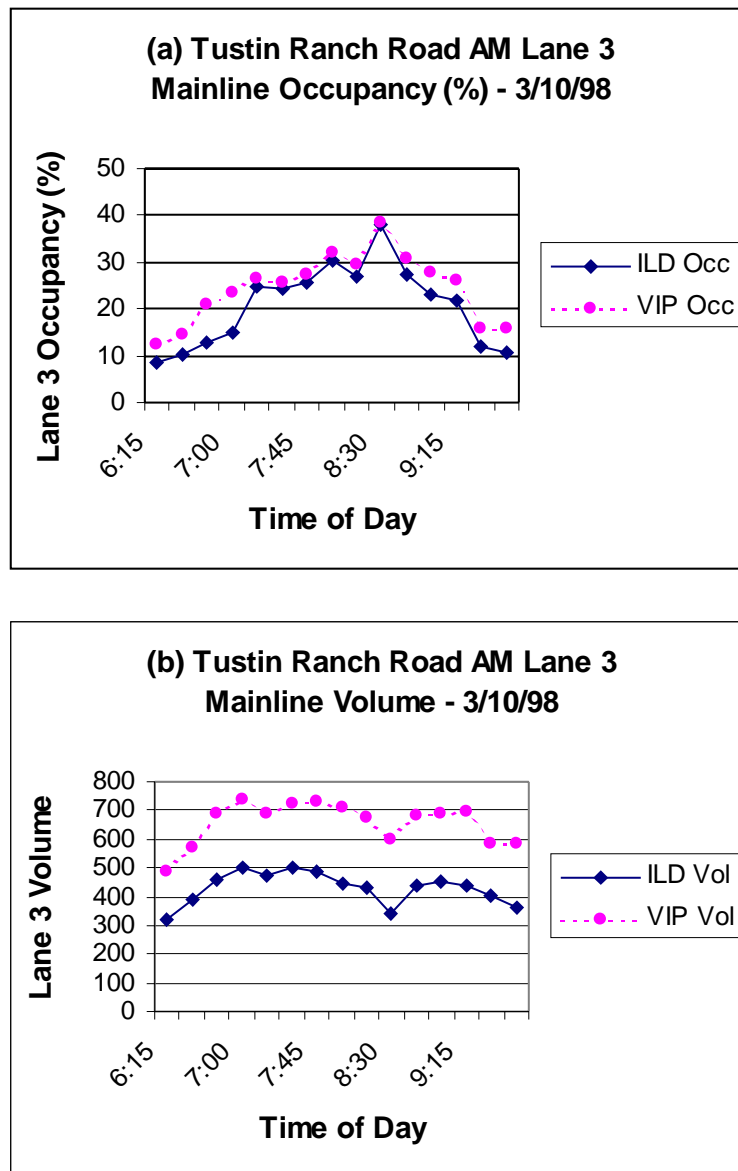


Figure J-24. Lane 3 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/10/98

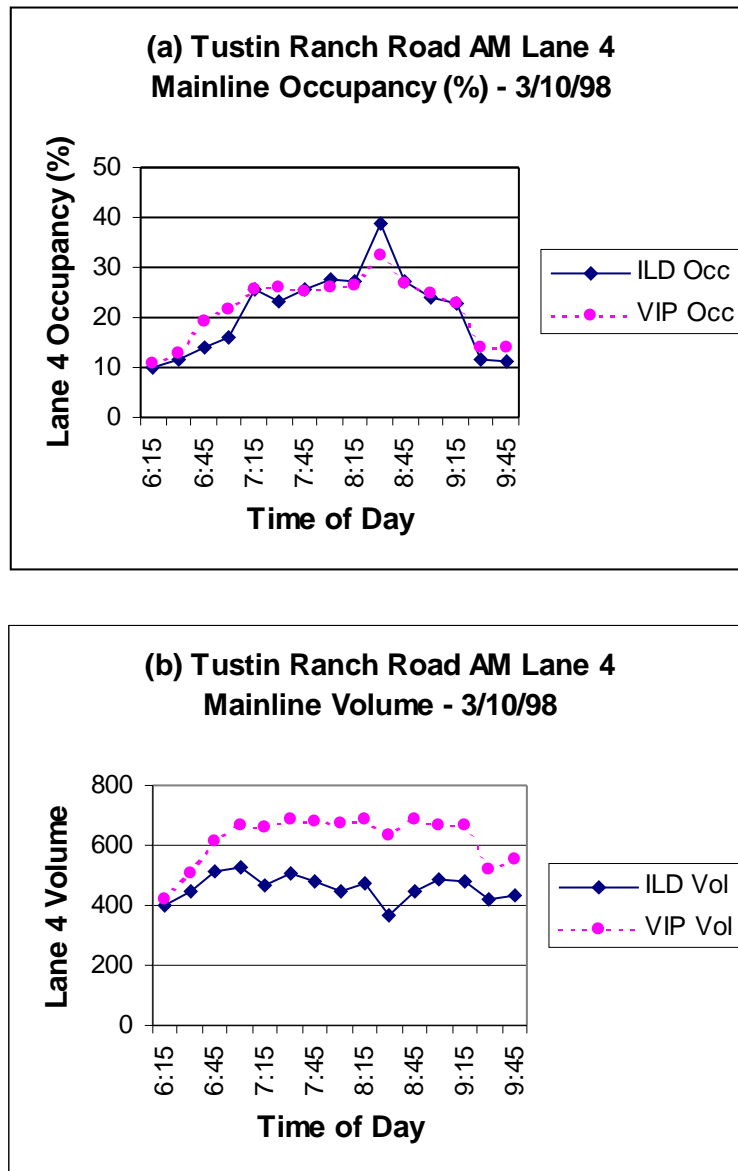


Figure J-25. Lane 4 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/10/98

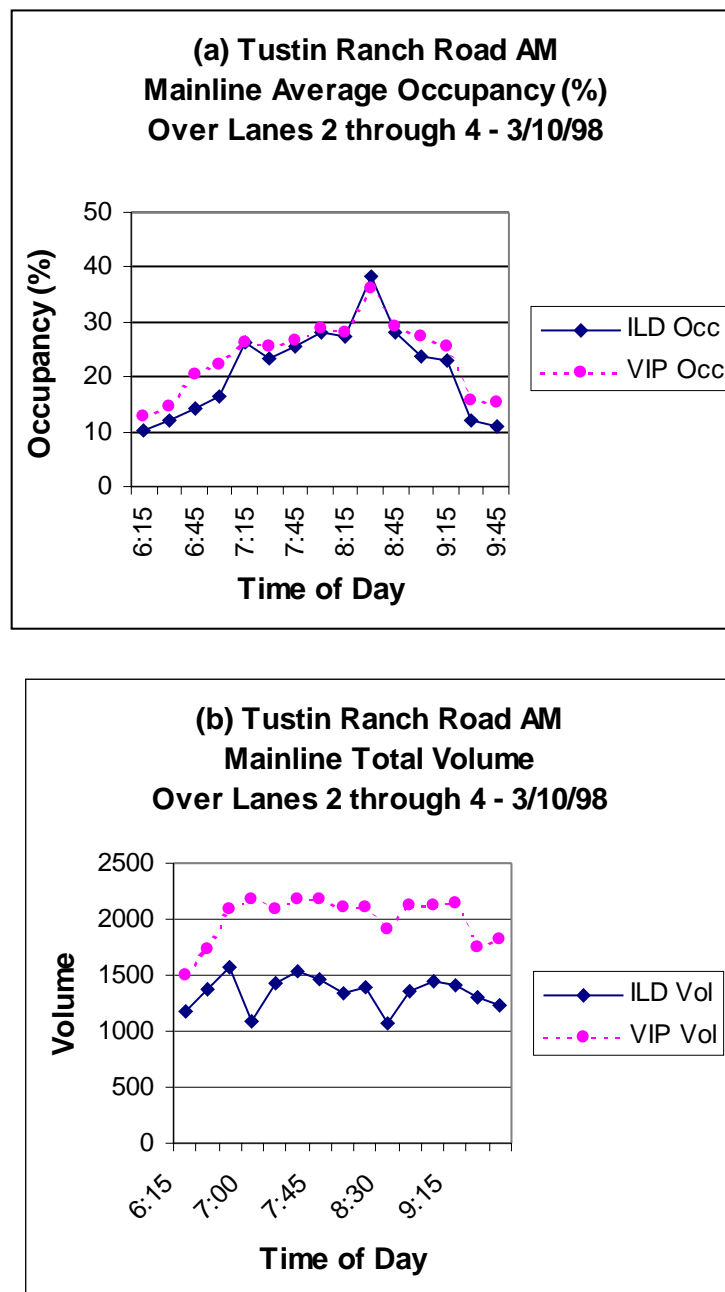


Figure J-26. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over lanes 1, 3, and 4 at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/10/98

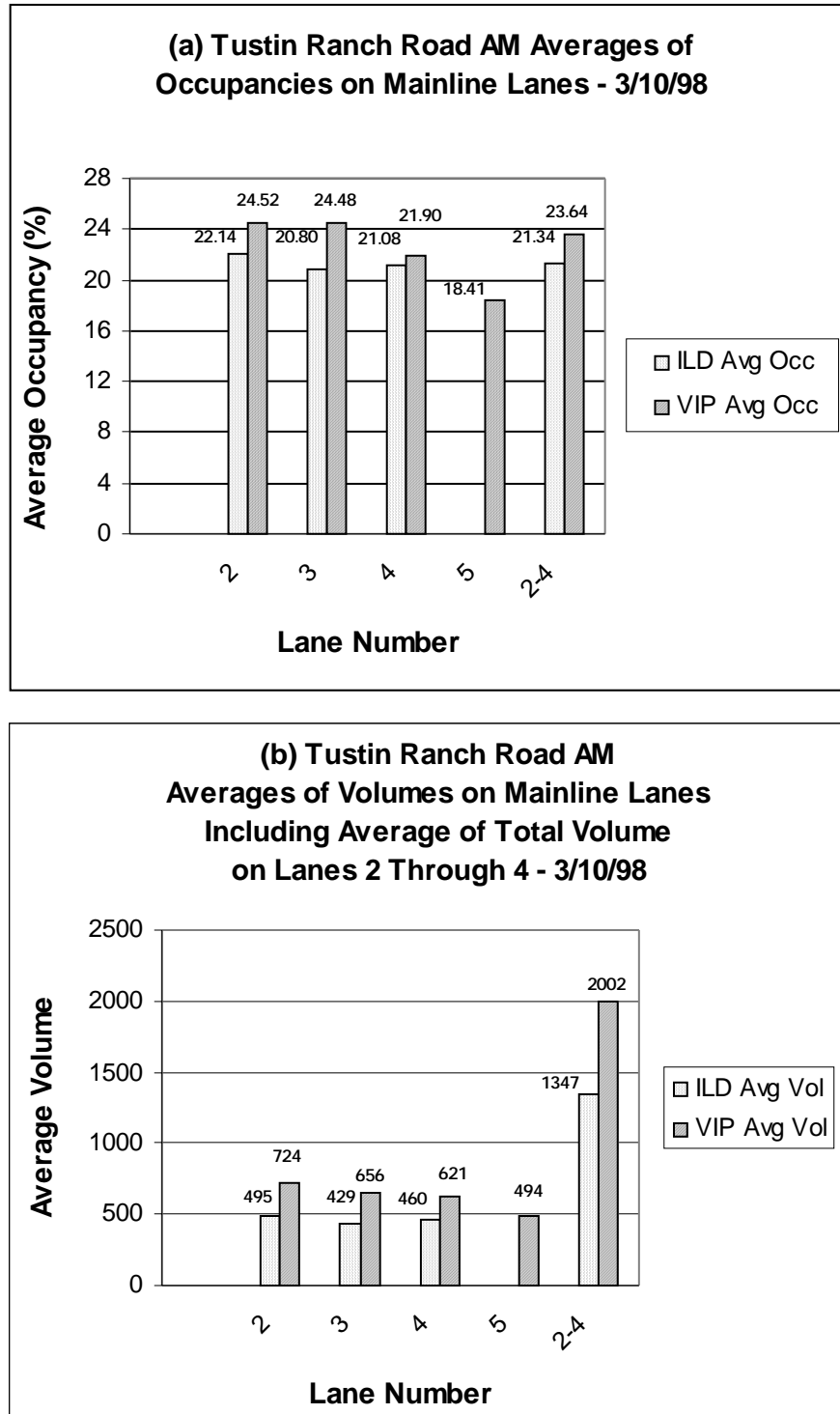


Figure J-27. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/10/98

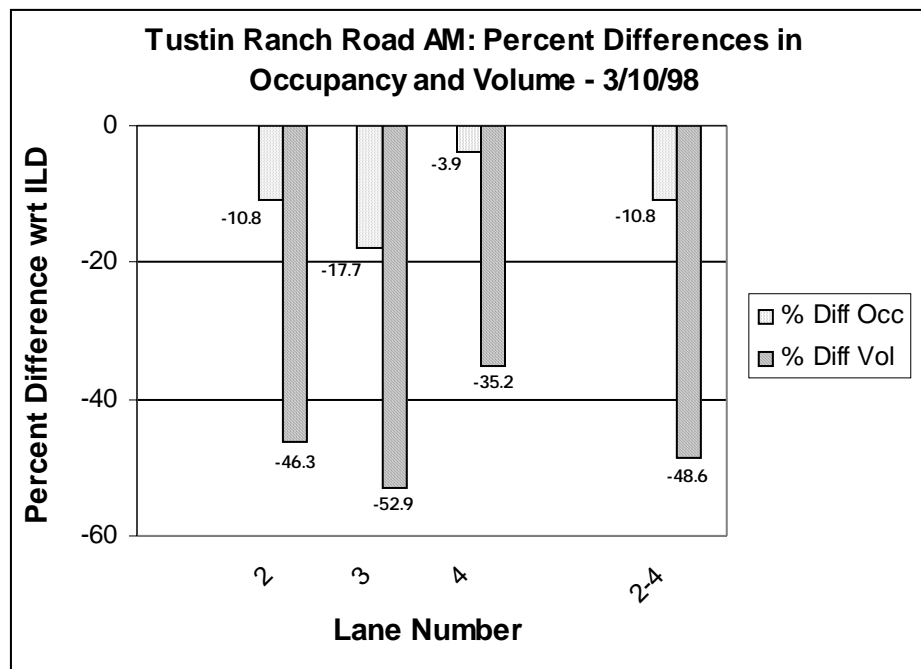


Figure J-28. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Tustin Ranch Road evaluation site during the morning rush-hour interval on 3/10/98

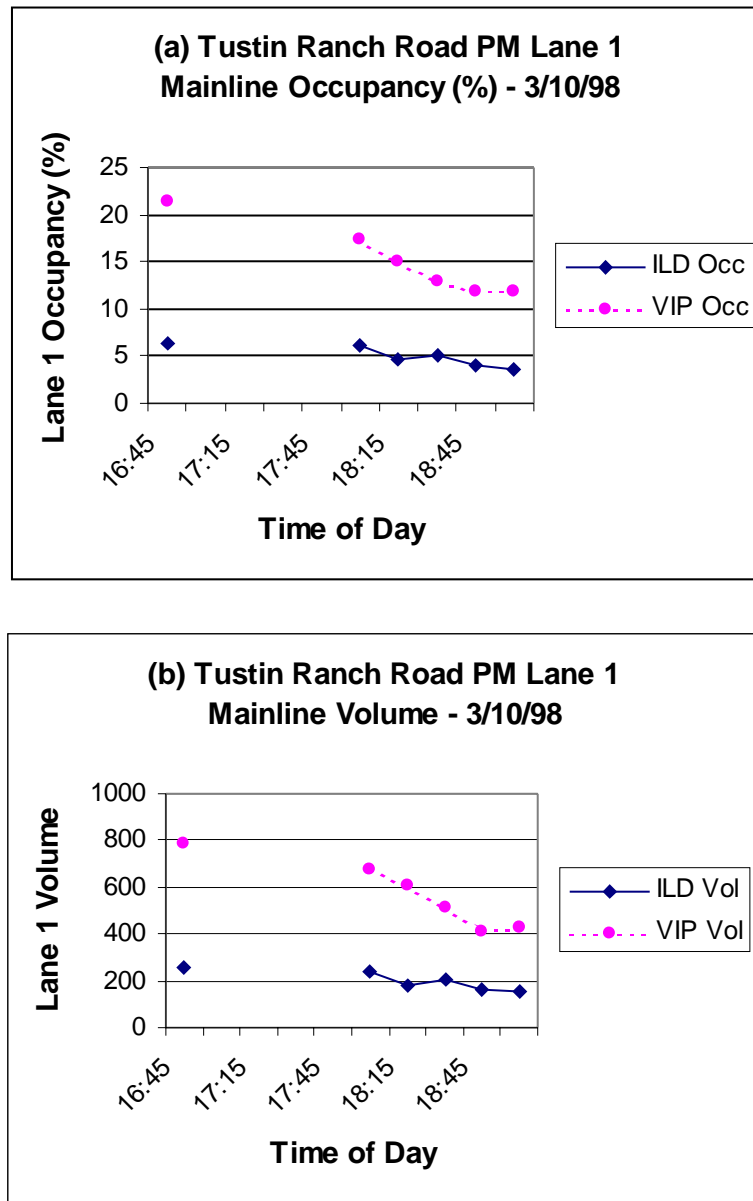


Figure J-29. Lane 1 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/10/98

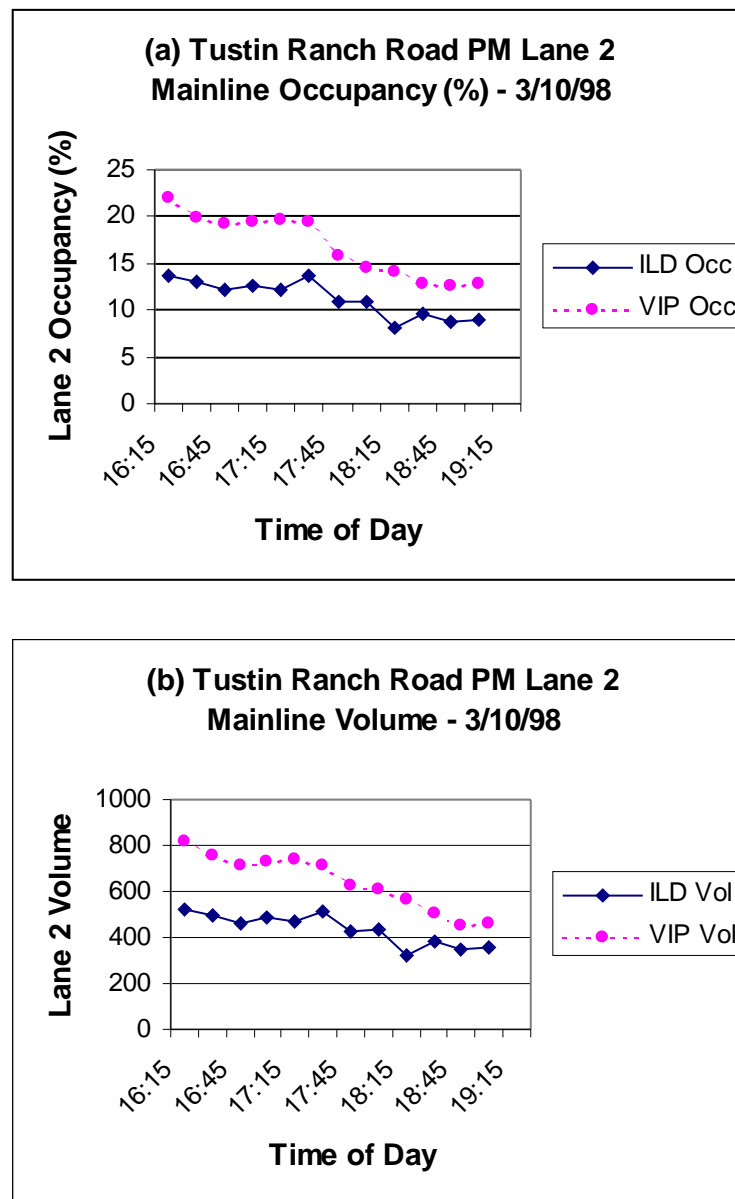


Figure J-30. Lane 2 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/10/98

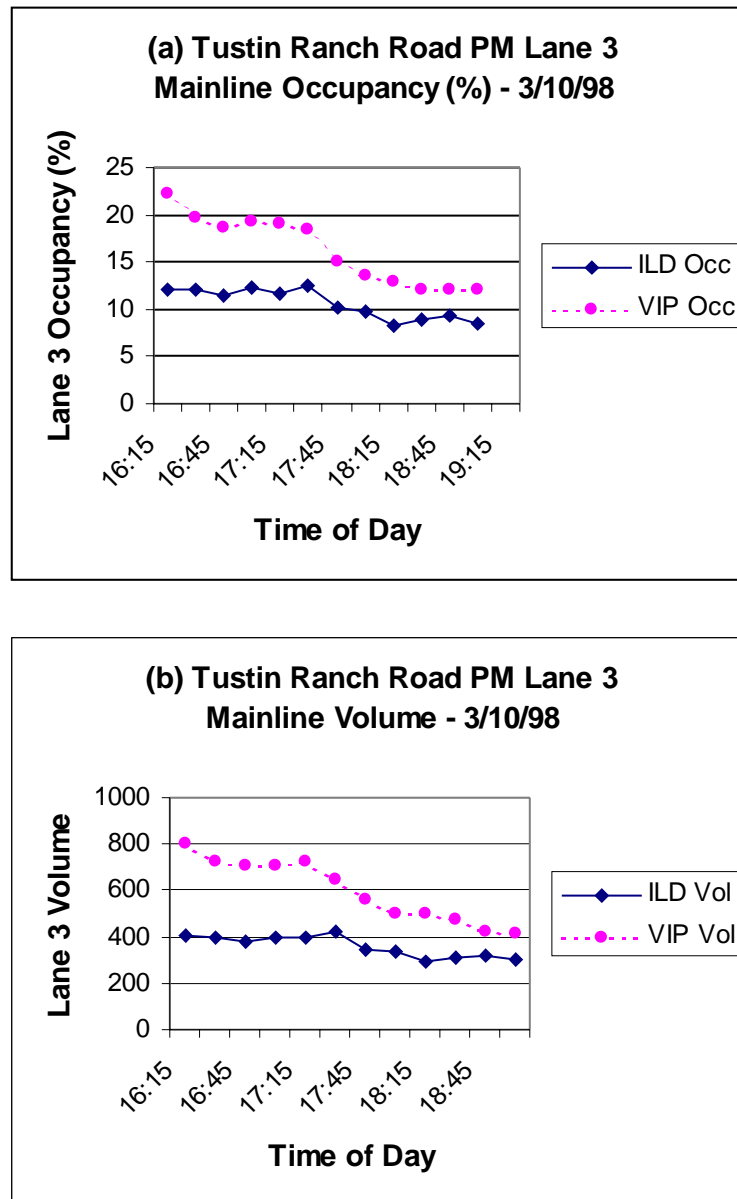


Figure J-31. Lane 3 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/10/98

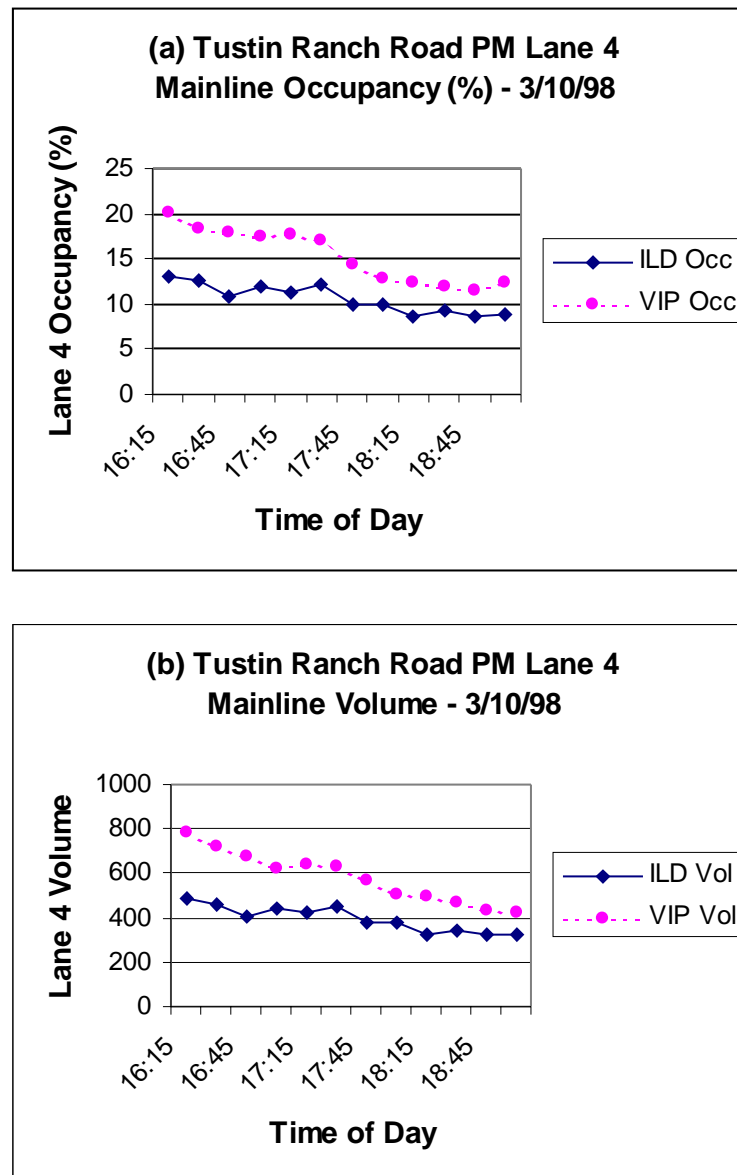


Figure J-32. Lane 4 (a) occupancy and (b) volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/10/98

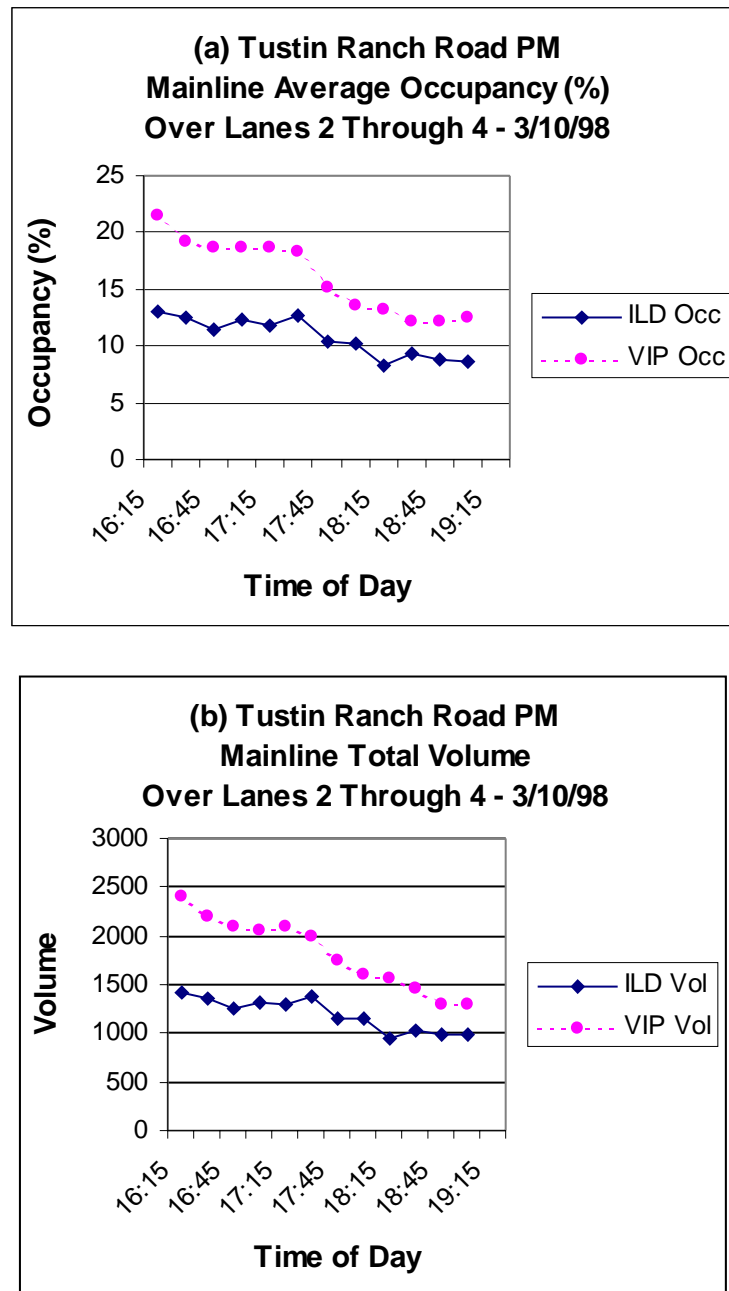


Figure J-33. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over all lanes at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/10/98

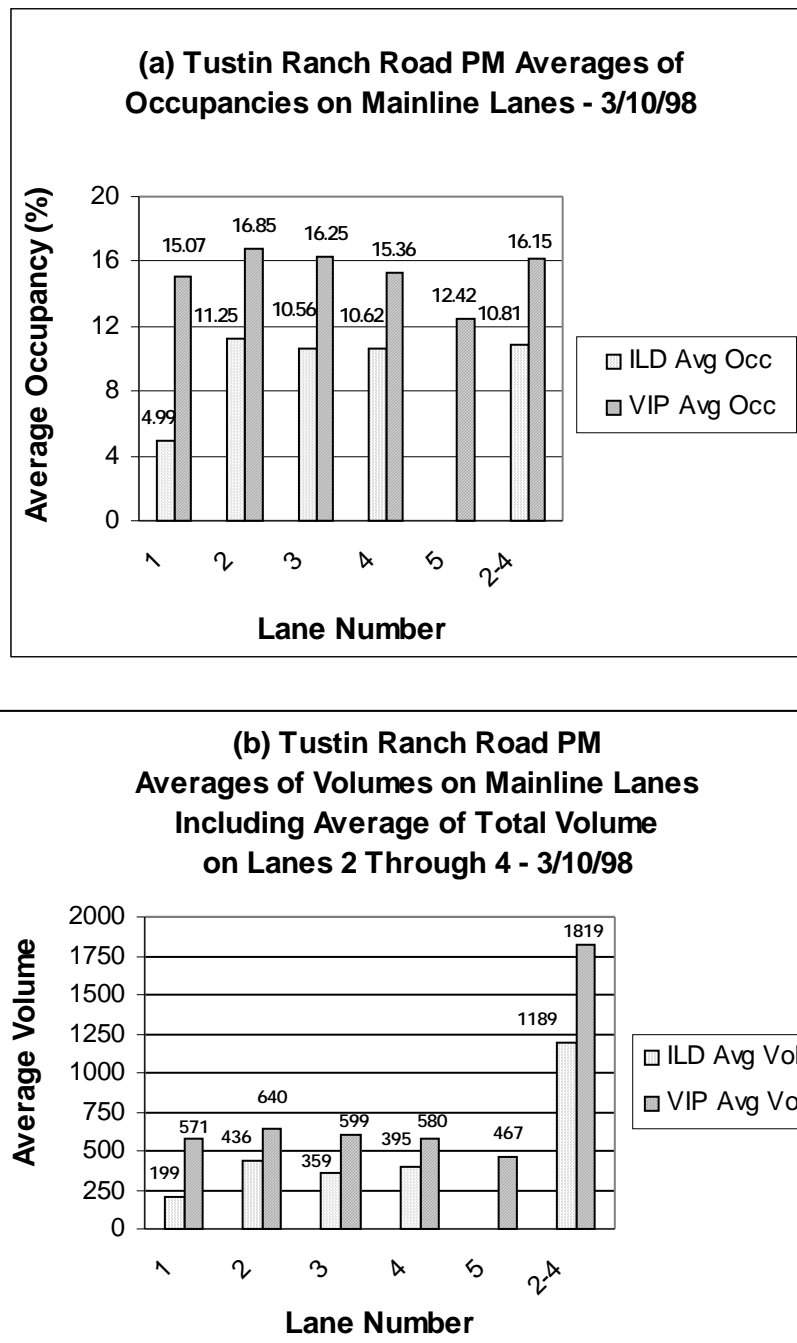


Figure J-34. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/10/98

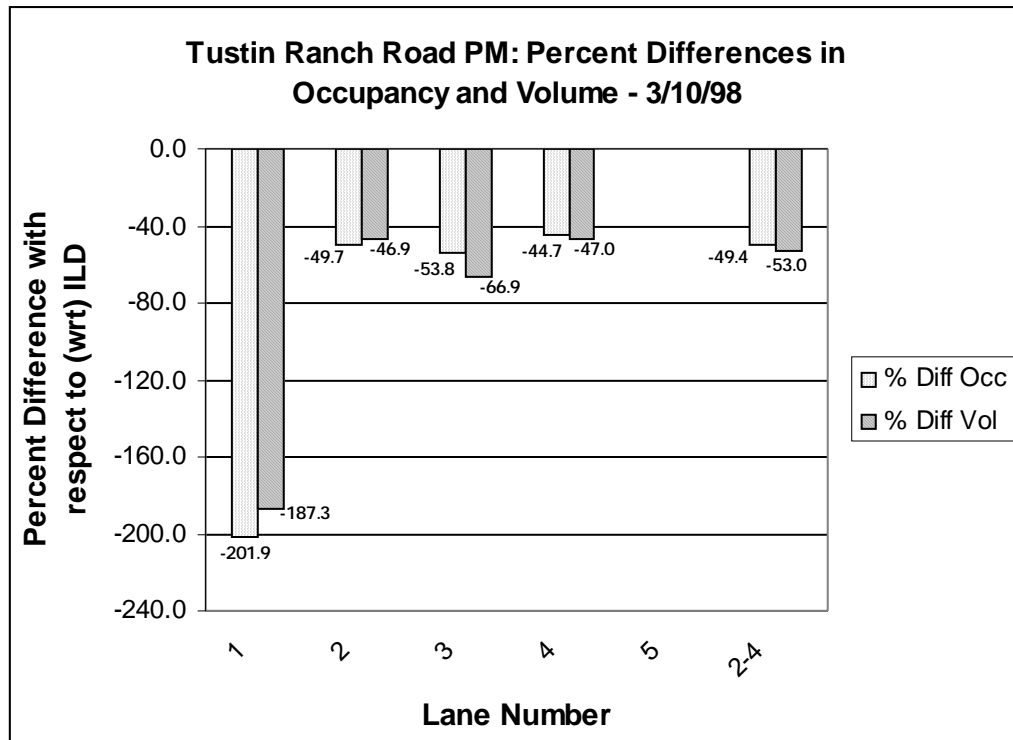


Figure J-35. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Tustin Ranch Road evaluation site during the afternoon rush-hour interval on 3/10/98

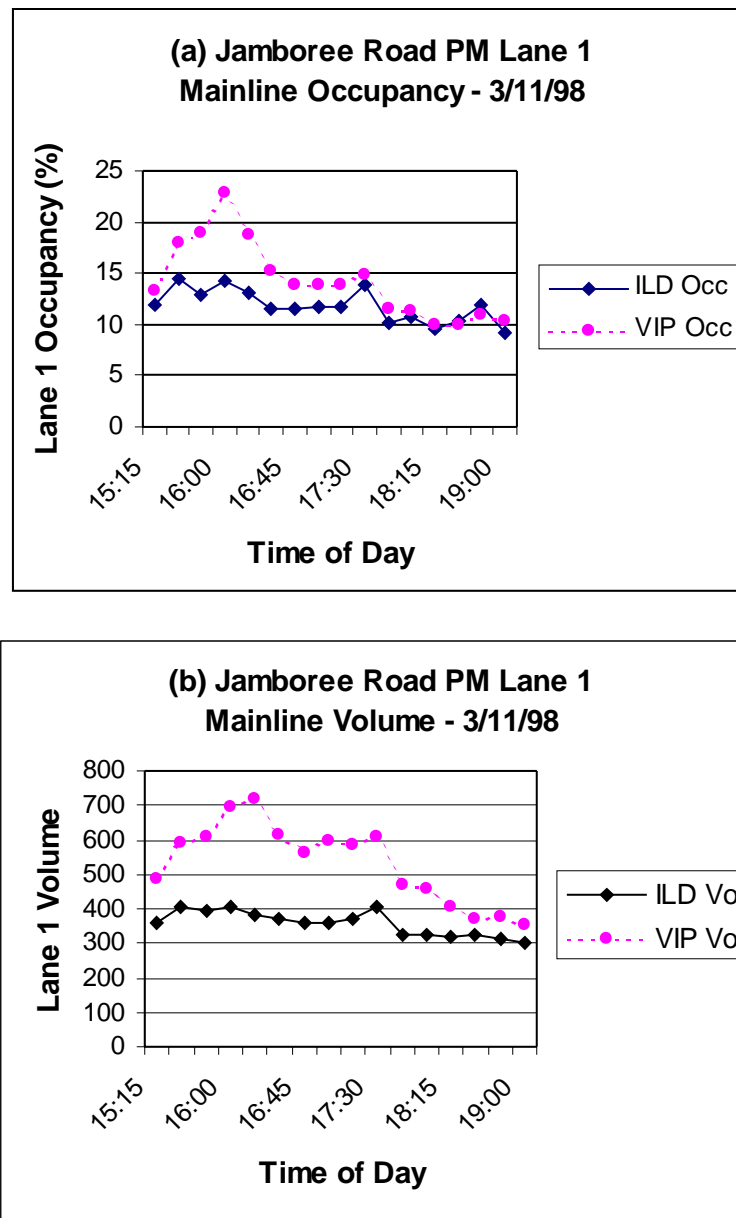


Figure J-36. Lane 1 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/11/98

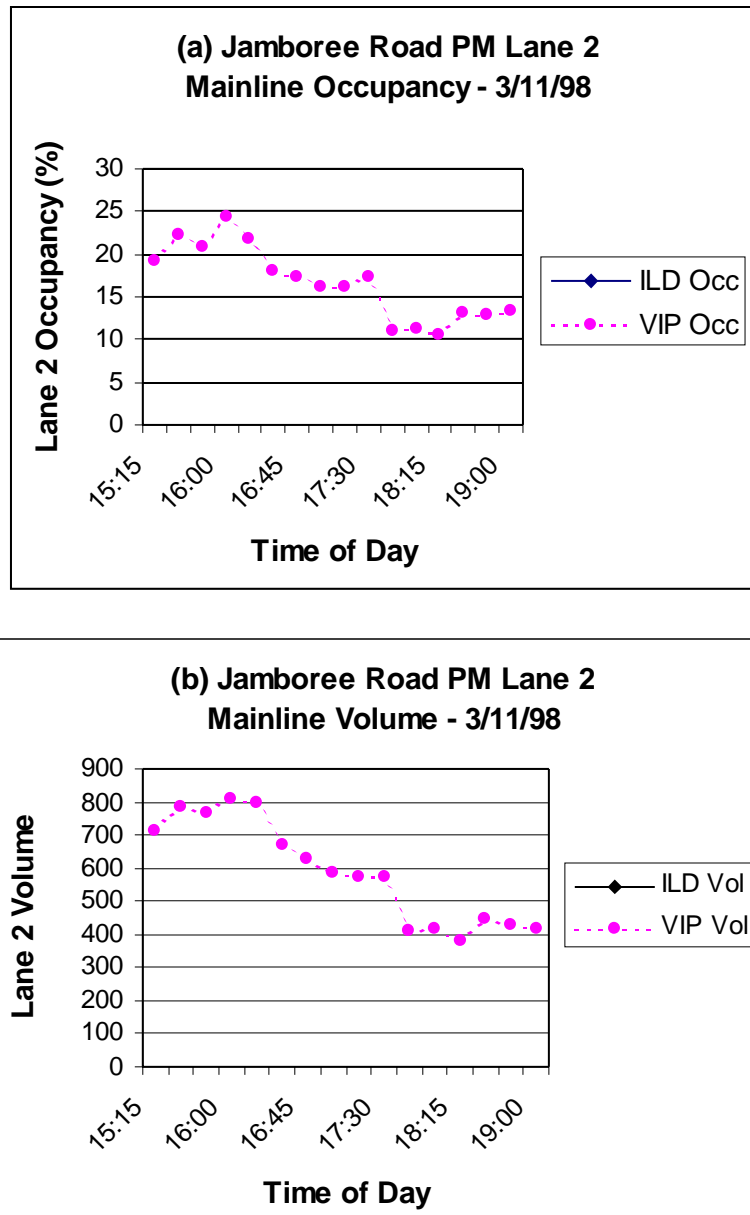


Figure J-37. Lane 2 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/11/98

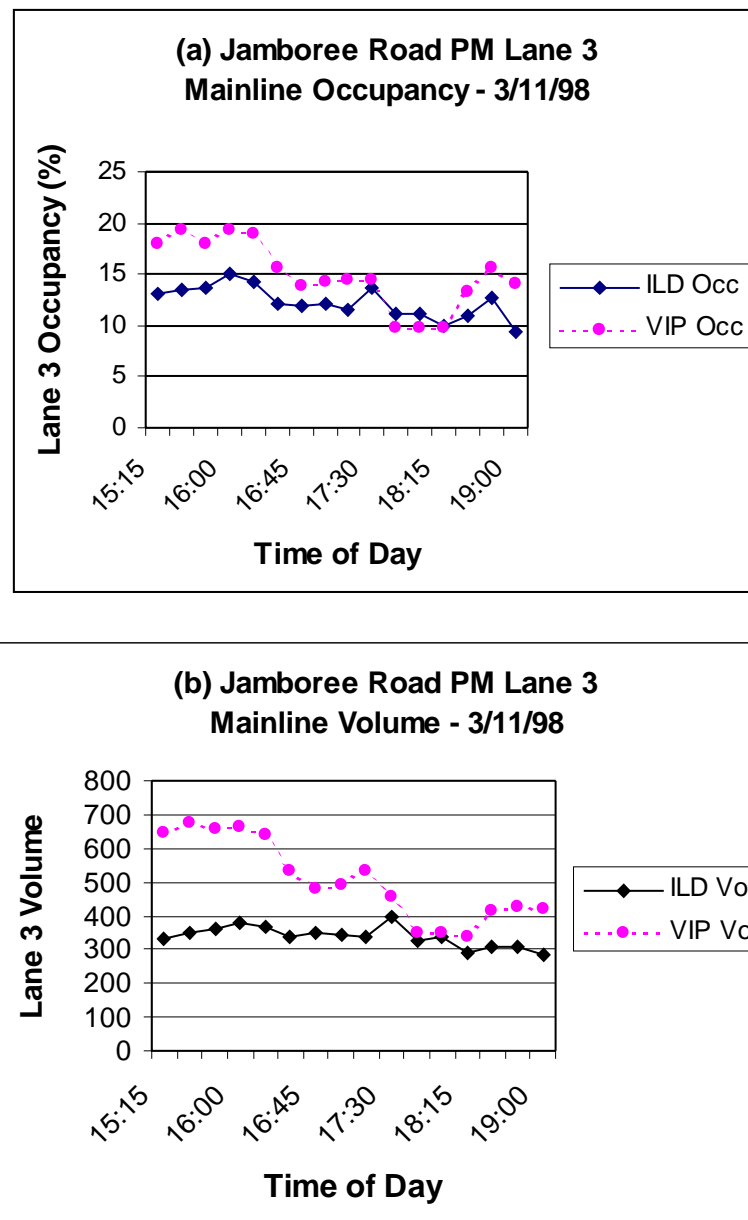


Figure J-38. Lane 3 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/11/98

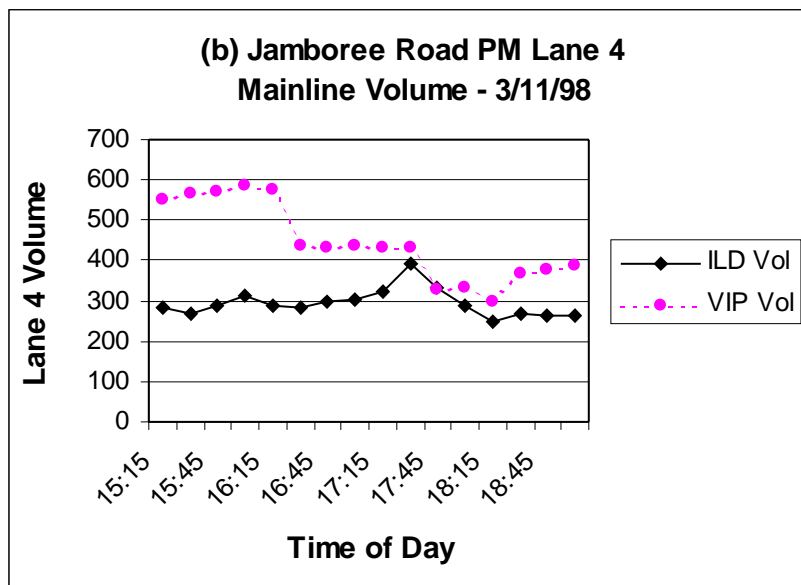
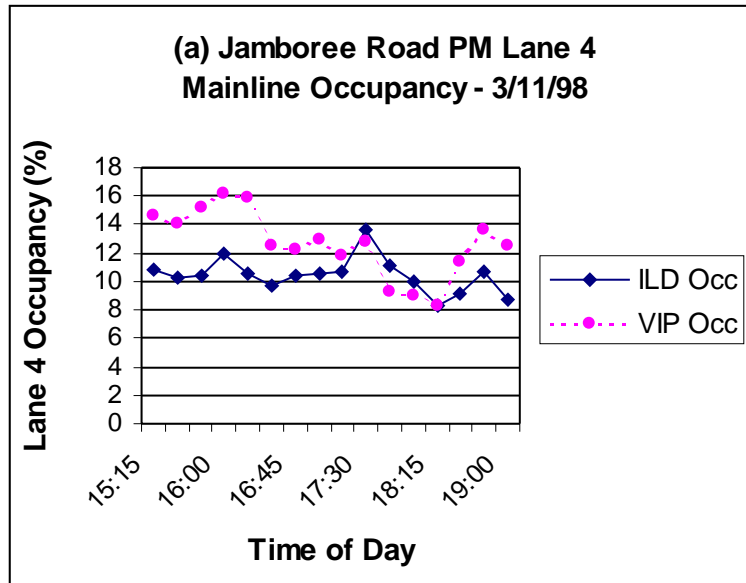


Figure J-39. Lane 4 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/11/98

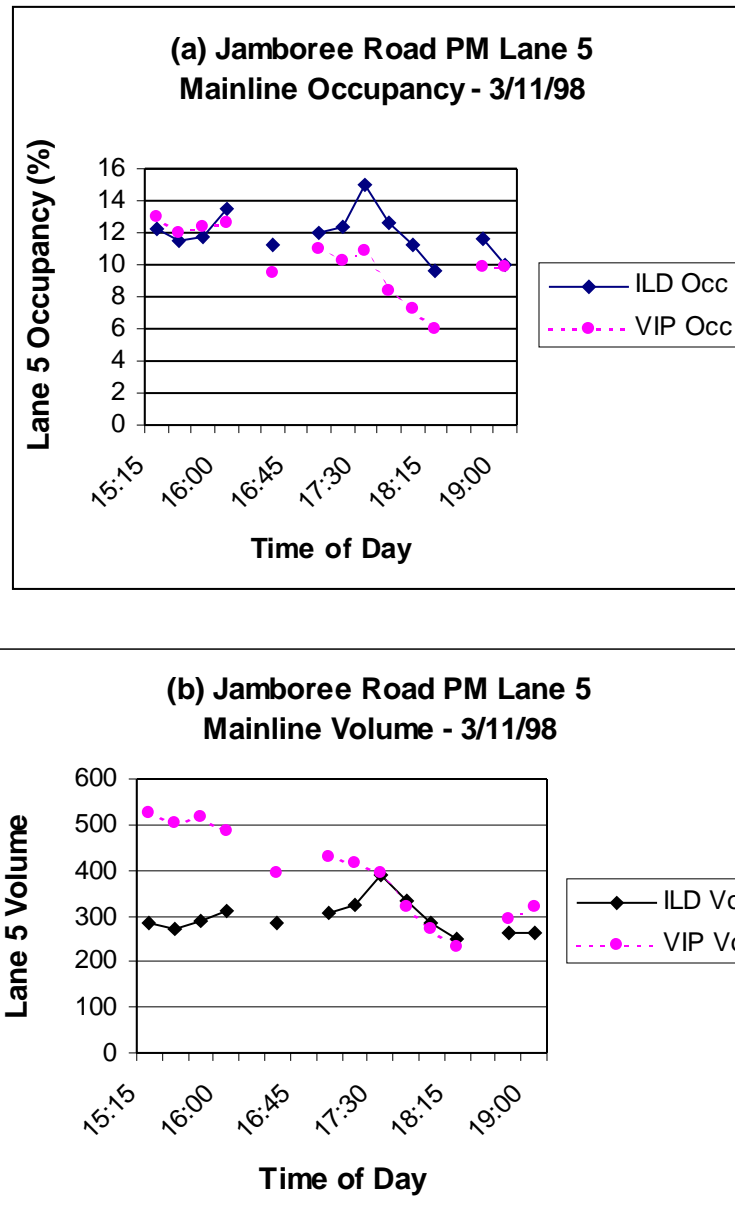


Figure J-40. Lane 5 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/11/98

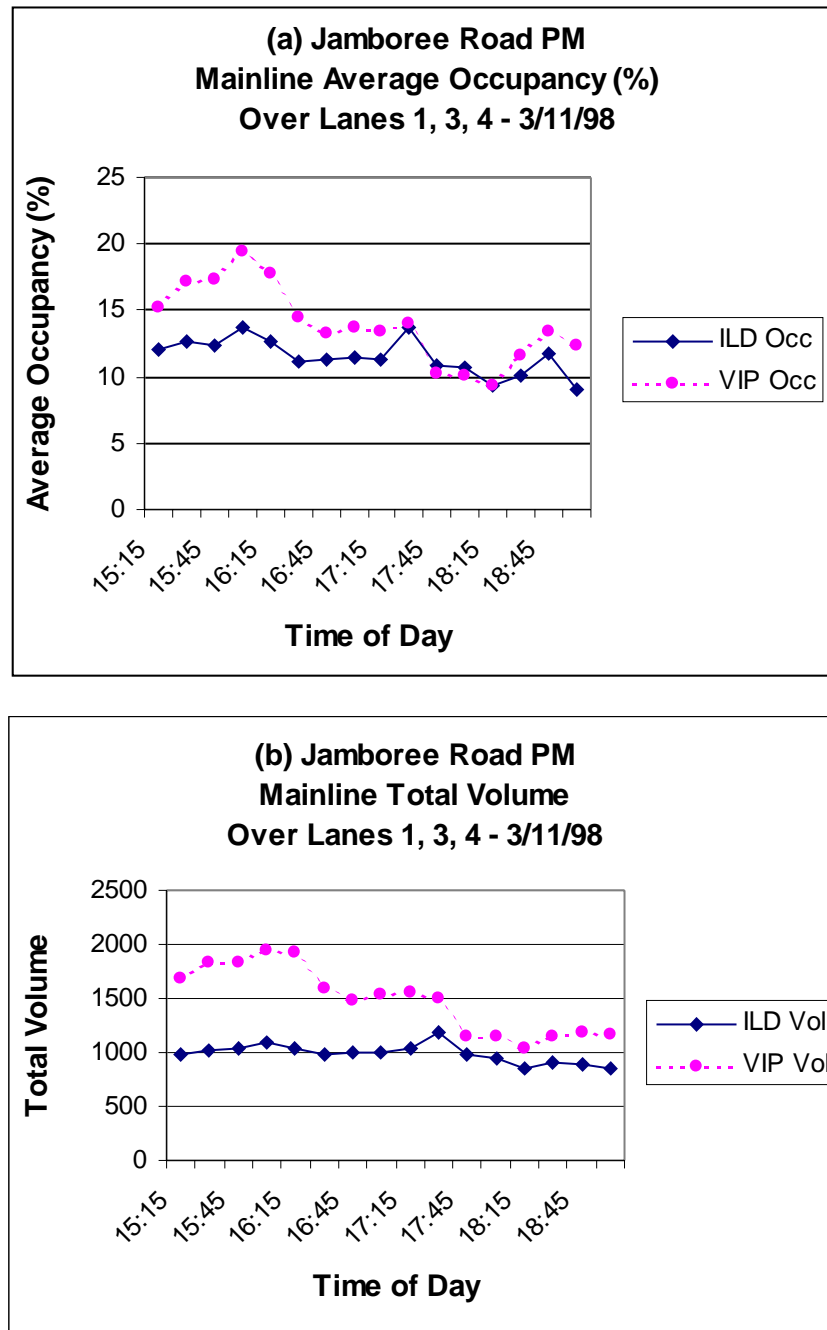


Figure J-41. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over all lanes at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/11/98

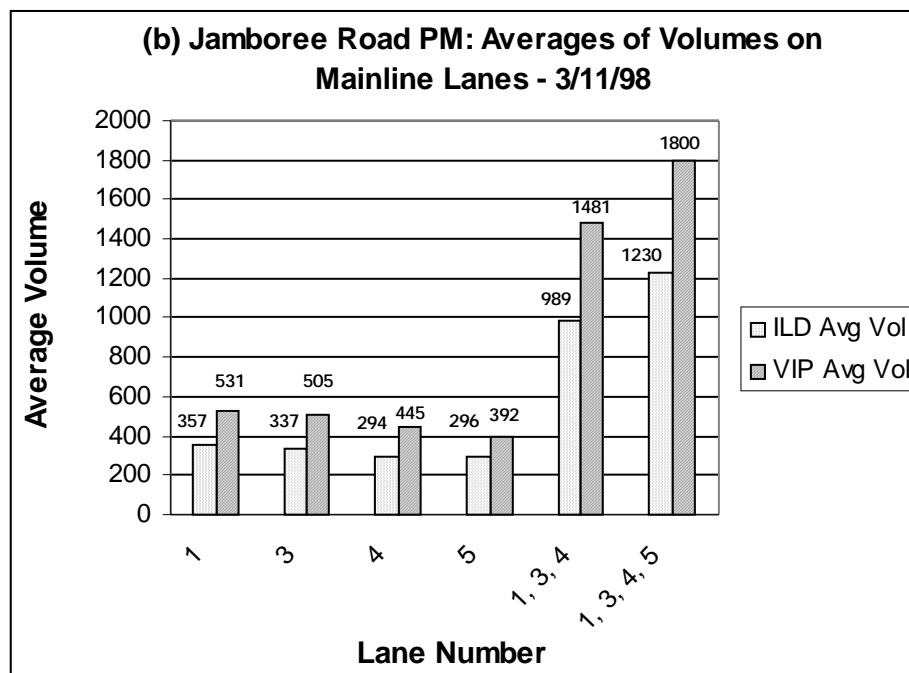
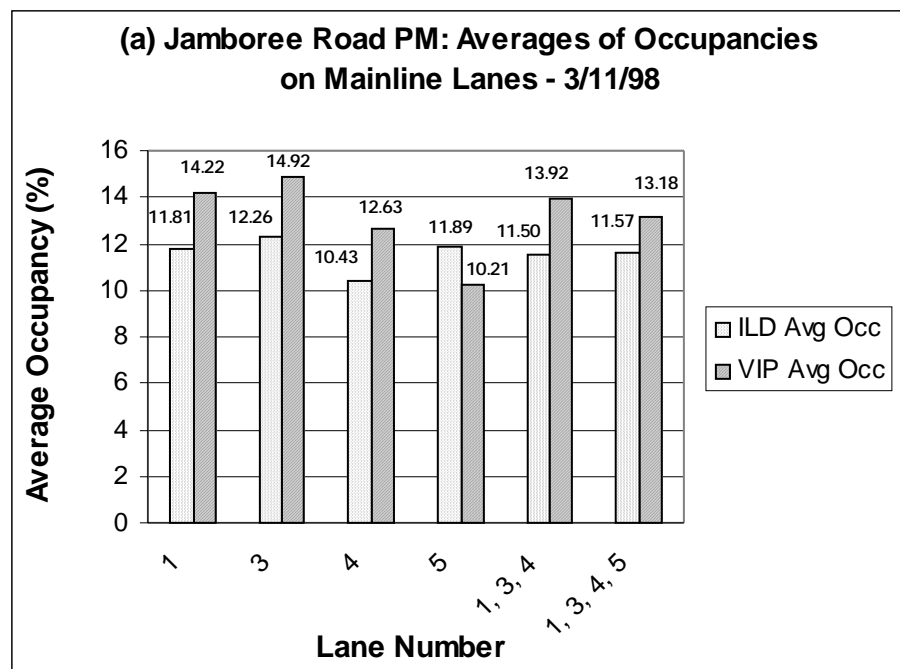


Figure J-42. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/11/98

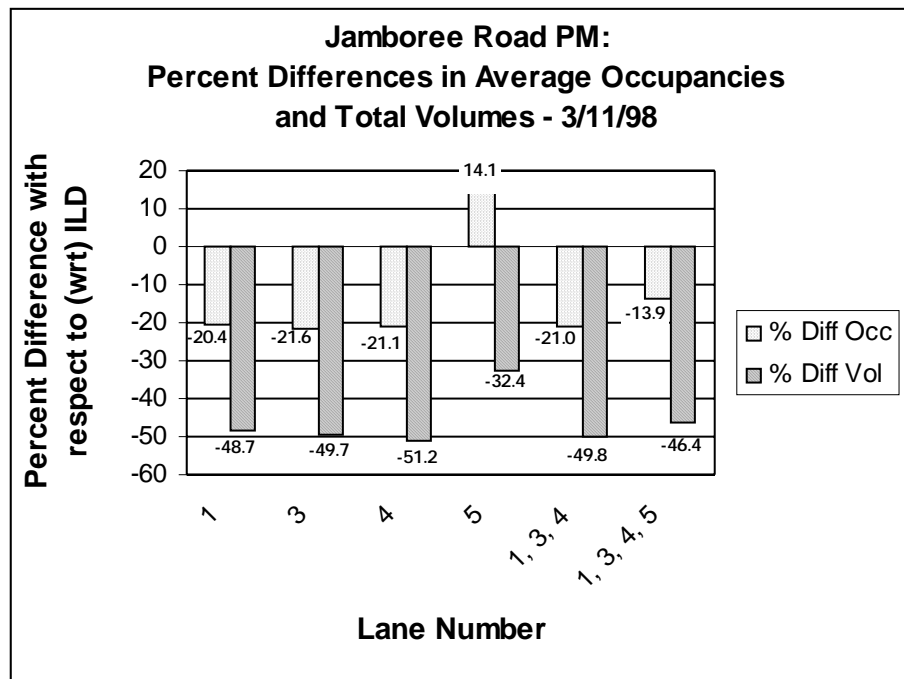


Figure J-43. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/11/98

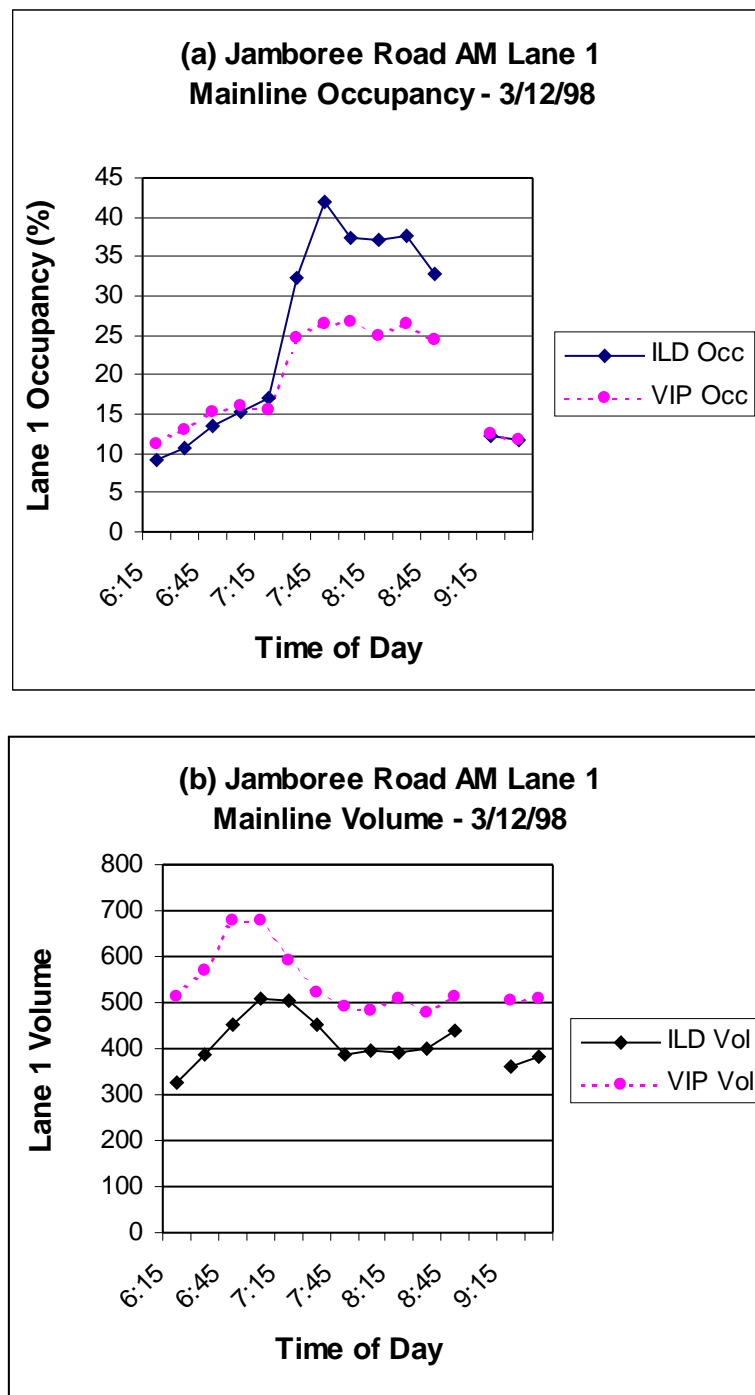


Figure J-44. Lane 1 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/12/98

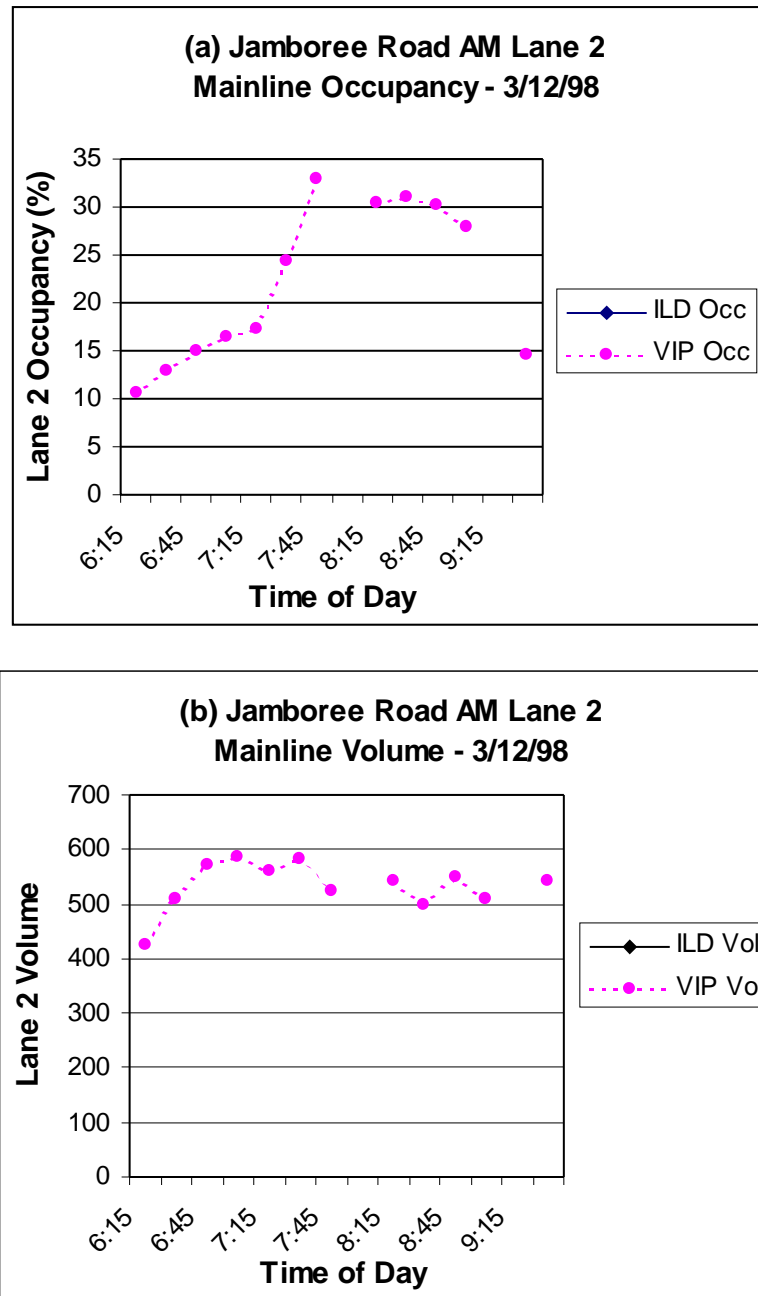


Figure J-45. Lane 2 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/12/98

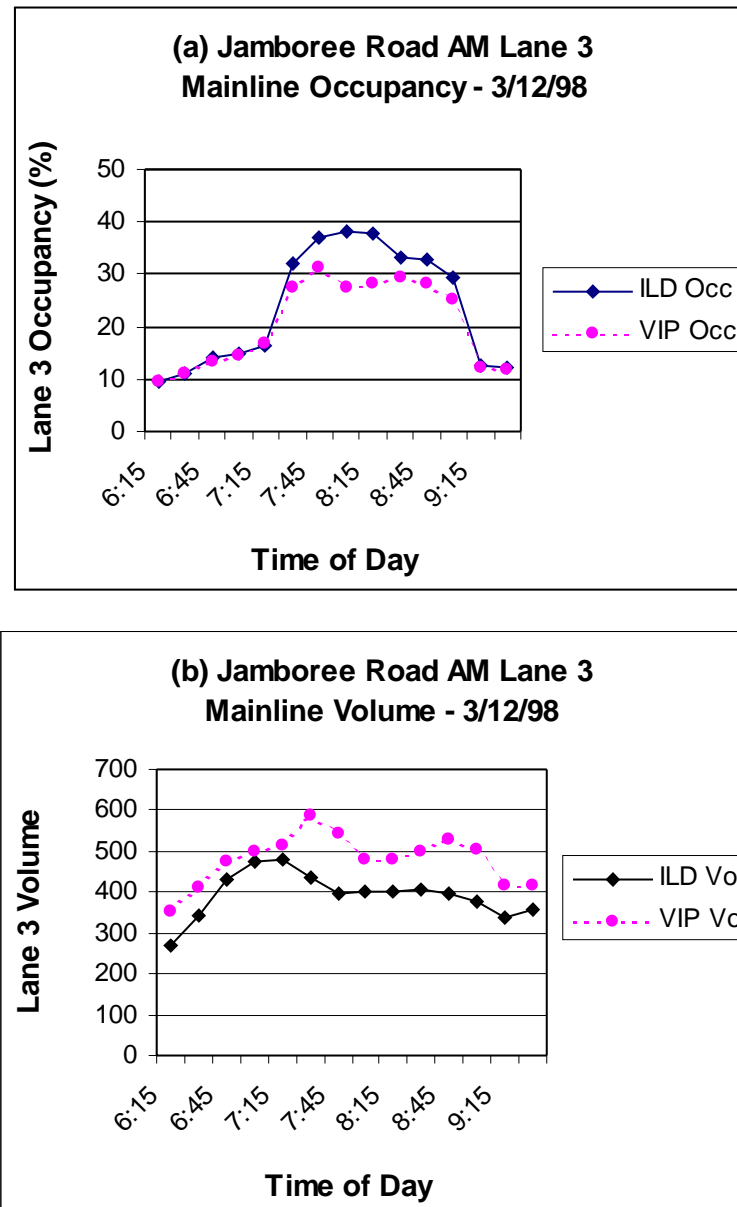


Figure J-46. Lane 3 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/12/98

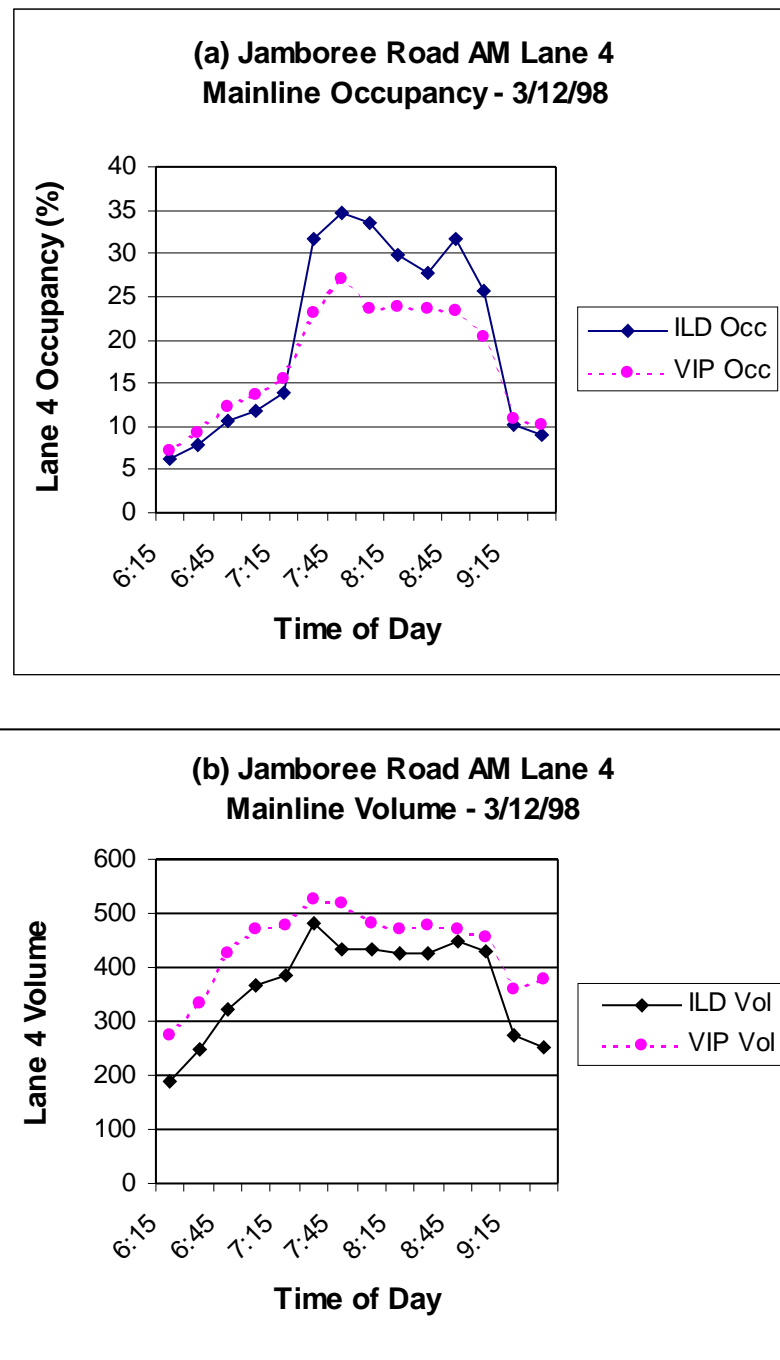


Figure J-47. Lane 4 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/12/98

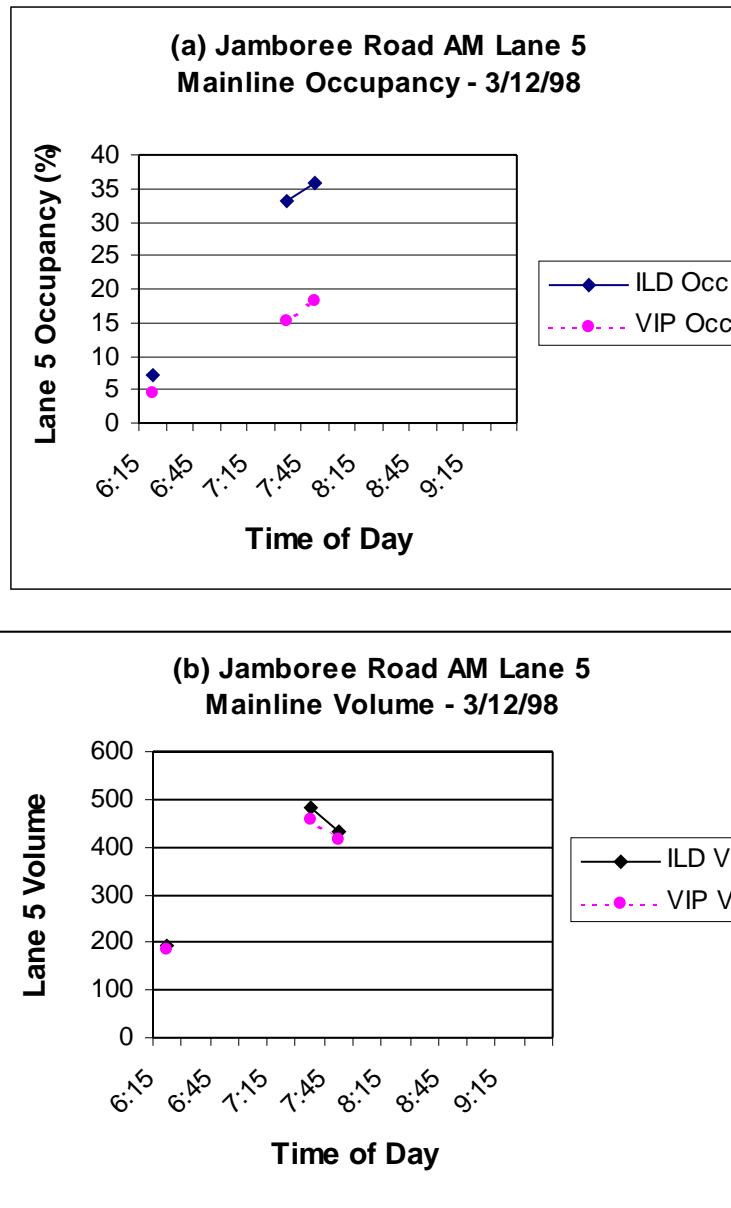


Figure J-48. Lane 5 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/12/98

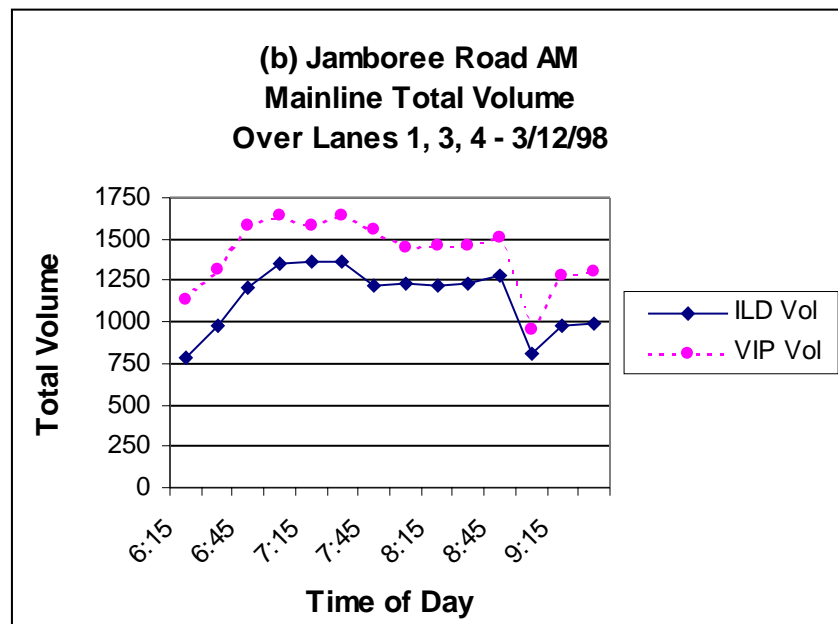
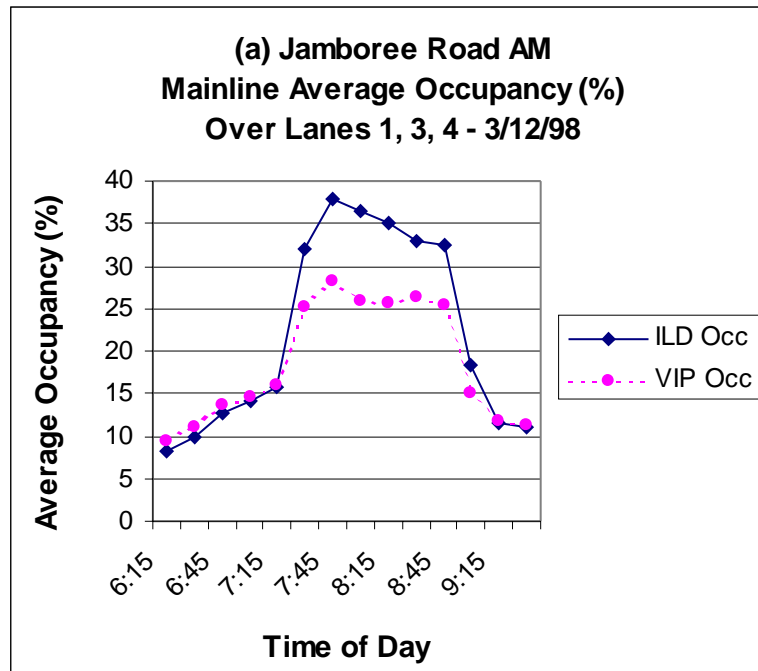


Figure J-49. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over lanes 1, 3, and 4 at the Jamboree Road evaluation site during the morning rush-hour interval on 3/12/98

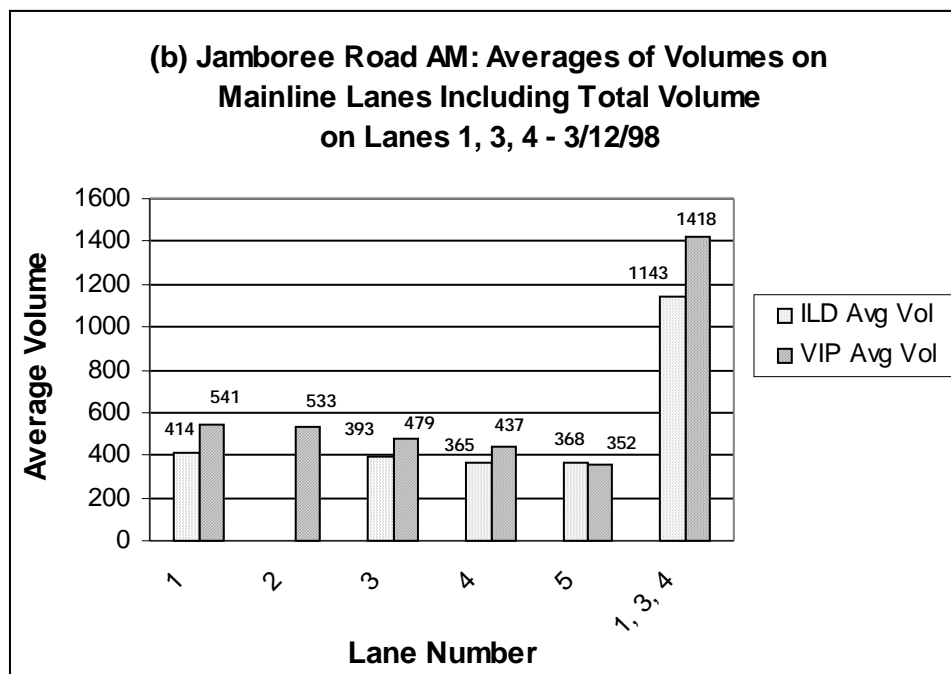
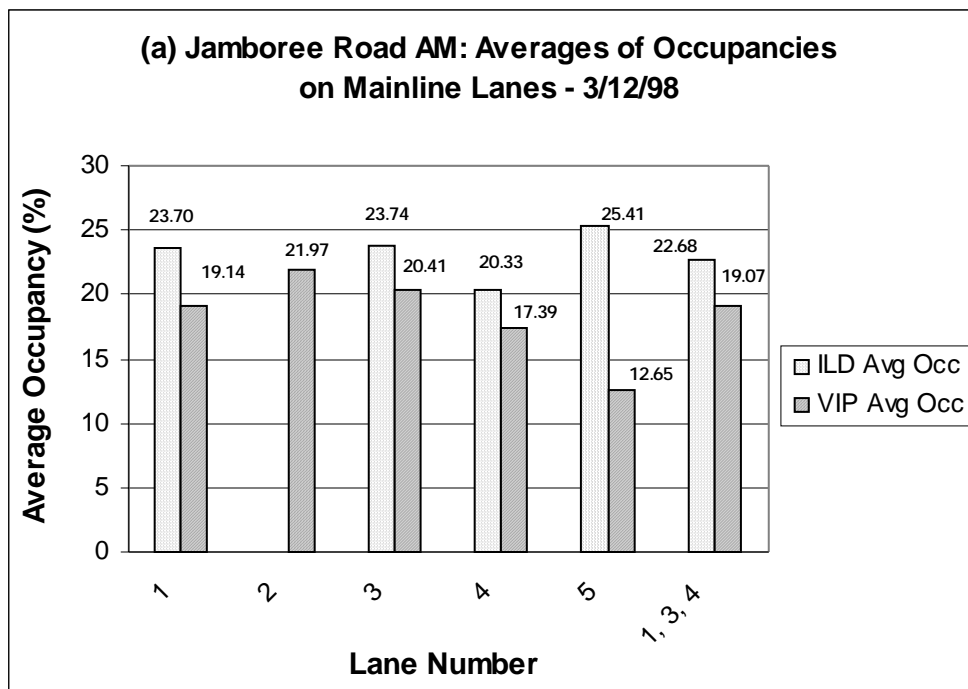


Figure J-50. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/12/98

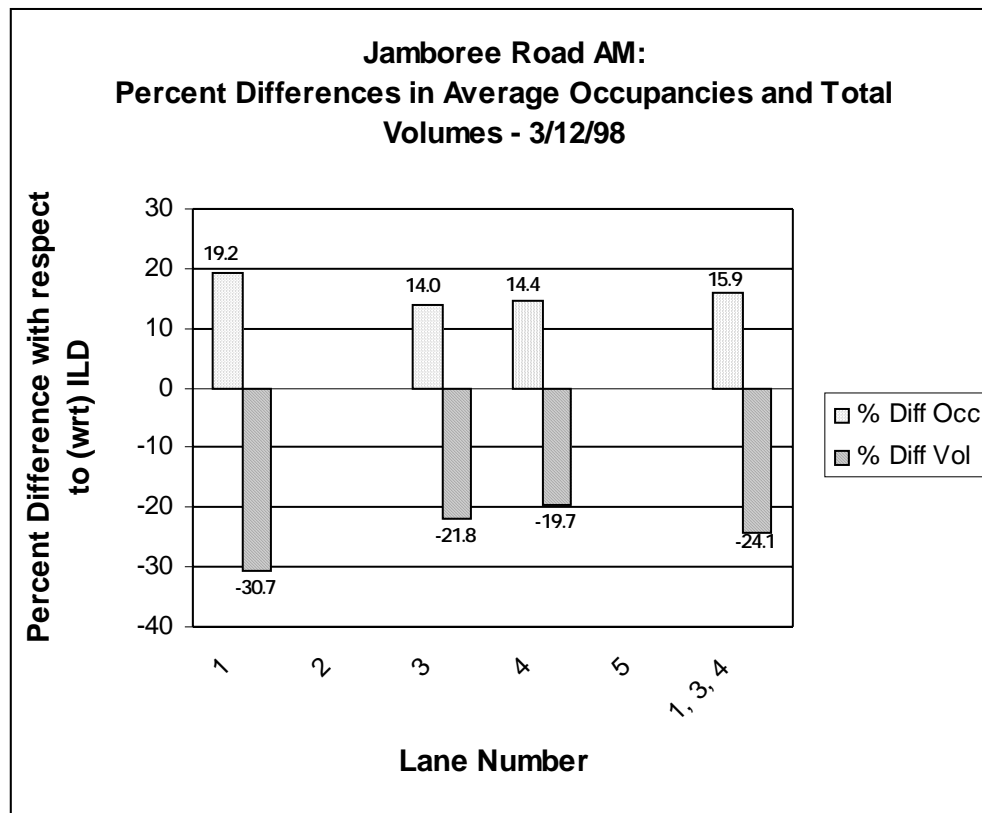


Figure J-51. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Jamboree Road evaluation site during the morning rush-hour interval on 3/12/98

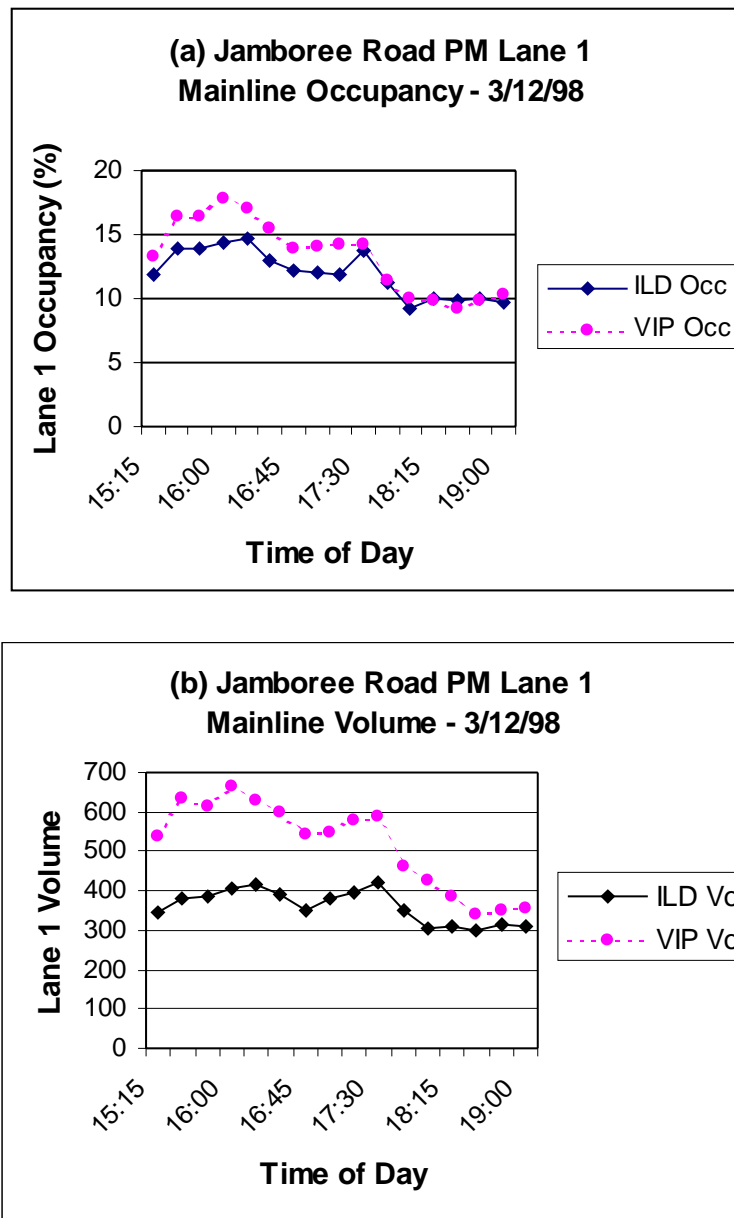


Figure J-52. Lane 1 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/12/98

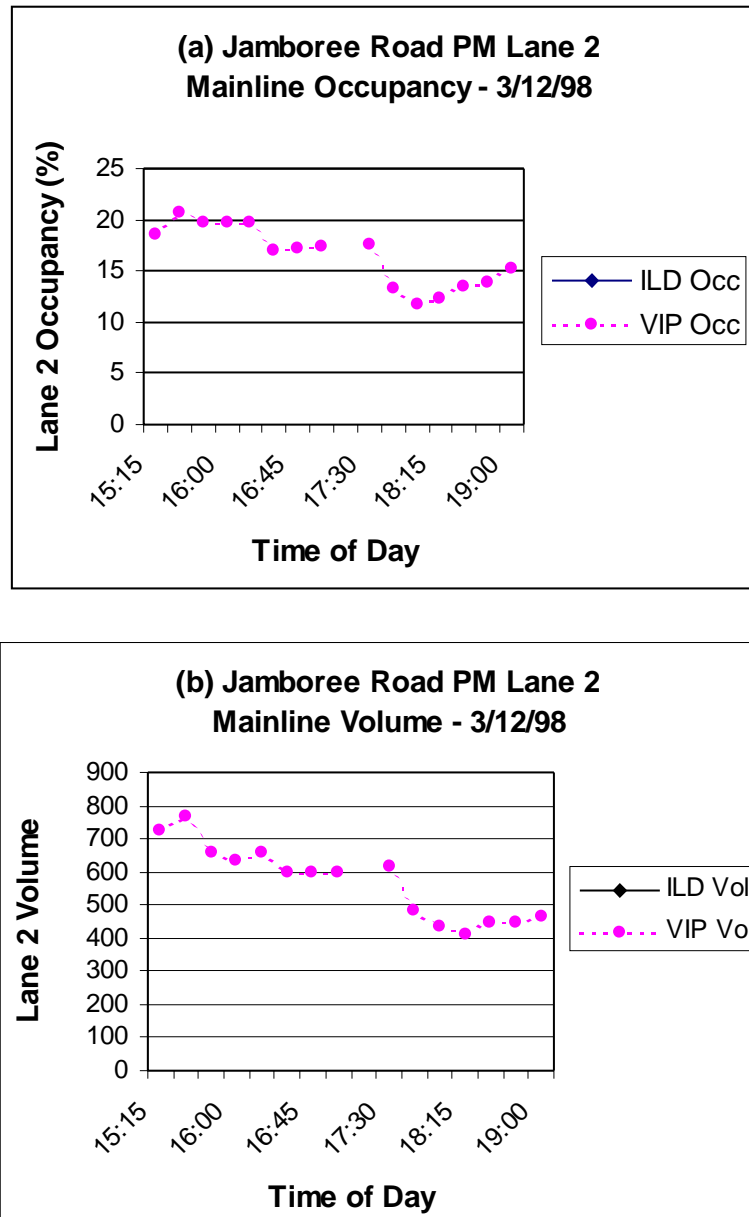


Figure J-53. Lane 2 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/12/98

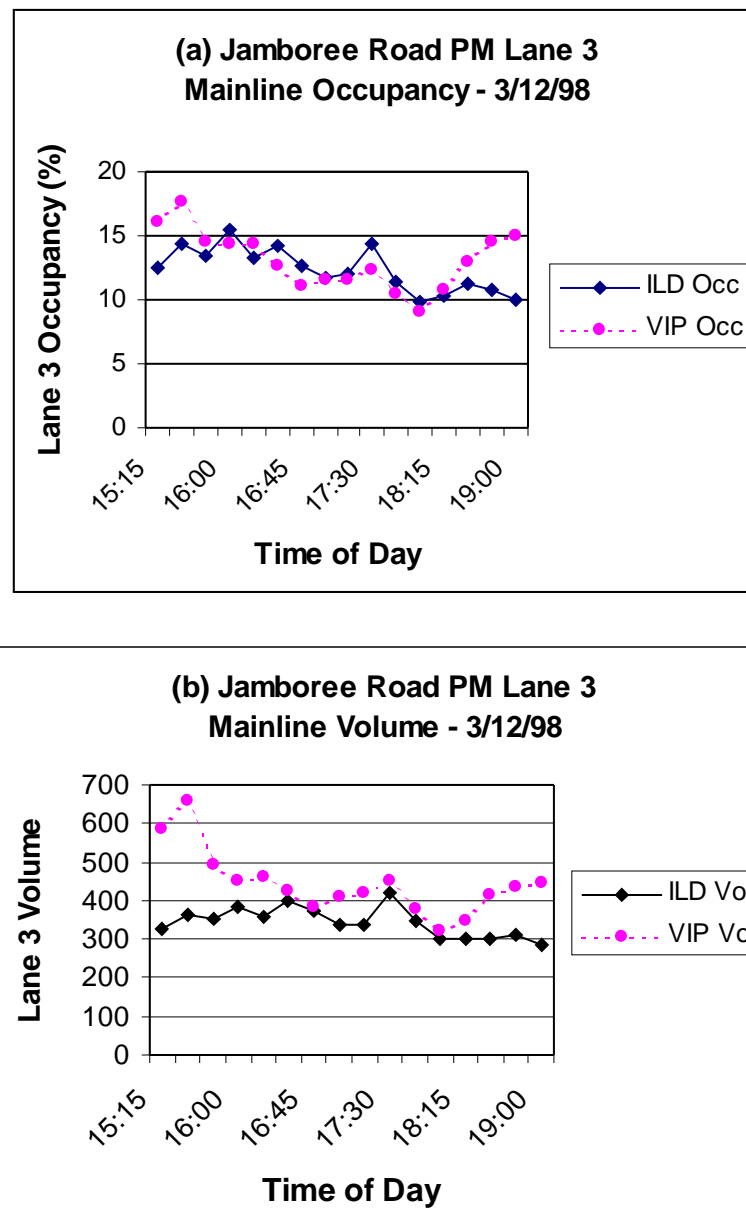


Figure J-54. Lane 3 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/12/98

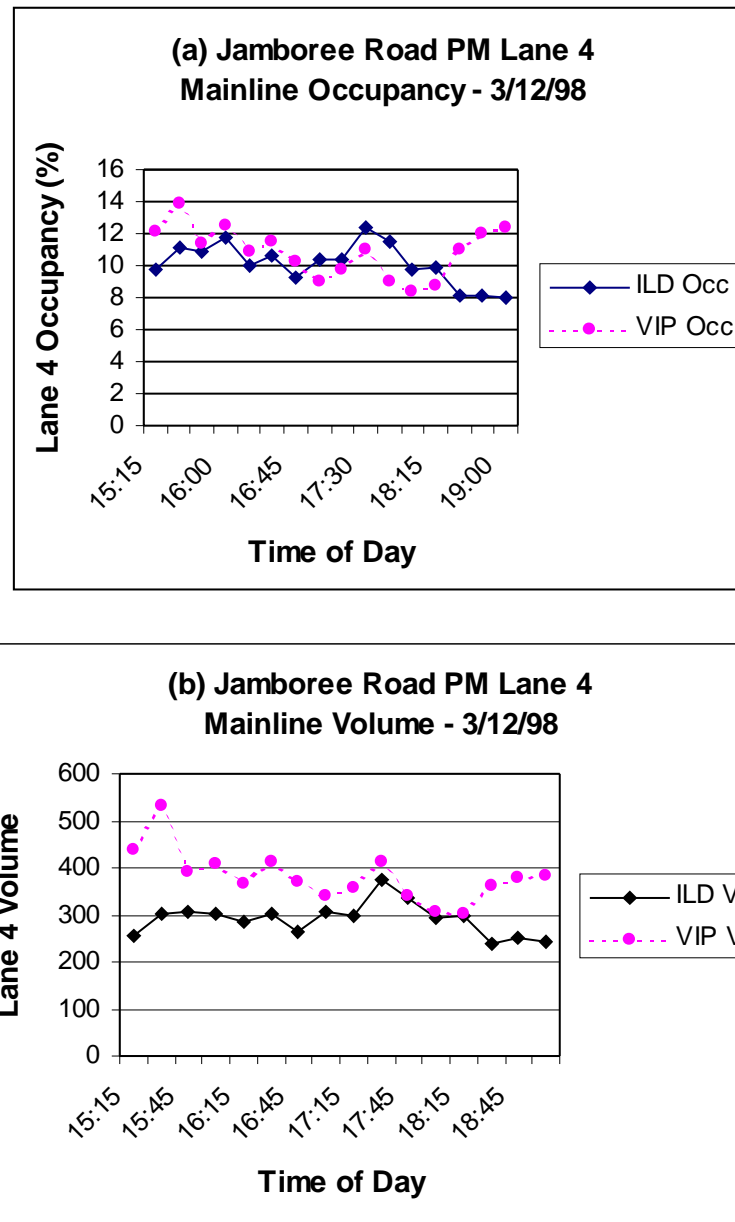


Figure J-55. Lane 4 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/12/98

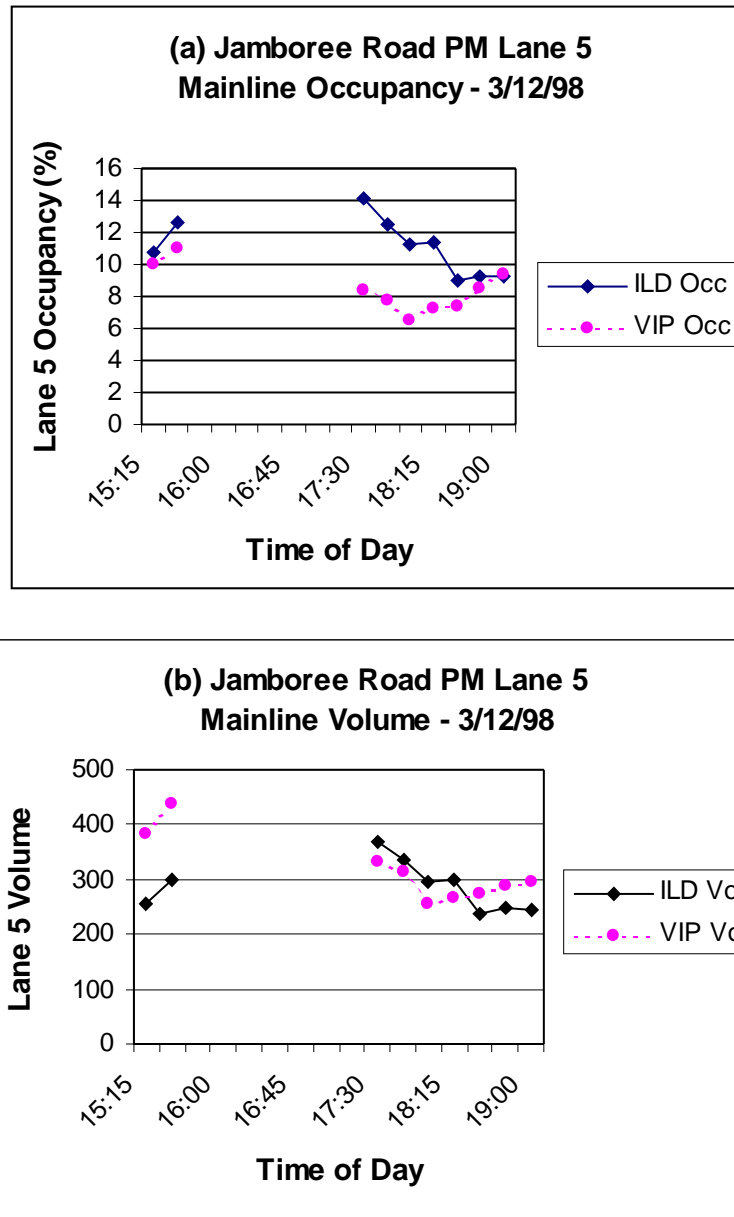


Figure J-56. Lane 5 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/12/98

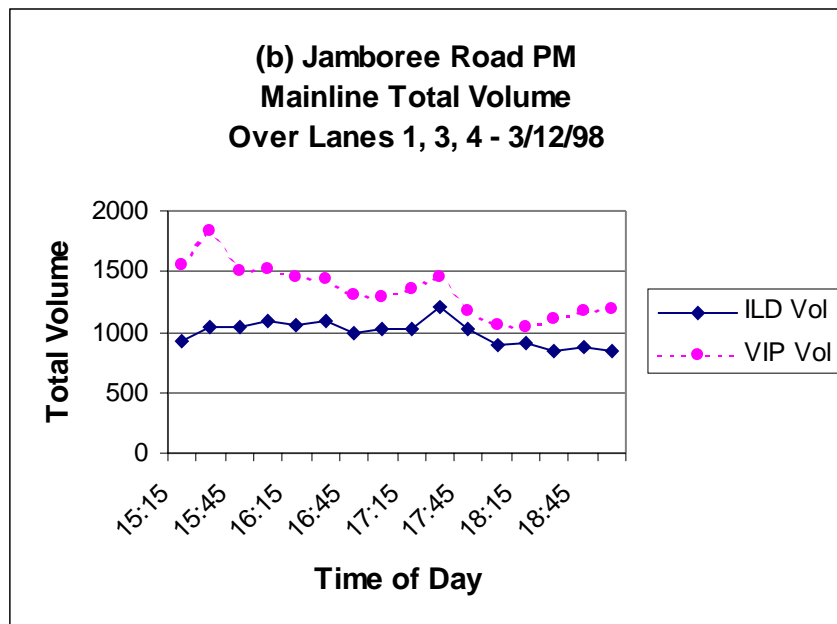
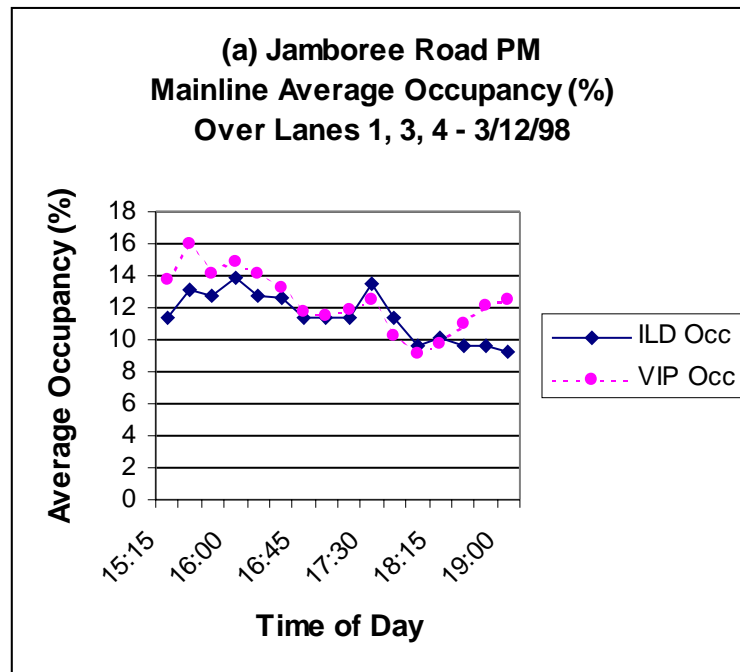


Figure J-57. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over all lanes at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/12/98

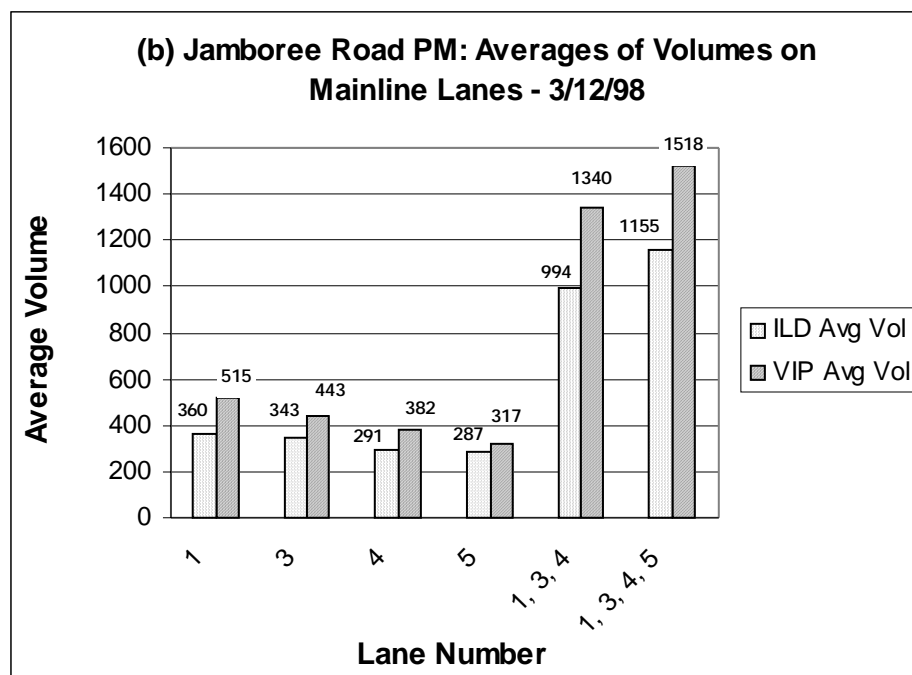
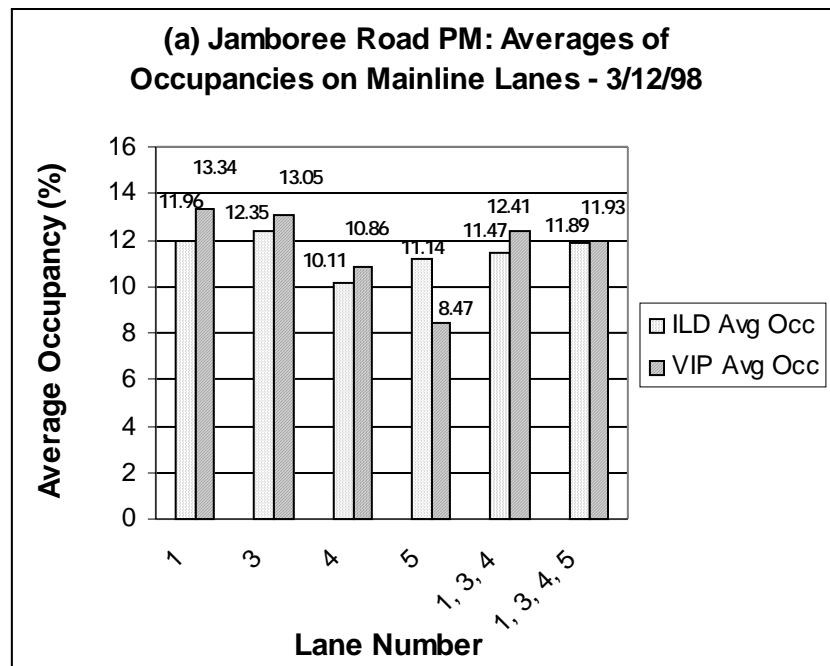


Figure J-58. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/12/98

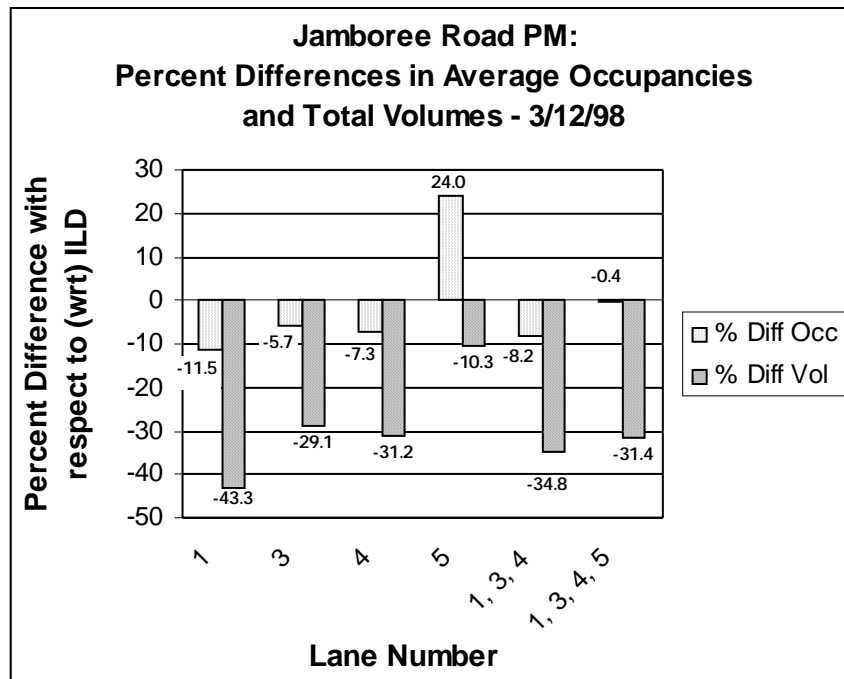


Figure J-59. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/12/98

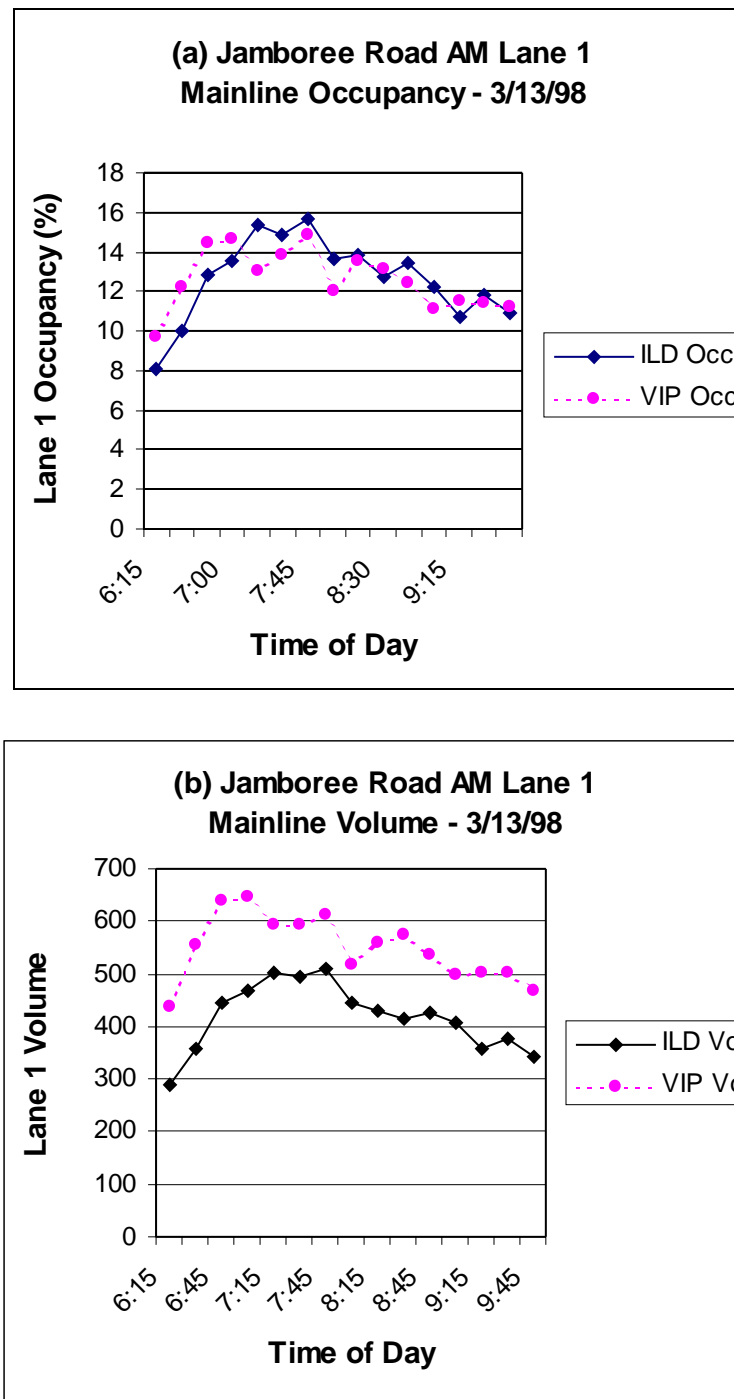


Figure J-60. Lane 1 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/13/98

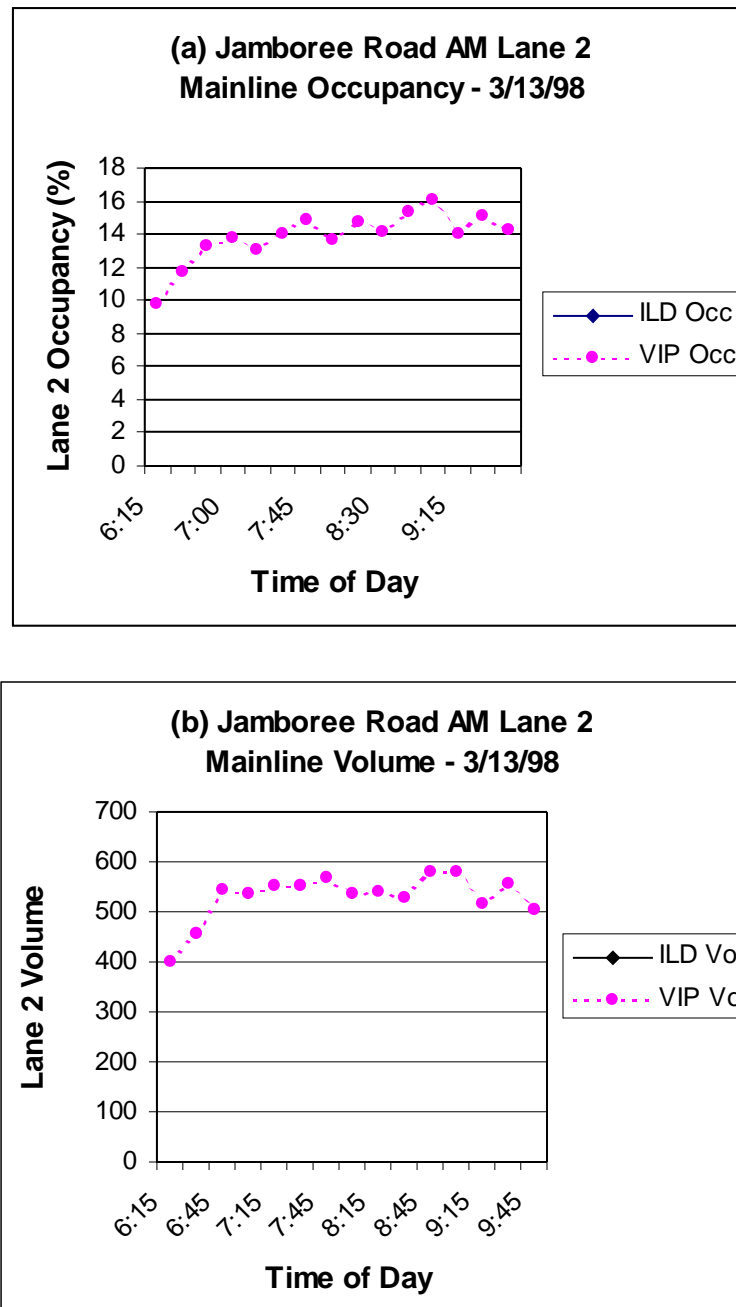


Figure J-61. Lane 2 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/13/98

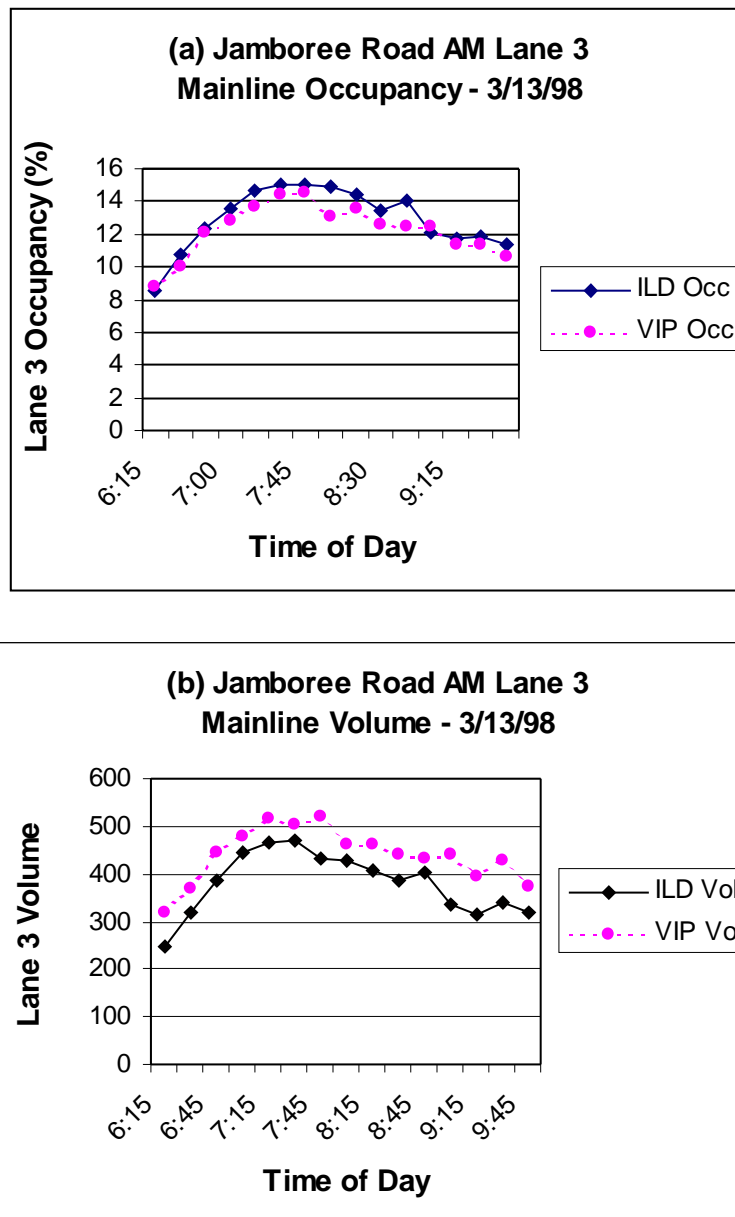


Figure J-62. Lane 3 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/13/98

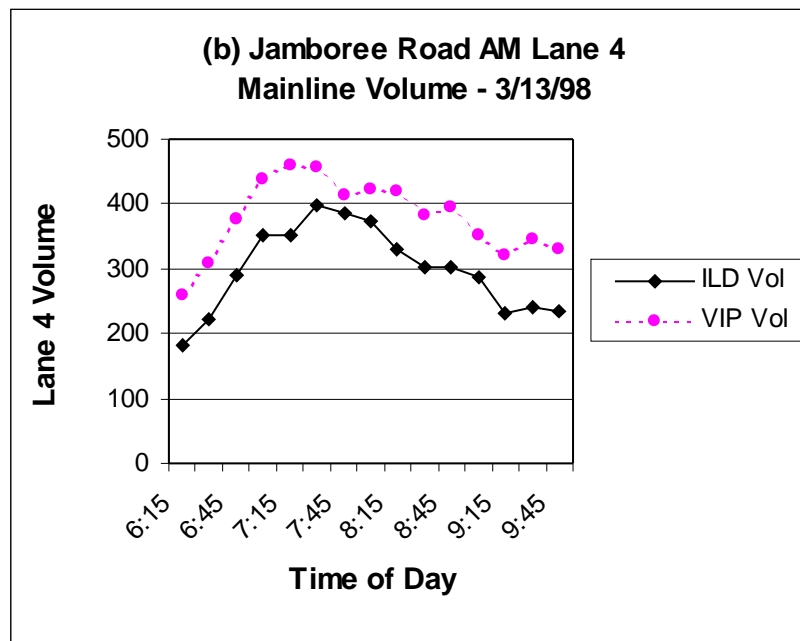
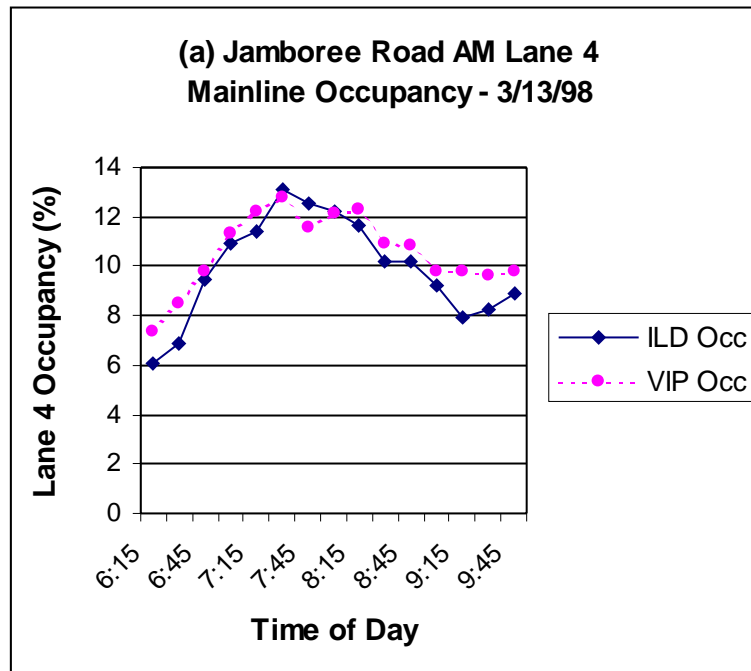


Figure J-63. Lane 4 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/13/98

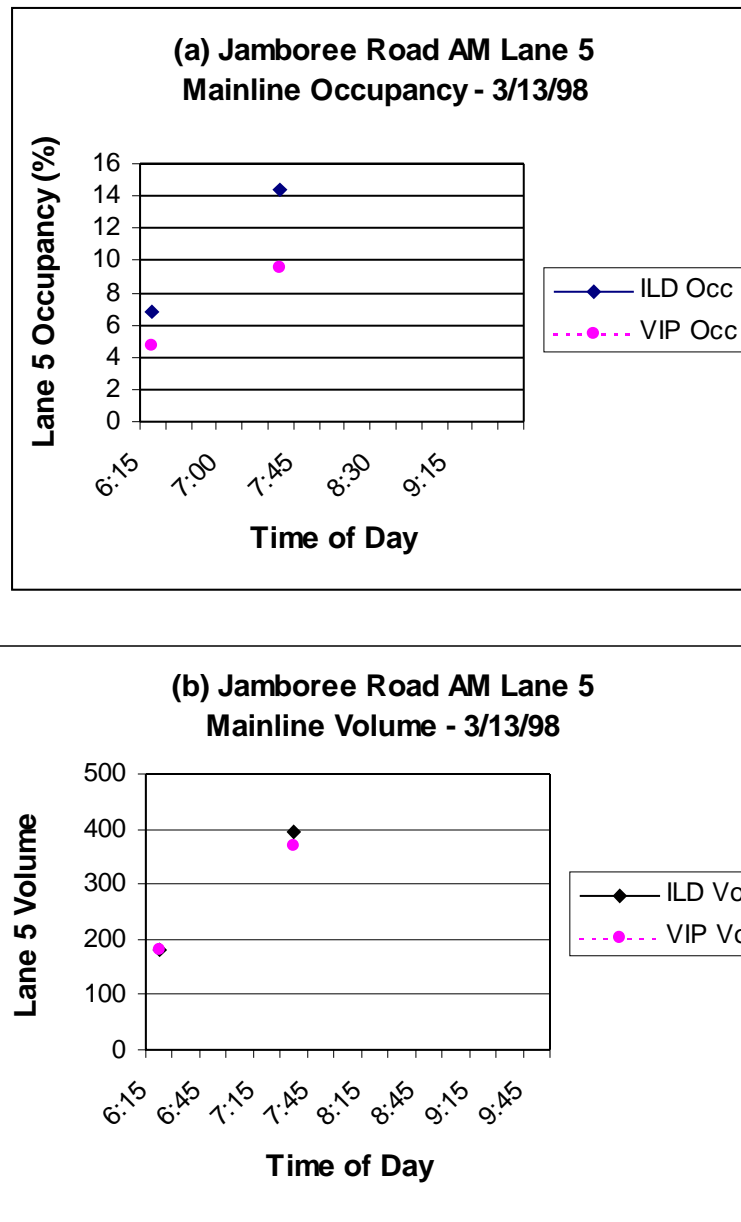


Figure J-64. Lane 5 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/13/98

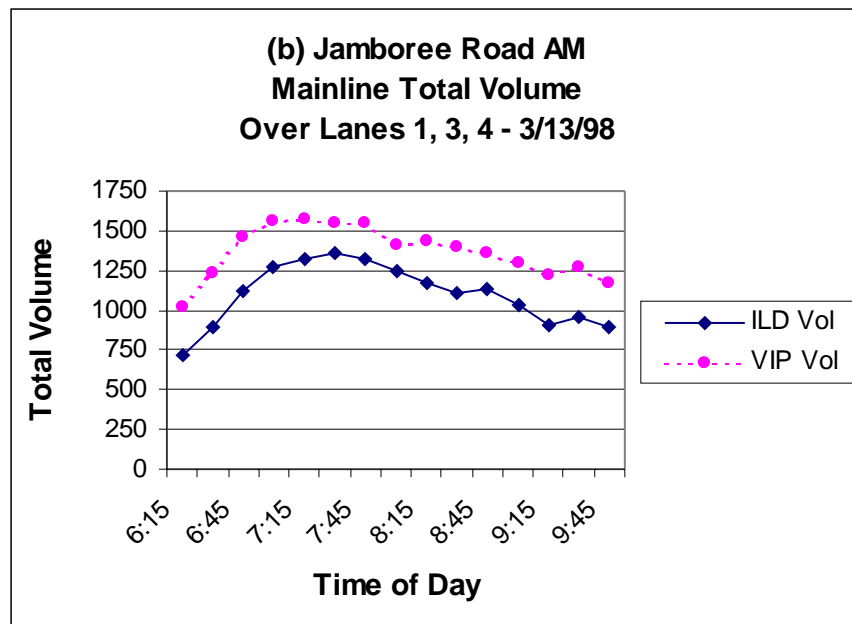
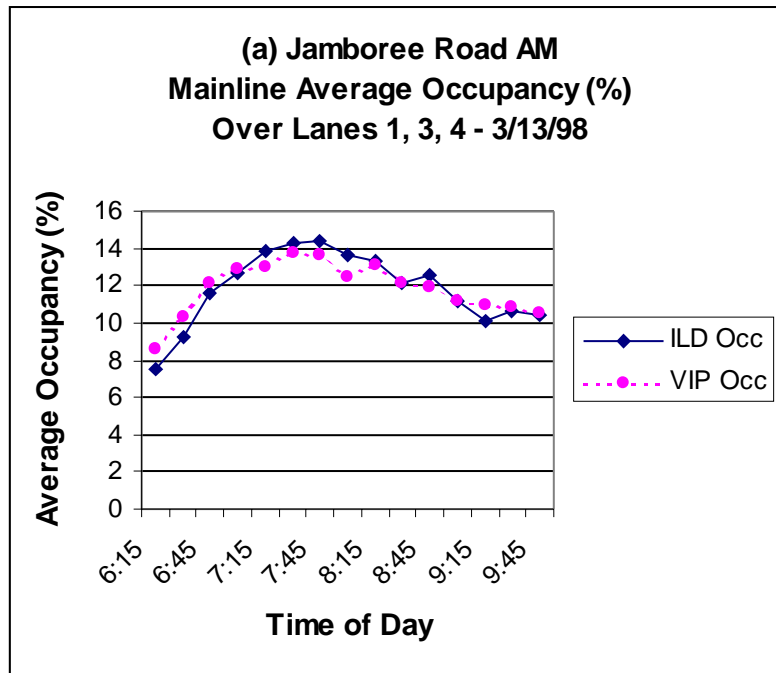


Figure J-65. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over lanes 1, 3, and 4 at the Jamboree Road evaluation site during the morning rush-hour interval on 3/13/98

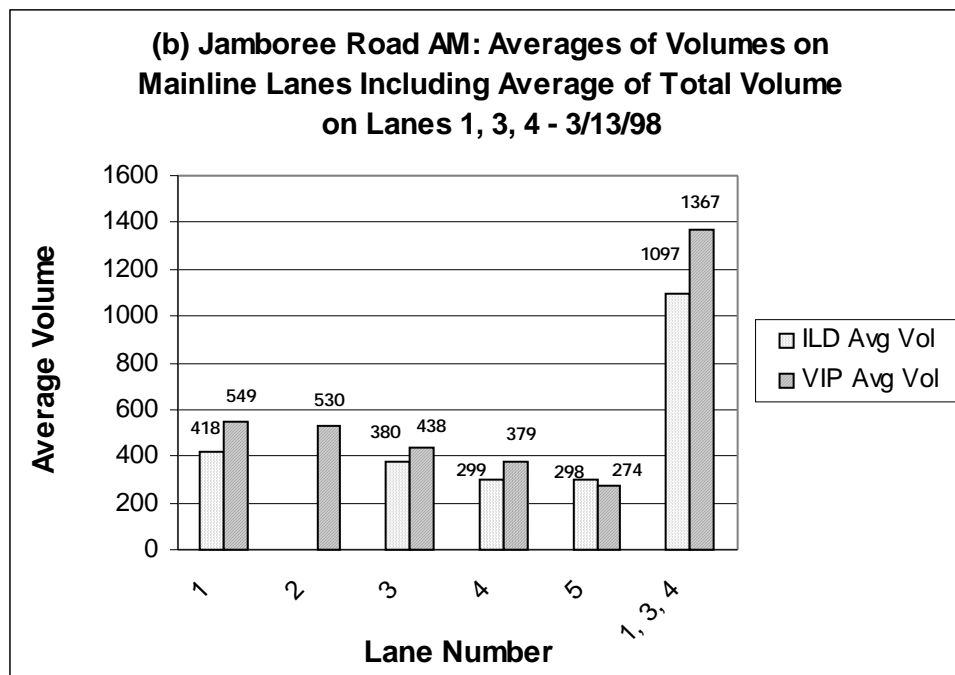
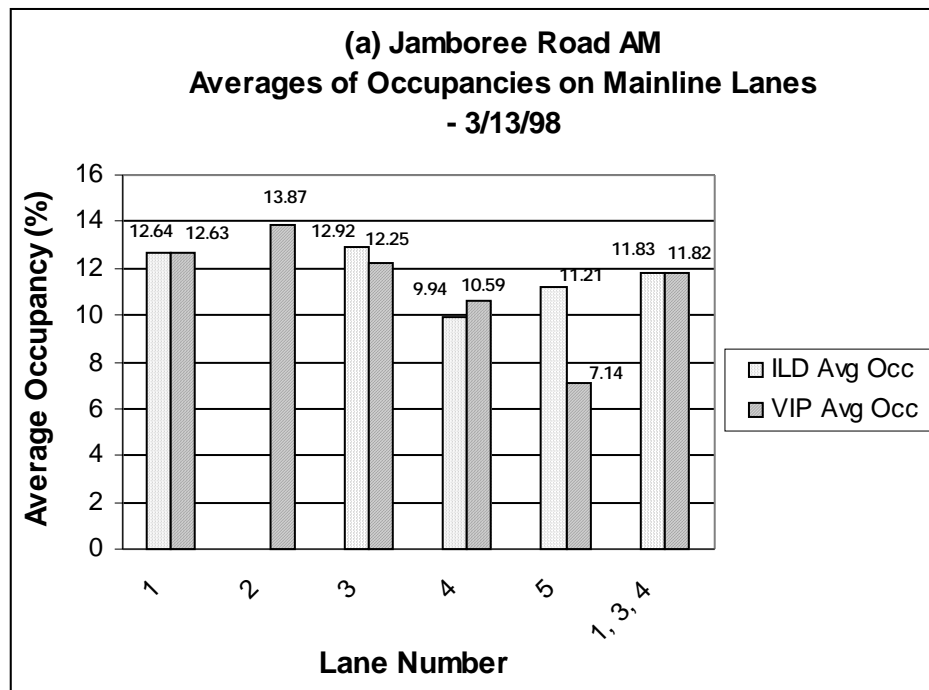


Figure J-66. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Jamboree Road evaluation site during the morning rush-hour interval on 3/13/98

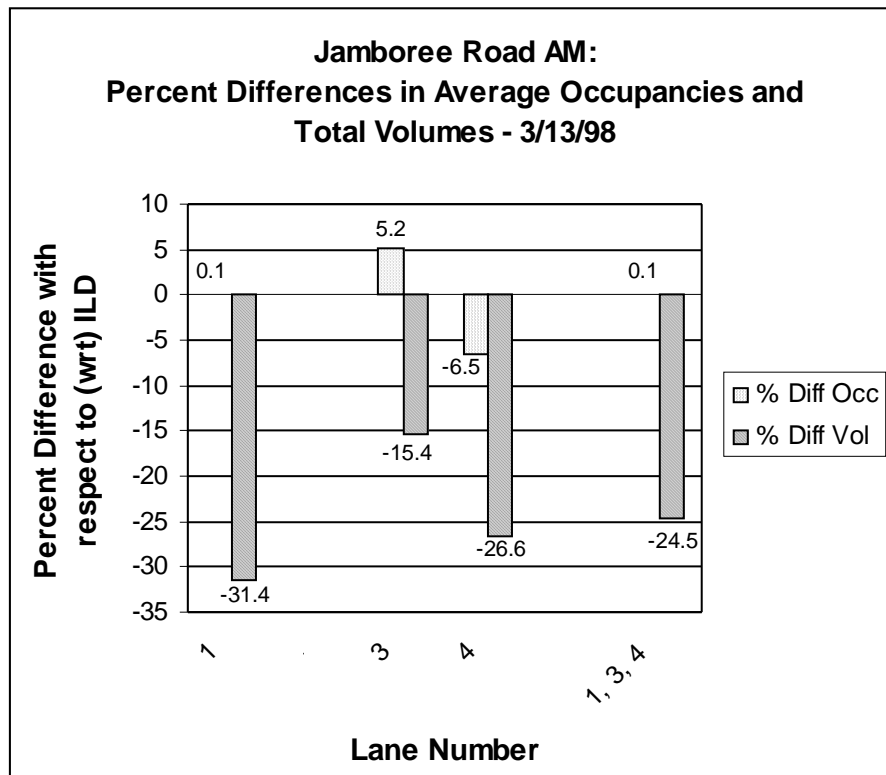


Figure J-67. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Jamboree Road evaluation site during the morning rush-hour interval on 3/13/98

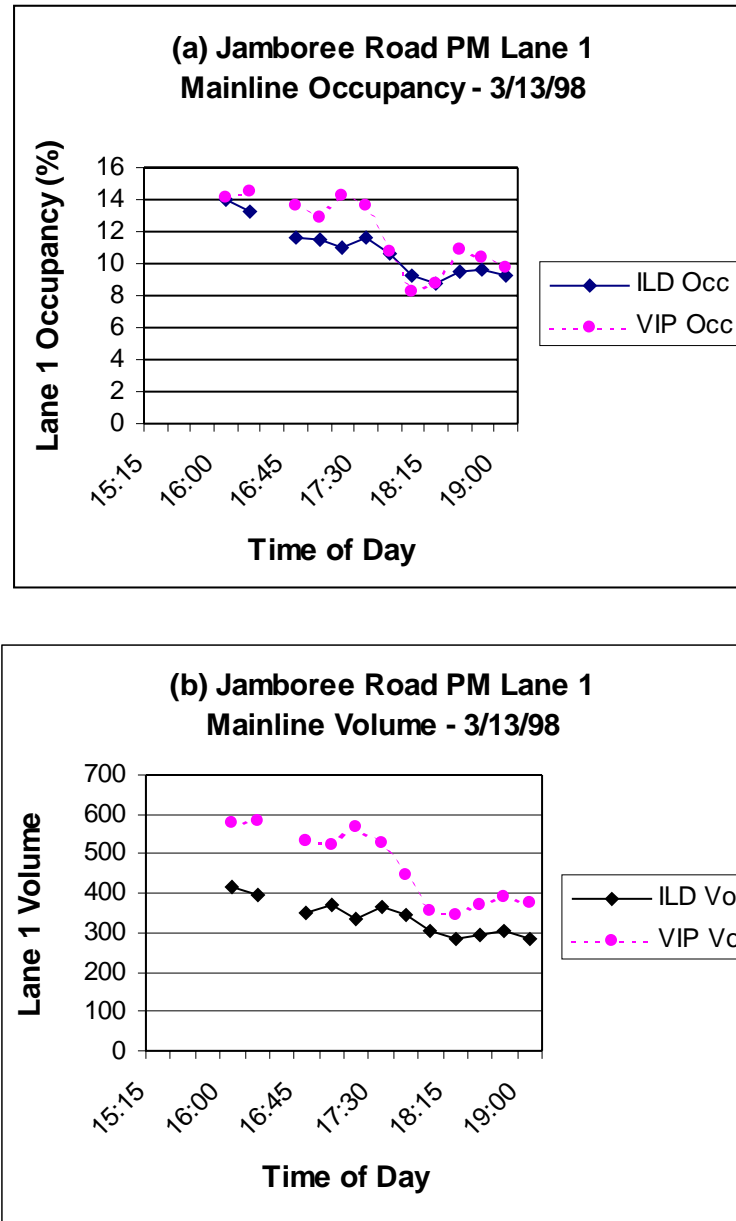


Figure J-68. Lane 1 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/13/98

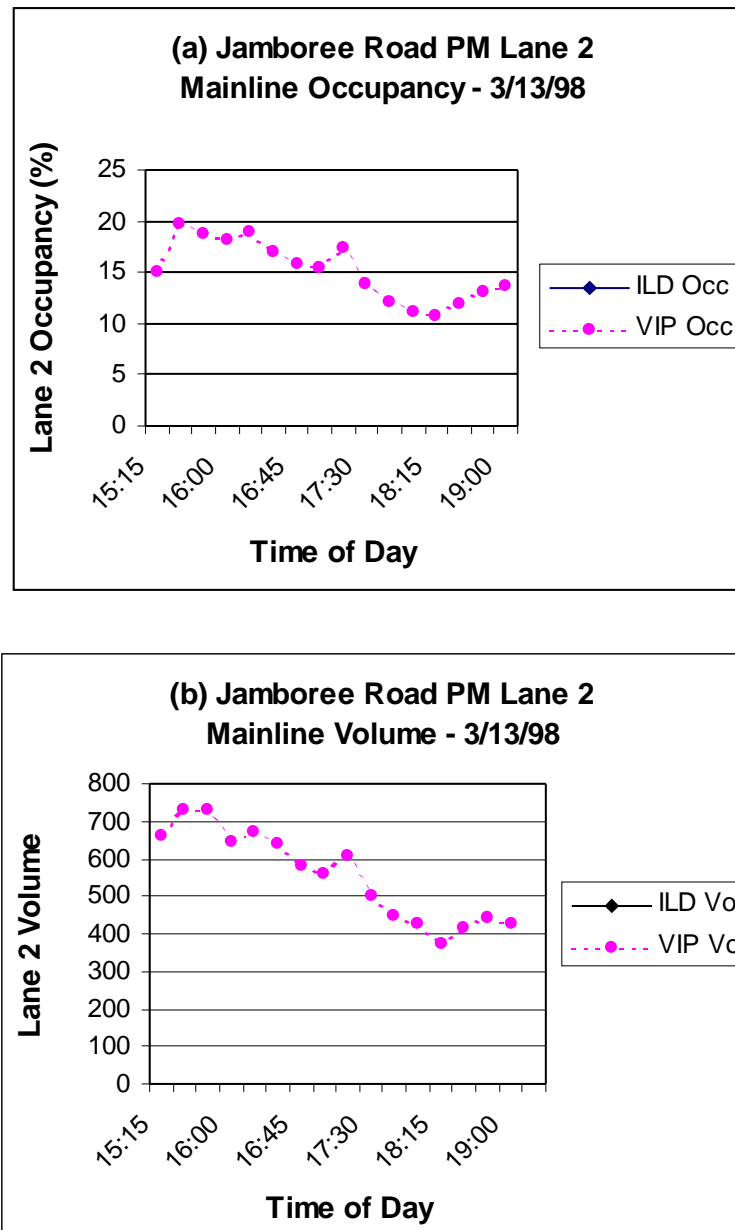


Figure J-69. Lane 2 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/13/98

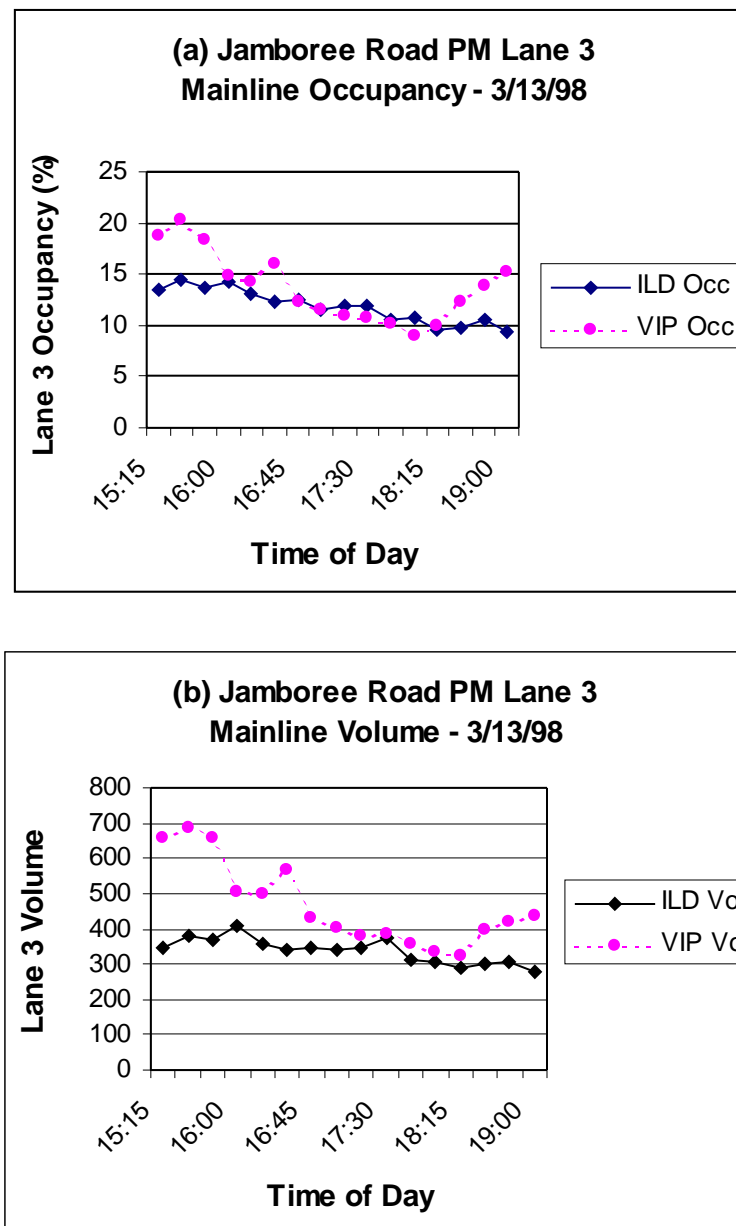


Figure J-70. Lane 3 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/13/98

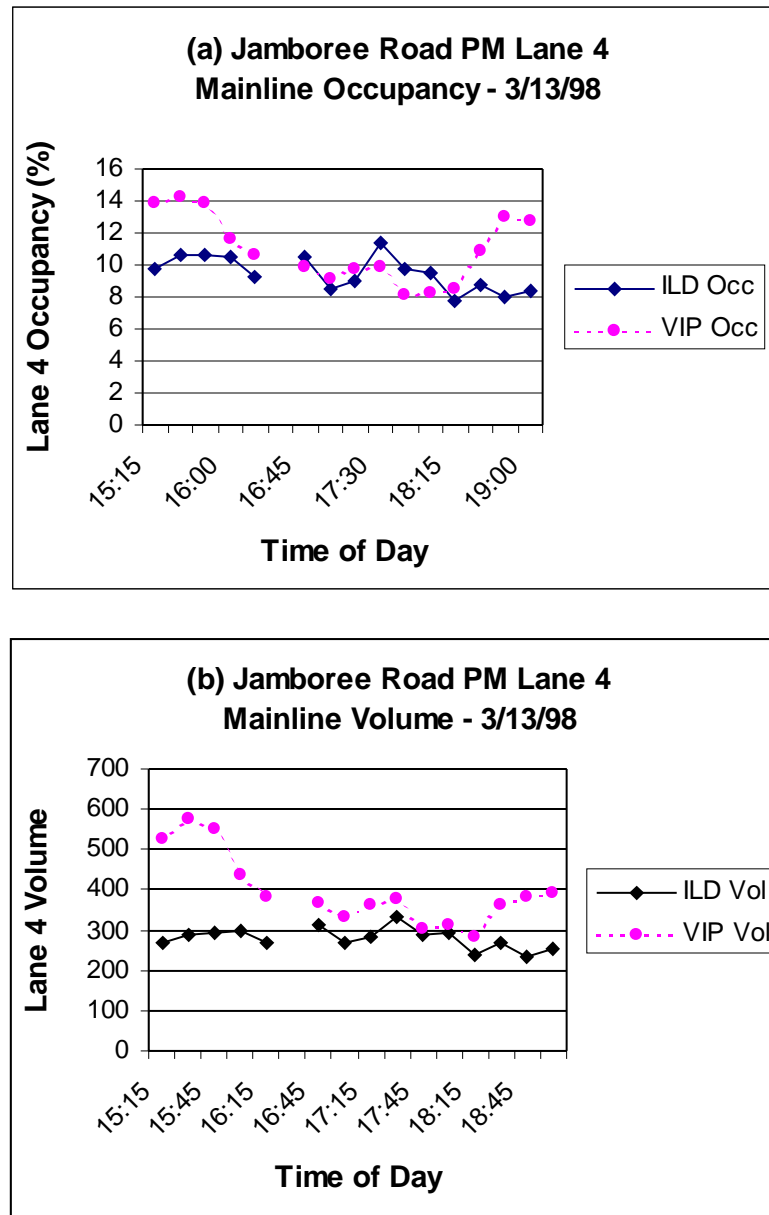


Figure J-71. Lane 4 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/13/98

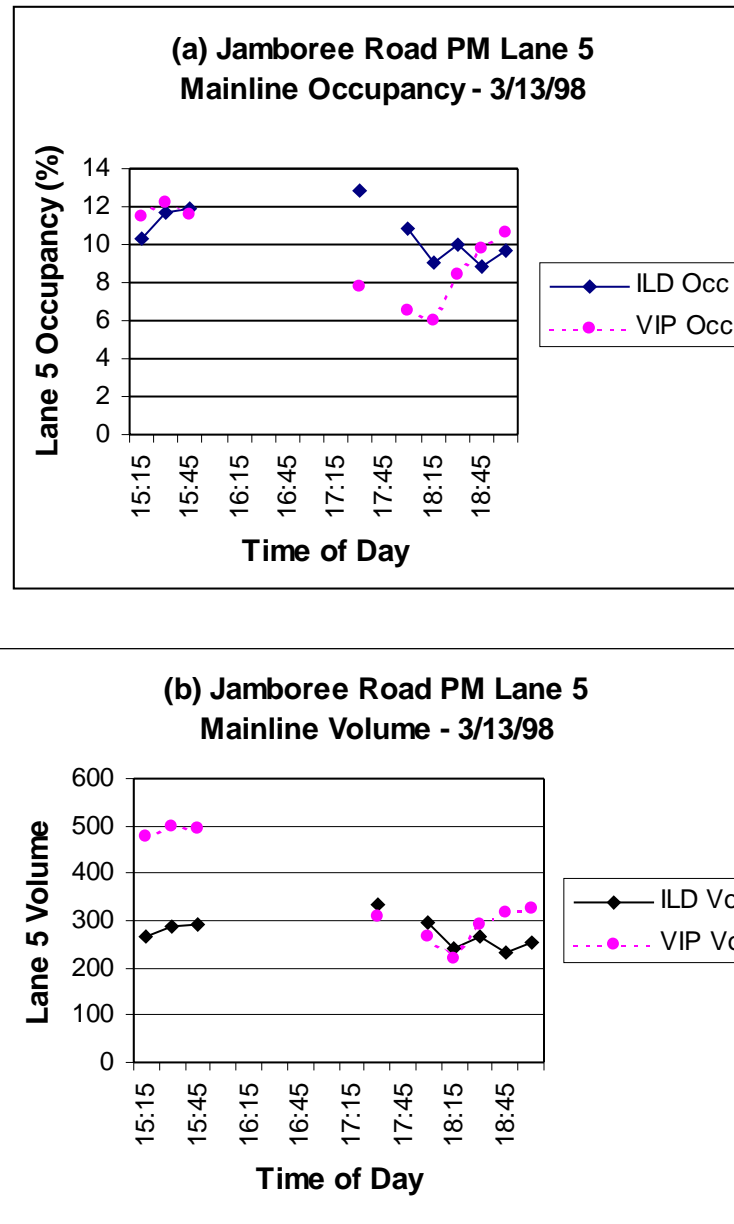


Figure J-72. Lane 5 (a) occupancy and (b) volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/13/98

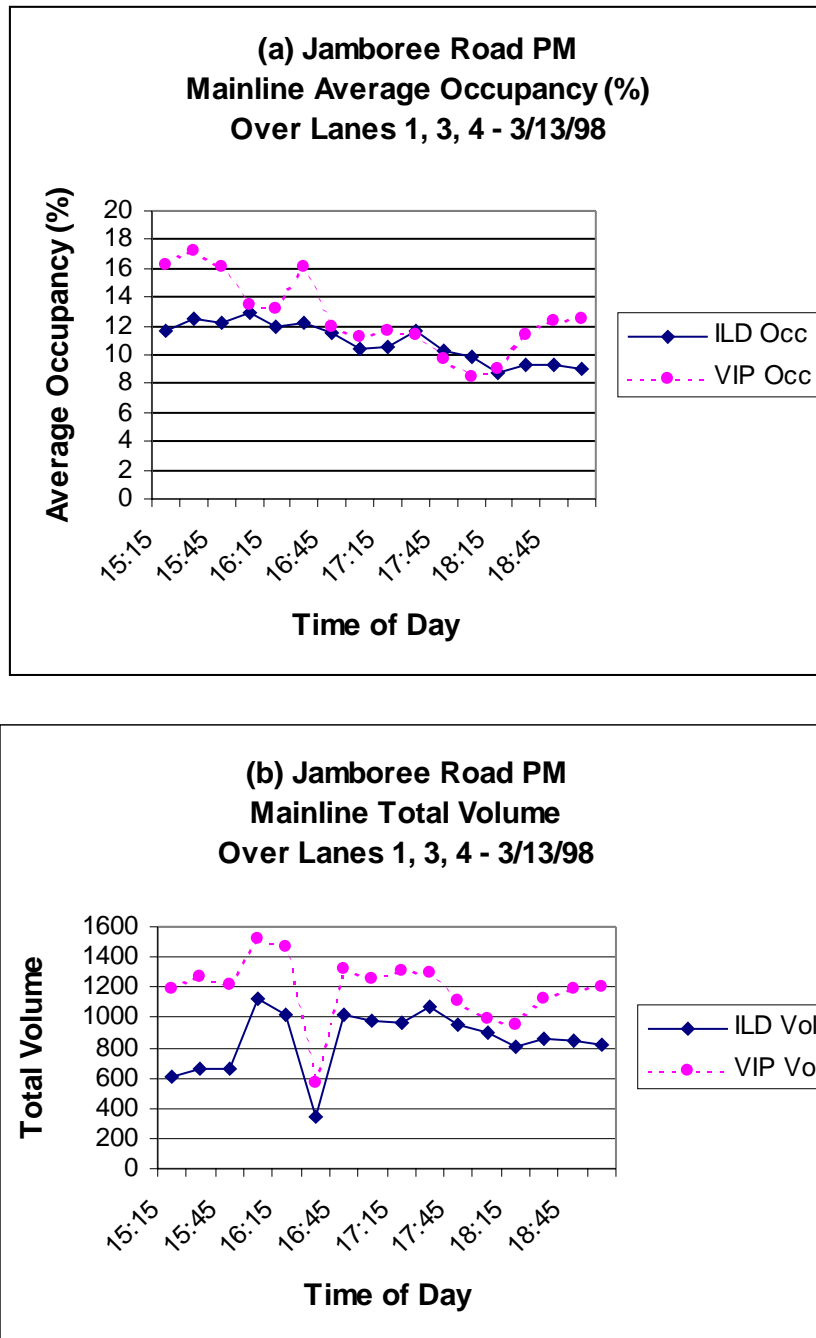


Figure J-73. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over all lanes at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/13/98

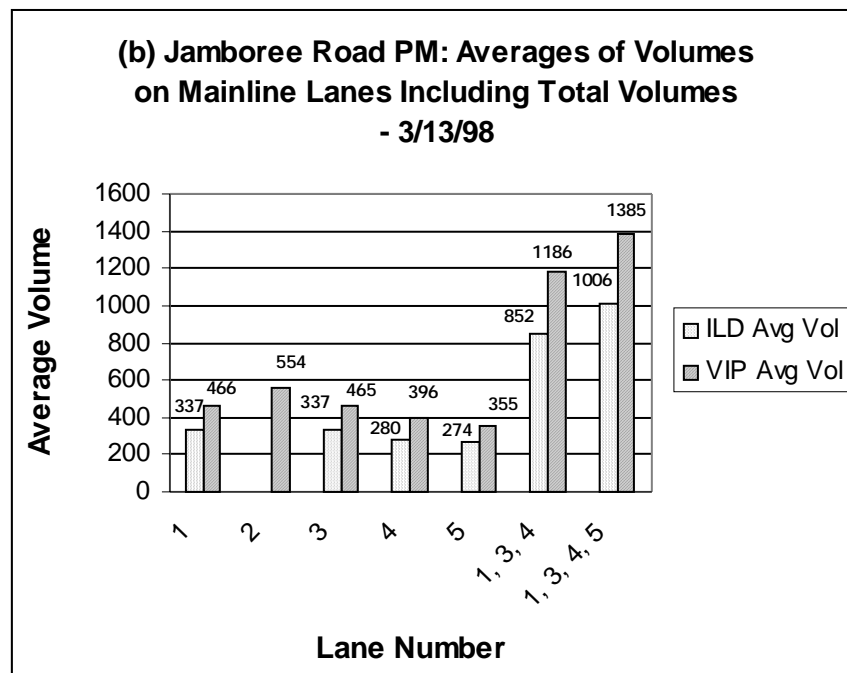
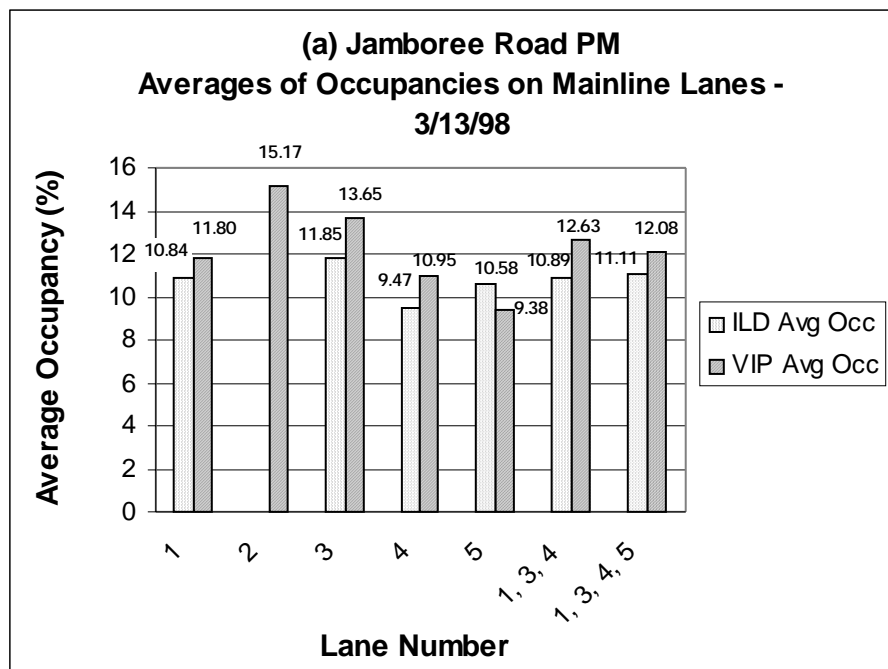


Figure J-74. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/13/98

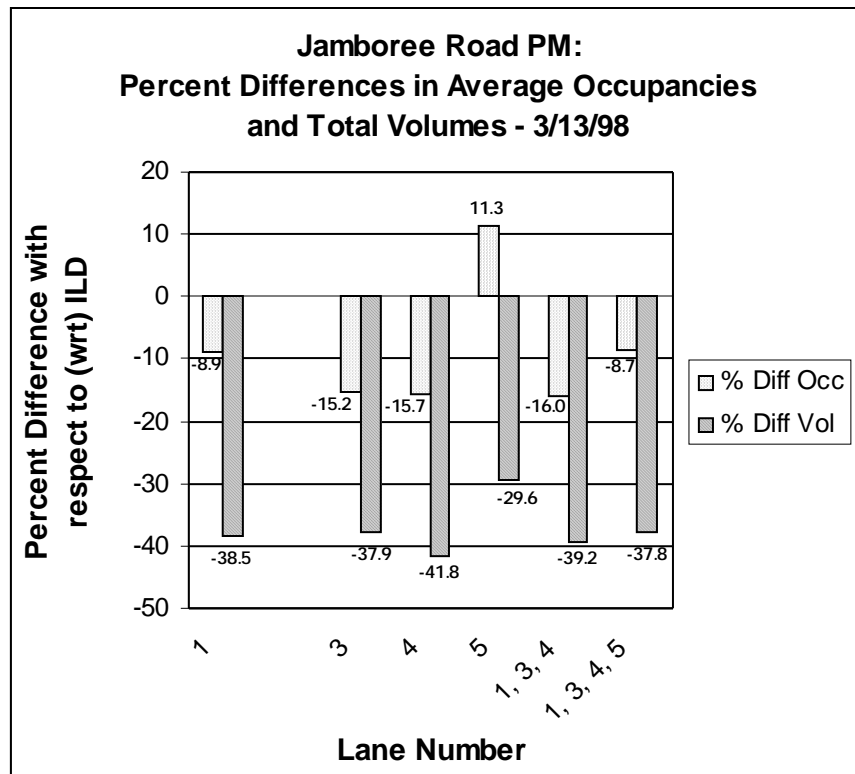


Figure J-75. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Jamboree Road evaluation site during the afternoon rush-hour interval on 3/13/98

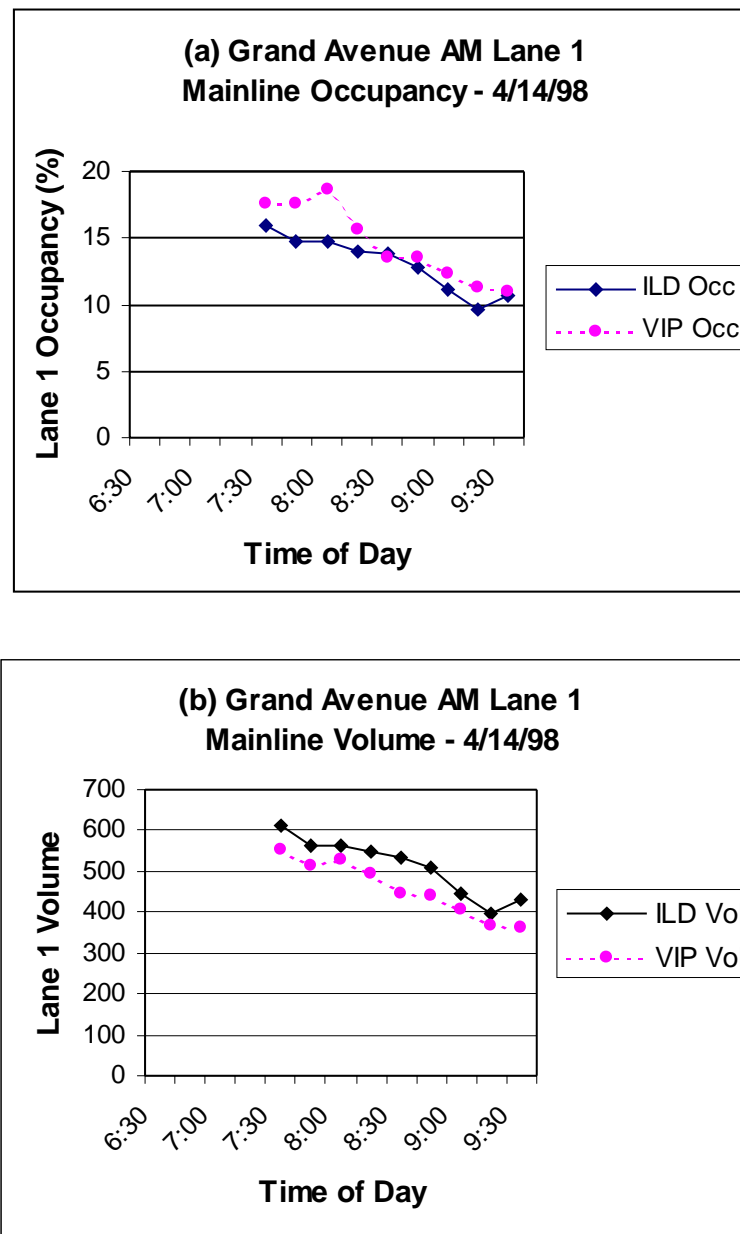


Figure J-76. Lane 1 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/14/98

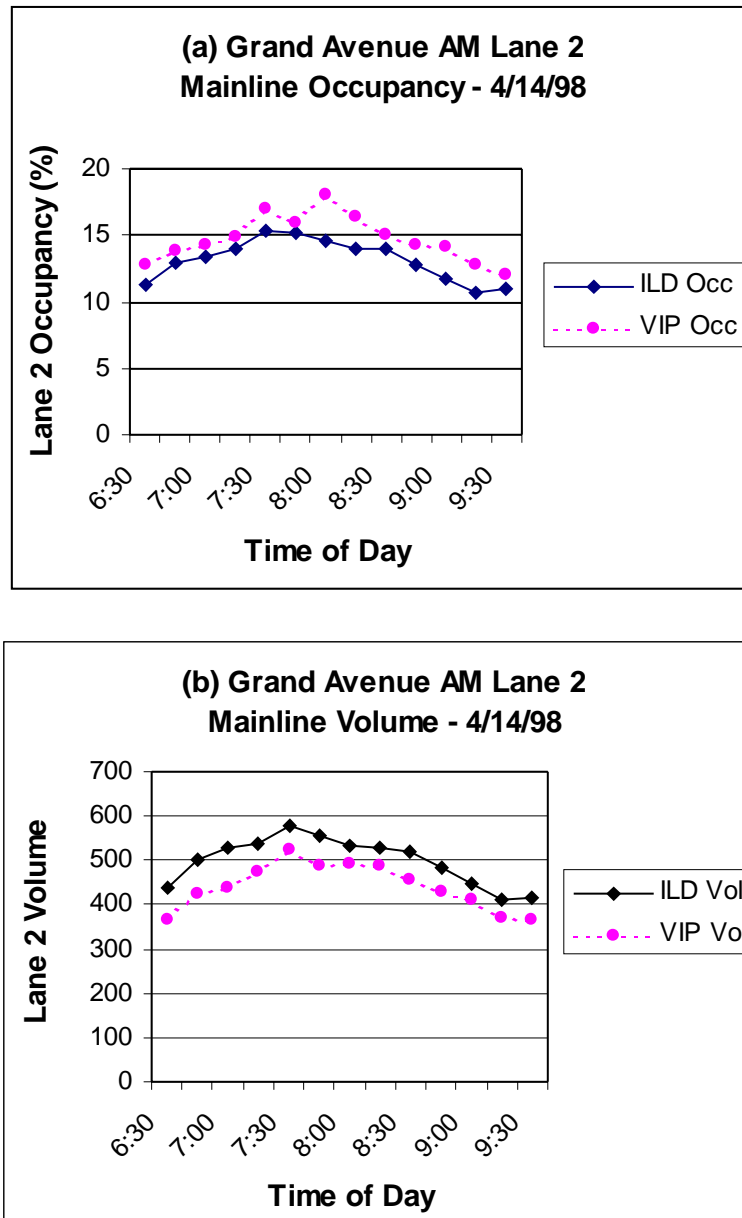


Figure J-77. Lane 2 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/14/98

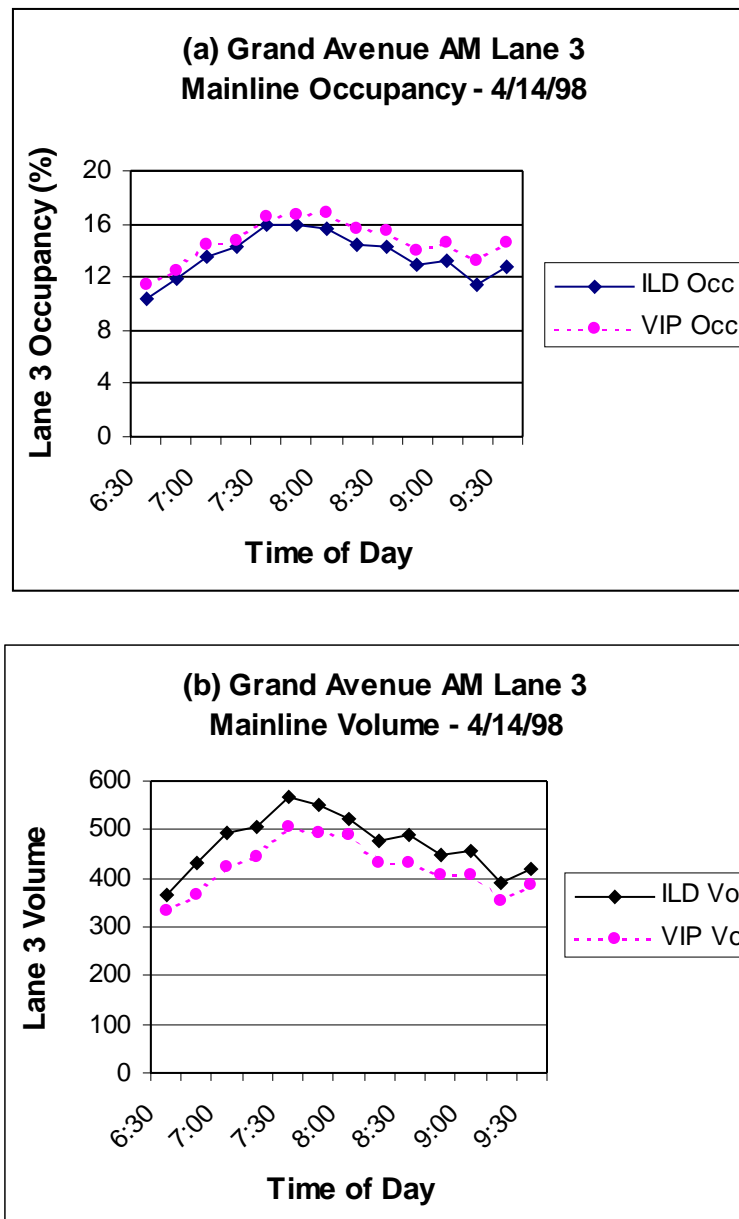


Figure J-78. Lane 3 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/14/98

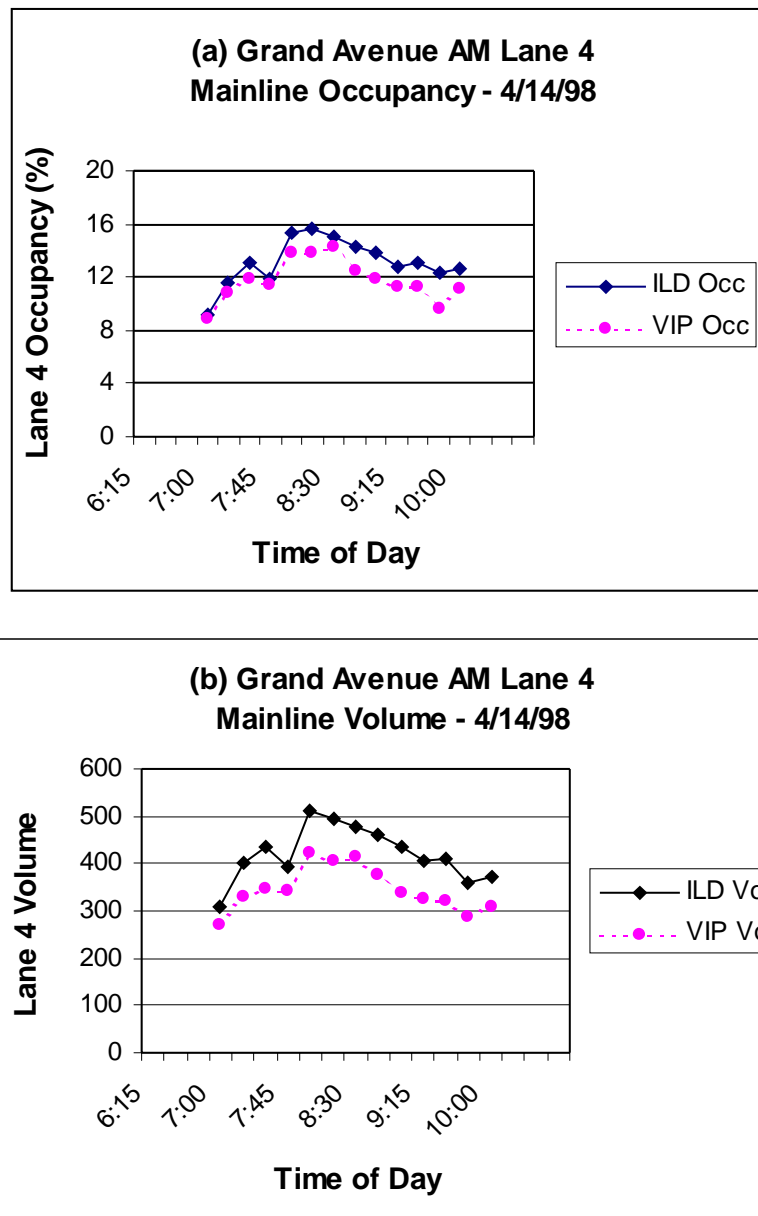


Figure J-79. Lane 4 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/14/98

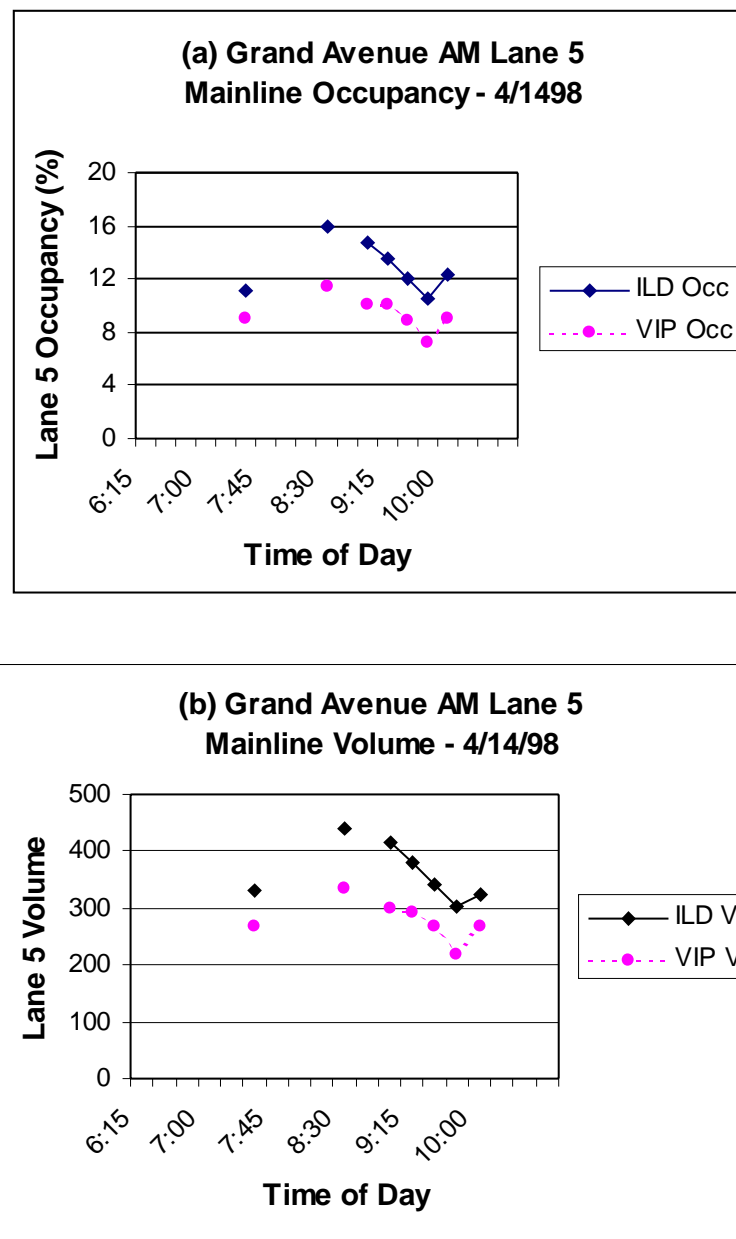


Figure J-80. Lane 5 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/14/98

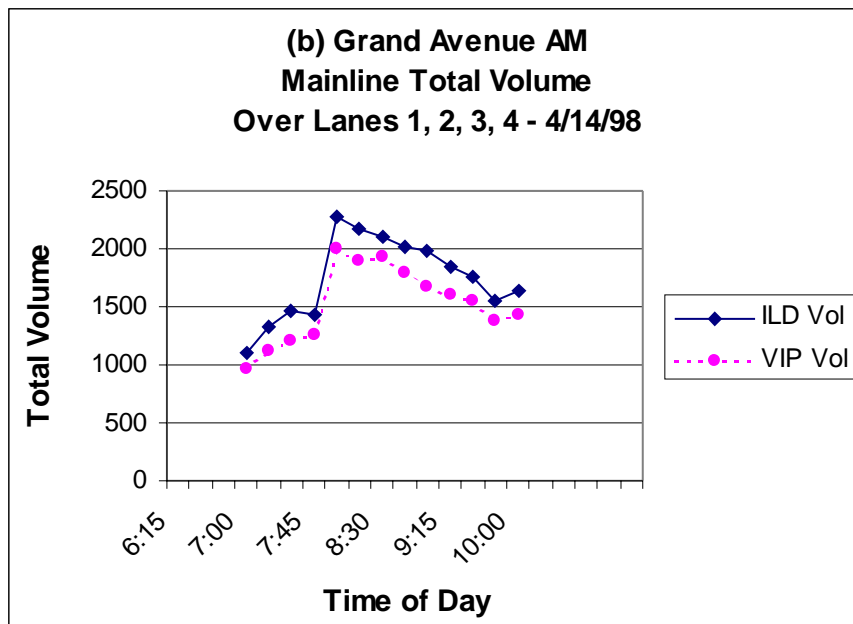
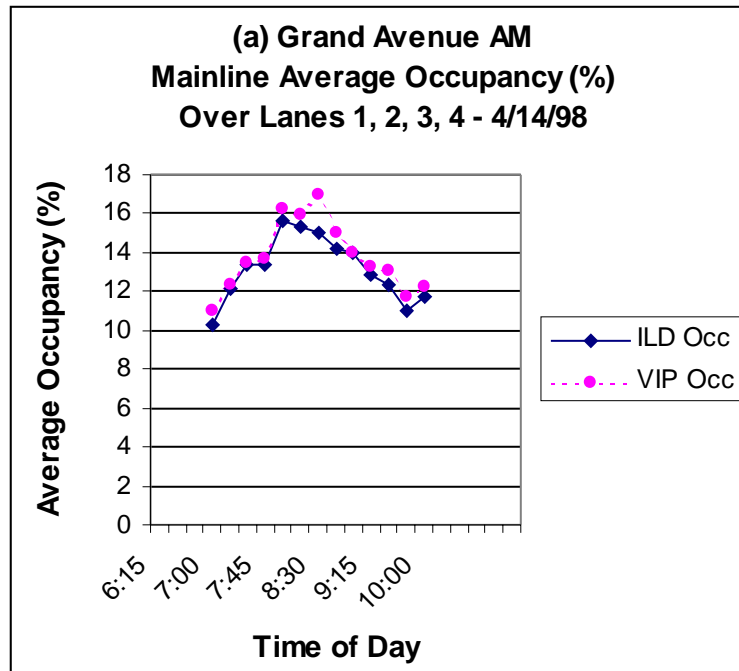


Figure J-81. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over lanes 1 through 4 at the Grand Avenue evaluation site during the morning rush-hour interval on 4/14/98

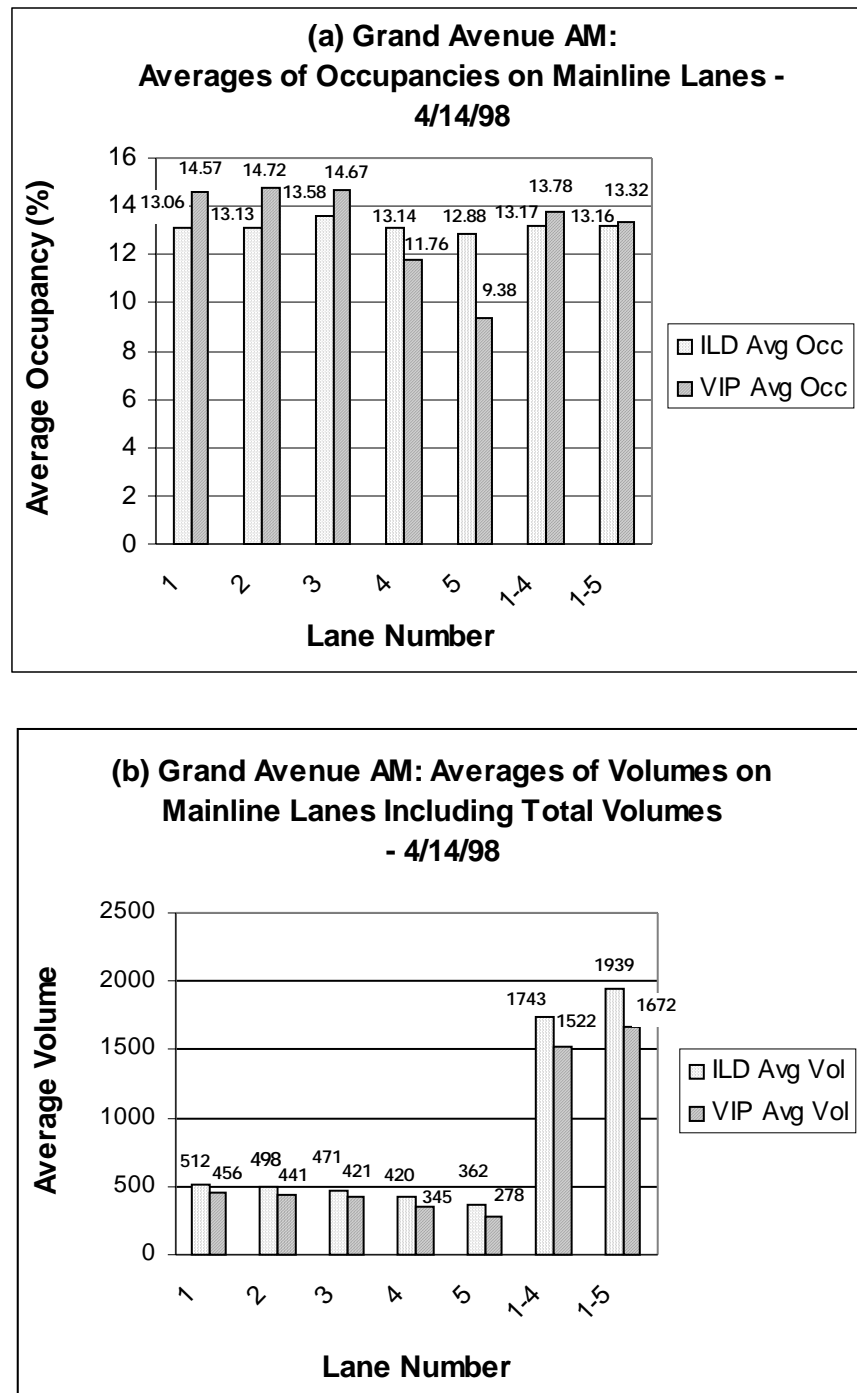


Figure J-82. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/14/98

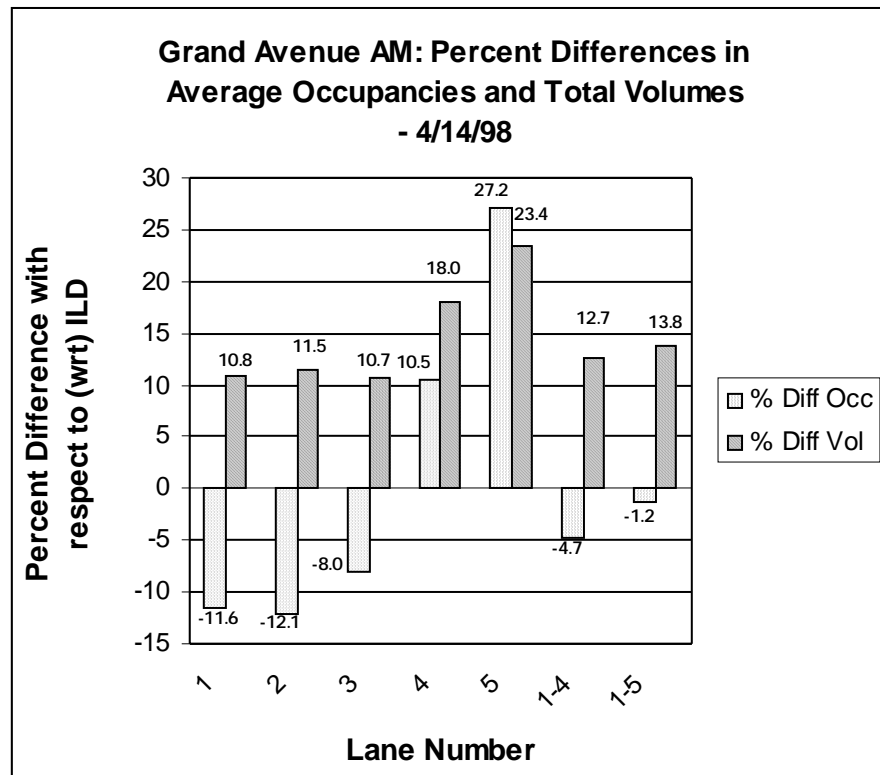


Figure J-83. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Grand Avenue evaluation site during the morning rush-hour interval on 4/14/98

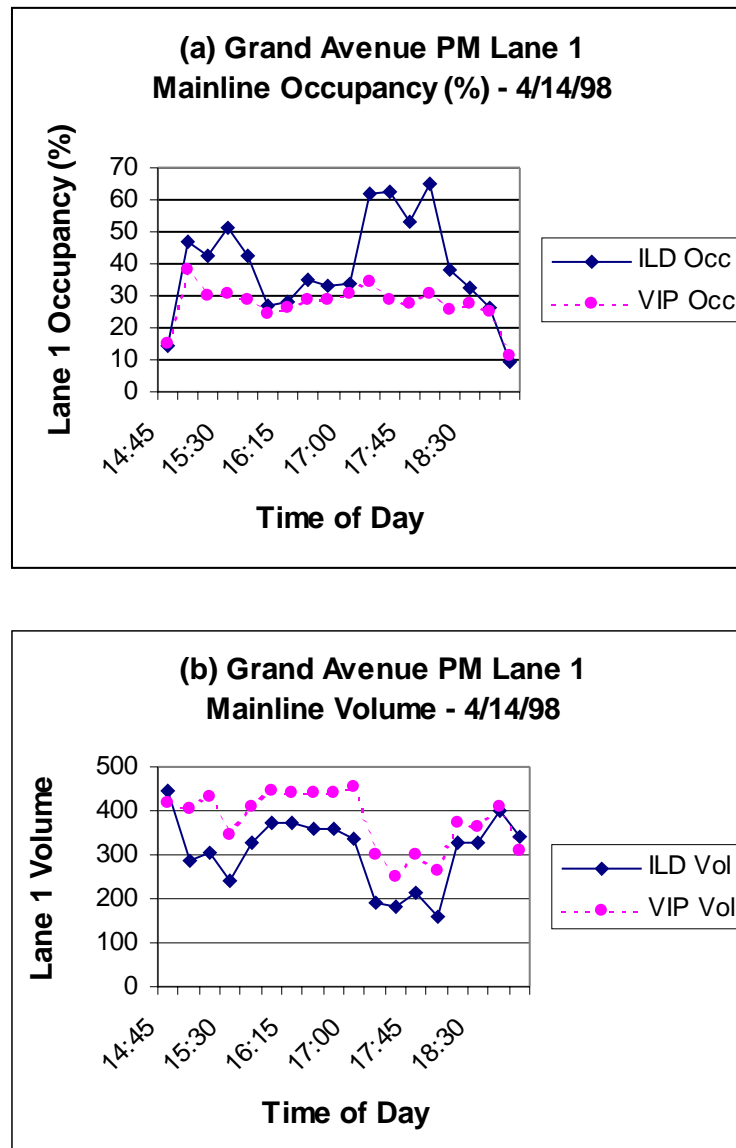


Figure J-84. Lane 1 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/14/98

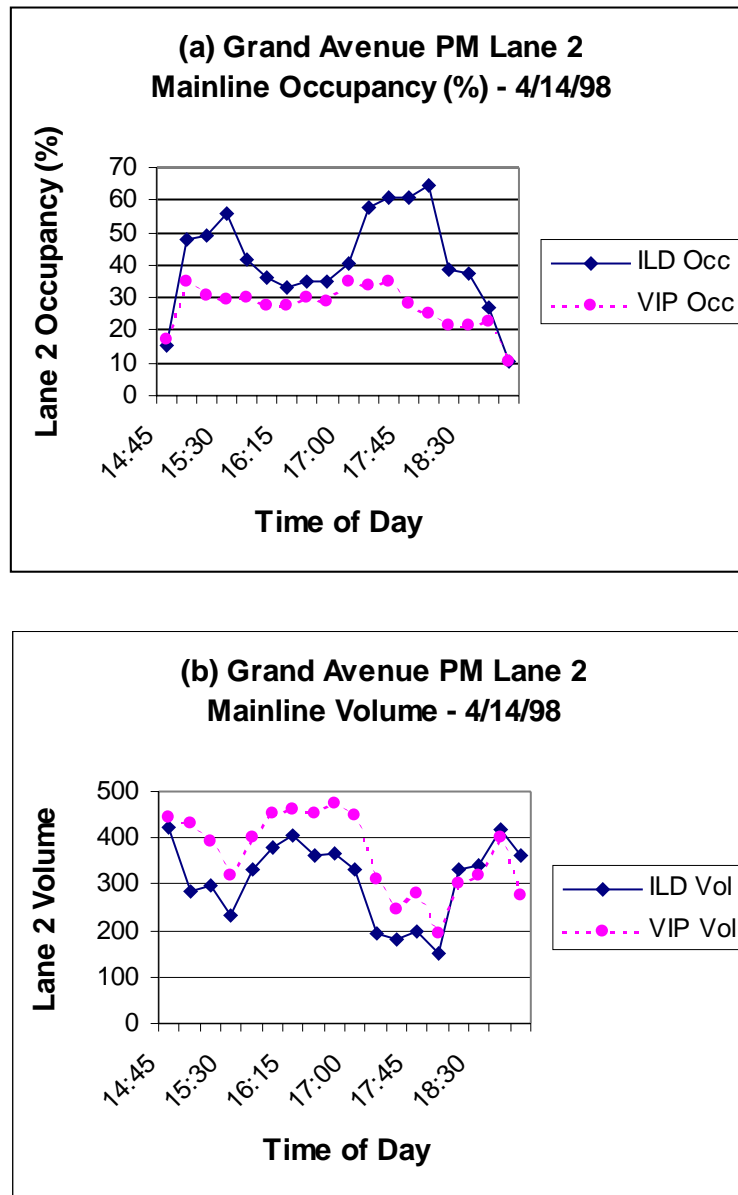


Figure J-85. Lane 2 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/14/98

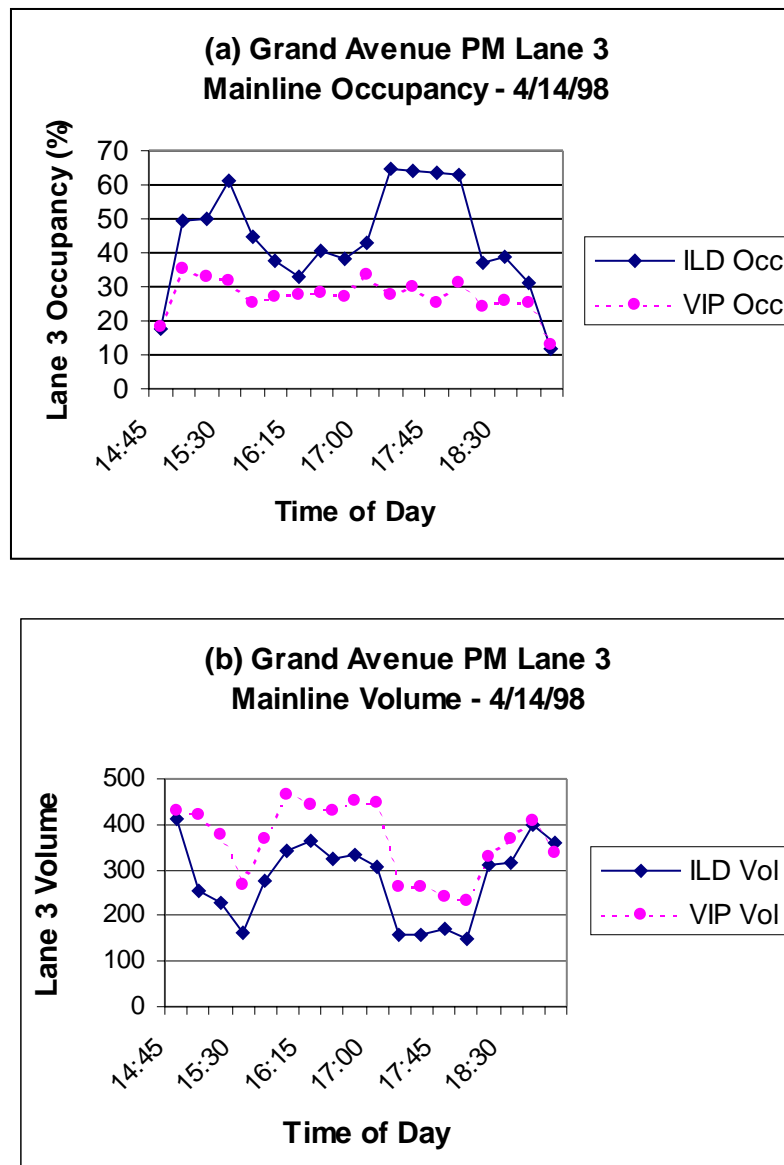


Figure J-86. Lane 3 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/14/98

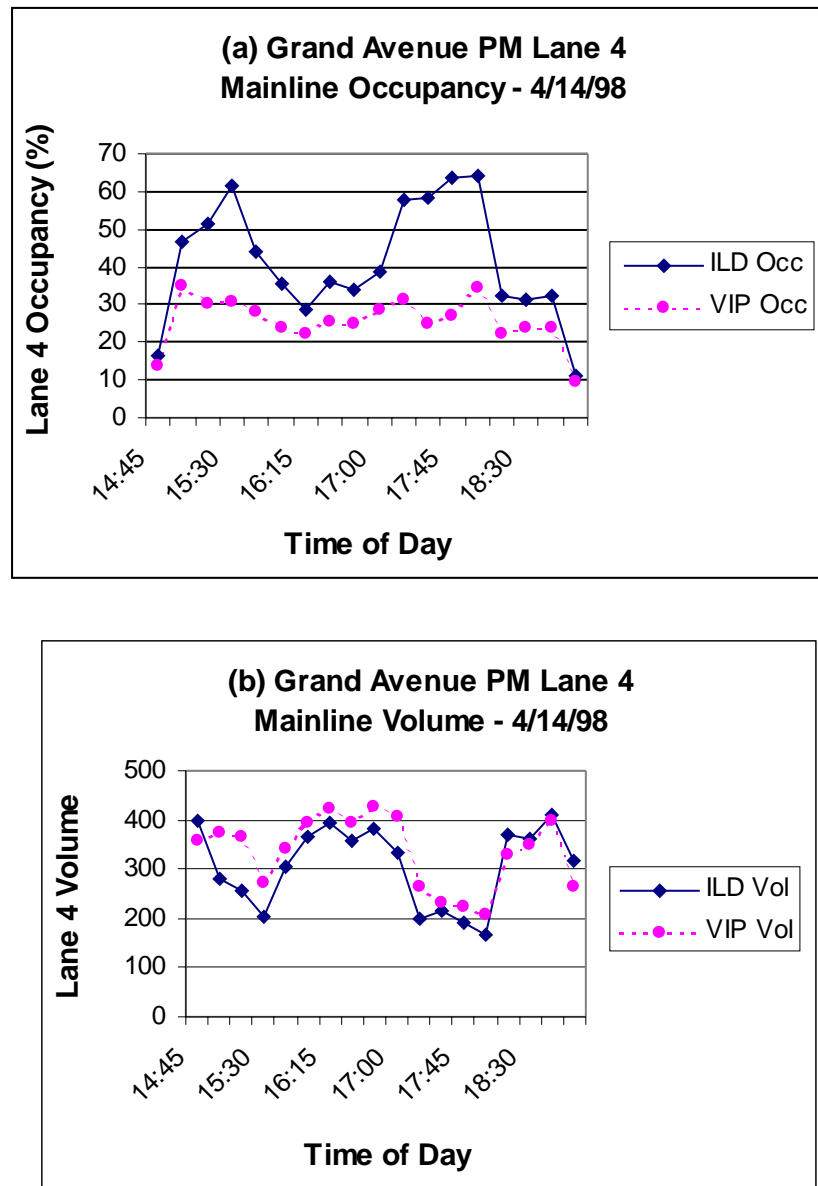


Figure J-87. Lane 4 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/14/98

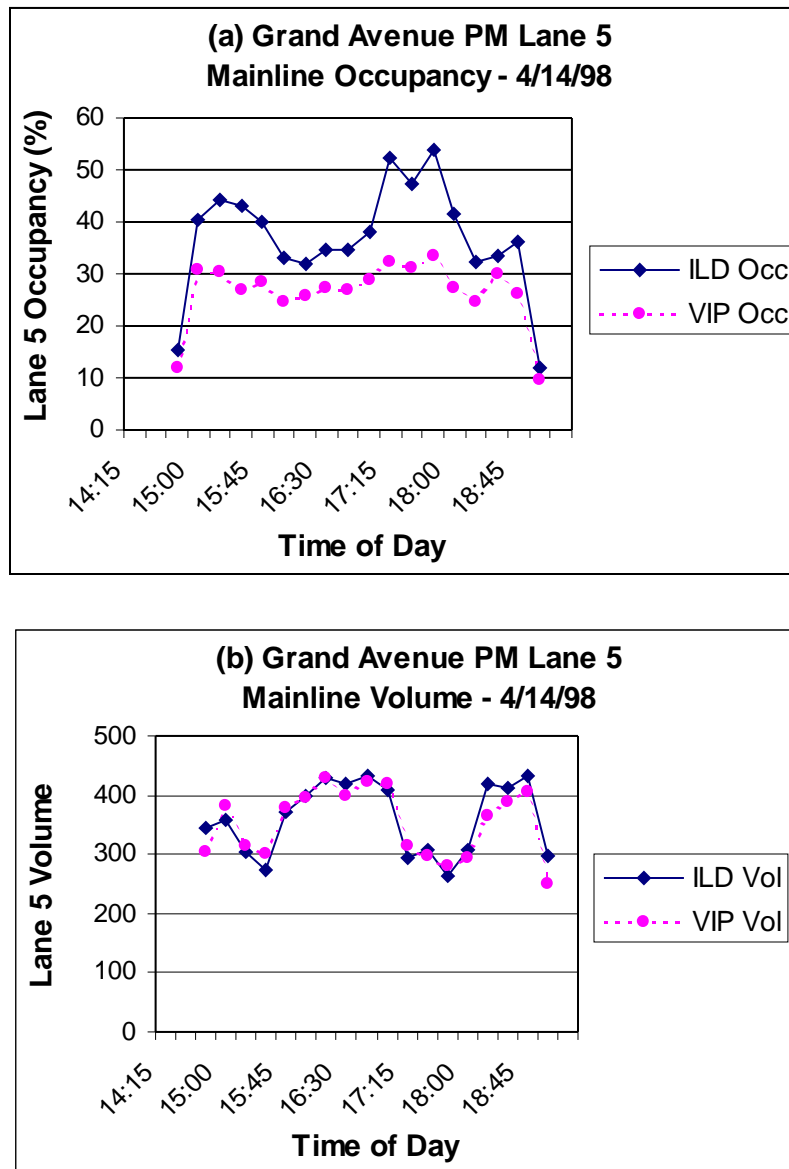


Figure J-88. Lane 5 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/14/98

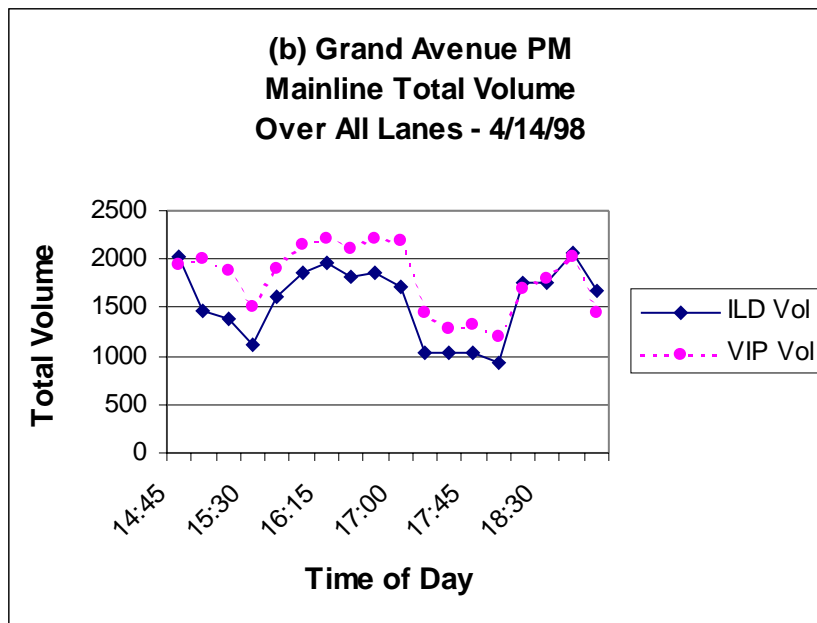
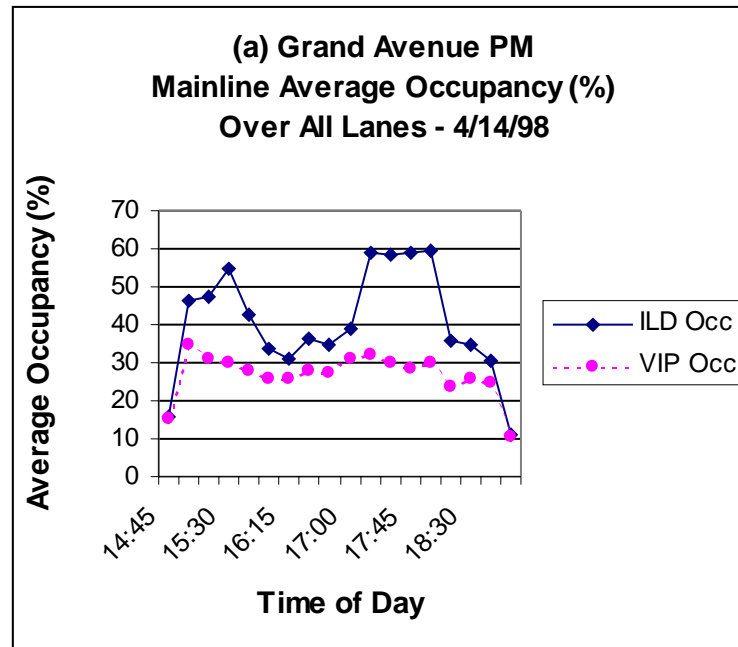


Figure J-89. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over all lanes at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/14/98

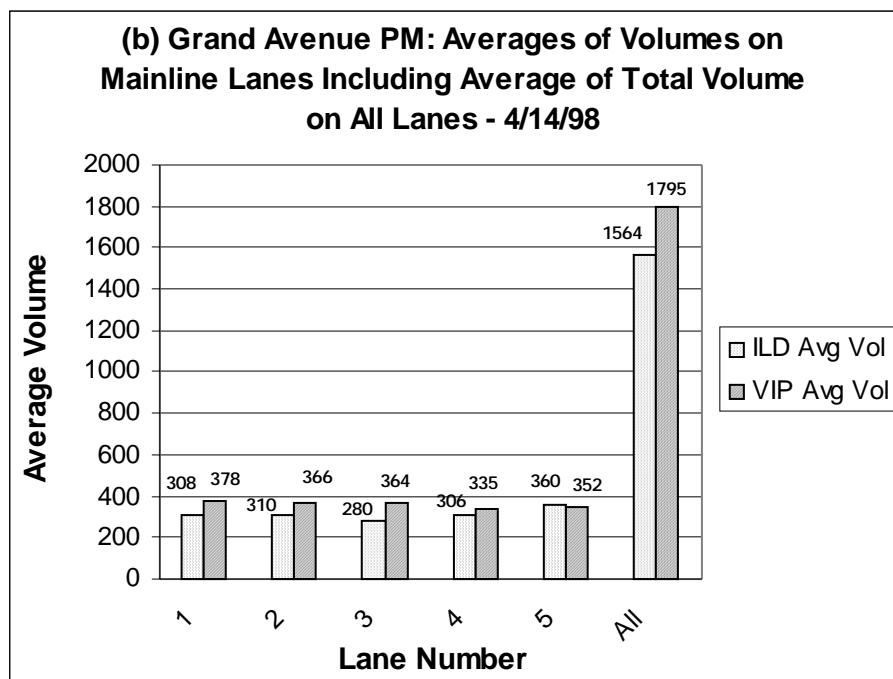
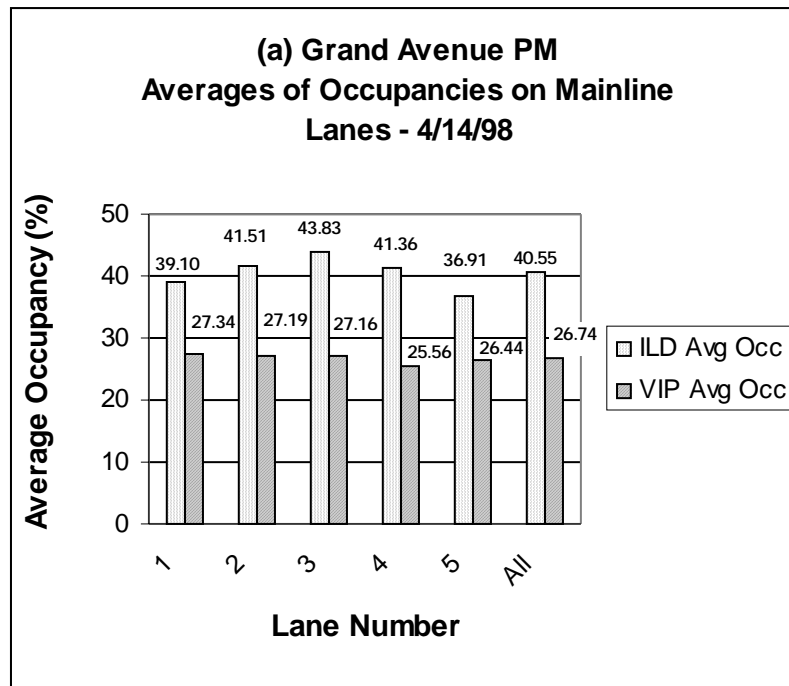


Figure J-90. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/14/98

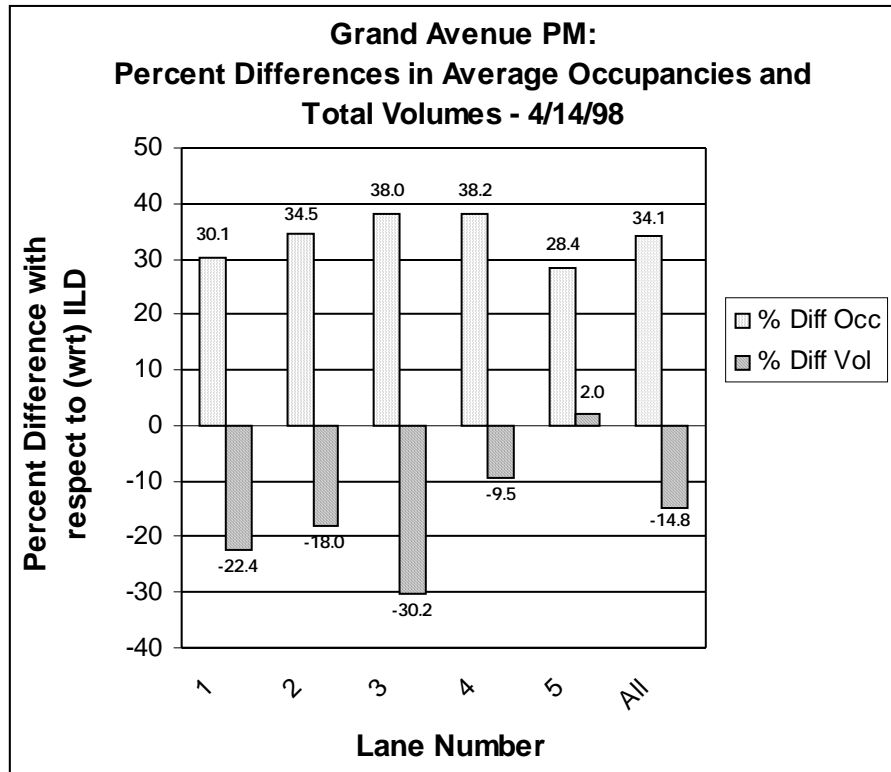


Figure J-91. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/14/98

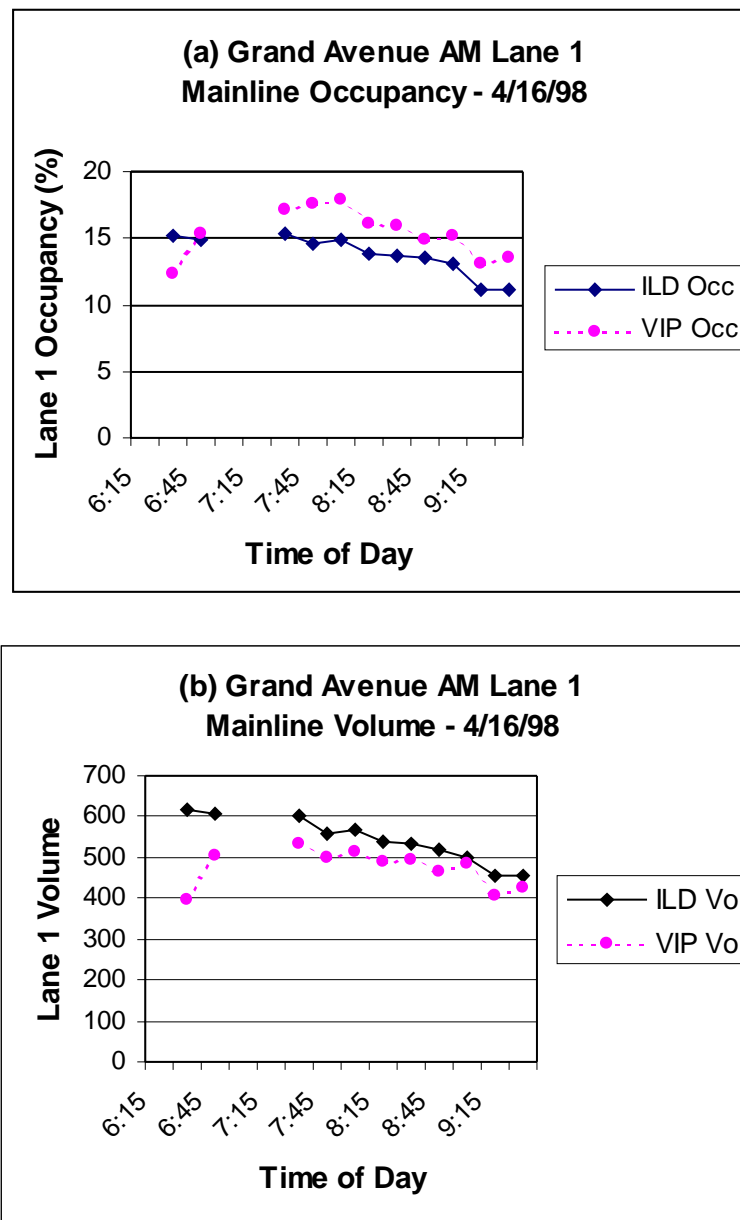


Figure J-92. Lane 1 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/16/98

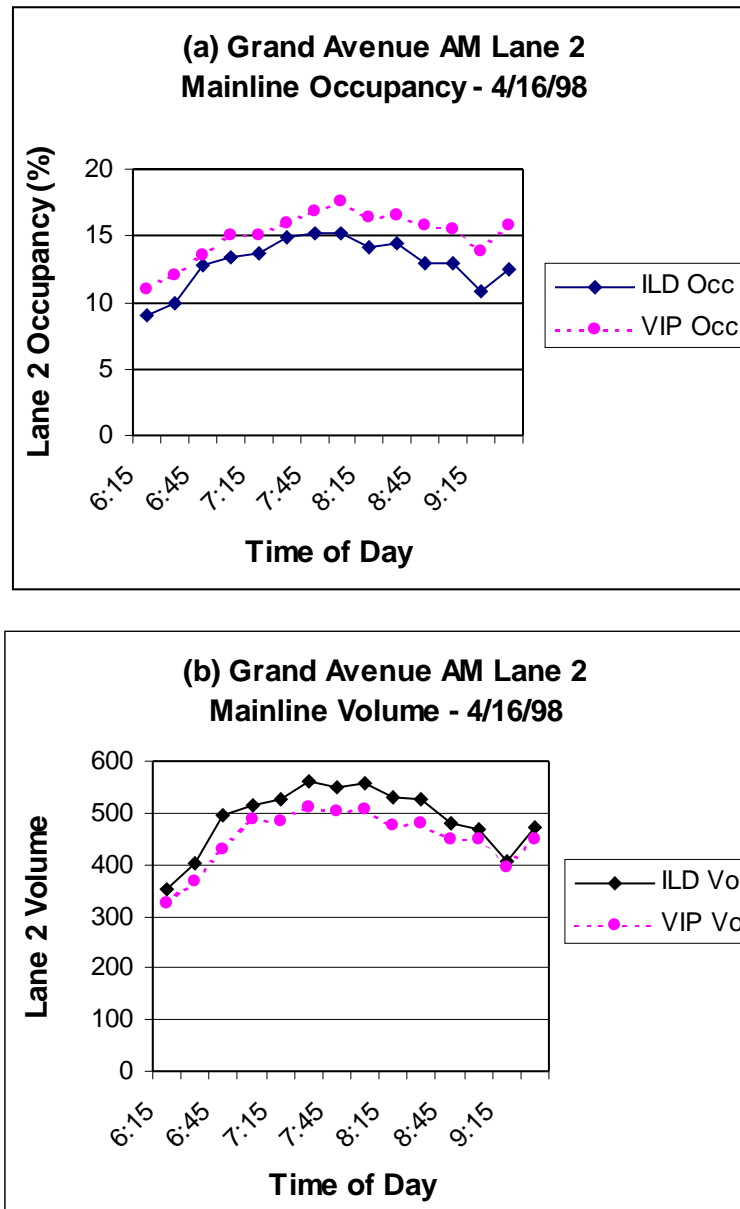


Figure J-93. Lane 2 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/16/98

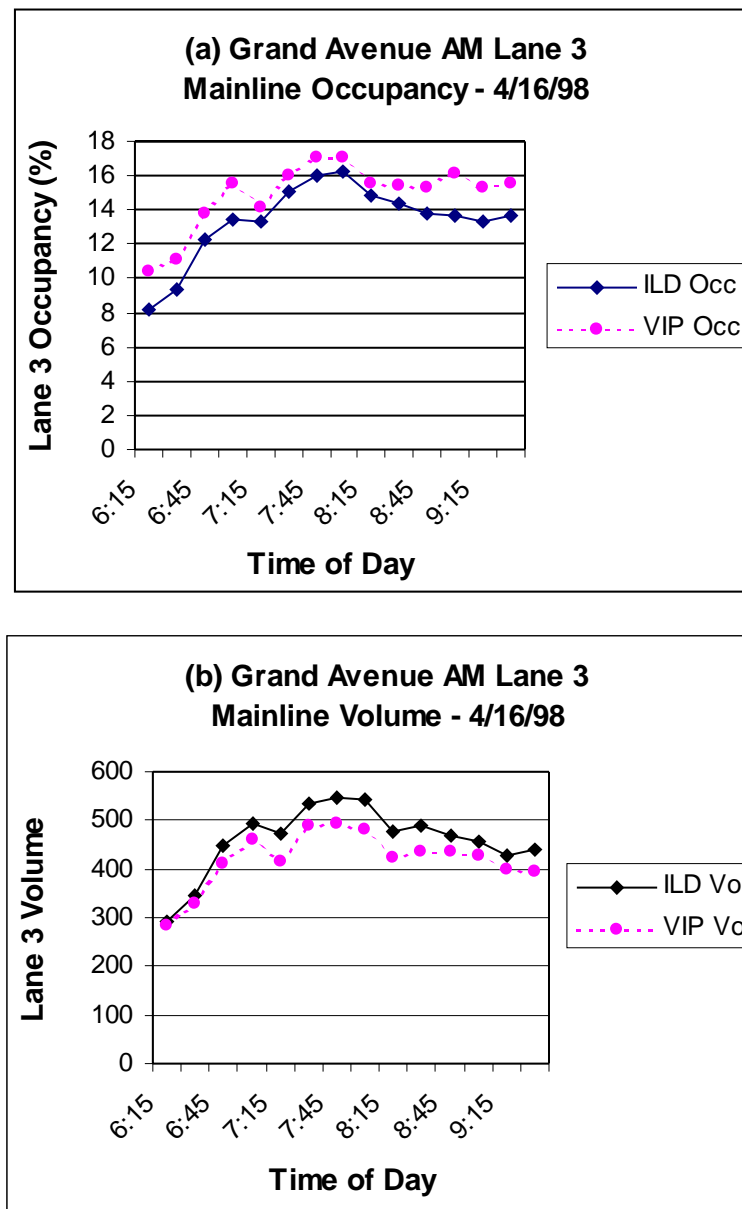


Figure J-94. Lane 3 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/16/98

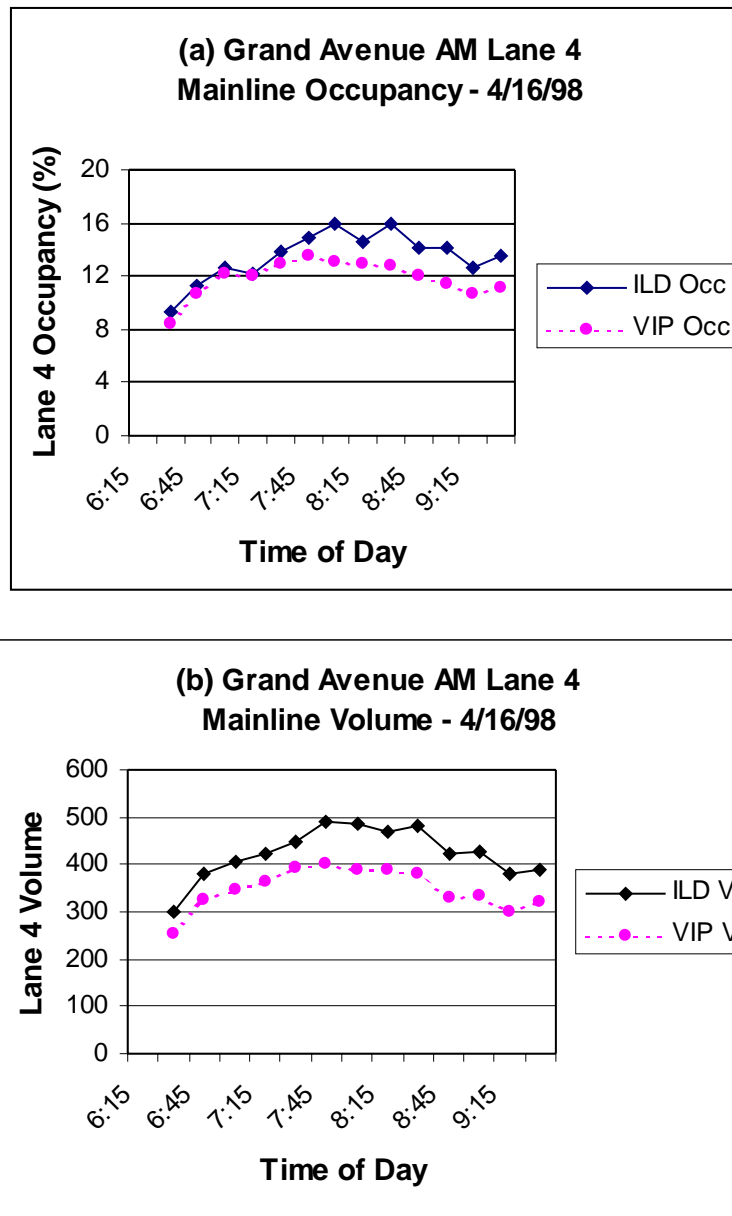


Figure J-95. Lane 4 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/16/98

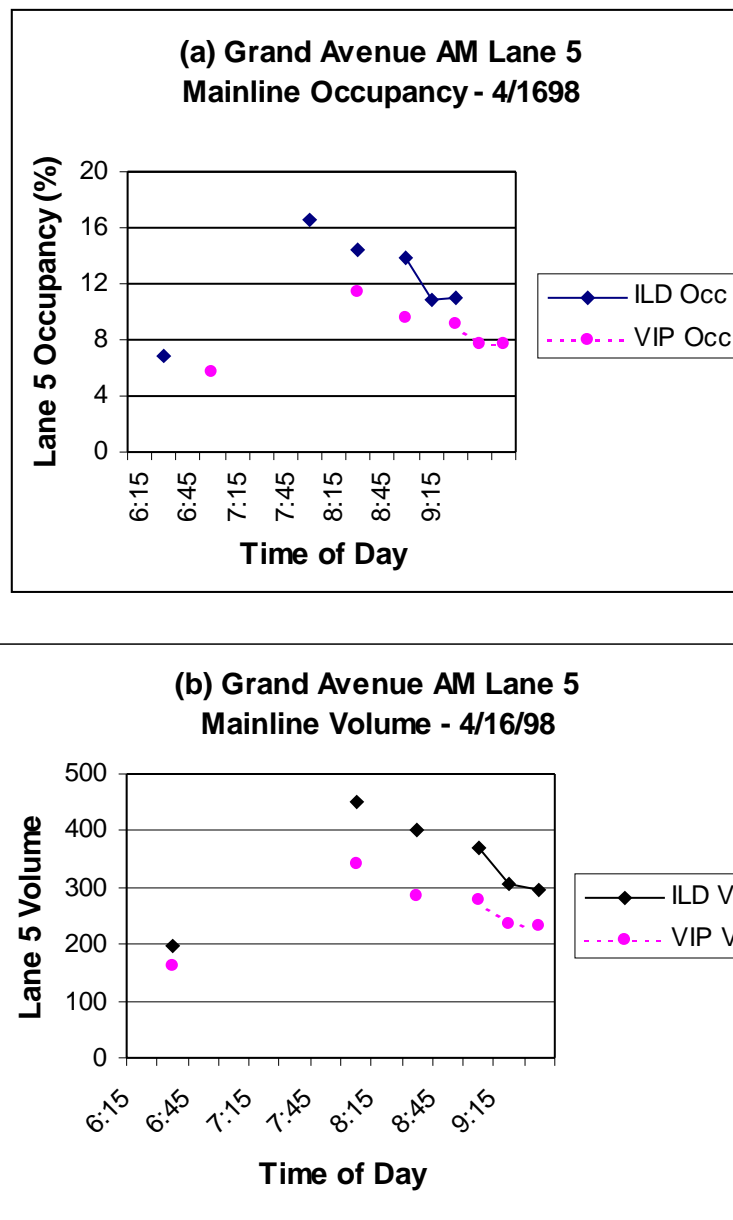


Figure J-96. Lane 5 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/16/98

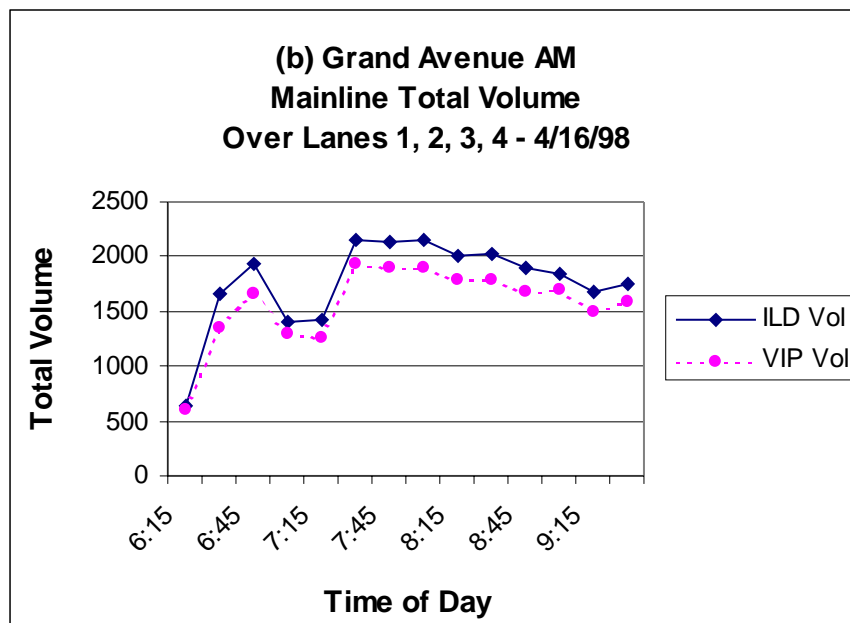
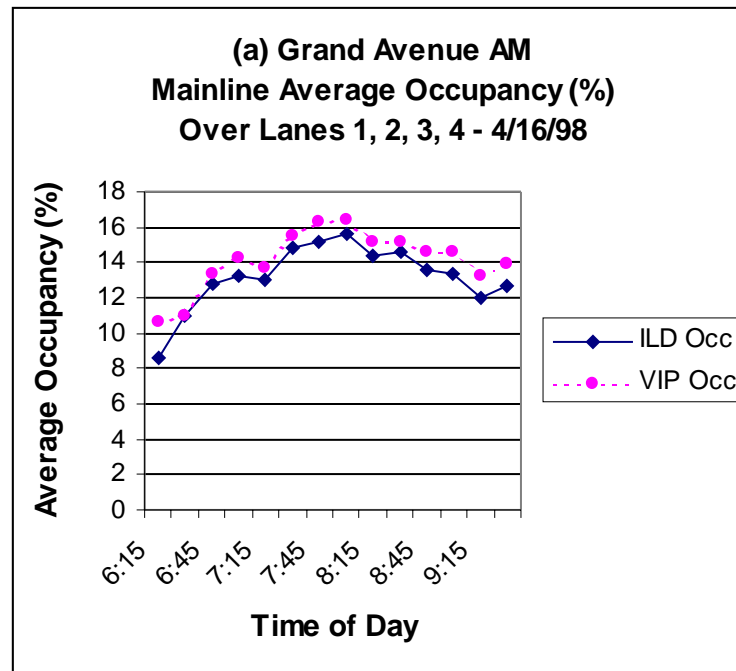


Figure J-97. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over lanes 1 through 4 at the Grand Avenue evaluation site during the morning rush-hour interval on 4/16/98

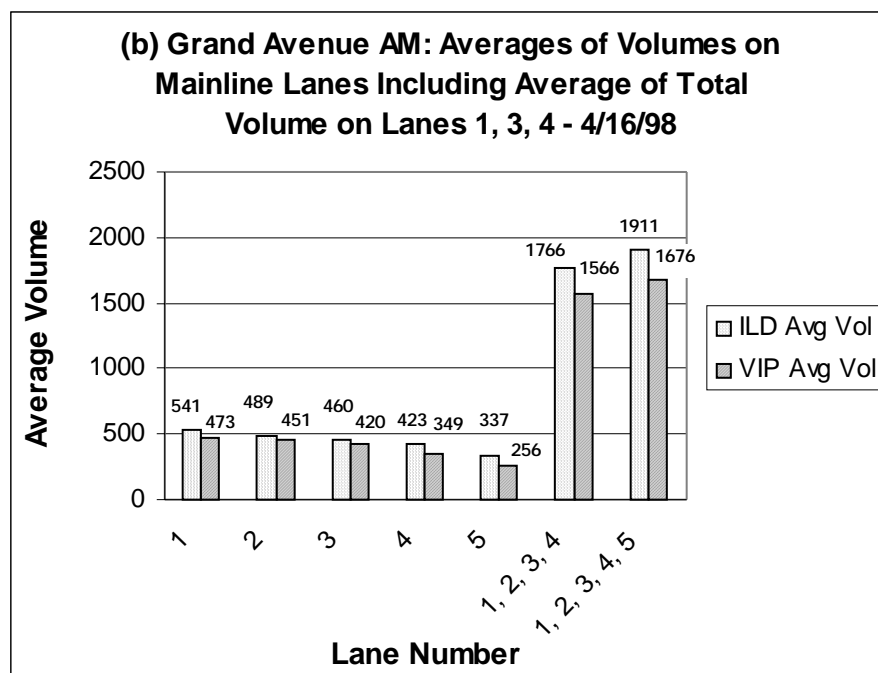
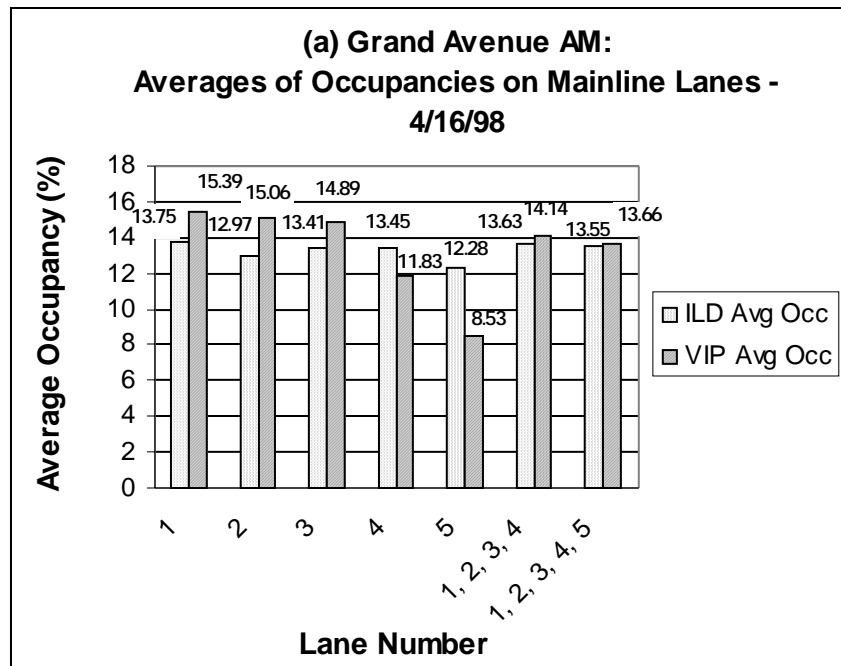


Figure J-98. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Grand Avenue evaluation site during the morning rush-hour interval on 4/16/98

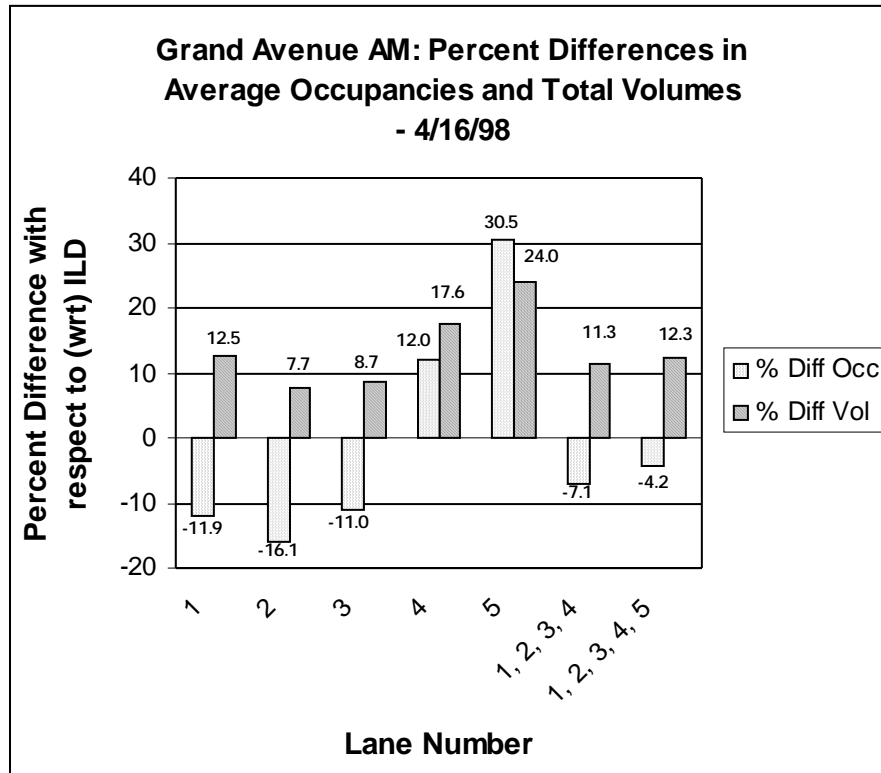


Figure J-99. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Grand Avenue evaluation site during the morning rush-hour interval on 4/16/98

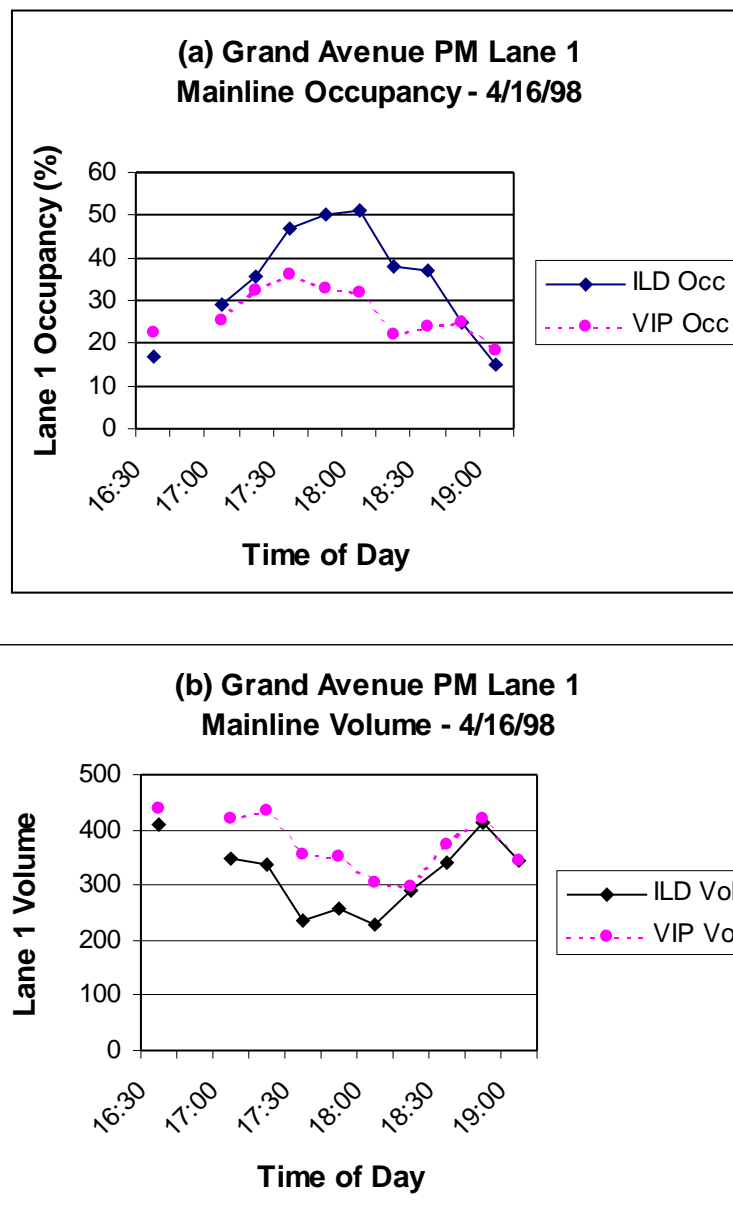


Figure J-100. Lane 1 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/16/98

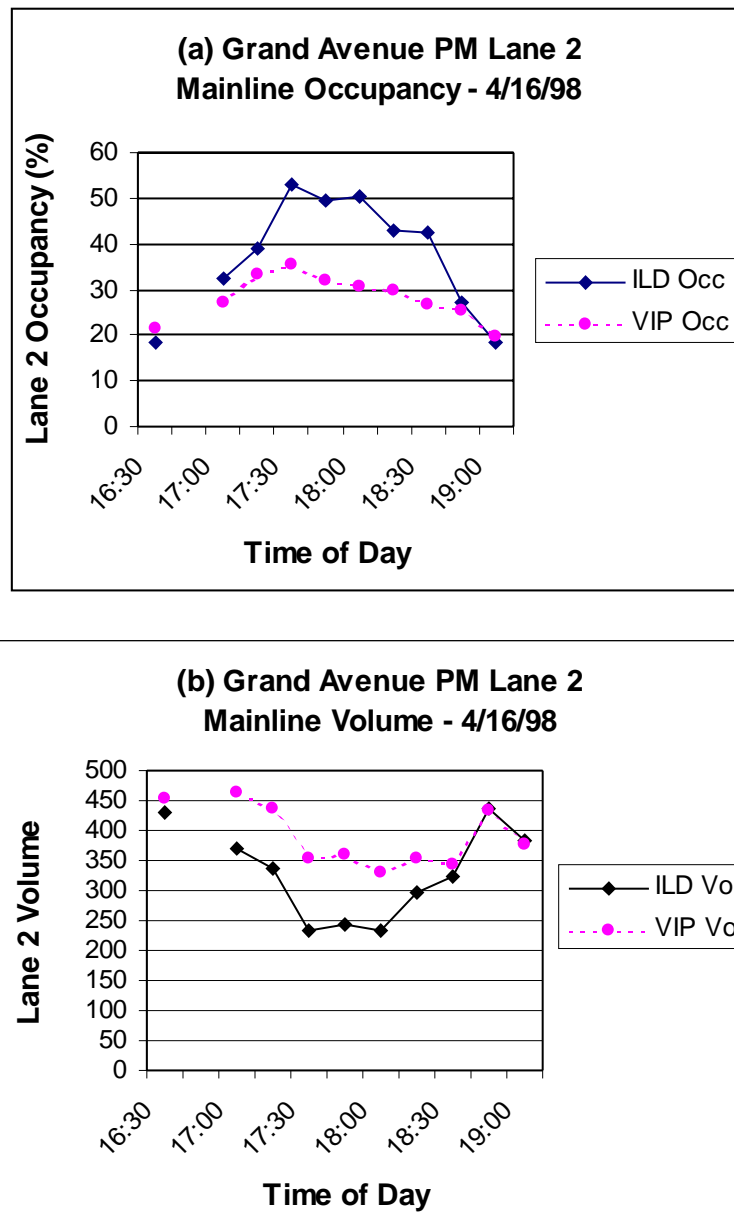


Figure J-101. Lane 2 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/16/98

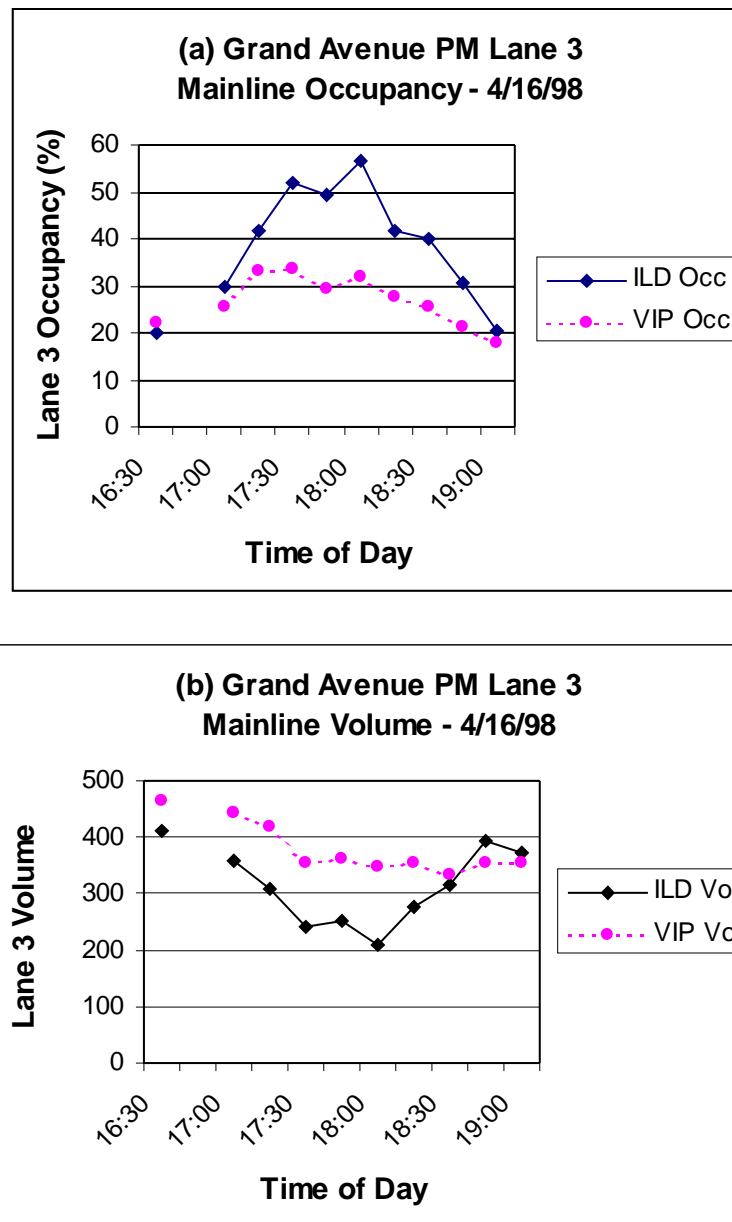


Figure J-102. Lane 3 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/16/98

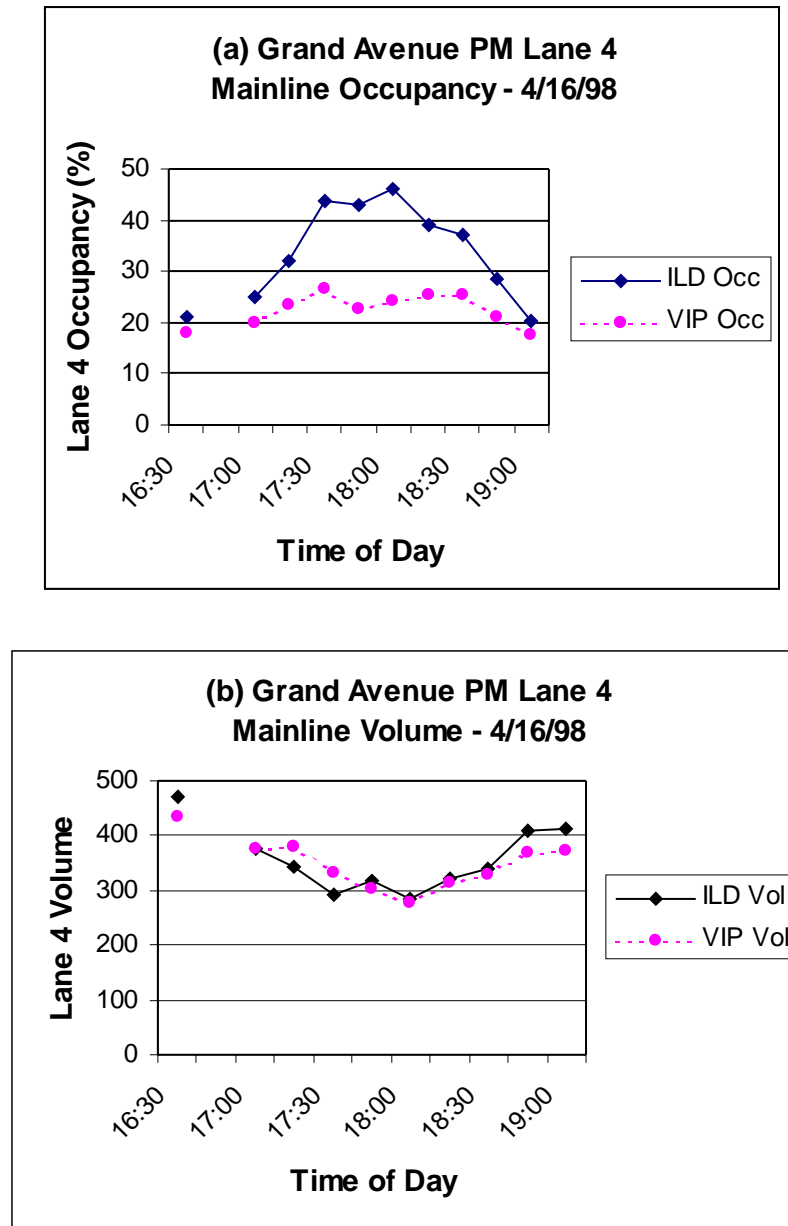


Figure J-103. Lane 4 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/16/98

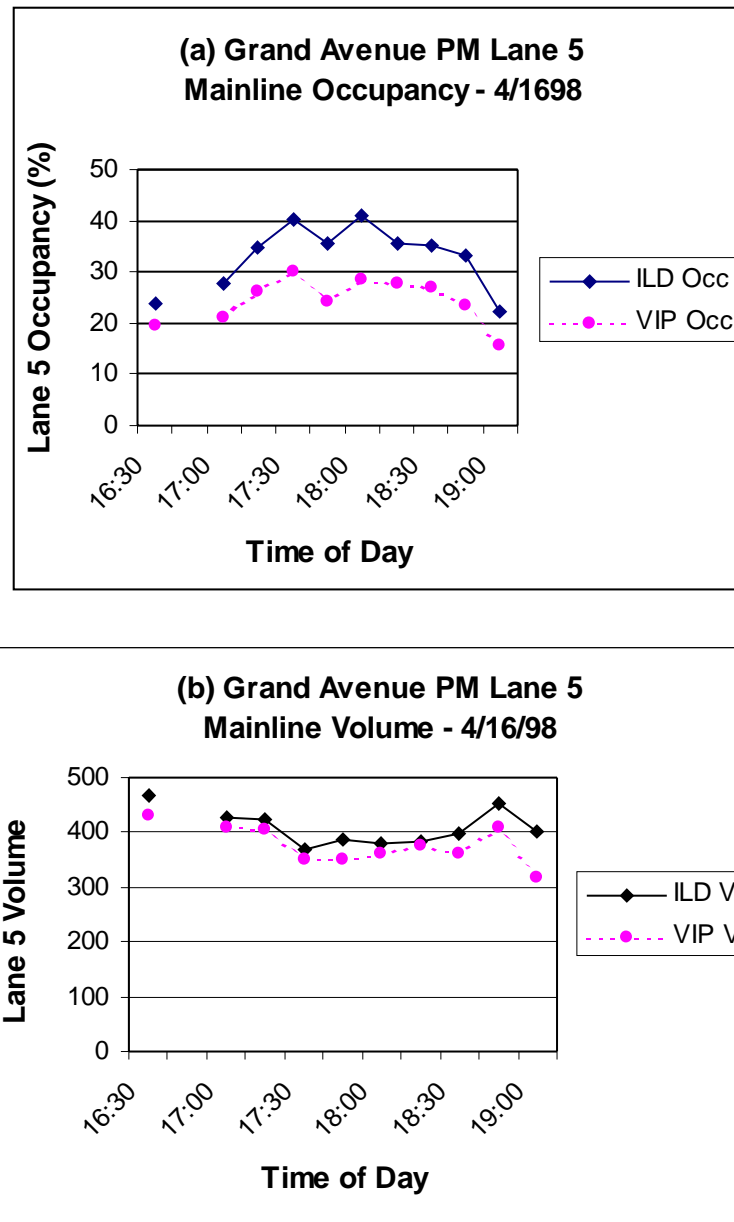


Figure J-104. Lane 5 (a) occupancy and (b) volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/16/98

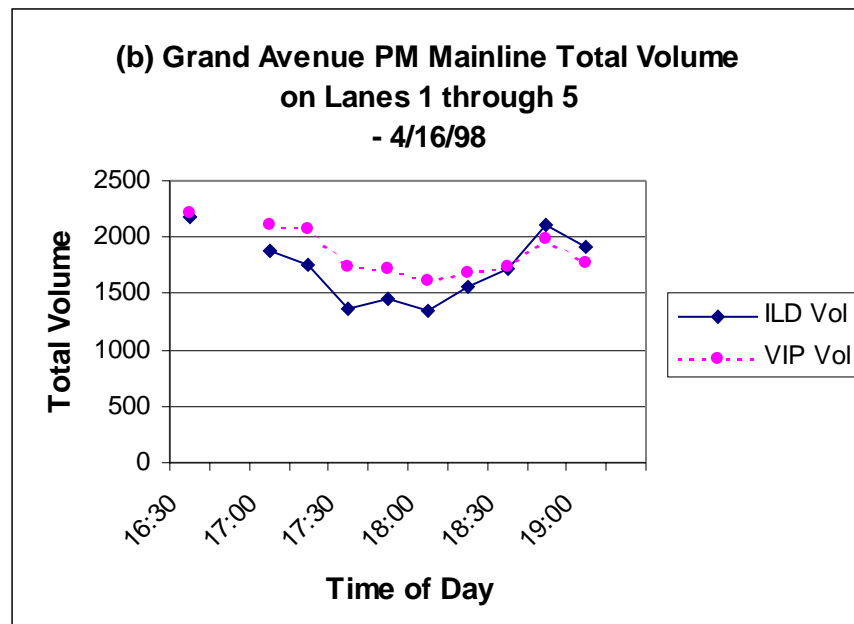
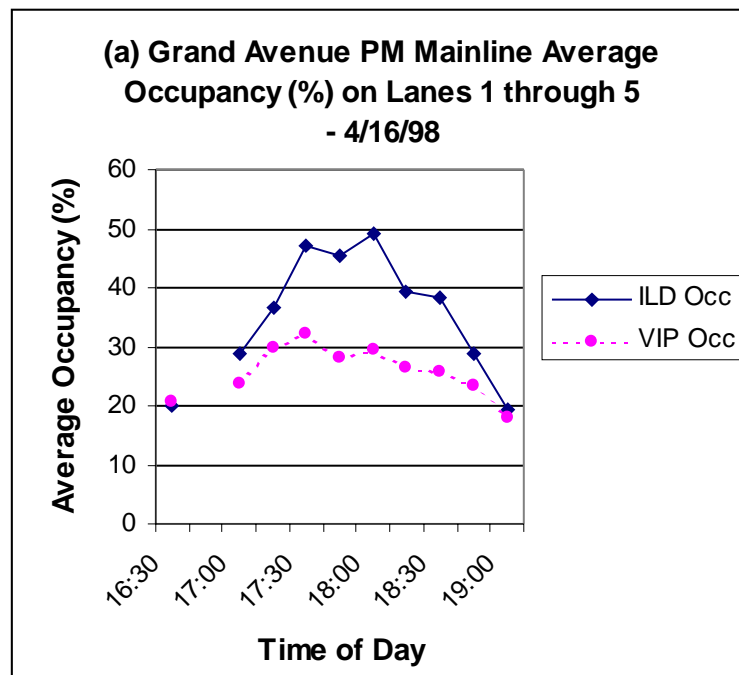


Figure J-105. Average (a) lane occupancy and (b) total volume measured by the ILDs and VIP over all lanes at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/16/98

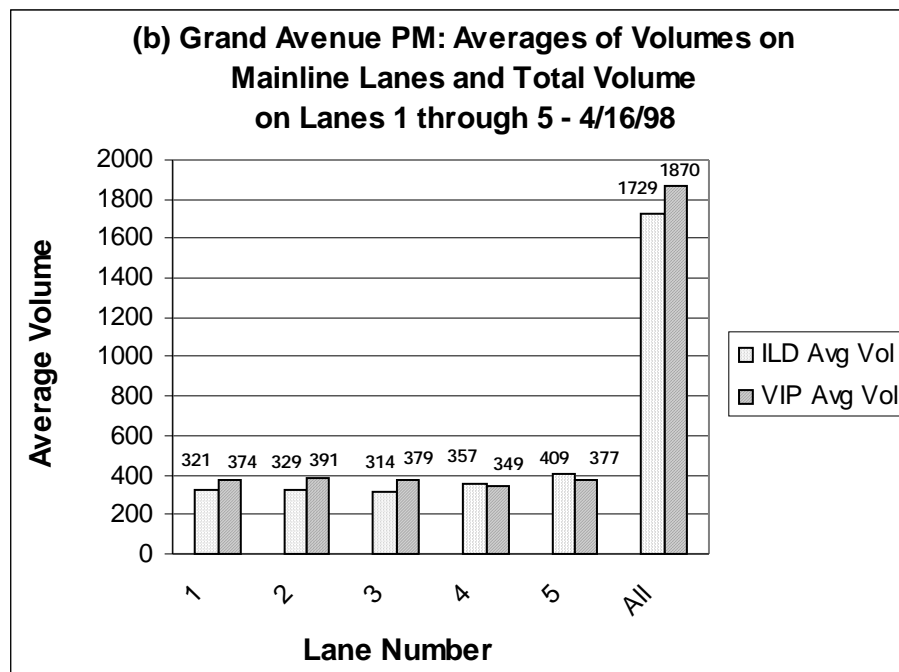
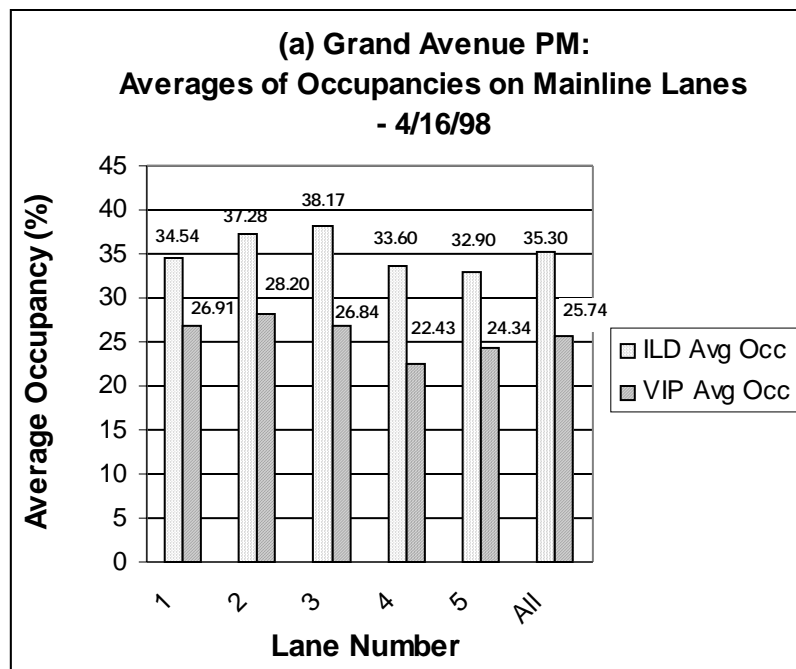


Figure J-106. Comparison of ILD and VIP lane-by-lane averages of (a) lane occupancy and (b) total volume at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/16/98

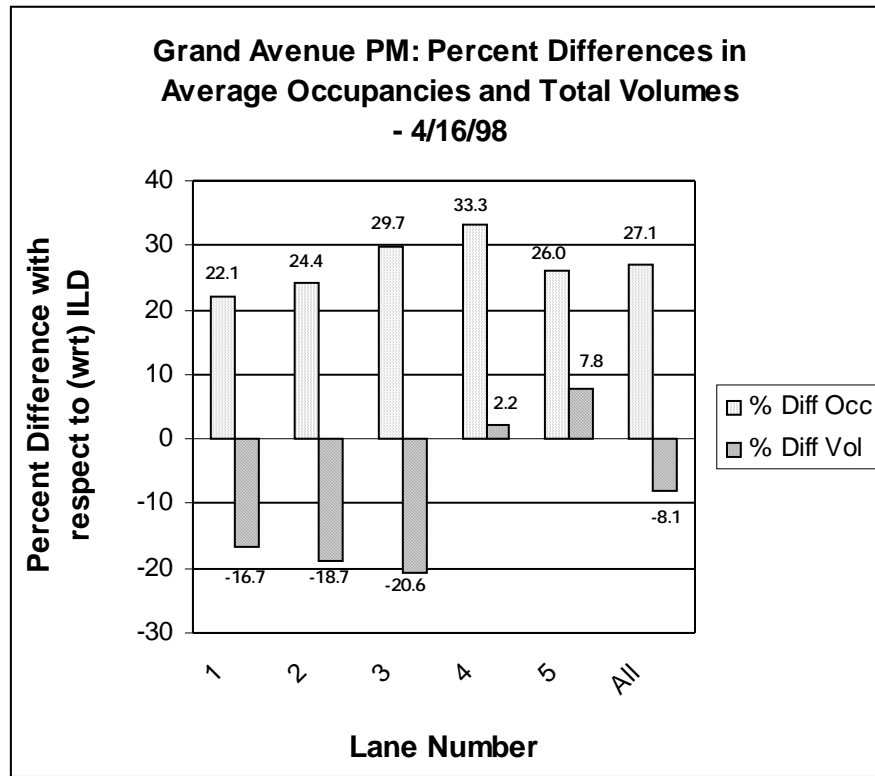


Figure J-107. Percent difference between the ILD and VIP averages of the average occupancy and total volume by lane at the Grand Avenue evaluation site during the afternoon rush-hour interval on 4/16/98

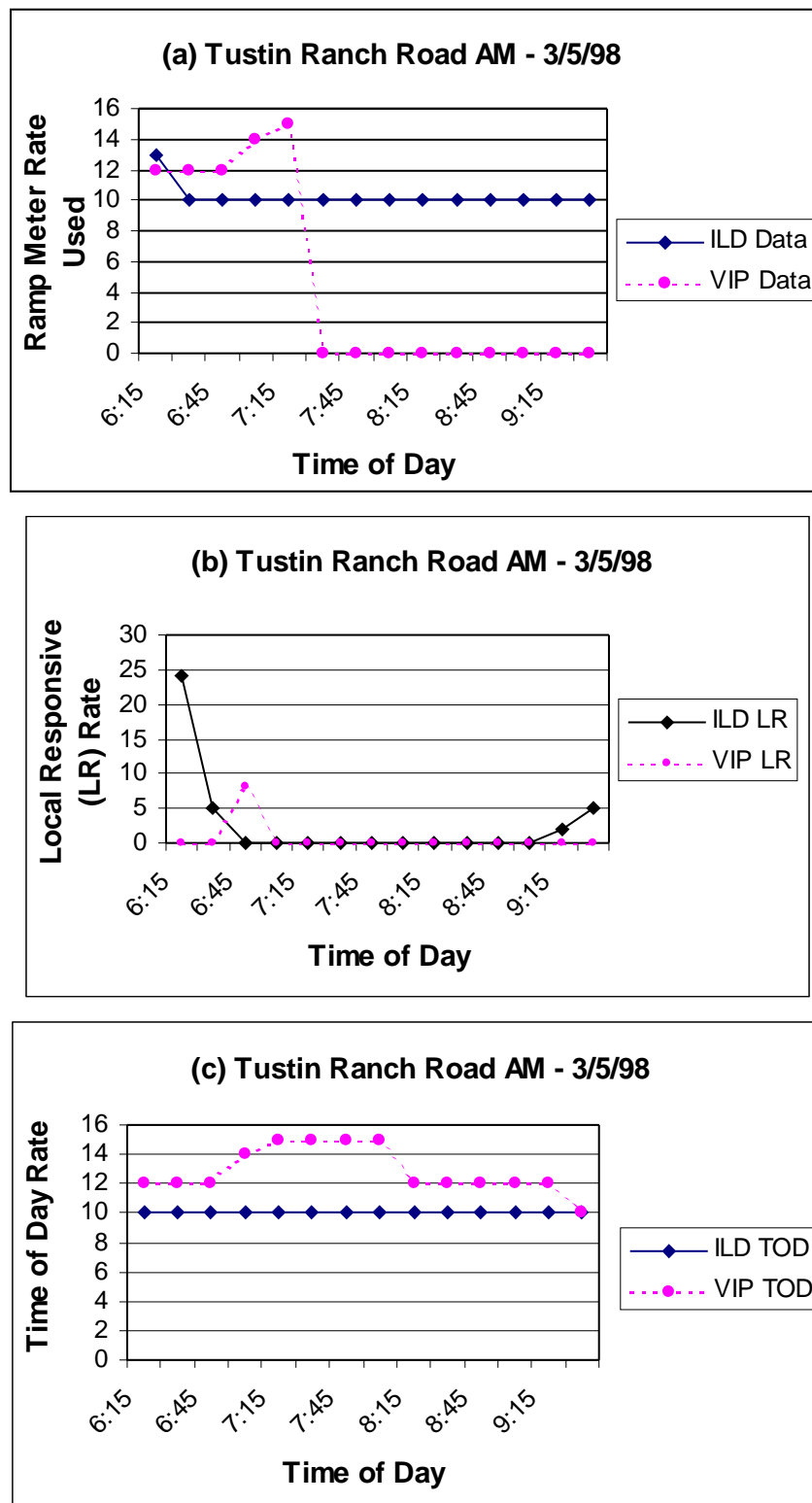


Figure J-108. Ramp meter rates (vehicles/minute) at Tustin Ranch Road for AM rush hours on 3/5/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

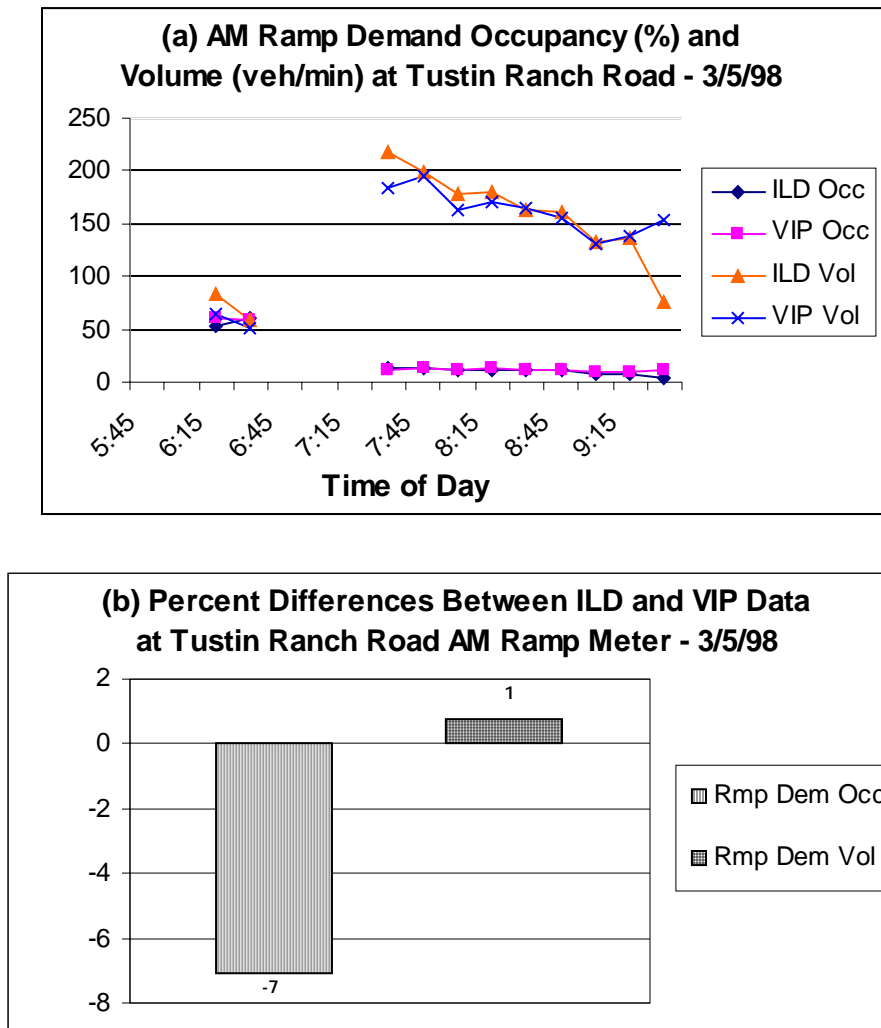


Figure J-109. ILD and VIP ramp and mainline data at Tustin Ranch Road ramp meter for AM rush hours on 3/5/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

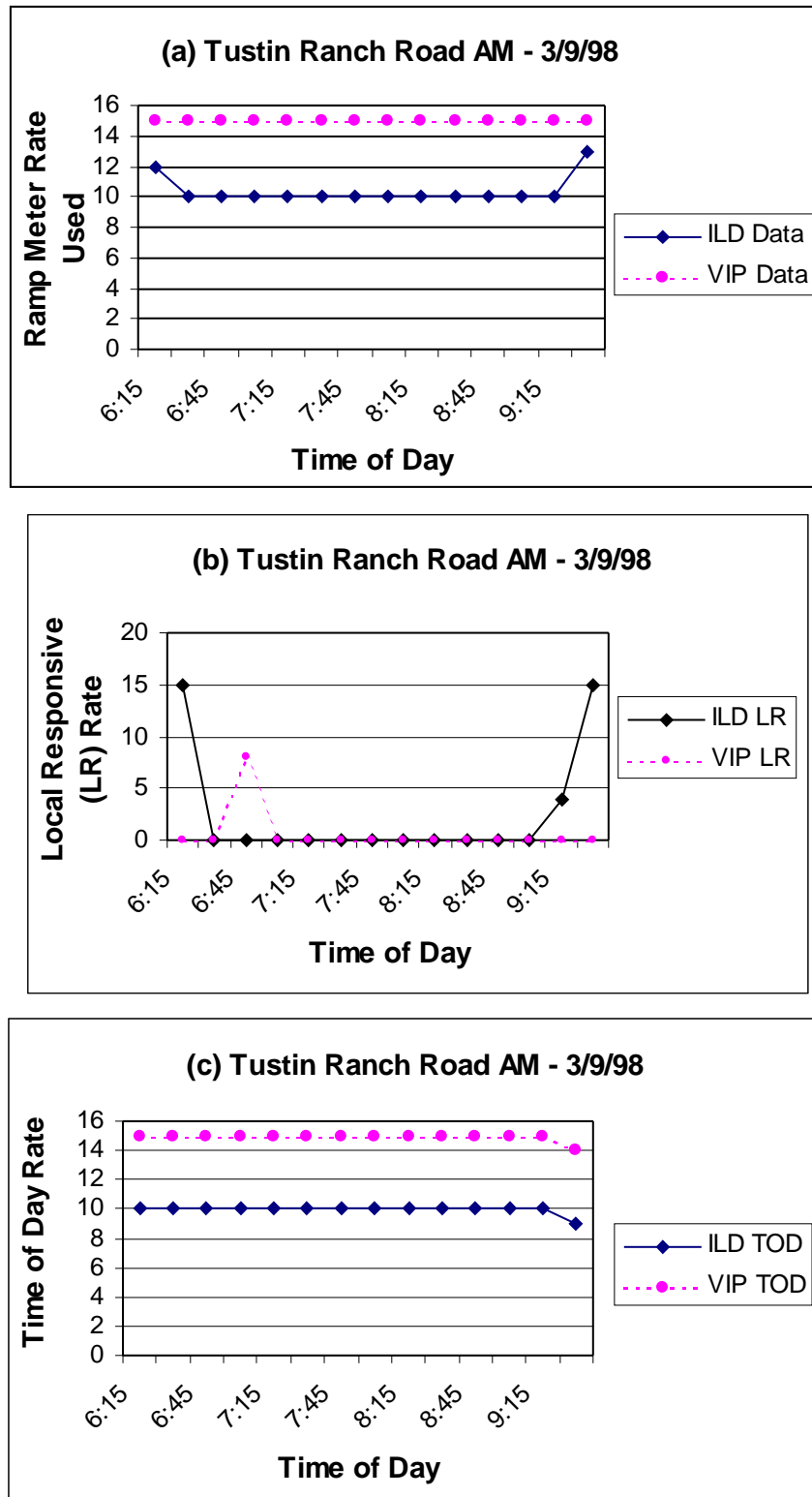


Figure J-110. Ramp meter rates (vehicles/minute) at Tustin Ranch Road for AM rush hours on 3/9/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

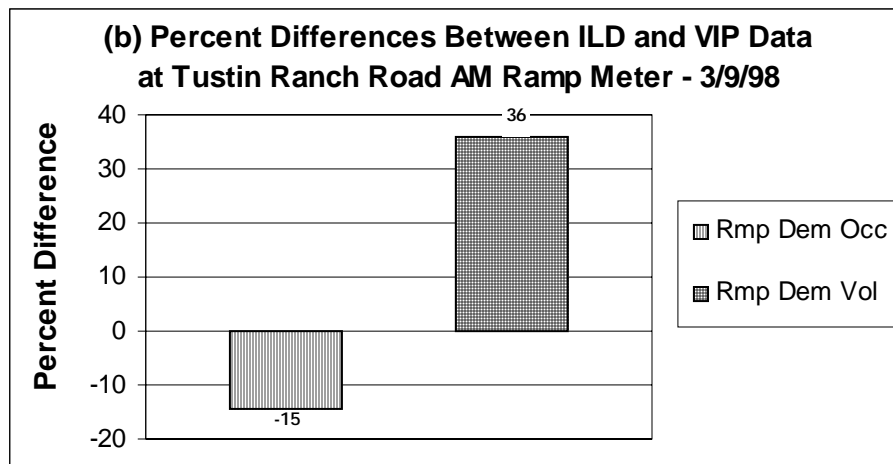
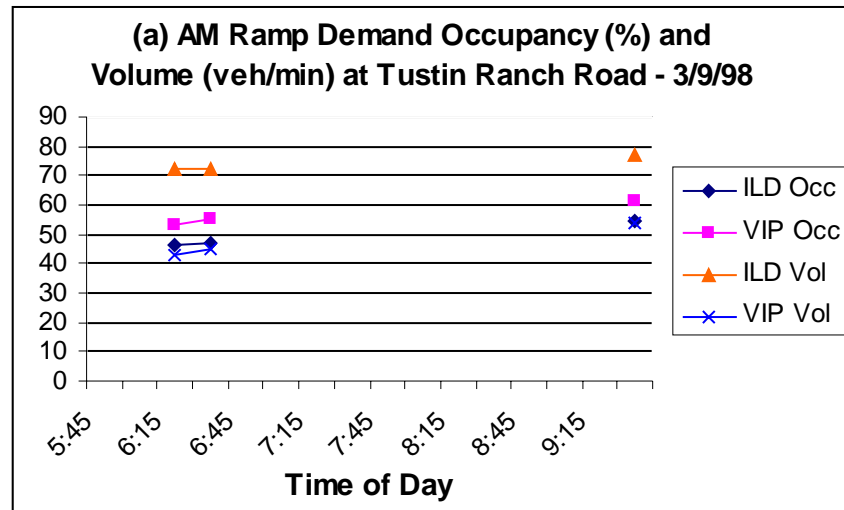


Figure J-111. ILD and VIP ramp and mainline data at Tustin Ranch Road ramp meter for AM rush hours on 3/9/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

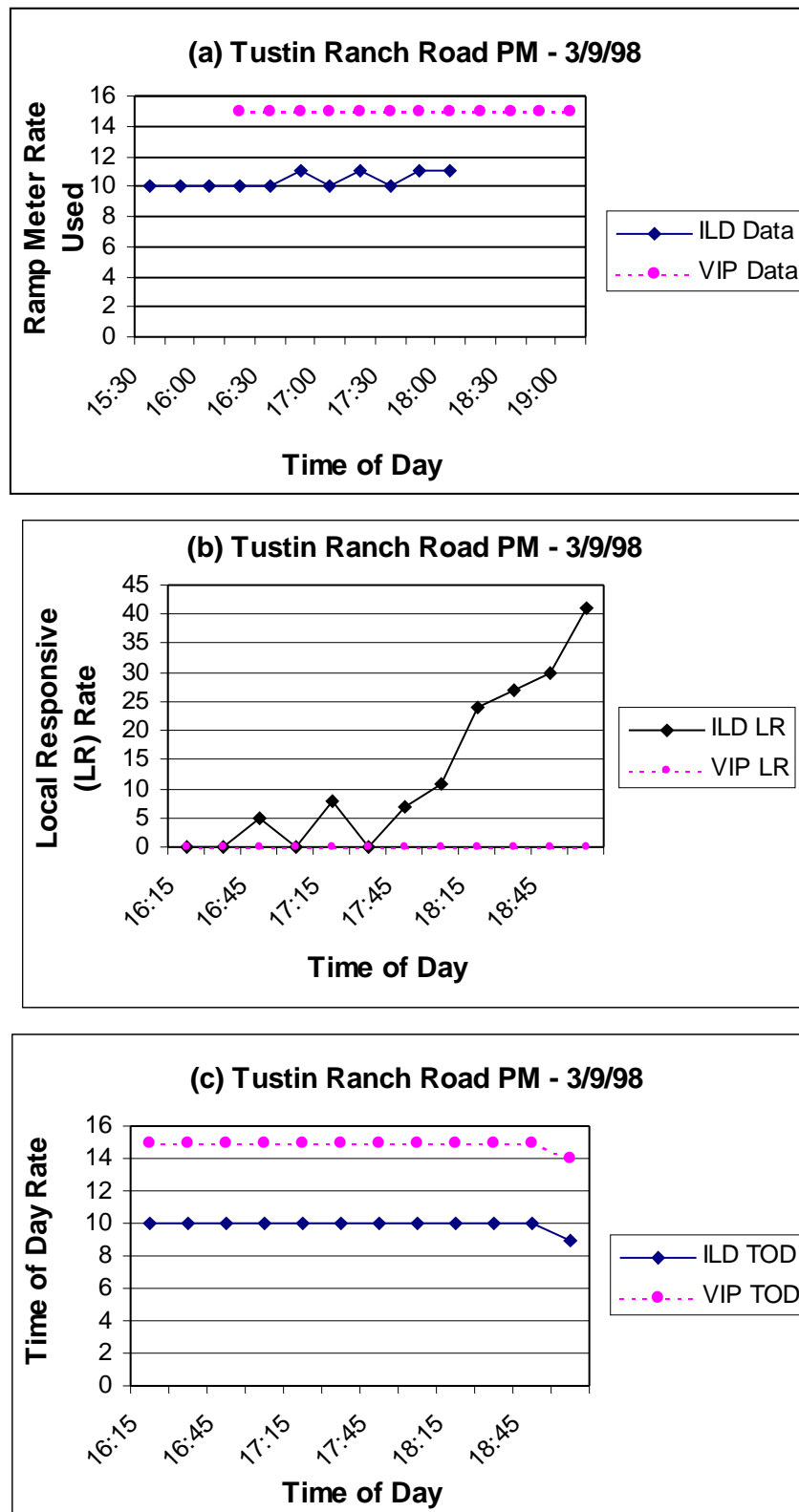


Figure J-112. Ramp meter rates (vehicles/minute) at Tustin Ranch Road for PM rush hours on 3/9/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

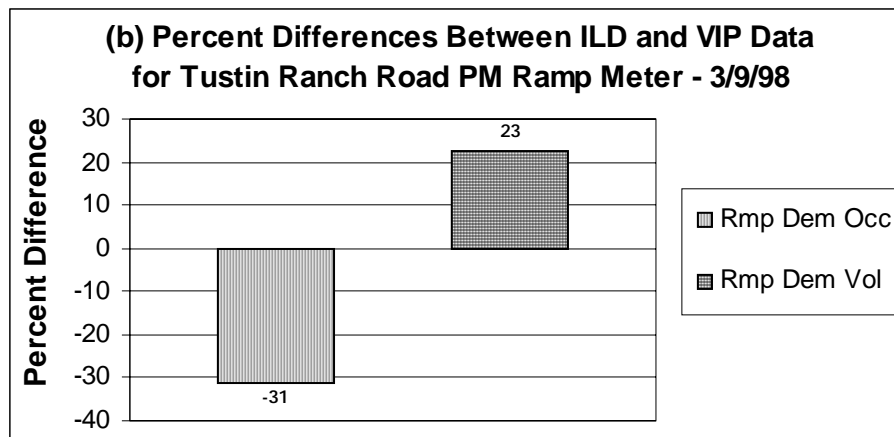
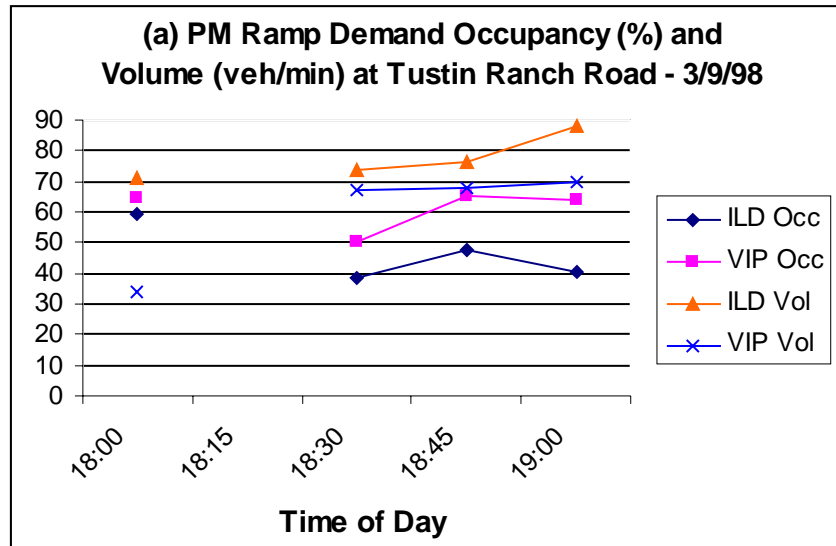


Figure J-113. ILD and VIP ramp and mainline data at Tustin Ranch Road ramp meter for PM rush hours on 3/9/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

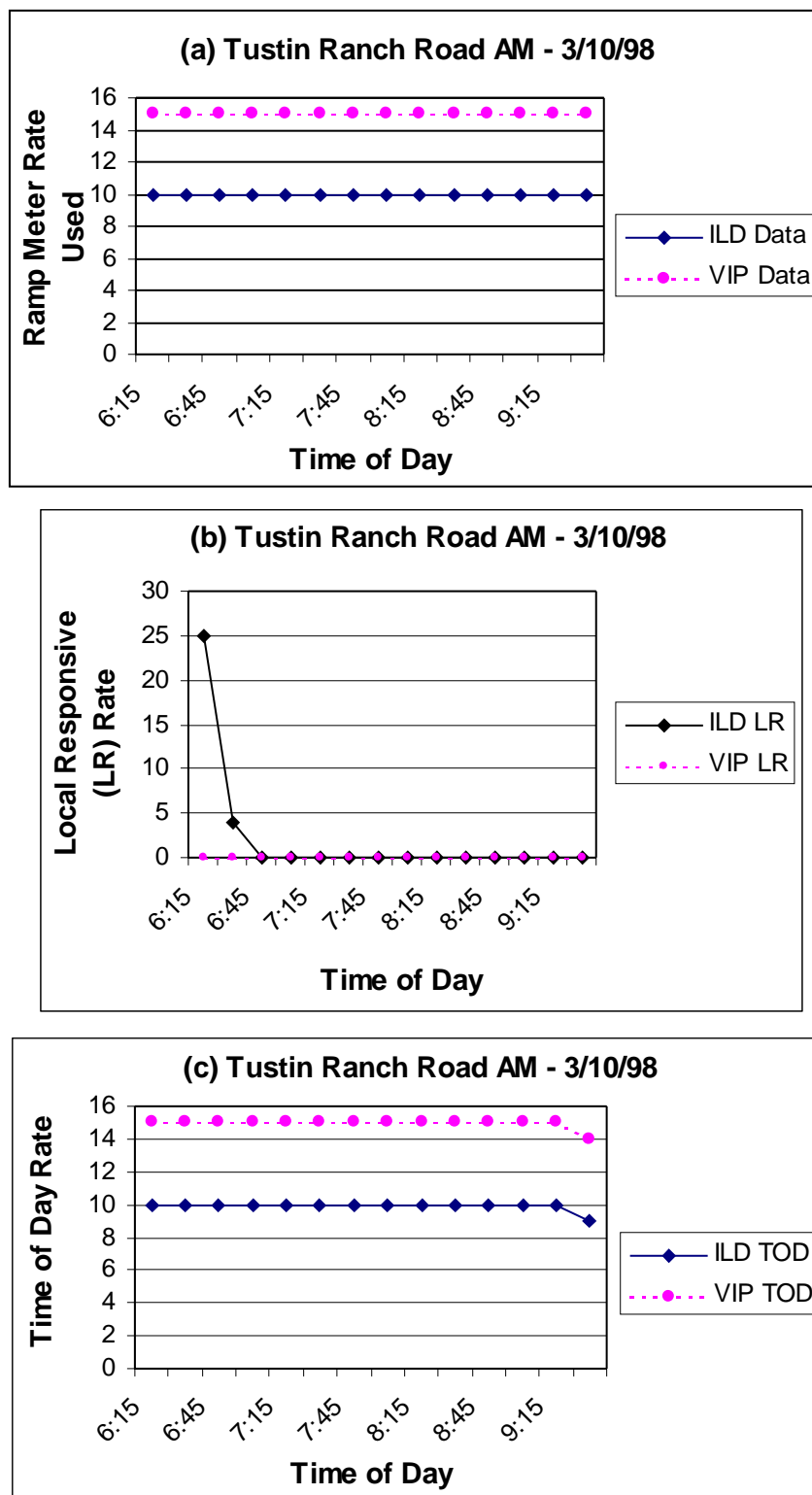


Figure J-114. Ramp meter rates (vehicles/minute) at Tustin Ranch Road for AM rush hours on 3/10/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

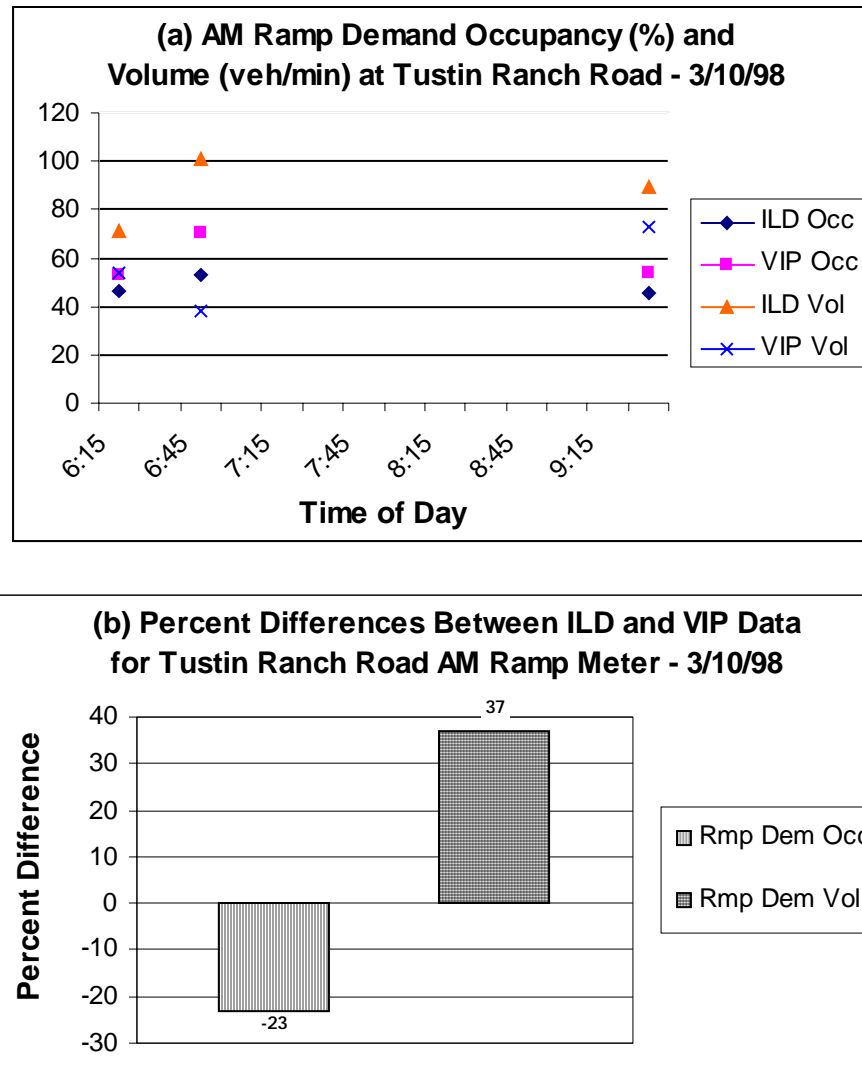


Figure J-115. ILD and VIP ramp and mainline data at Tustin Ranch Road ramp meter for AM rush hours on 3/10/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

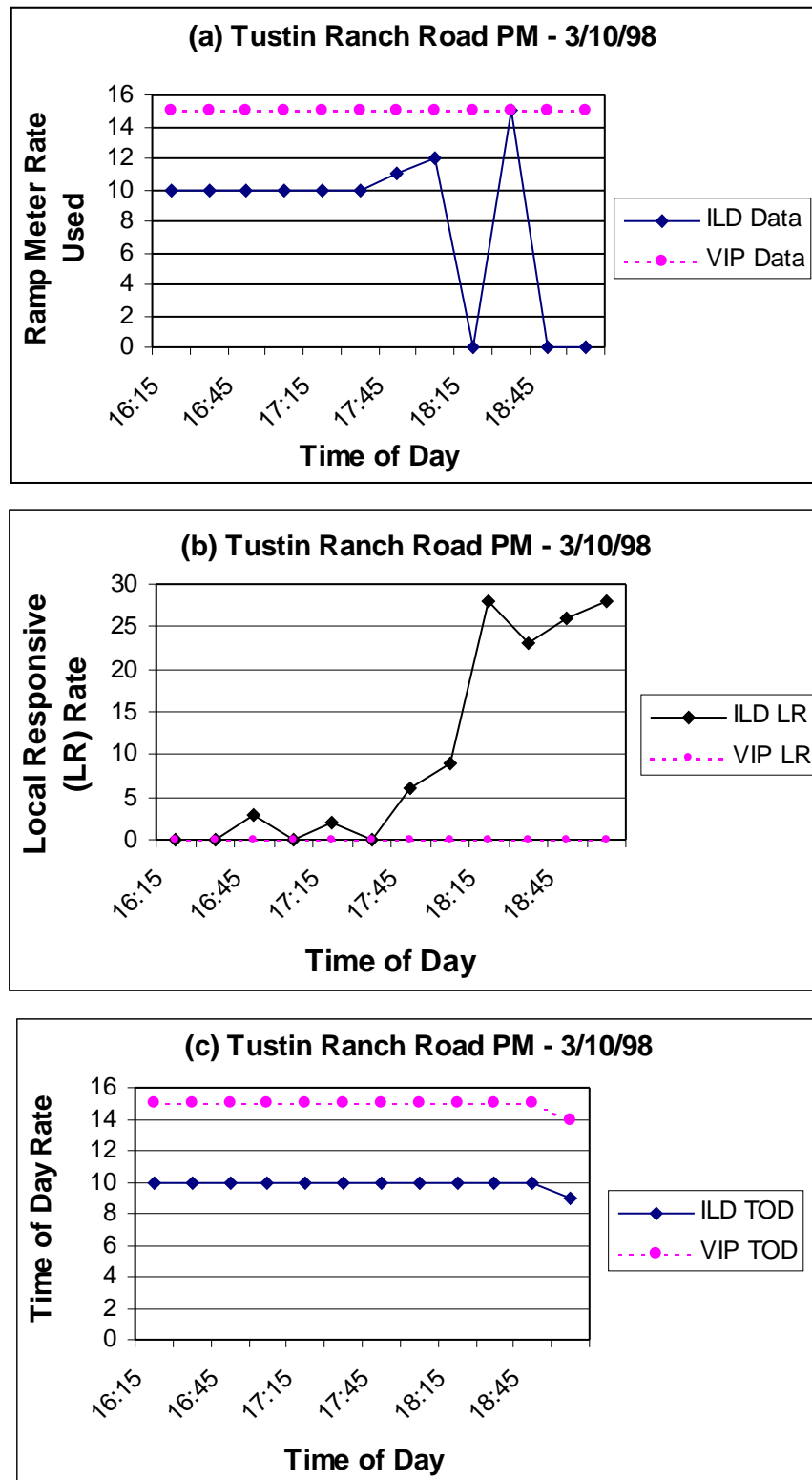


Figure J-116. Ramp meter rates (vehicles/minute) at Tustin Ranch Road for PM rush hours on 3/10/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

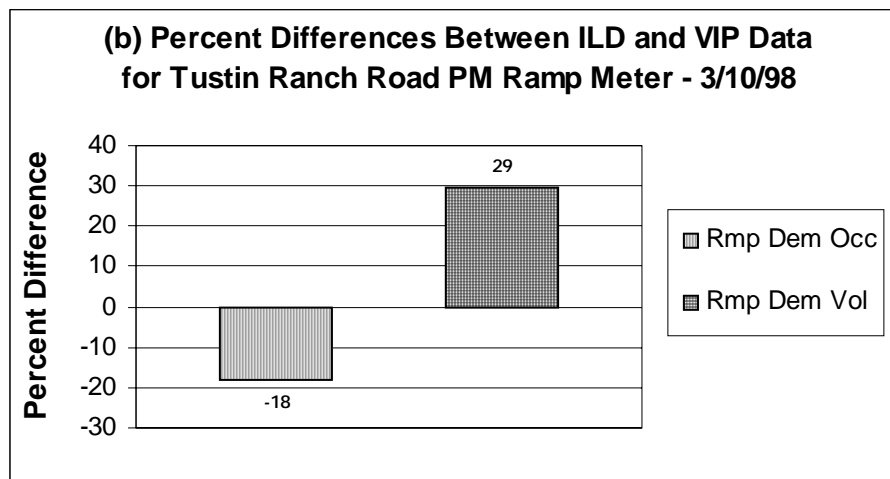
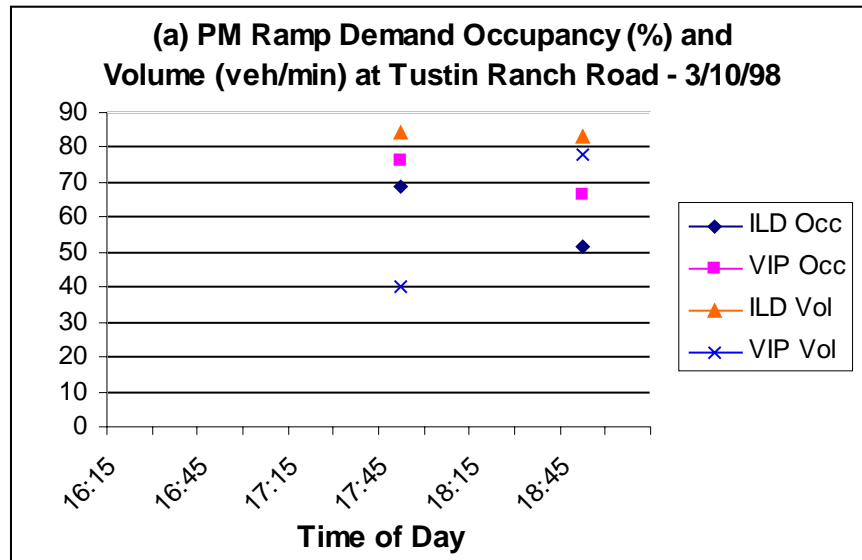


Figure J-117. ILD and VIP ramp and mainline data at Tustin Ranch Road ramp meter for PM rush hours on 3/10/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

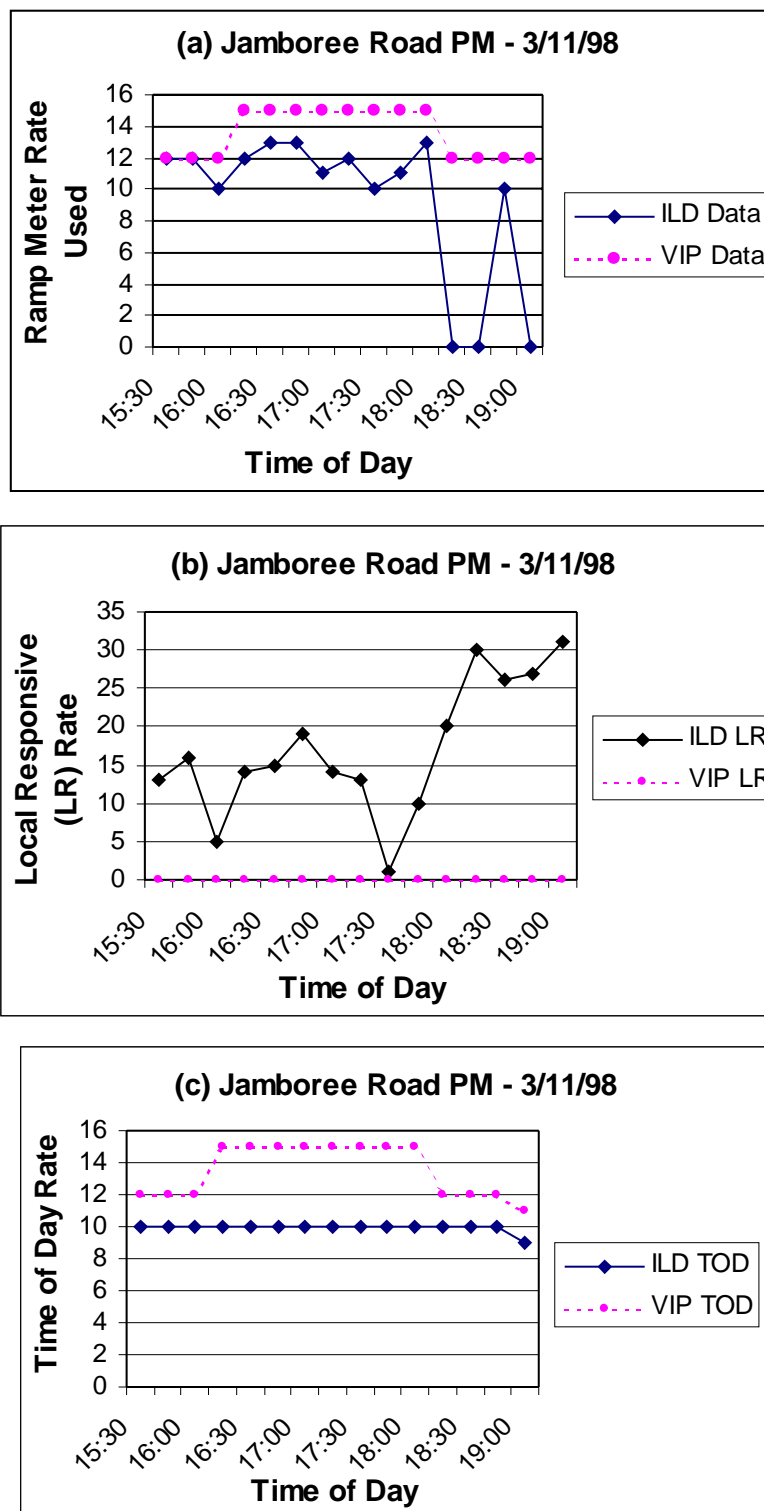


Figure J-118. Ramp meter rates (vehicles/minute) at Jamboree Road for PM rush hours on 3/11/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

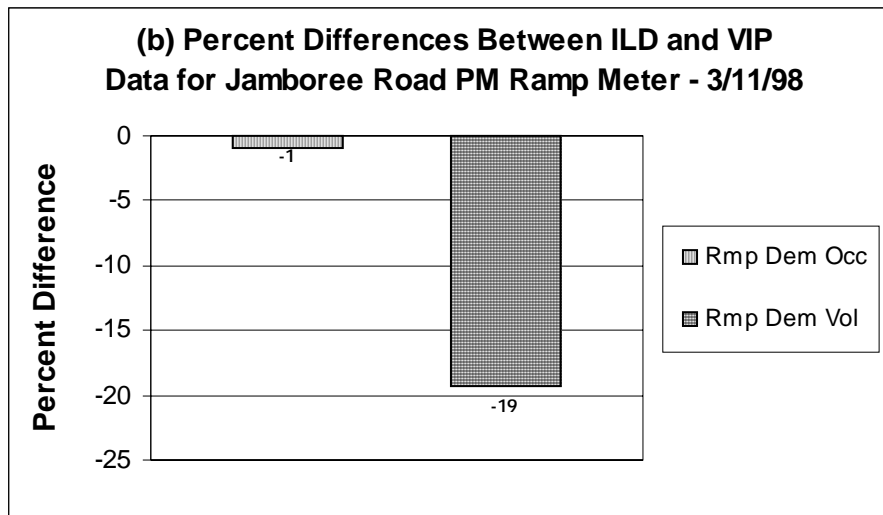
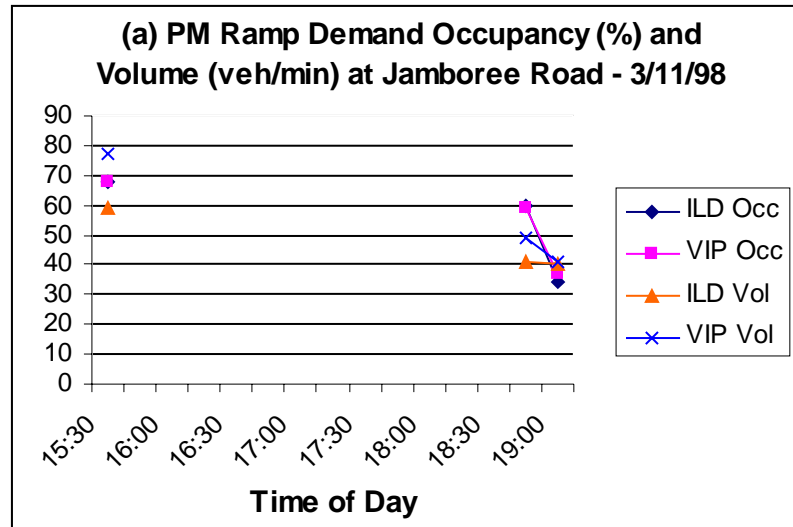


Figure J-119. ILD and VIP ramp and mainline data at Jamboree Road ramp meter for PM rush hours on 3/11/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

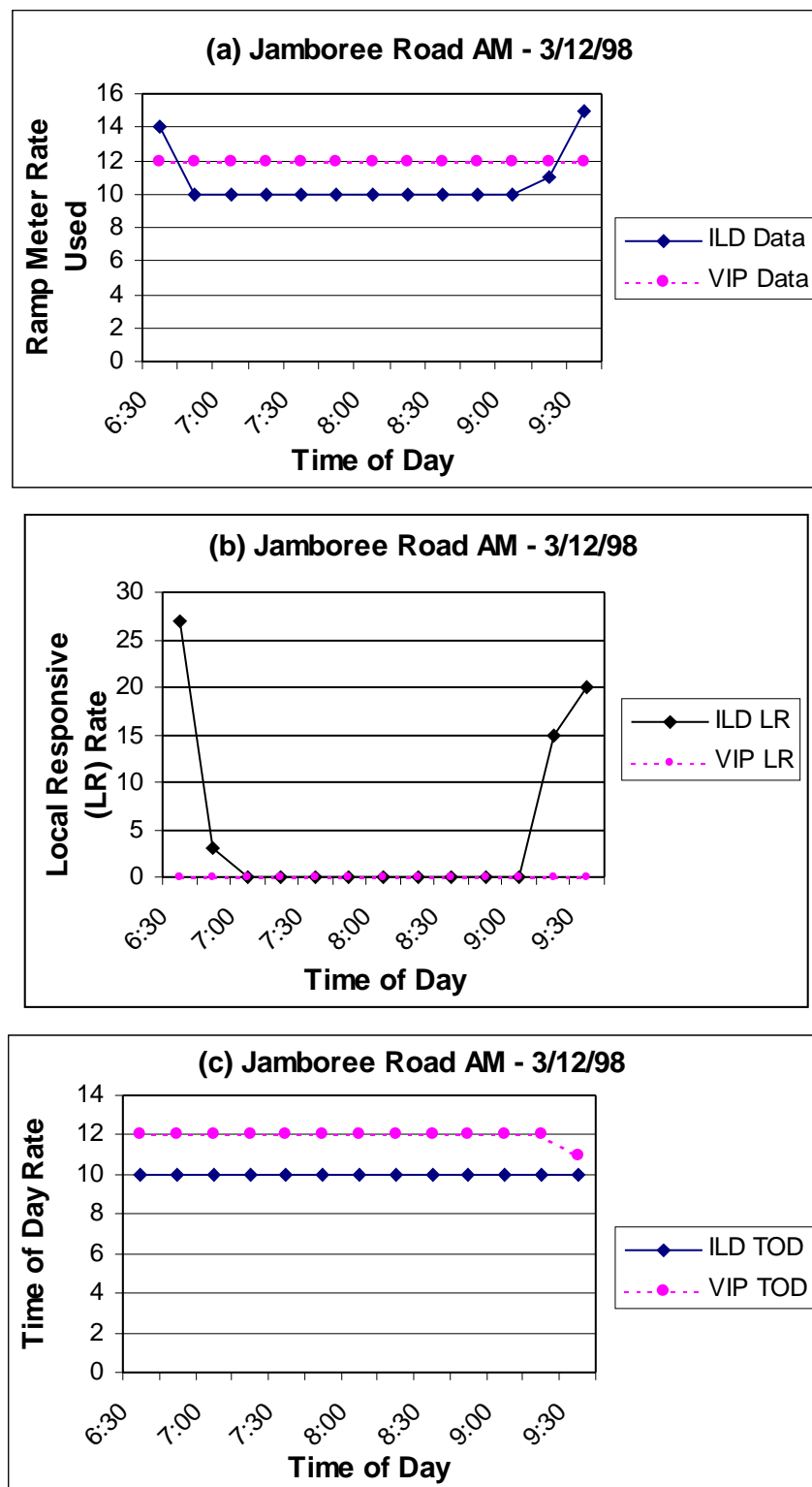


Figure J-120. Ramp meter rates (vehicles/minute) at Jamboree Road for AM rush hours on 3/12/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

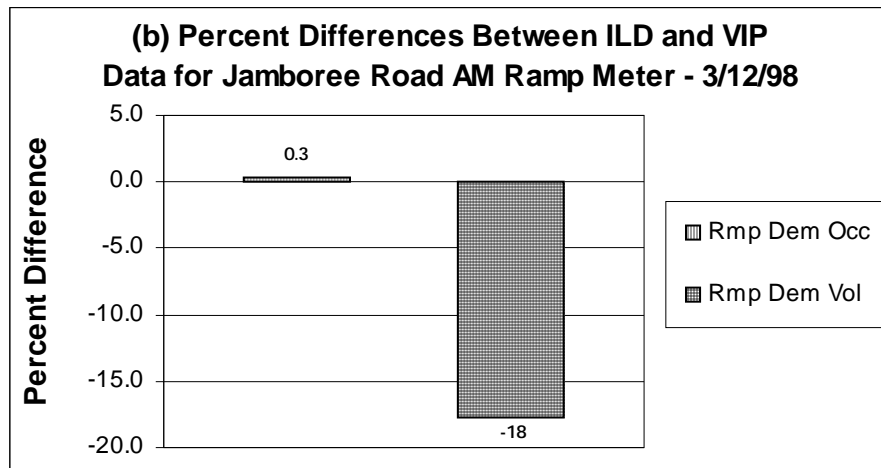
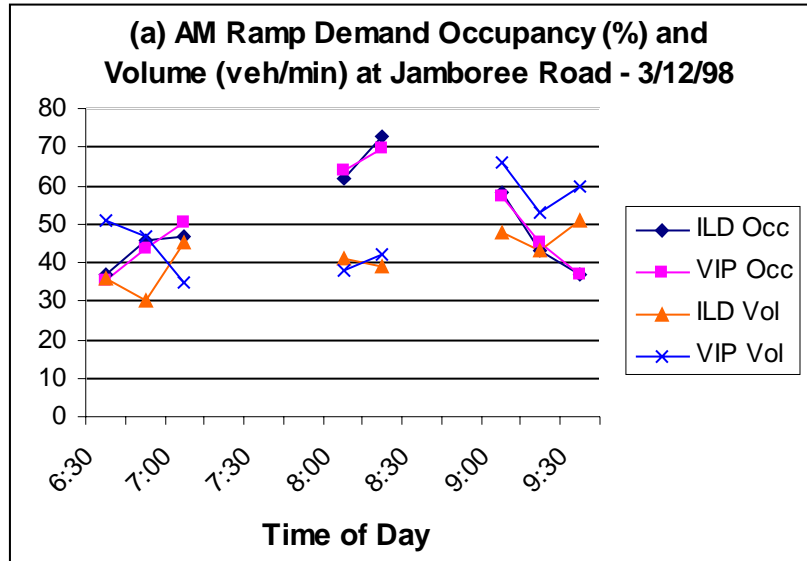


Figure J-121. ILD and VIP ramp and mainline data at Jamboree Road ramp meter for AM rush hours on 3/12/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

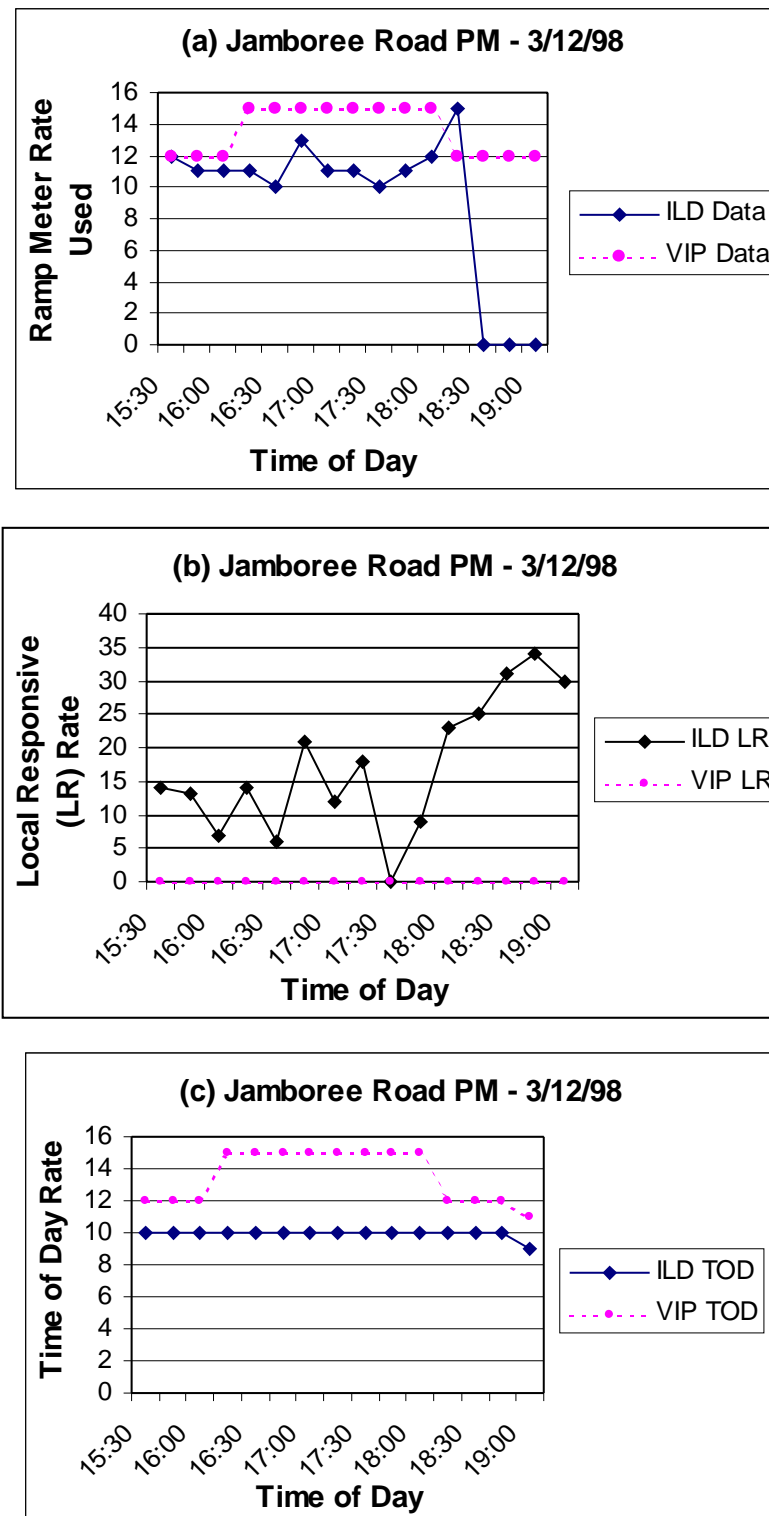


Figure J-122. Ramp meter rates (vehicles/minute) at Jamboree Road for PM rush hours on 3/12/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

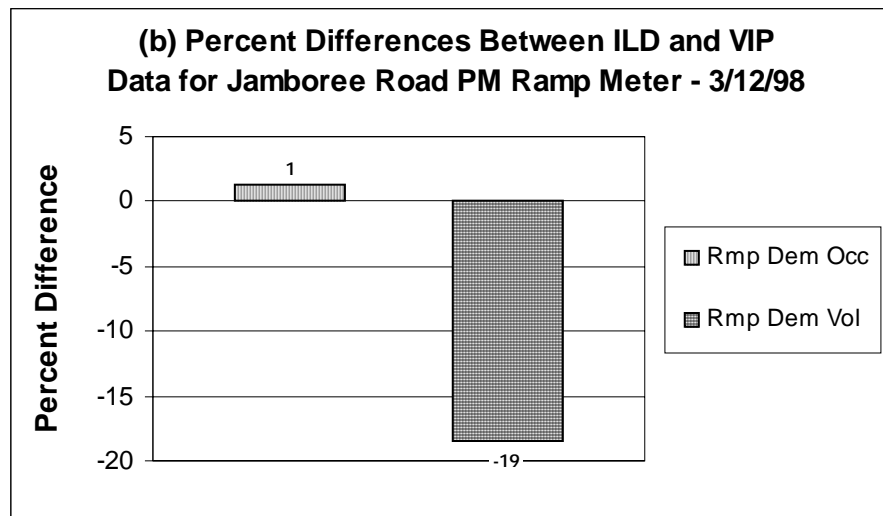
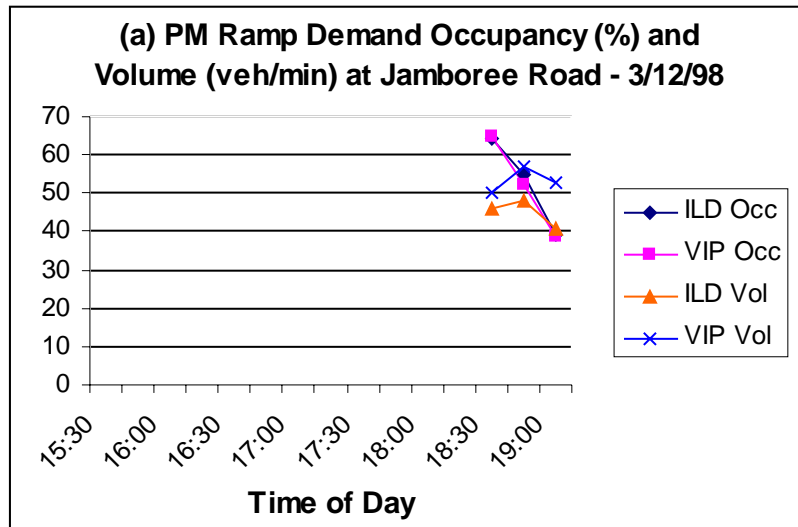


Figure J-123. ILD and VIP ramp and mainline data at Jamboree Road ramp meter for PM rush hours on 3/12/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

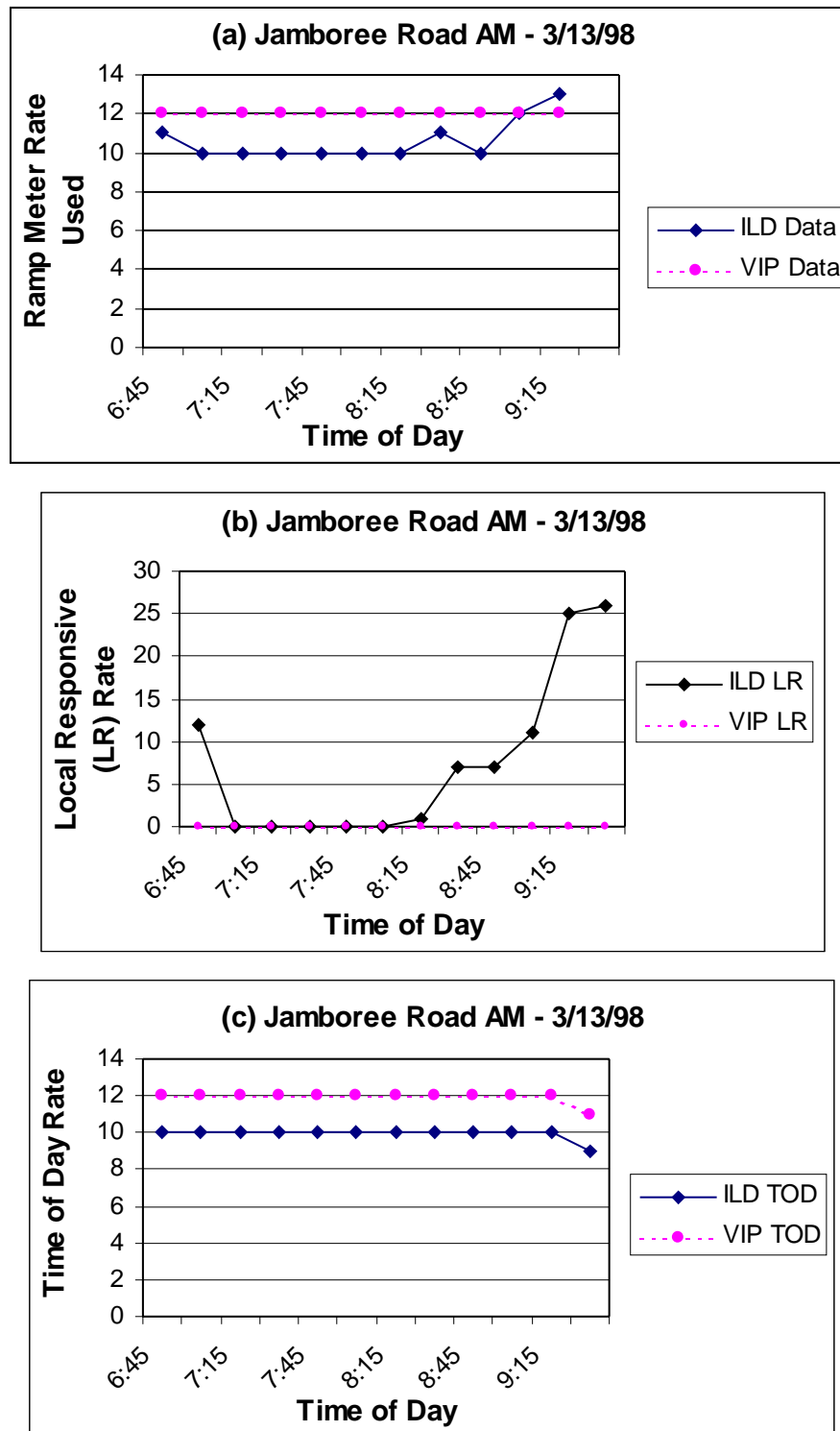


Figure J-124. Ramp meter rates (vehicles/minute) at Jamboree Road for AM rush hours on 3/13/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

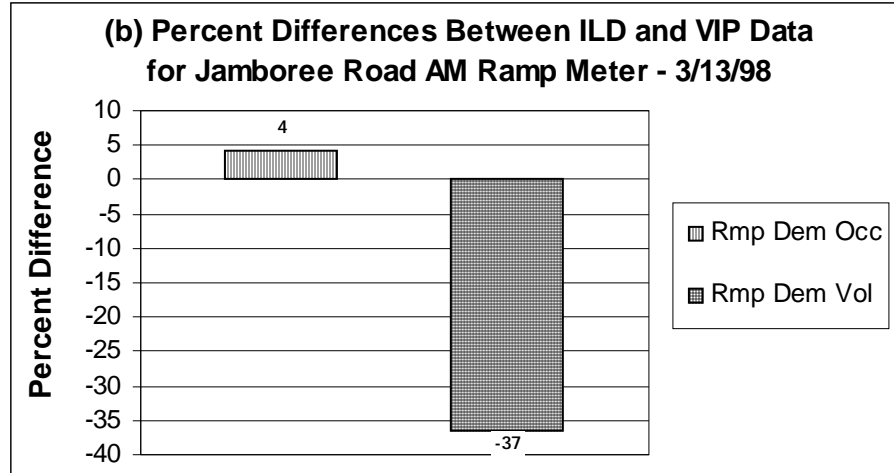
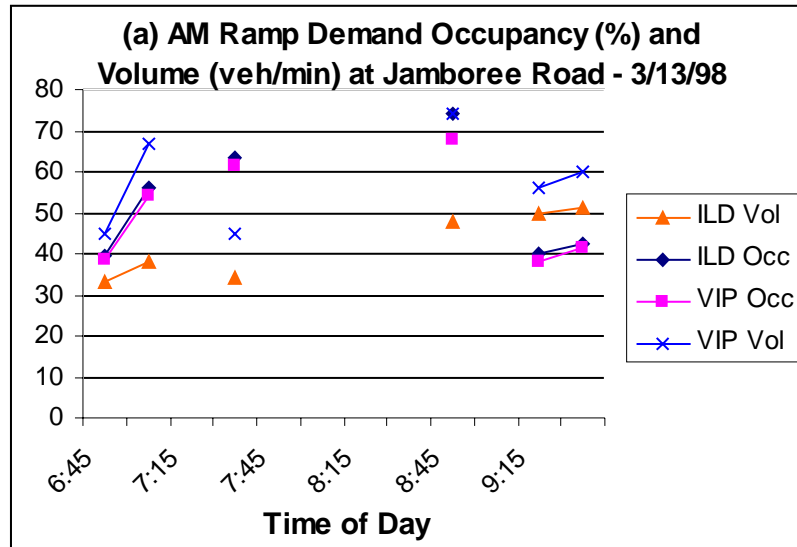


Figure J-125. ILD and VIP ramp and mainline data at Jamboree Road ramp meter for AM rush hours on 3/13/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

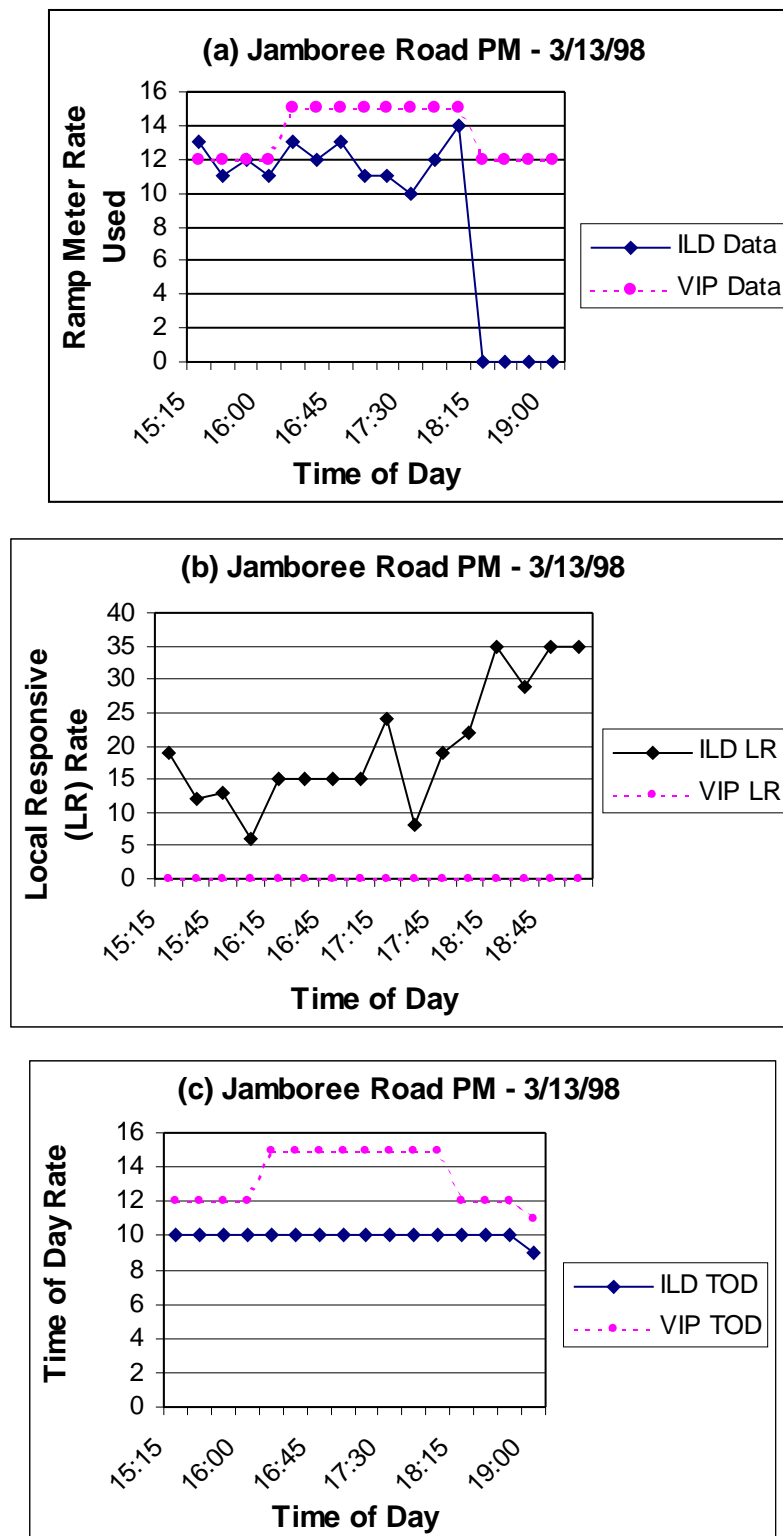


Figure J-126. Ramp meter rates (vehicles/minute) at Jamboree Road for PM rush hours on 3/13/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

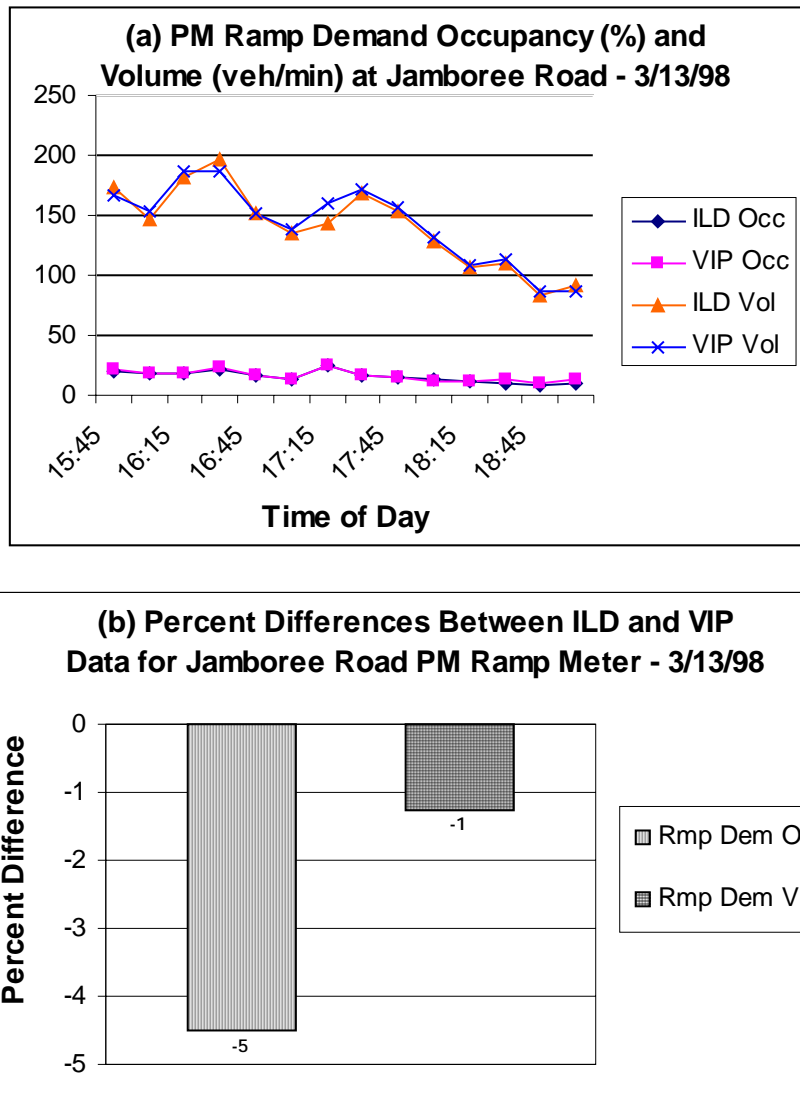


Figure J-127. ILD and VIP ramp and mainline data at Jamboree Road ramp meter for PM rush hours on 3/13/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

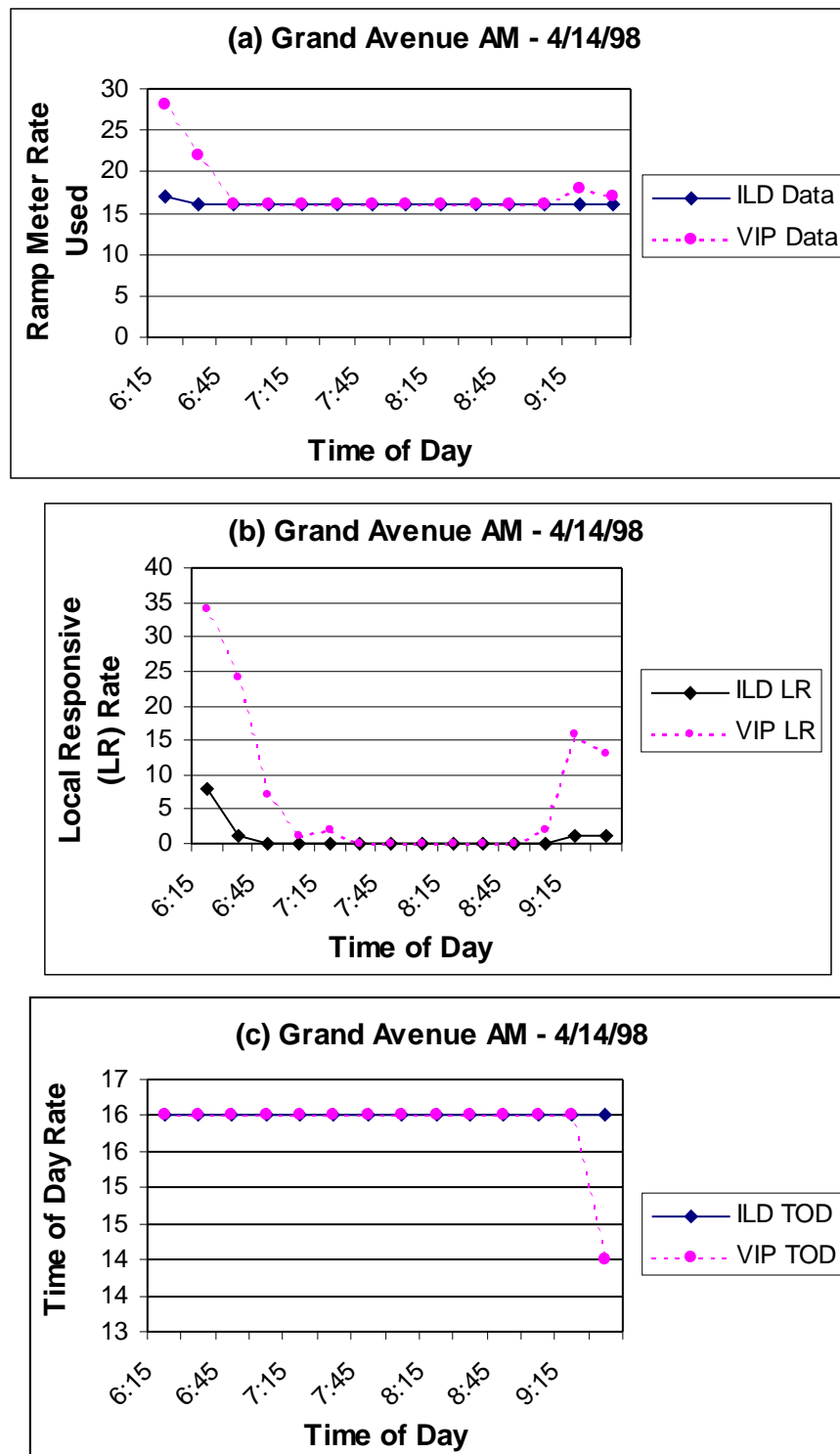


Figure J-128. Ramp meter rates (vehicles/minute) at Grand Avenue for AM rush hours on 4/14/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

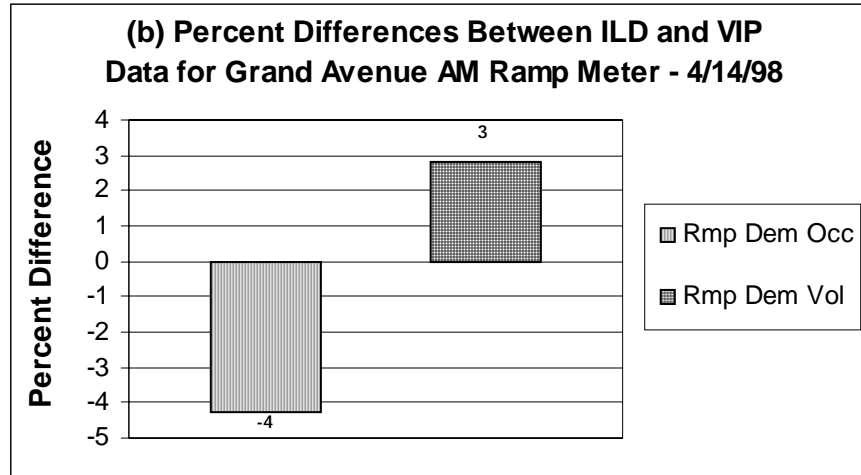
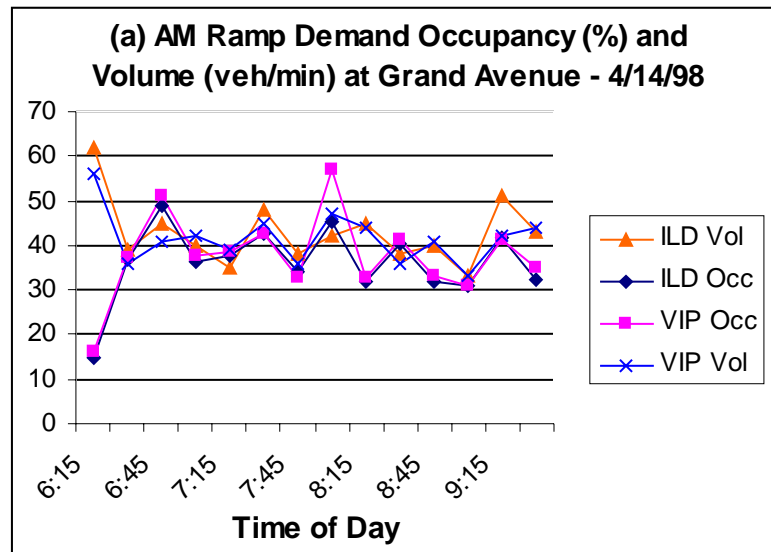


Figure J-129. ILD and VIP ramp and mainline data at Grand Avenue ramp meter for AM rush hours on 4/14/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

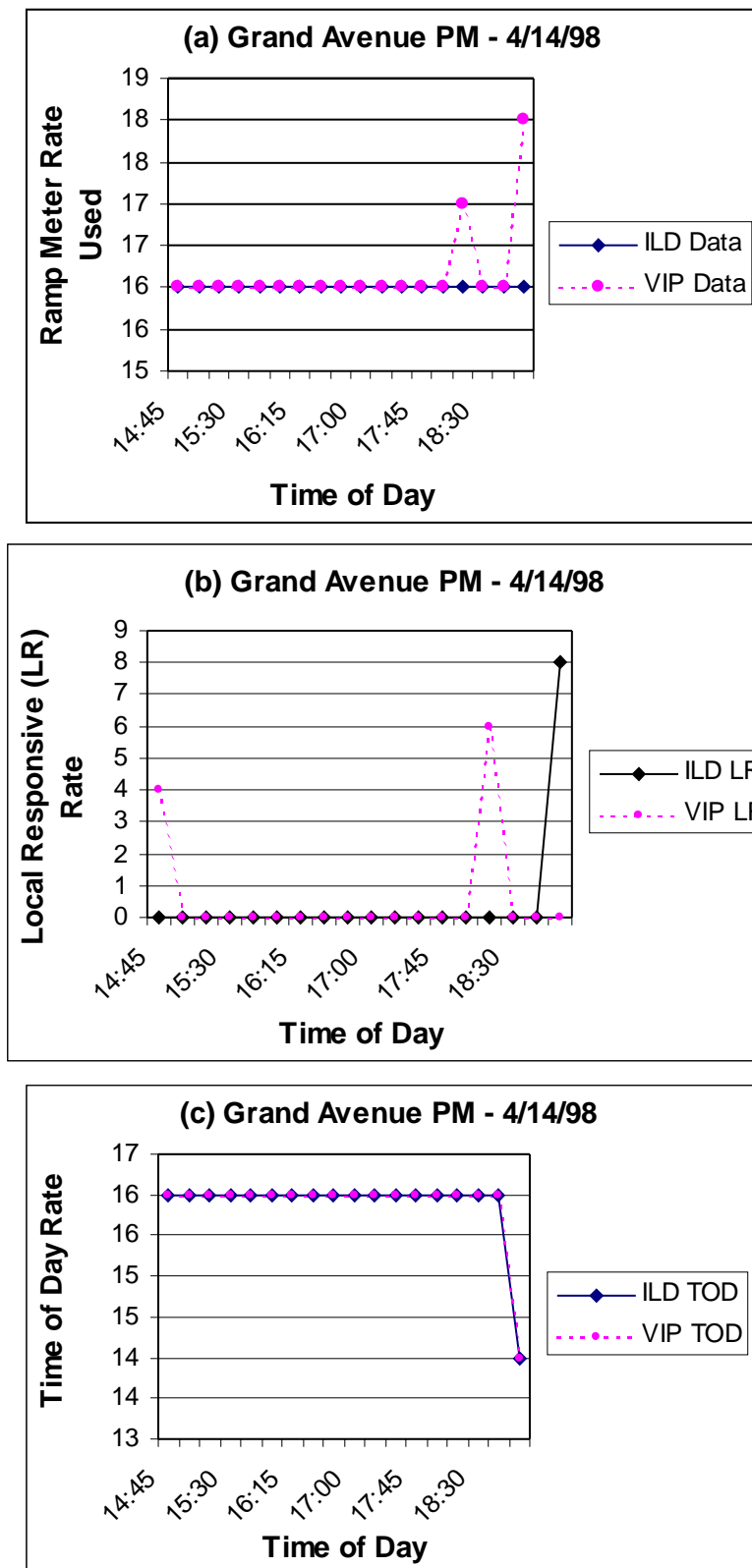


Figure J-130. Ramp meter rates (vehicles/minute) at Grand Avenue for PM rush hours on 4/14/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

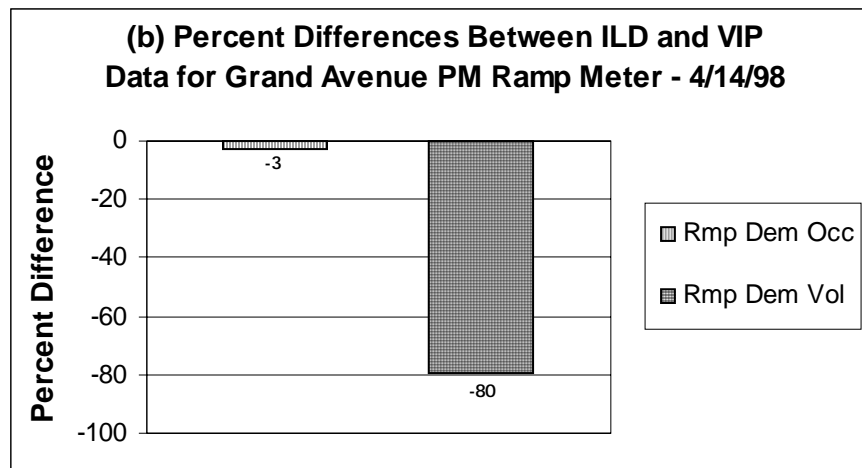
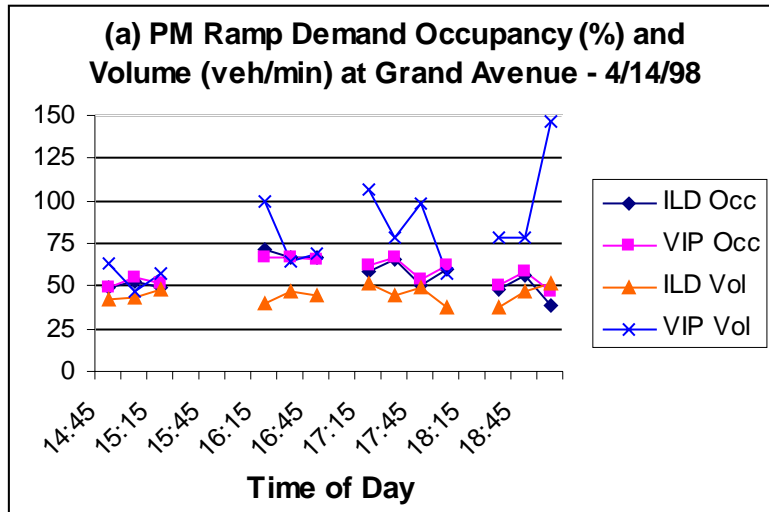


Figure J-131. ILD and VIP ramp and mainline data at Grand Avenue ramp meter for PM rush hours on 4/14/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

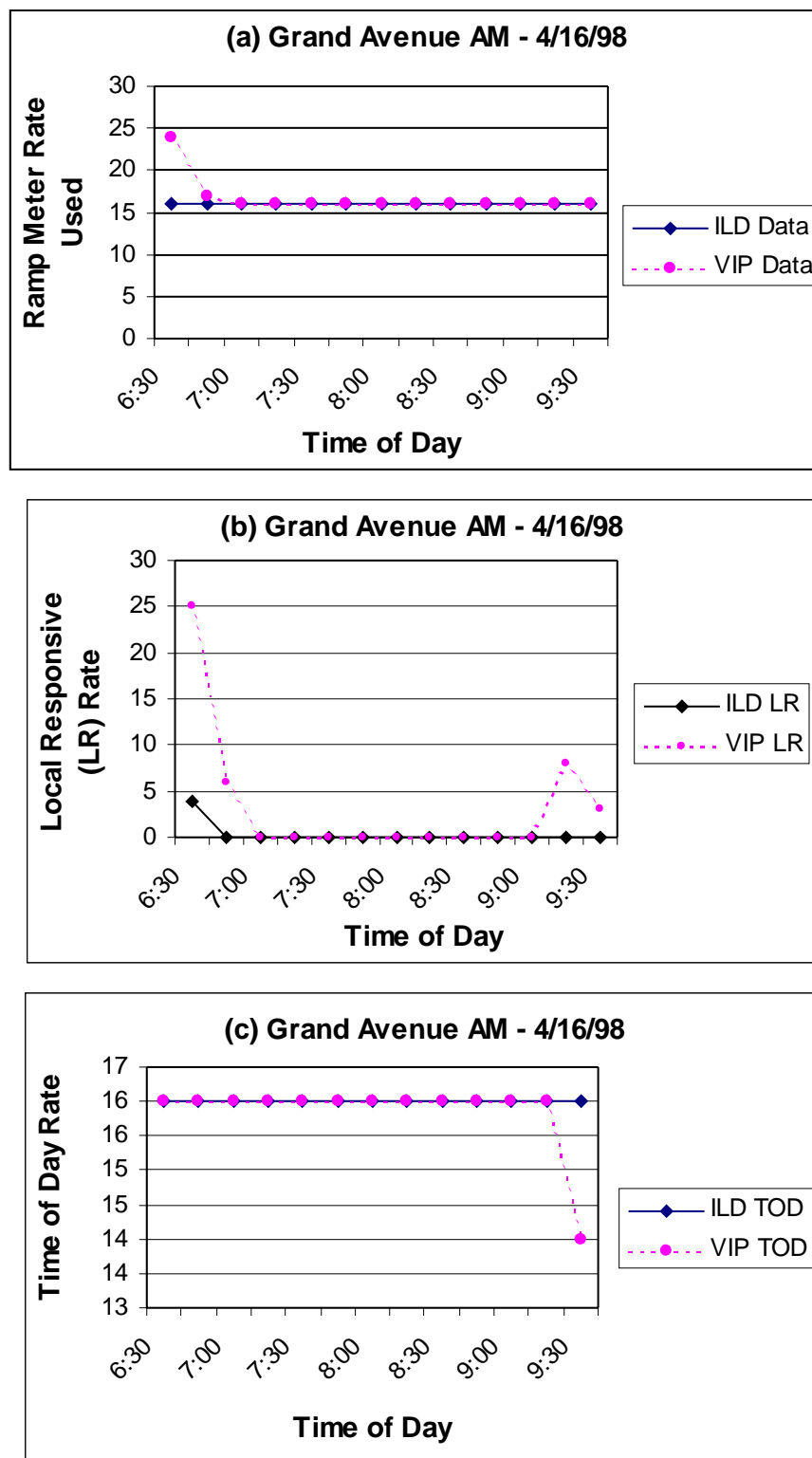


Figure J-132. Ramp meter rates (vehicles/minute) at Grand Avenue for AM rush hours on 4/16/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

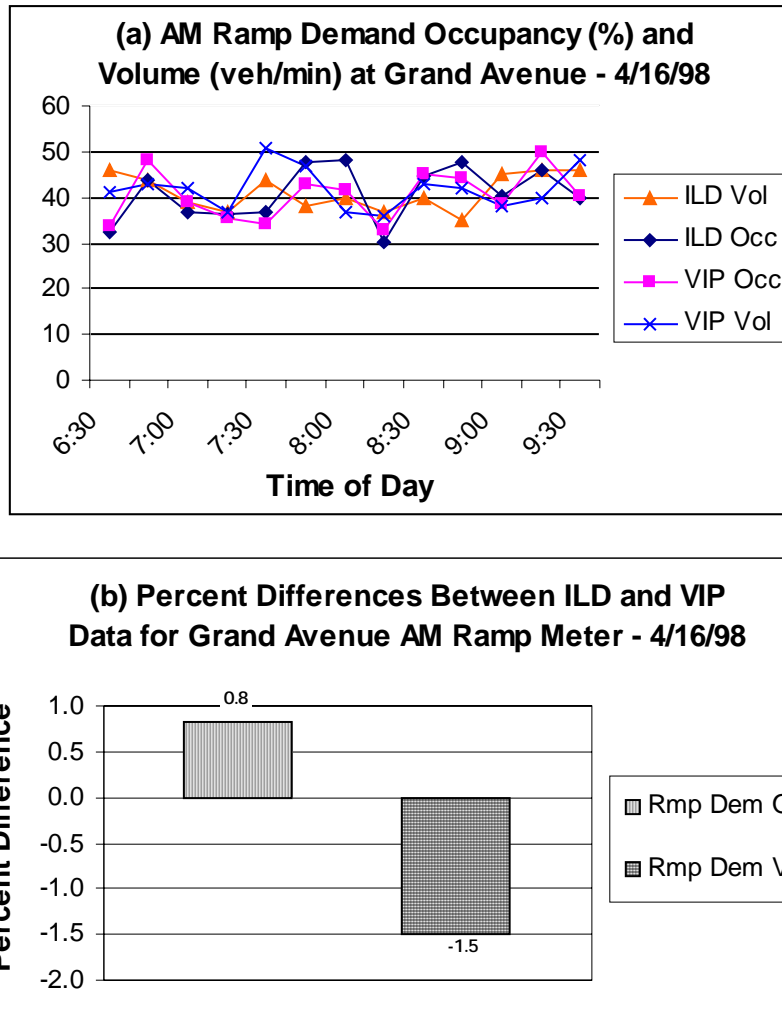


Figure J-133. ILD and VIP ramp and mainline data at Grand Avenue ramp meter for AM rush hours on 4/16/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

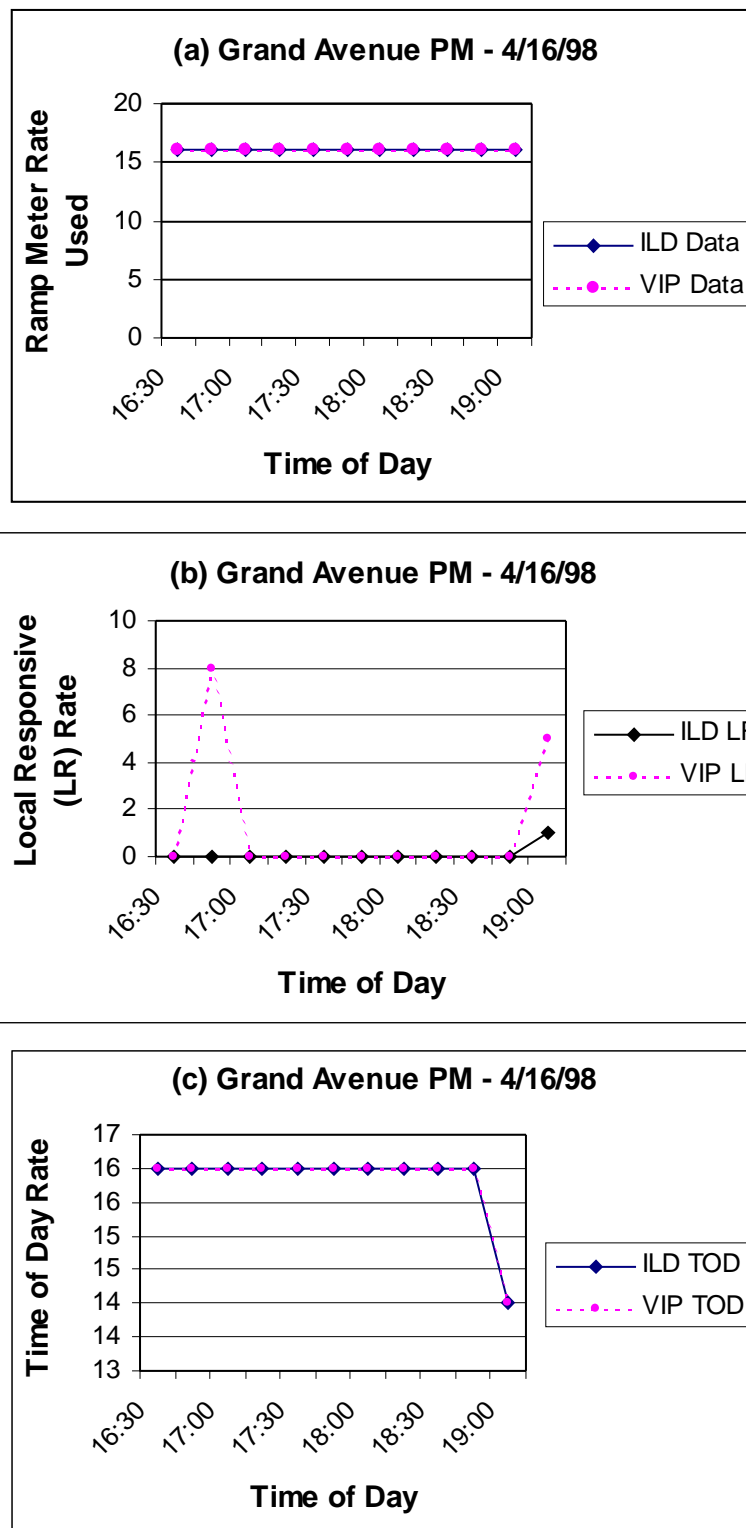


Figure J-134. Ramp meter rates (vehicles/minute) at Grand Avenue for PM rush hours on 4/16/98: (a) Ramp meter rate used, (b) Local responsive rate, (c) Time of day rate

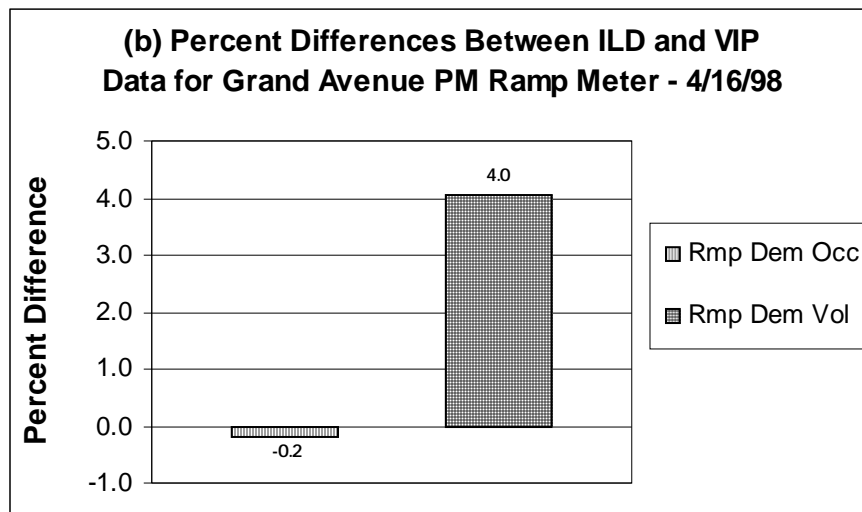
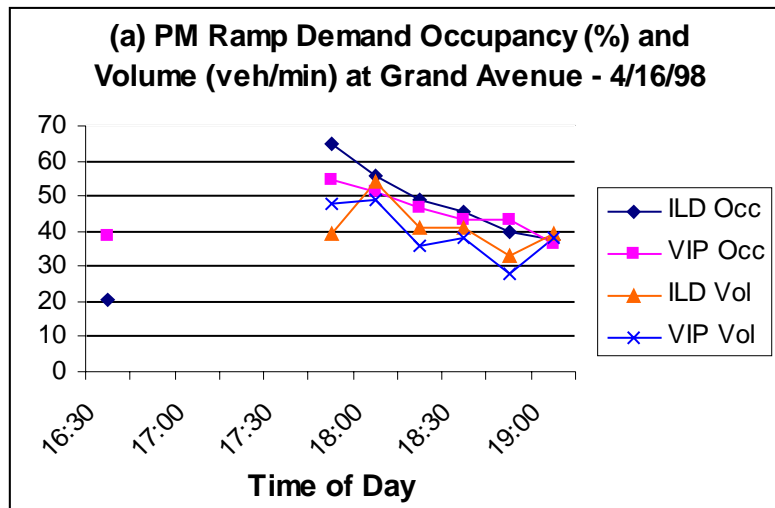


Figure J-135. ILD and VIP ramp and mainline data at Grand Avenue ramp meter for PM rush hours on 4/16/98: (a) Ramp demand occupancy and volume, (b) Percent differences between ILD and VIP data

**15-Minute Averages of 170 Controller Output Data Based on VIP and ILD
Measurements**

J-138

Table J-1

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/5/1998 AT 0530:00 TO 3/5/1998 AT 1000:00 PRINT DATE: 10/01/98
 FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER POST MILE: 28.34

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL		
0545:00	100.00*	0	100.00*	0	100.00*	0	100.00*	0	100.00*	0	---	---	0.00A	0A		-----
0600:00	51.29*	366	49.21*	302	48.03*	262	47.04*	221	44.50*	134	---	---	35.32A	0A		-----
0615:00	16.37	708	13.75	603	12.81	518	10.21	435	5.99*	228	---	---	13.78A	2925A		71.34
0630:00	19.29	783	15.96	688	15.76	634	13.04	527	7.00*	284	---	---	16.29A	3349A	----	69.11
0645:00	22.76	895	19.59	795	20.79	803	17.48	712	9.46*	373	---	---	20.88A	4150A		66.81
0700:00	21.63	867A	18.46	788A	20.11	790A	17.66	718A	10.65*	429A	---	---	21.63A	4390A		68.23
0715:00	21.96	849	20.67	816	22.57	813	19.57	744	11.33*	459	---	---	20.99A	3998A		64.02
0730:00	26.59	817	24.72	782	26.76	799	23.29	715	14.76	499	---	---	23.22	3612	16150A	52.28
0745:00	31.00	730	28.07	724	31.40	772	26.50	697	16.71*	476	---	---	26.83A	3412A		42.75
0800:00	31.79	728	26.51	716	29.38	752	24.69	690	17.12*	500	---	---	31.89A	4156A		43.81
0815:00	31.76	735	26.71	707	29.63	761	26.51	725	17.50	498	---	---	26.42	3426		43.58
0830:00	29.55	782	24.91	725	28.00	774	24.25	740	16.33	499	---	---	24.61	3520	14515A	48.08
0845:00	29.79	806	25.27	765	29.24	795	25.04	746	17.66	536	---	---	25.40	3648		48.28
0900:00	28.29	803	25.04	743	26.66	729	22.05	700	15.67	477	---	---	23.54	3452		49.29
0915:00	18.54	743	16.25	668	16.16	618	13.97	569	9.57*	358	---	---	18.08A	3587A		66.70
0930:00	20.11	790	16.96	689	16.52	628	14.05	550	8.66*	323	---	---	18.19A	3558A	14245A	65.74
0945:00	49.76*	492	48.42*	448	49.27*	435	47.56*	389	43.37*	210	---	---	174.79A	0A		-----
1000:00	22.81*	779	19.94*	678	19.55*	605	17.81*	555	11.79*	323	---	---	44.06A	0A		-----
AVERAGE	24.96	786	21.63	727	23.27	726	19.88	660	16.38	502	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	27.3	2663	21.2	2918	36.0	7454	28.1	8895	1.2	363	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

Table J-2

J-139

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/5/1998 AT 0530:00 TO 3/5/1998 AT 1000:00 PRINT DATE: 10/01/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28.35

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN	ESTMD
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT	VOLUME	SPEED
0545:00	0.94	41	6.65	271	5.78	215	7.49	292	0.00*	0	---	---	5.22A	1024A		65.98
0600:00	1.50	63	10.72	420	7.06	262	8.53	334	0.00*	0	---	---	6.95A	1349A		65.24
0615:00	2.31	98	11.67	463	7.98	290	9.80	378	0.00*	0	---	---	7.94A	1536A		65.06
0630:00	2.73*	114	14.36	558	10.57	384	11.94	458	0.00*	0	---	---	10.33A	1973A	5881A	64.18
0645:00	3.63*	147	17.09	646	13.14	485	14.59	540	0.00*	0	---	---	14.94A	2785A		62.65
0700:00	4.47*	185	16.85	646	13.82	504	15.23	574	0.00*	0	---	---	15.30A	2873A		63.13
0715:00	4.50*	185	17.34	647	14.72	527	15.25	559	0.00*	0	---	---	15.77A	2888A		61.56
0730:00	7.71*	288	20.81	562	19.65	525	20.07	527	0.00*	0	---	---	20.75A	2797A	11343A	45.29
0745:00	7.92*	278	29.54	445	30.08*	447	31.63	448	0.00*	0	---	---	41.17A	3044A		24.86
0800:00	7.77*	276	28.09	480	26.63	467	29.52	485	0.00*	0	---	---	27.61A	2344A		28.54
0815:00	7.21*	252	27.69	485	29.22	459	27.67	469	0.00*	0	---	---	28.19A	2355A		28.08
0830:00	6.36*	226	25.66	501	23.90	490	24.03	481	0.00*	0	---	---	24.53A	2453A	10196A	33.62
0845:00	7.19*	252	25.84	496	25.04	474	23.19	473	0.00*	0	---	---	24.69A	2405A		32.74
0900:00	6.83*	240	23.56	507	23.30	445	21.87	484	0.00*	0	---	---	22.91A	2393A		35.12
0915:00	4.10*	162	12.73	490	10.68	383	11.03	420	0.00*	0	---	---	12.16A	2295A		63.44
0930:00	6.53	263A	14.58	510A	11.31	390A	12.42	450A	0.00*	0A	---	---	11.21A	2016A	9109A	60.45
AVERAGE	2.82	59	18.95	480	16.19	397	17.76	436	0.00	0	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	4.8	609	46.9	19744	56.1	17353	56.5	14951	0.0	0	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

J-140

Table J-3

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/9/1998 AT 0530:00 TO 3/9/1998 AT 1000:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER

POST MILE: 28.34

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL			
0545:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A		-----
0600:00	48.05*	368	46.44*	299	46.03*	274	44.09*	217	42.29*	121	---	---	30.55A	0A		-----	
0615:00	16.84	703	13.11	584	12.92	529	10.14	422	5.29*	224	---	---	13.44A	2836A		70.91	
0630:00	19.18	814	16.57	716	16.33	647	13.86	545	6.96*	292	---	---	17.04A	3519A	----	69.39	
0645:00	29.61*	700	27.30*	624	27.87*	622	24.24*	514	18.31*	298	---	---	83.15A	0A		-----	
0700:00	22.37	791	20.61	766	22.43	774	17.95	673	10.28*	423	---	---	22.52A	4104A		61.26	
0715:00	28.34	790	24.73	761	27.26	792	22.01	740	12.46*	472	---	---	27.21A	4163A		51.42	
0730:00	31.68	794	27.03	762	30.69	793	26.30	748	15.63*	540	---	---	31.87A	4396A	----	46.35	
0745:00	30.17	769	25.67	754	29.46	781	25.33	750	14.54*	506	---	---	30.09A	4268A		47.67	
0800:00	31.21	745	26.93	747	30.98	754	26.91	735	17.51	555	---	---	26.71	3536		44.50	
0815:00	32.61	792	27.97	769	31.20	789	26.31	779	16.11*	513	---	---	29.40A	3984A		45.55	
0830:00	31.67	794	26.83	783	30.16	779	23.35	727	14.84*	472	---	---	28.73A	4031A	15819A	47.16	
0845:00	31.35	782	27.11	791	30.17	789	24.58	752	15.81*	503	---	---	31.64A	4437A		47.13	
0900:00	31.53	811	27.85	785	30.91	783	25.90	775	18.57	543	---	---	26.95	3697		46.11	
0915:00	18.39	713	16.40	666	16.45	595	14.85	557	10.59*	372	---	---	17.86A	3398A		63.96	
0930:00	17.44	679	15.60	615	14.88	568	13.72	520	7.61*	286	---	---	15.90A	3076A	14608A	65.01	
0945:00	91.02*	99A	90.76*	81A	90.19*	66A	90.12*	59A	89.87*	42A	---	---	232.22A	0A		-----	
1000:00	*** NO DATA ***																

AVERAGE	26.37	767	22.80	731	24.91	721	20.86	671	18.04	549	---	---				
VARIANCE	37.7	1754	28.0	4158	47.9	8908	32.5	12837	0.3	36	---	---				

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-4

J-141

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/9/1998 AT 0530:00 TO 3/9/1998 AT 1000:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28.35

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN	ESTMD
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT	VOLUME	SPEED
0545:00	1.17	50	7.81	320	5.82	221	7.20	282	0.00*	0	---	---	5.50A	1091A		66.67
0600:00	1.74	72	10.90	442	8.27	293	8.92	349	0.00*	0	---	---	7.46A	1445A		65.13
0615:00	2.60	108	13.36	528	8.91	333	10.33	405	0.00*	0	---	---	8.80A	1718A		65.59
0630:00	2.46*	106	14.83	579	10.72	408	12.26	476	0.00*	0	---	---	12.23A	2369A	6623A	65.10
0645:00	4.16*	167	16.05	613	13.36	500	14.14	527	0.00*	0	---	---	14.54A	2738A		63.29
0700:00	3.78*	154	18.15	586	16.24	532	16.81	524	0.00*	0	---	---	17.07A	2737A		53.89
0715:00	5.77*	215	24.38	554	19.83	507	21.96	513	0.00*	0	---	---	22.05A	2623A		39.99
0730:00	7.12*	257	28.29	520	27.84	481	26.13	494	0.00*	0	---	---	27.42A	2492A	10590A	30.54
0745:00	8.06*	292	26.20	503	26.04	483	25.59	493	0.00*	0	---	---	26.15A	2503A		32.18
0800:00	7.75*	274	30.31	466	30.81	448	27.95	459	0.00*	0	---	---	29.69A	2288A		25.91
0815:00	7.57*	265	26.84	488	26.18	451	28.57	497	0.00*	0	---	---	27.20A	2393A		29.58
0830:00	7.16*	242	23.98	484	25.36	454	24.99	472	0.00*	0	---	---	24.78A	2350A	9535A	31.88
0845:00	8.01*	274	25.27	493	26.18	475	25.10	493	0.00*	0	---	---	25.58A	2448A		32.17
0900:00	6.29*	220	24.25	482	25.42	443	24.34	450	0.00*	0	---	---	24.67A	2292A		31.22
0915:00	3.74*	150	12.04	455	11.17	388	11.36	415	0.00*	0	---	---	12.19A	2235A		61.65
0930:00	3.42	143	10.89	431	9.39	343	10.02	387	0.00*	0	---	---	8.43A	1630A	8605A	65.00
0945:00	4.07	165	11.76	467	10.84	376	10.52	403	0.00*	0	---	---	9.30A	1764A		63.77
1000:00	3.87	160	12.07	473	9.94	347	10.64	406	0.00*	0	---	---	9.13A	1733A		63.79

AVERAGE 2.81 116 18.74 494 17.35 416 17.60 447 0.00 0 --- --- * = SUSPECT/MALFUNCTION DATA

VARIANCE 1.2 1904 50.6 4226 66.9 6555 56.2 4115 0.0 0 --- --- A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-142

Table J-5

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/9/1998 AT 1400:00 TO 3/9/1998 AT 1915:00 PRINT DATE: 08/25/98
 FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER POST MILE: 28.34

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL		
1415:00	*** NO DATA ***															
1430:00	*** NO DATA ***															
1445:00	*** NO DATA ***															
1500:00	*** NO DATA ***															
1515:00	*** NO DATA ***															
1530:00	*** NO DATA ***															
1545:00	*** NO DATA ***															
1600:00	26.52	10A	26.52	10A	26.52	10A	26.52	10A	26.52	10A	26.52	10A	26.52A	60A	240A	0.63
1615:00	28.92*	759A	26.23*	653A	26.38*	616A	24.89*	605A	20.16*	466A	28.79*	0A	86.03A	0A		----
1630:00	23.49	866	20.03	751	19.89	737	19.55	747	13.37*	546	---	---	20.28A	3827A		63.43
1645:00	20.74	792	19.07	719	18.10	666	17.09	667	11.93	497	---	---	17.38	3341		64.60
1700:00	21.81	825	19.58	730	18.94	679	17.96	657	12.62	495	---	---	18.18	3386	----	62.60
1715:00	19.19*	747	17.21*	659	15.89	590	15.28	561	10.96	422	---	---	21.17A	4031A		63.99
1730:00	21.20	826	18.80	734	16.87	614	16.97	653	12.17	456	---	---	17.20	3283		64.15
1745:00	17.67	692	15.60	604	14.53	566	14.74	576	10.31	392	---	---	14.57	2830		65.28
1800:00	16.93	686	14.64	586	12.91	510	11.99	484	8.99	346	---	---	13.09	2612	12756A	67.07
1815:00	16.34	629	15.46	583	14.10	524	14.06	525	9.96	343	---	---	13.98	2604		62.60
1830:00	12.33	468	12.37	464	11.91	430	11.30	429	10.21	390	---	---	11.63	2181		63.06
1845:00	10.05	370	12.33	425	13.14	434	12.56	424	12.45	418	---	---	12.11	2071		57.51
1900:00	10.51	362	11.42	396	10.97	388	10.61	398	10.93	397	---	---	10.89	1941	8797	59.92
1915:00	98.15*	3A	98.19*	5A	98.14*	3A	98.12*	3A	98.11*	3A	---	---	59.50A	0A		-----
AVERAGE	17.96	592	16.89	545	16.15	512	15.72	510	12.46	378	26.52	1	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	26.4	64651	18.0	44397	17.1	34257	17.8	34693	21.0	16595	0.0	0	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

Table J-6

J-143

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/9/1998 AT 1400:00 TO 3/9/1998 AT 1915:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28.35

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT		
1415:00	2.98	121	9.83	384	10.58	354	9.38	353	0.00*	0	---	---	8.19A	1515A		62.16
1430:00	3.31	135	10.94	425	11.04	360	10.24	381	0.00*	0	---	---	8.88A	1626A		61.54
1445:00	4.37	173	11.88	466	11.39	372	11.09	414	0.00*	0	---	---	9.68A	1781A		61.83
1500:00	6.05*	244	13.16	513	12.51	406	11.71	433	0.00*	0	---	---	13.13A	2409A	7331A	61.67
1515:00	4.80	195	11.44	451	11.68	372	10.81	402	0.00*	0	---	---	9.68A	1775A		61.63
1530:00	6.75*	267	12.98	498	12.51	421	12.31	452	0.00*	0	---	---	13.88A	2548A		61.69
1545:00	7.33*	287	13.01	507	13.74	432	12.63	463	0.00*	0	---	---	13.70A	2475A		60.71
1600:00	8.27*	320	14.90	550	14.24	446	13.74	485	0.00*	0	---	---	15.21A	2671A	9468A	59.02
1615:00	6.87*	278	12.28	475	11.73	391	11.56	435	0.00*	0	---	---	12.25A	2270A		62.29
1630:00	7.52*	288	13.61	517	11.94	396	12.21	447	0.00*	0	---	---	14.51A	2638A		61.11
1645:00	5.90*	223	11.40	441	10.69	357	10.97	414	0.00*	0	---	---	12.74A	2343A		61.84
1700:00	6.20*	245	13.34	515	12.26	403	12.08	442	0.00*	0	---	---	12.83A	2337A	9589A	61.25
1715:00	5.53	222	11.44	454	10.46	369	10.12	385	0.00*	0	---	---	9.39A	1788A		64.01
1730:00	7.51*	300	13.70	526	11.90	410	12.20	451	0.00*	0	---	---	13.74A	2553A		62.45
1745:00	6.16	244	10.63	415	10.07	351	9.81	374	0.00*	0	---	---	9.16A	1730A		63.45
1800:00	5.40	214	10.75	416	8.99	321	9.47	355	0.00*	0	---	---	8.65A	1633A	7703A	63.40
1815:00	4.85	192	9.02	359	9.25	323	8.38	320	0.00*	0	---	---	7.88A	1493A		63.70
1830:00	4.30	170	9.05	354	8.64	304	8.27	319	0.00*	0	---	---	7.57A	1434A		63.69
1845:00	3.61	146	8.59	330	8.99	315	8.81	332	0.00*	0	---	---	7.50A	1404A		62.94
1900:00	2.97	125	7.32	295	8.13	282	7.39	284	0.00*	0	---	---	6.45A	1233A	5563A	64.23
1915:00	2.80	112	6.28	256	7.53	256	6.80	259	0.00*	0	---	---	5.85A	1104A		63.39
AVERAGE	4.26	171	11.22	436	10.87	364	10.48	390	0.00	0	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	1.2	1735	4.8	6264	3.1	2388	3.3	3700	0.0	0	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-144

Table J-7

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/10/1998 AT 0530:00 TO 3/10/1998 AT 1000:00 PRINT DATE: 08/25/98
 FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER POST MILE: 28.34

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL			
0545:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A		-----
0600:00	47.32*	357	45.56*	313	45.00*	285	44.07*	236	41.56*	116	---	---	31.24A	0A		-----	
0615:00	17.30	712	14.53	588	12.54	486	10.86	418	5.53*	213	---	---	14.01A	2795A		67.04	
0630:00	20.36	793	16.06	660	14.48	571	12.90	504	7.20*	280	---	---	16.42A	3250A	----	66.53	
0645:00	24.19	867	20.71	781	21.14	686	19.03	614	9.46*	354	---	---	21.94A	3811A		58.39	
0700:00	25.60	869	21.55	774	23.49	737	21.74	667	10.97*	436	---	---	24.65A	4125A		56.25	
0715:00	32.21	808	26.50	741	26.43	691	25.60	658	13.90*	449	---	---	30.23A	4025A		44.75	
0730:00	29.04	824	25.29	766	25.84	724	25.91	687	15.16*	482	---	---	29.76A	4265A	16227A	48.18	
0745:00	30.04	814	27.10	761	27.33	730	25.16	680	16.41	493	---	---	25.21	3478		46.38	
0800:00	31.96	791	28.65	721	31.99	713	26.15	672	18.05	483	---	---	27.36	3380		41.52	
0815:00	33.22	814	28.97	746	29.32	676	26.22	689	18.84	512	---	---	27.31	3437		42.30	
0830:00	39.75	688	37.73	680	38.48	599	32.39	634	22.99	493	---	---	34.27	3094	13389	30.35	
0845:00	33.94	787	29.76	760	30.77	681	26.93	684	18.90*	477	---	---	30.91A	3734A		40.61	
0900:00	32.54	796	30.05	767	27.70	689	24.70	668	17.29	491	---	---	26.46	3411		43.34	
0915:00	31.07	844	27.49	777	26.23	694	22.62	668	16.87	493	---	---	24.85	3476		47.01	
0930:00	19.80	745	16.84	648	15.81	584	14.11	522	8.99*	323	---	---	17.11A	3208A	13829A	63.04	
0945:00	18.74	766A	16.60	685A	15.71	586A	14.18	556A	9.11*	335A	---	---	18.02A	3568A		66.55	
1000:00	*** NO DATA ***																
AVERAGE	27.98	766	24.52	698	24.48	634	21.90	600	18.41	494	---	---	* = SUSPECT/MALFUNCTION DATA				
VARIANCE	41.0	15808	40.4	14530	50.0	14981	36.8	15326	4.8	76	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR				
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																	

Table J-8

J-145

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/10/1998 AT 0530:00 TO 3/10/1998 AT 1000:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28.35

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL		
0545:00	1.07	46	7.36	302	5.94	217	6.58	264	0.00*	0	---	---	5.24A	1036A		66.52
0600:00	1.69	69	9.59	396	7.11	269	7.94	319	0.00*	0	---	---	6.58A	1316A		67.22
0615:00	2.58	108	11.78	466	8.56	320	10.19	398	0.00*	0	---	---	8.28A	1615A		65.59
0630:00	2.91*	123	14.08	547	10.42	388	11.62	445	0.00*	0	---	---	10.69A	2044A	6012A	64.29
0645:00	3.94*	163	16.07	600	12.98	456	13.95	512	0.00*	0	---	---	14.35A	2618A		61.32
0700:00	4.95*	204	18.25	606	14.99	503	15.88	528	0.00*	0	---	---	16.43A	2740A		56.07
0715:00	5.40*	205	28.00	493	24.92	475	25.54	468	0.00*	0	---	---	26.16A	2393A		30.76
0730:00	7.64*	292	22.94	532	24.17	503	23.23	509	0.00*	0	---	---	23.78A	2637A	10388A	37.27
0745:00	8.41*	297	25.20	501	25.76	490	25.70	482	0.00*	0	---	---	25.79A	2495A		32.52
0800:00	9.06*	308	26.65	450	30.36	442	27.78	444	0.00*	0	---	---	28.26A	2227A		26.48
0815:00	7.29*	254	28.13	488	26.92	429	27.06	472	0.00*	0	---	---	27.44A	2328A		28.52
0830:00	6.97*	239	38.11	371	38.11	336	38.82	370	0.00*	0	---	---	40.07A	2092A	9142A	17.54
0845:00	8.51*	275	29.87	460	27.27	440	27.29	450	0.00*	0	---	---	27.00A	2190A		27.27
0900:00	6.76*	238	24.52	502	22.87	455	23.84	486	0.00*	0	---	---	23.75A	2405A		34.04
0915:00	7.70*	269	24.57	501	21.97	435	22.66	481	0.00*	0	---	---	23.07A	2362A		34.41
0930:00	4.26*	167	12.96	476	11.93	404	11.42	417	0.00*	0	---	---	12.33A	2205A	9162A	60.13
0945:00	4.17*	177A	10.90	429A	10.70	363A	11.29	432A	0.00*	0A	---	---	11.90A	2240A		63.25
1000:00	*** NO DATA ***															

AVERAGE 1.78 74 20.53 461 19.12 393 19.46 423 0.00 0 --- --- * = SUSPECT/MALFUNCTION DATA

VARIANCE 0.4 655 70.2 11678 83.7 10875 76.7 9450 0.0 0 --- --- A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-146

Table J-9

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/10/1998 AT 1400:00 TO 3/10/1998 AT 1915:00 PRINT DATE: 07/28/98
 FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER POST MILE: 28.34

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL		
1415:00	*** NO DATA ***															
1430:00	*** NO DATA ***															
1445:00	*** NO DATA ***															
1500:00	*** NO DATA ***															
1515:00	*** NO DATA ***															
1530:00	*** NO DATA ***															
1545:00	*** NO DATA ***															
1600:00	*** NO DATA ***															
1615:00	24.48	896A	21.93	815A	22.20	801A	20.19	784A	14.20	556A	---	21.44	20.60A	3852A	2400	62.86
1630:00	23.20	849	19.80	755	19.67	721	18.26	719	13.10	511	---	19.24	18.81	3555	2195	63.54
1645:00	21.38	786	19.23	715	18.67	709	18.01	679	12.99	506	---	18.64	18.06	3395	2103	63.20
1700:00	21.84	823	19.37	734	19.30	705	17.37	626	12.76	507	---	18.68	18.13	3395	2065	14197A 62.95
1715:00	22.24	831	19.60	739	18.97	723	17.69	640	13.92	512	---	18.25	18.49	3445	2102	62.64
1730:00	21.69	817	19.37	714	18.44	650	17.14	628	14.08	493	---	18.32	18.14	3302	1942	61.17
1745:00	17.65	705	15.87	624	15.03	559	14.45	566	10.27*	381	---	15.12	15.38A	2909A	1741	65.31
1800:00	17.33	678	14.63	605	13.49	502	12.81	506	9.19	343	---	13.64	13.49	2634	1613	12370A 65.63
1815:00	14.99	609	14.13	564	12.89	499	12.49	494	9.03*	333	---	13.17	15.03A	2954A	1557	66.05
1830:00	13.00	512	12.75	507	12.09	474	11.86	471	9.76	380	---	12.23	11.89	2344	1452	66.25
1845:00	11.86	412	12.57	449	12.17	426	11.56	429	11.97	429	---	12.10	12.03	2145	1304	59.95
1900:00	11.86	431	12.91	457	12.07	417	12.45	420	12.23	428	---	12.48	12.30	2153	1294	9596A 58.83
1915:00	97.91*	3A	97.93*	3A	97.94*	3A	97.96*	5A	97.96*	5A	---	---	54.29A	0A		-----

Enter on Worksheet B

AVERAGE 11.08 398 10.11 366 9.75 342 11.08 331 10.49 246 15.21
 VARIANCE 93.5 ***** 74.3 97379 70.7 86291 93.5 79058 100.3 51143 431.0

0 * = SUSPECT/MALFUNCTION DATA
 0 A = ADJUSTED DATA / --- = INACTIVE DETECTOR
 ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-10

J-147

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/10/1998 AT 1400:00 TO 3/10/1998 AT 1915:00 PRINT DATE: 07/28/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28.35

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL			
1415:00	*** NO DATA ***																
1430:00	*** NO DATA ***																
1445:00	*** NO DATA ***																
1500:00	*** NO DATA ***																
1515:00	*** NO DATA ***																
1530:00	*** NO DATA ***																
1545:00	*** NO DATA ***																
1600:00	*** NO DATA ***																
1615:00	7.54*	303A	13.73	522A	12.02	408A	13.13	488A	0.00*	0A	---	---	12.46	11.93A	2207A	1418	62.20
1630:00	6.51*	257	13.09	499	12.03	399	12.54	458	0.00*	0	---	---	12.55	14.18A	2585A	1356	61.27
1645:00	6.46	256	12.14	464	11.43	381	10.95	409	0.00*	0	---	---	11.51	10.24A	1888A	1254	61.93
1700:00	6.78*	267A	12.68	488A	12.33	395A	12.03	439A	0.00*	0A	---	---	12.35	11.92A	2458A	1322	8838A
1715:00	6.20*	241	12.25	471	11.66	398	11.30	424	0.00*	0	---	---	11.74	13.73A	2543A	1293	62.26
1730:00	7.23*	283	13.70	514	12.40	419	12.19	451	0.00*	0	---	---	12.06	14.41A	2636A	1384	61.47
1745:00	6.19*	241	10.94	427	10.25	345	9.96	374	0.00*	0	---	---	10.28	12.06A	2238A	1146	62.38
1800:00	6.13	242	11.00	436	9.69	332	10.04	375	0.00*	0	---	---	10.24	9.21A	1731A	1143	9148A
1815:00	4.69	183	8.10	320	8.26	297	8.52	320	0.00*	0	---	---	8.29	7.39A	1400A	937	63.66
1830:00	5.06	203	9.72	379	8.92	312	9.40	346	0.00*	0	---	---	9.35	8.27A	1550A	1037	62.98
1845:00	3.94	159	8.72	350	9.37	322	8.55	323	0.00*	0	---	---	8.88	7.64A	1443A	945	63.44
1900:00	3.67	150	8.96	357	8.39	298	8.77	328	0.00*	0	---	---	8.71	7.45A	1416A	983	5809A
1915:00	3.62	146A	6.72	272A	7.06	260A	7.23	282A	0.00*	0A	---	---	7.00	6.16A	1198A	814	65.41
AVERAGE	2.24	86	6.75	249	6.37	207	3.52	227	0.00	0	3.52	0	* = SUSPECT/MALFUNCTION DATA				
VARIANCE	6.2	9670	31.0	42844	26.8	28691	8.7	34553	0.0	0	8.7	0	A = ADJUSTED DATA / --- = INACTIVE DETECTOR				
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																	

J-148

Table J-11

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/11/1998 AT 1400:00 TO 3/11/1998 AT 1915:00 PRINT DATE: 10/01/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER POST MILE: 27.54

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN	ESTMD	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT	VOLUME	SPEED	
															TOTALS	(2.38)	
1415:00	*** NO DATA ***																
1430:00	*** NO DATA ***																
1445:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A		-----
1500:00	35.27*	362	39.78*	511	38.20*	446	36.01*	374	35.03*	359			53.33A	0A	----	-----	
1515:00	13.29	489	19.11	711	17.95	648	14.57	551	12.94	524			15.57	2923		63.09	
1530:00	17.89	592	22.30	783	19.33	673	14.08	564	12.00	502			17.12	3114		61.14	
1545:00	19.00	606	20.96	766	17.97	655	15.19	570	12.34	515			17.09	3112		61.21	
1600:00	22.87	693	24.26	810	19.43	661	16.13	585	12.59	488			19.06	3237	12386	57.10	
1615:00	18.76	717	21.74	795	18.85	640	15.90	575	11.34*	466			19.52A	3581A		61.69	
1630:00	15.29	617	18.13	670	15.63	536	12.58	436	9.54	394			14.23	2653		62.65	
1645:00	13.81	561	17.30	629	13.92	482	12.17	434	9.64*	354			15.67A	2886A		61.89	
1700:00	13.91	598	16.21	583	14.33	492	12.87	439	10.99	428			13.67	2540	11660A	62.48	
1715:00	13.80	587	16.10	575	14.47	536	11.86	434	10.23	418			13.29	2550		64.49	
1730:00	14.83	607	17.37	573	14.46	458	12.80	433	10.89	396			14.07	2467		58.94	
1745:00	11.52	468	10.91	411	9.81	347	9.27	330	8.33	321			9.97	1877		63.29	
1800:00	11.32	459	11.15	419	9.77	348	8.97	334	7.24	271			9.69	1831	8725	63.51	
1815:00	10.00	407	10.47	380	9.74	336	8.29	300	6.00	231			8.90	1654		62.47	
1830:00	9.95	369	13.10	445	13.34	417	11.33	369	7.99*	286			12.44A	2119A		57.25	
1845:00	10.88	376	12.87	426	15.55	429	13.67	375	9.84	293			12.56	1899		50.81	
1900:00	10.33	355	13.25	416	14.12	423	12.47	389	9.85	320			12.00	1903	7575A	53.29	
1915:00	98.96*	4	98.89*	3	98.87*	2	98.87*	2	98.87*	2			39.68A	0A		-----	
AVERAGE	14.22	531	16.58	587	14.92	505	12.63	445	10.21	392	---	---	* = SUSPECT/MALFUNCTION DATA				
VARIANCE	13.3	12464	17.7	22826	9.9	13561	5.2	8650	4.1	8957	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR				
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																	

J-149

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/11/1998 AT 1400:00 TO 3/11/1998 AT 1915:00 PRINT DATE: 10/01/98

POST MILE: 27.55

TIME	MAIN		MAIN		MAIN		MAIN		MAIN		MAIN		LOCATION		60 MIN	ESTMD
	LANE #1		LANE #2		LANE #3		LANE #4		LANE #5		LANE #6		AVE	TOT	VOLUME	SPEED
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	TOTALS	(2.38)
1415:00	*** NO DATA ***															
1430:00	*** NO DATA ***															
1445:00	13.43	411A	0.00*	0A	14.01	360A	9.74	282A	11.00	282A	---	---	12.05A	1669A		46.56
1500:00	12.50	356	0.00*	0	12.53	337	9.51	265	10.67	264	---	---	11.30A	1528A	6393A	45.42
1515:00	11.98	361	0.00*	0	13.11	334	10.89	283	12.19	283	---	---	12.04A	1576A		43.99
1530:00	14.43	408	0.00*	0	13.39	347	10.24	270	11.50	271	---	---	12.39A	1620A		43.95
1545:00	12.93	394	0.00*	0	13.71	359	10.37	289	11.80	288	---	---	12.20A	1663A		45.80
1600:00	14.23	408	0.00*	0	15.00	378	11.93	313	13.52	313	---	---	13.67A	1765A	6624A	43.40
1615:00	12.99	380	0.00*	0	14.32	365	10.53	287	11.87	287	---	---	12.43A	1649A		44.60
1630:00	11.61	369	0.00*	0	12.14	335	9.75	284	11.19	284	---	---	11.18A	1590A		47.83
1645:00	11.51	359	0.00*	0	11.90	348	10.47	297	11.77	296	---	---	11.41A	1625A		47.86
1700:00	11.66	359	0.00*	0	12.11	342	10.50	304	11.94	305	---	---	11.55A	1638A	6501A	47.64
1715:00	11.75	372	0.00*	0	11.60	340	10.69	323	12.32	323	---	---	11.59A	1698A		49.23
1730:00	13.94	404	0.00*	0	13.67	398	13.71	390	15.06	389	---	---	14.10A	1976A		47.12
1745:00	10.14	325	0.00*	0	11.19	325	11.06	333	12.58	332	---	---	11.24A	1644A		49.15
1800:00	10.81	323	0.00*	0	11.22	336	9.94	287	11.29	286	---	---	10.81A	1540A	6858A	47.86
1815:00	9.51	319	0.00*	0	10.01	289	8.36	250	9.65	250	---	---	9.38A	1385A		49.61
1830:00	10.29	322	0.00*	0	10.91	310	9.21	269	10.34	269	---	---	10.19A	1463A		48.26
1845:00	11.97	312	0.00*	0	12.62	311	10.63	264	11.58	264	---	---	11.70A	1439A		41.33
1900:00	9.17	303	0.00*	0	9.31	282	8.65	264	10.00	264	---	---	9.28A	1391A	5678A	50.38
1915:00	8.52	276	0.00*	0	8.46	271	6.58	216	7.55	215	---	---	7.78A	1223A		52.84
AVERAGE	11.76	341	0.00	0	12.17	322	10.15	278	11.46	278	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	2.8	3676	0.0	0	2.8	3224	2.0	3126	2.3	3114	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

J-150

Table J-13

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/12/1998 AT 0530:00 TO 3/12/1998 AT 1000:00 PRINT DATE: 08/25/98
 FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER POST MILE: 27.54
 (VIP)

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL			
0545:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A		-----
0600:00	44.90*	248	43.14*	199	42.52*	169	41.87*	143	40.06*	90	---	---	20.67A	0A		-----	
0615:00	11.31	511	10.54	424	9.46	352	7.27	274	4.58	185	---	---	8.63	1746		68.00	
0630:00	12.87	569	13.00	509	10.89	409	9.20	333	5.82*	230	---	---	11.37A	2238A	----	66.16	
0645:00	15.18	678	14.91	570	13.29	475	12.14	426	7.97*	303	---	---	15.01A	2909A		65.14	
0700:00	15.93	677	16.36	588	14.44	498	13.67	472	9.15*	353	---	---	16.90A	3145A		62.54	
0715:00	15.46	593	17.38	562	16.98	514	15.43	476	10.43*	374	---	---	18.66A	3103A		55.90	
0730:00	24.76	522	24.46	582	27.30	588	23.17	526	15.14	456	---	---	22.97	2674	11830A	39.14	
0745:00	26.55	493	32.91	525	31.33	541	27.02	519	18.23	415	---	---	27.21	2493		30.80	
0800:00	26.70	481	33.44*	510	27.42	480	23.54	482	16.33*	392	---	---	38.73A	3542A		30.74	
0815:00	24.89	508	30.42	541	28.13	478	23.70	472	15.29*	374	---	---	27.25A	2602A		32.10	
0830:00	26.38	480	31.05	500	29.35	500	23.48	476	15.81*	389	---	---	30.31A	2848A	11485A	31.59	
0845:00	24.41	511	30.23	549	28.20	527	23.29	472	18.57*	429	---	---	30.76A	3059A		33.42	
0900:00	22.87*	466	27.92	510	25.10	503	20.41	455	14.77*	385	---	---	32.70A	3562A		36.62	
0915:00	12.58	503	15.16*	508	12.09	418	10.91	360	8.11*	288	---	---	14.14A	2521A		59.94	
0930:00	11.78	509A	14.49	541A	11.75	416A	10.26	378A	6.22*	227A	---	---	11.43A	2167A	11309A	63.72	
0945:00	98.22*	12A	98.27*	12A	98.19*	11A	98.28*	14A	98.23*	12A	---	---	53.24A	0A		-----	
1000:00	*** NO DATA ***																

AVERAGE 19.14 540 21.97 532 20.41 478 17.39 436 12.65 352
 VARIANCE 38.0 4420 62.7 1848 63.6 3664 42.3 5166 34.2 14225

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-14

J-151

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/12/1998 AT 0530:00 TO 3/12/1998 AT 1000:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE 1 (1LD) POST MILE: 27.55

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN	ESTMD
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT	VOLUME	SPEED
0545:00	6.18	225A	0.00*	0A	7.61	237A	4.66	111A	5.09	111A	---	---	5.88A	855A		48.85
0600:00	7.04	253	0.00*	0	7.43	231	5.05	161	5.86	161	---	---	6.34A	1008A		53.38
0615:00	9.03	324	0.00*	0	9.71	268	6.22	190	7.13	191	---	---	8.02A	1216A		50.96
0630:00	10.63	386	0.00*	0	11.25	341	7.81	249	9.07	248	---	---	9.69A	1530A	4609A	53.07
0645:00	13.44	452	0.00*	0	14.01	431	10.73	322	11.97	322	---	---	12.54A	1909A		51.17
0700:00	15.27	507	0.00*	0	14.86	473	11.89	366	13.69	367	---	---	13.93A	2141A		51.68
0715:00	16.99	505	0.00*	0	16.59	478	13.76	386	15.39	384	---	---	15.68A	2191A		46.97
0730:00	32.21	452	0.00*	0	32.16	435	31.64	481	33.15	481	---	---	32.29A	2311A	8553A	24.06
0745:00	41.91	387	0.00*	0	37.10	396	34.74	433	35.94	433	---	---	37.42A	2061A		18.51
0800:00	37.36	396	0.00*	0	38.30	399	33.57	432	35.54	433	---	---	36.19A	2075A		19.27
0815:00	37.23	391	0.00*	0	37.80	402	29.94	426	31.49	426	---	---	34.12A	2056A		20.26
0830:00	37.54	399	0.00*	0	33.34	405	27.75	427	29.05	426	---	---	31.92A	2071A	8264A	21.81
0845:00	32.67	440	0.00*	0	32.93	398	31.74	447	32.72	446	---	---	32.52A	2164A		22.37
0900:00	30.74	409	0.00*	0	29.47	377	25.55	428	27.39	427	---	---	28.29A	2051A		24.37
0915:00	12.11	363	0.00*	0	12.56	340	10.20	275	11.48	274	---	---	11.59A	1565A		45.39
0930:00	11.68	381	0.00*	0	12.30	356	9.03	251	10.40	249	---	---	10.85A	1546A	7326A	47.90
0945:00	10.87	363A	0.00*	0A	11.09	303A	8.30	224A	9.19	224A	---	---	9.87A	1391A		47.40
1000:00	*** NO DATA ***															

AVERAGE 21.35 374 0.00 0 21.09 354 17.80 321 19.09 321
 VARIANCE 155.1 10497 0.0 0 133.5 10283 124.9 15971 129.4 15950

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-15

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/12/1998 AT 1400:00 TO 3/12/1998 AT 1915:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER

POST MILE: 27.54

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN	ESTMD	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT	VOLUME	SPEED	
1415:00	*** NO DATA ***																
1430:00	*** NO DATA ***																
1445:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A	----	-----
1500:00	47.90*	344	50.34*	442	48.75*	364	46.79*	291	45.53*	272	---	---	44.03A	0A	----	-----	
1515:00	13.21	538	18.65	724	16.05	584	12.15	438	10.00	385	---	---	14.01	2669		64.02	
1530:00	16.42	634	20.79	765	17.67	660	13.91	534	11.03	439	---	---	15.96	3032		63.84	
1545:00	16.38	614	19.75	660	14.57	495	11.43	391	8.34*	317	---	---	16.02A	2812A		59.00	
1600:00	17.89	662	19.81	635	14.34	453	12.44	410	8.20*	285	---	---	17.60A	2955A	11468A	56.44	
1615:00	17.03	627	19.75	660	14.33	461	10.89	367	6.90*	262	---	---	16.33A	2809A		57.80	
1630:00	15.50	597	17.06	599	12.66	424	11.54	413	7.83*	292	---	---	15.62A	2806A		60.38	
1645:00	13.95	543	17.10	601	11.07	386	10.23	370	6.22*	225	---	---	13.71A	2493A		61.11	
1700:00	14.00	548	17.44	600	11.50	410	8.97	339	7.11*	279	---	---	13.86A	2555A	10663A	61.99	
1715:00	14.19	576	16.46*	591	11.49	422	9.77	356	7.17*	268	---	---	16.43A	3069A		62.78	
1730:00	14.28	586	17.56	618	12.42	449	10.94	412	8.35	332	---	---	12.71	2397		63.38	
1745:00	11.44	462	13.27	482	10.47	378	9.01	341	7.79	315	---	---	10.40	1978		63.95	
1800:00	10.06	425	11.71	437	9.01	324	8.33	307	6.50	255	---	---	9.12	1748	9192A	64.40	
1815:00	9.78	386	12.30	413	10.75	348	8.77	303	7.24	268	---	---	9.77	1718		59.11	
1830:00	9.18	340	13.39	447	12.90	414	10.97	361	7.41	272	---	---	10.77	1834		57.23	
1845:00	9.78	352	13.81	446	14.51	437	11.99	379	8.49	287	---	---	11.72	1901		54.54	
1900:00	10.28	354	15.31	464	15.03	444	12.35	385	9.38	296	---	---	12.47	1943	7396	52.38	
1915:00	98.75*	3	98.76*	3	98.79*	3	98.80*	2	98.73*	2	---	---	16.22A	0A		-----	
AVERAGE	13.34	515	16.51	570	13.05	443	10.86	382	8.47	317	---	---	* = SUSPECT/MALFUNCTION DATA				
VARIANCE	7.9	11667	8.5	11933	5.0	6473	2.3	2866	1.9	3261	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR				
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																	

Table J-16

J-153

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/12/1998 AT 1400:00 TO 3/12/1998 AT 1915:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE 1

POST MILE: 27.55

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN	ESTMD
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT	VOLUME	SPEED
															TOTALS	(2.38)
1415:00	*** NO DATA ***															
1430:00	*** NO DATA ***															
1445:00	17.49	492A	0.00*	0A	17.86	453A	14.57	357A	15.90	351A	---	---	16.45A	2066A		42.21
1500:00	12.81	374	0.00*	0	13.63	354	10.44	271	11.51	272	---	---	12.10A	1589A	7310A	44.14
1515:00	11.80	345	0.00*	0	12.47	328	9.78	256	10.80	256	---	---	11.21A	1481A		44.41
1530:00	13.86	381	0.00*	0	14.34	361	11.10	301	12.61	300	---	---	12.98A	1679A		43.48
1545:00	13.95	387	0.00*	0	13.45	351	10.89	307	12.19	305	---	---	12.62A	1688A		44.95
1600:00	14.32	405	0.00*	0	15.54	384	11.72	302	13.02	301	---	---	13.65A	1740A	6588A	42.85
1615:00	14.74	415	0.00*	0	13.33	358	10.01	287	11.44	287	---	---	12.38A	1684A		45.72
1630:00	12.91	390	0.00*	0	14.21	400	10.67	302	11.96	301	---	---	12.44A	1741A		47.05
1645:00	12.11	351	0.00*	0	12.71	372	9.22	262	10.47	261	---	---	11.13A	1558A		47.04
1700:00	12.00	382	0.00*	0	11.67	336	10.32	308	11.75	306	---	---	11.44A	1665A	6648A	48.94
1715:00	11.93	396	0.00*	0	11.96	338	10.36	296	11.84	297	---	---	11.52A	1659A		48.39
1730:00	13.82	421	0.00*	0	14.37	418	12.37	373	14.16	370	---	---	13.68A	1978A		48.58
1745:00	11.21	350	0.00*	0	11.34	346	11.53	335	12.55	335	---	---	11.66A	1708A		49.23
1800:00	9.21	302	0.00*	0	9.91	299	9.81	295	11.31	295	---	---	10.06A	1489A	6833A	49.73
1815:00	10.06	308	0.00*	0	10.24	302	9.92	298	11.38	298	---	---	10.40A	1508A		48.73
1830:00	9.80	301	0.00*	0	11.18	303	8.08	239	8.94	238	---	---	9.50A	1351A		47.81
1845:00	10.05	312	0.00*	0	10.78	312	8.08	249	9.30	248	---	---	9.55A	1401A		49.32
1900:00	9.63	308	0.00*	0	10.04	285	7.97	244	9.21	244	---	---	9.21A	1351A	5611A	49.31
1915:00	7.19	243	0.00*	0	7.62	244	6.65	217	7.59	217	---	---	7.26A	1151A		53.29
AVERAGE	12.05	344	0.00	0	12.46	329	10.18	277	11.47	276	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	5.5	3947	0.0	0	5.2	3403	3.0	2636	3.4	2629	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

J-154

Table J-17

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/13/1998 AT 0530:00 TO 3/13/1998 AT 1000:00 PRINT DATE: 08/25/98
 FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER POST MILE: 27.54

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL			
0545:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A		-----
0600:00	44.73*	231	44.56*	211	44.31*	179	43.27*	137	41.90*	100	---	---	23.00A	0A		-----	
0615:00	9.70	439	9.79	400	8.74	317	7.39	259	4.73	180	---	---	8.07	1595		66.42	
0630:00	12.28	557	11.77	458	10.04	369	8.52	310	5.10*	210	---	---	10.10A	2010A	----	66.88	
0645:00	14.43	639	13.24	544	12.11	443	9.79	377	6.61*	274	---	---	13.78A	2790A		68.07	
0700:00	14.66	646	13.82	536	12.83	478	11.31	437	8.10*	333	---	---	13.97A	2799A		67.33	
0715:00	13.02	595	13.07	553	13.66	514	12.19	460	7.93*	327	---	---	12.85A	2619A		68.52	
0730:00	13.90	594	14.06	554	14.40	502	12.82	456	9.54	368	---	---	12.94	2474	10682A	64.25	
0745:00	14.84	613	14.88	570	14.53	519	11.54	415	8.67*	348	---	---	15.32A	2930A		64.27	
0800:00	12.05	519	13.67	535	13.10	463	12.16	424	8.53*	347	---	---	14.35A	2772A		64.92	
0815:00	13.53	560	14.69	539	13.53	462	12.30	419	8.13*	307	---	---	14.06A	2582A		61.75	
0830:00	13.12	574	14.19	528	12.53	439	10.89	382	7.07*	279	---	---	13.05A	2486A	10769A	64.06	
0845:00	12.43	535	15.39	579	12.50	434	10.86	394	6.98*	274	---	---	14.07A	2672A		63.82	
0900:00	11.15	500	16.07	582	12.47	442	9.79	351	6.26*	256	---	---	13.35A	2542A		63.98	
0915:00	11.57	501	14.04	515	11.37	394	9.79	321	5.83*	217	---	---	12.15A	2244A		62.08	
0930:00	11.47	502	15.13	555	11.40	426	9.60	347	5.74*	216	---	---	11.97A	2305A	9762A	64.71	
0945:00	11.27	467A	14.21	506A	10.61	374A	9.83	329A	5.68*	203A	---	---	12.54A	2280A		61.10	
1000:00	*** NO DATA ***																

AVERAGE	12.63	539	13.87	519	12.26	430	10.59	371	7.14	274	---	---				
VARIANCE	2.0	6787	2.2	4435	2.4	5037	2.2	4672	5.8	8836	---	---				

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-18

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/13/1998 AT 0530:00 TO 3/13/1998 AT 1000:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE 1

POST MILE: 27.55

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL		
0545:00	7.80	255A	0.00*	0A	6.76	204A	4.11	120A	4.69	120A	---	---	5.84A	874A		50.30
0600:00	7.32	264	0.00*	0	7.84	223	4.96	157	5.61	155	---	---	6.43A	999A		52.20
0615:00	8.10	291	0.00*	0	8.49	249	6.10	181	6.81	181	---	---	7.37A	1128A		51.40
0630:00	10.00	358	0.00*	0	10.73	318	6.88	222	7.83	221	---	---	8.86A	1399A	4399A	53.05
0645:00	12.86	445	0.00*	0	12.39	388	9.50	291	10.67	292	---	---	11.35A	1770A		52.40
0700:00	13.56	469	0.00*	0	13.57	446	10.91	353	12.45	350	---	---	12.62A	2023A		53.86
0715:00	15.36	503	0.00*	0	14.71	465	11.44	353	12.80	352	---	---	13.58A	2091A		51.76
0730:00	14.82	496	0.00*	0	15.02	468	13.08	397	14.39	396	---	---	14.33A	2196A	8080A	51.53
0745:00	15.66	509	0.00*	0	15.03	432	12.53	386	14.50	384	---	---	14.43A	2139A		49.82
0800:00	13.61	444	0.00*	0	14.91	427	12.26	375	14.06	373	---	---	13.71A	2024A		49.62
0815:00	13.84	429	0.00*	0	14.39	407	11.66	331	12.85	332	---	---	13.18A	1874A		47.77
0830:00	12.72	416	0.00*	0	13.40	387	10.23	304	11.58	303	---	---	11.98A	1763A	7799A	49.44
0845:00	13.43	425	0.00*	0	14.08	404	10.20	303	11.60	302	---	---	12.32A	1793A		48.89
0900:00	12.20	408	0.00*	0	12.14	335	9.23	286	10.87	285	---	---	11.11A	1643A		49.69
0915:00	10.68	359	0.00*	0	11.77	315	7.91	231	8.75	232	---	---	9.78A	1421A		48.86
0930:00	11.84	378	0.00*	0	11.83	339	8.25	240	9.32	238	---	---	10.31A	1494A	6350A	48.70
0945:00	10.89	342A	0.00*	0A	11.38	318A	8.92	236A	9.66	234A	---	---	10.21A	1412A		46.47
1000:00	*** NO DATA ***															

AVERAGE	12.04	383	0.00	0	12.26	346	9.30	271	10.49	270	---	---				
VARIANCE	6.2	11781	0.0	0	6.3	10896	6.6	8948	8.5	8893	---	---				

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-19

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/13/1998 AT 1400:00 TO 3/13/1998 AT 1915:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER POST MILE: 27.54

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL			
1415:00	*** NO DATA ***																
1430:00	*** NO DATA ***																
1445:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A		-----
1500:00	44.69*	271	48.57*	415	49.23*	386	46.01*	318	45.36*	288	---	---	41.82A	0A	----	-----	
1515:00	10.61*	433	15.06	660	18.70	657	13.91	528	11.45	476	---	---	16.25A	3206A		66.31	
1530:00	19.69*	552	19.73	731	20.22	686	14.24	577	12.22	498	---	---	18.00A	3173A		59.26	
1545:00	21.46	574	18.76	731	18.38	657	13.86	553	11.56	493	---	---	16.80	3008		60.17	
1600:00	14.10	578	18.09	647	14.87	507	11.63	436	7.51*	318	---	---	14.95A	2791A	12178A	62.74	
1615:00	14.55	585	18.90	671	14.30	497	10.59	383	7.63*	281	---	---	15.91A	2909A		61.47	
1630:00	15.62*	510	16.92	642	16.06	567	10.14*	393	10.44*	347	---	---	25.61A	4626A		60.70	
1645:00	13.62	531	15.78	581	12.36	430	9.90	365	7.81*	296	---	---	13.93A	2569A		62.01	
1700:00	12.84	523	15.44	558	11.60	401	9.13	334	6.10*	233	---	---	12.63A	2360A	12464A	62.79	
1715:00	14.31	570	17.32	608	10.93	378	9.73	361	6.70*	272	---	---	13.47A	2498A		62.32	
1730:00	13.61	527	13.87	503	10.83	387	9.91	376	7.83	307	---	---	11.21	2100		62.95	
1745:00	10.78	444	12.13	450	10.09	360	8.11	303	6.59*	261	---	---	11.35A	2165A		64.13	
1800:00	8.21	354	11.10	426	8.97	333	8.20	311	6.52	266	---	---	8.60	1690	8453A	66.06	
1815:00	8.69	343	10.67	371	9.91	324	8.50	284	5.98	219	---	---	8.75	1541		59.20	
1830:00	9.89	368	12.01	416	12.32	397	10.87	364	8.40	292	---	---	10.70	1837		57.71	
1845:00	10.87	393	13.15	441	13.79	422	12.97	380	9.79	315	---	---	12.11	1951		54.14	
1900:00	10.33	376	13.74	425	15.14	435	12.72	390	10.64	325	---	---	12.51	1951	7280	52.40	
1915:00	98.93*	3	98.92*	3	98.91*	2	98.86*	2	98.85*	2	---	---	53.02A	0A		-----	
AVERAGE	12.56	474	15.17	554	13.65	465	10.95	396	9.38	355	---	---	* = SUSPECT/MALFUNCTION DATA				
VARIANCE	11.0	8513	8.0	13711	10.8	13152	4.3	7518	4.7	9925	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR				
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																	

Table J-20

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 3/13/1998 AT 1400:00 TO 3/13/1998 AT 1915:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE 1

POST MILE: 27.55

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN	ESTMD
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT	VOLUME	SPEED
															TOTALS	(2.38)
1415:00	*** NO DATA ***															
1430:00	*** NO DATA ***															
1445:00	15.04	462A	0.00*	0A	15.33	402A	12.61	348A	13.98	348A	---	---	14.24A	1950A		46.02
1500:00	13.00	387	0.00*	0	12.87	358	10.10	285	11.21	285	---	---	11.80A	1644A	7188A	46.84
1515:00	12.36	385	0.00*	0	13.50	347	9.73	267	10.36	265	---	---	11.48A	1580A		46.25
1530:00	13.26	398	0.00*	0	14.45	380	10.60	287	11.67	287	---	---	12.49A	1690A		45.47
1545:00	12.89	394	0.00*	0	13.71	366	10.68	291	11.87	291	---	---	12.29A	1678A		45.88
1600:00	13.96	414	0.00*	0	14.33	407	10.49	300	11.63	298	---	---	12.60A	1774A	6721A	47.31
1615:00	13.31	394	0.00*	0	13.14	356	9.25	270	10.64	269	---	---	11.59A	1611A		46.74
1630:00	11.94	369	0.00*	0	12.27	341	10.26	295	11.34	295	---	---	11.45A	1625A		47.69
1645:00	11.68	352	0.00*	0	12.51	348	10.44	314	12.00	313	---	---	11.66A	1659A		47.84
1700:00	11.44	369	0.00*	0	11.45	341	8.49	269	9.54	269	---	---	10.23A	1560A	6455A	51.25
1715:00	11.04	334	0.00*	0	11.87	345	8.94	284	10.61	284	---	---	10.62A	1559A		49.35
1730:00	11.66	364	0.00*	0	11.99	372	11.33	334	12.80	333	---	---	11.94A	1754A		49.35
1745:00	10.68	344	0.00*	0	10.50	314	9.77	288	10.81	288	---	---	10.44A	1543A		49.66
1800:00	9.24	305	0.00*	0	10.76	305	9.47	294	10.88	294	---	---	10.09A	1498A	6353A	49.90
1815:00	8.81	282	0.00*	0	9.57	289	7.72	240	9.10	239	---	---	8.80A	1313A		50.13
1830:00	9.45	293	0.00*	0	9.77	303	8.70	268	9.98	268	---	---	9.48A	1415A		50.19
1845:00	9.60	303	0.00*	0	10.50	304	8.02	235	8.82	234	---	---	9.24A	1345A		48.95
1900:00	9.22	285	0.00*	0	9.33	277	8.41	252	9.70	252	---	---	9.16A	1333A	5405A	48.87
1915:00	8.33	268	0.00*	0	8.66	253	7.57	228	8.64	228	---	---	8.30A	1221A		49.45
AVERAGE	11.42	337	0.00	0	11.92	323	9.61	269	10.82	269	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	3.5	3795	0.0	0	3.4	3382	1.6	1976	1.8	1966	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

J-158

Table J-21

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 4/14/1998 AT 0530:00 TO 4/14/1998 AT 1000:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND TRAILER

POST MILE: 31.66

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL		
0545:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A	-----
0600:00	51.24*	242	51.18*	220	51.37*	198	48.40*	143	46.91*	101	---	---	38.53A	0A		-----
0615:00	12.35	374	12.16	346	10.31	274	7.98	217	4.98	145	---	---	9.56	1356		47.69
0630:00	13.63	434	12.82	368	11.46	333	8.83	271	5.01	152	---	---	10.35	1558	----	50.60
0645:00	14.81	472	13.87	426	12.46	364	10.80	328	6.30	183	---	---	11.65	1773		51.15
0700:00	14.79	487	14.26	436	14.37	425	11.93	345	8.98	266	---	---	12.86	1959		51.19
0715:00	15.69	497	14.84	474	14.76	445	11.37	341	8.54*	265	---	---	14.95A	2320A		52.16
0730:00	17.59	551	17.06	523	16.58	505	13.84	422	9.94*	299	---	---	17.75A	2718A	8770A	51.45
0745:00	17.54	515	15.90	488	16.63	492	13.84	405	9.54*	298	---	---	16.02A	2396A		50.27
0800:00	18.68	528	18.08	494	16.91	488	14.35	415	11.43	335	---	---	15.89	2260		47.80
0815:00	15.64	492	16.32	486	15.63	433	12.54	378	8.93*	268	---	---	16.70A	2489A		50.08
0830:00	13.53	444	15.06	455	15.53	430	11.93	336	10.03	298	---	---	13.22	1963	9108A	49.93
0845:00	13.51	443	14.24	431	14.01	405	11.30	327	10.11	292	---	---	12.64	1898		50.49
0900:00	12.37	408	14.09	412	14.58	407	11.26	320	8.90	266	---	---	12.24	1813		49.79
0915:00	11.35	367	12.82	370	13.17	353	9.68	286	7.17	220	---	---	10.84	1596		49.49
0930:00	10.96	360	12.06	368	14.61	388	11.18	310	9.01	267	---	---	11.56	1693	7000	49.22
0945:00	99.80*	4	99.80*	1	99.81*	1	99.73*	1	99.73*	1	---	---	16.44A	0A		-----
1000:00	95.29*	0A	95.29*	0A	95.29*	0A	95.29*	0A	95.29*	0A	---	---	0.00A	0A		-----
AVERAGE	14.46	455	14.54	434	14.36	410	11.49	336	8.19	242	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	5.2	3488	3.1	2878	3.6	3894	3.1	3016	4.4	3753	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

Table J-22

J-159

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 4/14/1998 AT 0530:00 TO 4/14/1998 AT 1000:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND 2

POST MILE: 31.73

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN	ESTMD
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT	VOLUME	SPEED
0545:00	34.60	660A	7.70	297A	8.56	291A	6.70	204A	4.60	135A	---	---	12.43A	1587A		42.91
0600:00	23.81*	884	8.15	318	7.31	266	7.28*	226	5.13*	144	---	---	17.12A	2957A		58.03
0615:00	29.06*	914	9.41*	369	8.60*	296	7.29*	238	5.81*	187	---	---	36.06A	0A		-----
0630:00	16.07*	616	11.28	436	10.34	367	9.17	308	6.11*	191	---	---	16.76A	3034A	----	60.84
0645:00	25.02*	975	12.93	503	11.84	430	11.53	402	7.65*	243	---	---	18.68A	3482A		62.65
0700:00	25.03*	894	13.43	528	13.51	495	13.14	437	11.12	331	---	---	15.82A	2770A		58.86
0715:00	19.05*	712	13.91	537	14.26	507	11.88	392	11.26	342	---	---	15.83A	2789A		59.24
0730:00	16.01	613	15.37	578	16.00	568	15.32	510	13.36	381	---	---	15.21	2650	11690A	58.55
0745:00	14.80	563	15.14	555	15.87	552	15.60	495	14.32	397	---	---	15.15	2562		56.85
0800:00	14.75	564	14.63	532	15.60	521	15.08	478	15.91	441	---	---	15.19	2536		56.10
0815:00	13.97	547	14.06	528	14.43	476	14.35	462	13.22	382	---	---	14.00	2395		57.48
0830:00	13.77	535	13.96	521	14.36	488	13.86	435	14.67	414	---	---	14.12	2393	9886	56.95
0845:00	12.82	511	12.71	485	12.97	449	12.79	405	13.55	380	---	---	12.97	2230		57.80
0900:00	11.16	446	11.69	445	13.29	458	13.11	408	12.05	343	---	---	12.26	2100		57.58
0915:00	9.62	397	10.64	409	11.36	389	12.30	360	10.52	303	---	---	10.89	1858		57.35
0930:00	10.65	429	10.96	417	12.71	420	12.68	373	12.31	325	---	---	11.86	1964	8152	55.65
0945:00	11.84	475	11.35	438	12.71	439	12.60	382	11.91	320	---	---	12.08	2054		57.14
1000:00	10.87	444A	11.02	417A	10.58	390A	12.60	366A	10.40	279A	---	---	11.09A	1896A		57.45

AVERAGE 14.57 454 12.29 439 12.69 415 12.67 377 12.09 321
 VARIANCE 40.0 18374 4 7 17734 5.7 16982 4.8 14012 6.7 12082

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-160

Table J-23

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 4/14/1998 AT 1400:00 TO 4/14/1998 AT 1915:00 PRINT DATE: 08/25/98
 FREEWAY LOCATION: 5 N/B @ GRAND TRAILER POST MILE: 31.66

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL		
1415:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A	-----
1430:00	49.22*	235	50.22*	247	50.73*	252	49.10*	217	47.92*	188	---	---	38.91A	0A		-----
1445:00	14.85	419	17.32	442	18.21	430	13.82	358	11.88	303	---	---	15.22	1952		43.12
1500:00	38.06	403	34.87	433	35.39	423	34.97	372	30.66	383	---	---	34.79	2014	----	19.46
1515:00	29.92	434	30.94	394	33.01	376	30.02	366	30.21	315	---	---	30.82	1885		20.56
1530:00	30.39	345	29.31	318	31.87	269	30.89	271	26.77	302	---	---	29.85	1505		16.95
1545:00	28.89	409	29.84	399	25.13	370	28.27	341	28.59	380	---	---	28.14	1899		22.68
1600:00	24.63	444	27.44	451	27.16	463	23.71	394	24.80	394	---	---	25.55	2146	7435	28.24
1615:00	26.46	442	27.74	460	27.53	445	22.15	424	25.77	430	---	---	25.93	2201		28.53
1630:00	28.65	439	30.33	452	28.01	430	25.25	395	27.18	400	---	---	27.89	2116		25.51
1645:00	28.93	441	28.80	476	26.81	452	25.02	428	26.94	423	---	---	27.30	2220		27.34
1700:00	30.38	456	35.01	447	33.24	449	28.46	408	28.86	420	---	---	31.19	2180	8717	23.49
1715:00	34.66	301	33.55	310	27.71	262	31.54	265	32.21	313	---	---	31.94	1451		15.27
1730:00	28.84	248	34.94	247	30.24	265	24.88	233	31.19	297	---	---	30.02	1290		14.44
1745:00	27.76	300	28.50	279	25.54	241	26.86	224	33.47	279	---	---	28.43	1323		15.64
1800:00	30.64	262	25.08	193	31.31	231	34.60	209	27.30	294	---	---	29.79	1189	5253	13.42
1815:00	25.34	372	21.41	302	23.93	329	22.03	329	24.51	365	---	---	23.45	1697		24.33
1830:00	27.67	365	21.48	317	25.65	369	23.87	349	29.94	389	---	---	25.72	1789		23.38
1845:00	24.74	410	22.67	399	25.25	409	23.93	398	25.98	404	---	---	24.52	2020		27.69
1900:00	11.25	308	10.17	277	12.88	338	9.72	266	9.69	250	---	---	10.74	1439	6945	45.04
1915:00	99.73*	3	99.67*	2	99.75*	3	99.71*	2	99.69*	2	---	---	16.37A	0A		-----
AVERAGE	27.34	378	27.19	366	27.16	364	25.56	335	26.44	352	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	36.0	4345	41.0	7048	27.6	6095	38.6	4913	36.7	3095	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

Table J-24

J-161

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 4/14/1998 AT 1400:00 TO 4/14/1998 AT 1915:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND 2

POST MILE: 31.73

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT		
1415:00	10.92	423A	11.46	408A	15.42	438A	12.86	405A	14.51	375A	---	---	13.03A	2049A		52.84
1430:00	10.13	398	10.86	412	12.59	391	12.45	363	12.07	332	---	---	11.62	1896		54.85
1445:00	14.27	445	15.39	423	17.56	414	16.31	399	15.37	343	---	---	15.78	2024		43.12
1500:00	47.13	288	47.68	283	49.26	254	46.50	282	40.42	359	---	---	46.20	1466	7435A	10.67
1515:00	42.56	305	49.10	297	49.86	230	51.28	255	44.39	304	---	---	47.44	1391		9.86
1530:00	51.29	239	55.83	233	61.47	161	61.77	202	42.93	273	---	---	54.66	1108		6.81
1545:00	42.56	329	41.99	331	44.89	278	44.27	306	40.14	370	---	---	42.77	1614		12.68
1600:00	27.16	374	35.99	381	37.66	341	35.76	366	33.13	399	---	---	33.94	1861	5974	18.43
1615:00	27.96	375	33.00	404	33.09	365	28.68	394	31.77	430	---	---	30.90	1968		21.41
1630:00	35.05	360	34.74	362	40.69	324	36.10	359	34.60	419	---	---	36.24	1824		16.92
1645:00	33.03	358	34.75	366	38.01	332	34.18	381	34.59	431	---	---	34.91	1868		17.99
1700:00	33.81	338	40.77	332	43.00	308	38.74	332	38.24	409	---	---	38.91	1719	7379	14.85
1715:00	61.85	190	57.88	194	64.75	156	58.04	200	52.33	293	---	---	58.97	1033		5.89
1730:00	62.60	180	61.02	181	64.04	160	58.25	215	47.49	307	---	---	58.68	1043		5.97
1745:00	53.25	215	60.60	198	63.57	173	63.41	191	54.02	265	---	---	58.97	1042		5.94
1800:00	64.90	161	64.71	150	62.73	151	64.33	166	41.60	309	---	---	59.66	937	4055	5.28
1815:00	38.09	327	38.72	333	37.01	313	32.30	369	32.28	419	---	---	35.68	1761		16.59
1830:00	32.64	326	37.69	342	38.91	314	31.52	362	33.30	411	---	---	34.81	1755		16.94
1845:00	26.13	400	27.08	416	31.00	399	32.09	412	35.98	434	---	---	30.46	2061		22.75
1900:00	9.54	342	10.23	362	11.51	359	11.01	318	11.85	298	---	---	10.83	1679	7256	52.12
1915:00	8.71	347	9.16	347	10.63	357	10.17	314	8.83	257	---	---	9.50	1622		57.40

AVERAGE 34.93 307 37.08 309 39.41 282 37.15 301 33.33 342
 VARIANCE 305.4 7032 305.5 7904 315.0 8014 307.9 6950 171.3 5846

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-162

Table J-25

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 4/16/1998 AT 0530:00 TO 4/16/1998 AT 1000:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND TRAILER

POST MILE: 31.66

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL		
0545:00	100.00*		0A100.00*		0A100.00*		0A100.00*		0A100.00*		0A	---	---	0.00A	0A	-----
0600:00	48.56*	212	48.25*	192	49.45*	186	47.66*	148	44.12*	79	---	---	34.72A	0A		-----
0615:00	11.57	368	10.94	327	10.37	283	7.69	216	4.73	146	---	---	9.06	1340		49.73
0630:00	12.37	397	12.08	368	11.13	327	8.49	255	5.67	163	---	---	9.95	1510	----	51.03
0645:00	15.31	503	13.49	428	13.80	413	10.65	325	6.90	208	---	---	12.03	1877		52.45
0700:00	15.90	526	15.03	489	15.60	461	12.15	348	8.69*	261	---	---	13.55A	2096A		52.00
0715:00	15.47	503	15.10	483	14.11	415	11.97	365	8.77	270	---	---	13.09	2036		52.30
0730:00	17.20	533	15.92	511	16.00	488	12.93	395	9.08*	285	---	---	15.63A	2426A	8435A	52.19
0745:00	17.62	497	16.89	505	17.08	492	13.52	402	10.19*	302	---	---	17.40A	2530A		48.89
0800:00	17.92	512	17.66	509	17.11	482	13.15	390	11.37	340	---	---	15.44	2233		48.60
0815:00	16.14	491	16.33	477	15.53	423	12.89	390	9.30*	270	---	---	15.14A	2212A		49.11
0830:00	15.91	496	16.55	481	15.44	435	12.81	381	9.54	286	---	---	14.05	2079	9055A	49.73
0845:00	14.96	463	15.79	449	15.36	434	12.09	331	7.82*	234	---	---	15.72A	2273A		48.59
0900:00	15.26	485	15.42	448	16.09	427	11.42	333	9.17	277	---	---	13.47	1970		49.15
0915:00	13.06	406	13.83	393	15.26	400	10.67	299	7.71	237	---	---	12.11	1735		48.17
0930:00	13.49	424	15.77	448	15.59	393	11.07	320	7.70	233	---	---	12.72	1818	7796A	48.03
0945:00	95.04*	17	94.93*	12	95.15*	19	95.02*	16	94.86*	11	---	---	8.33A	0A		-----
1000:00	95.62*	0A	95.62*	0A	95.62*	0A	95.62*	0A	95.62*	0A	---	---	0.00A	0A		-----
AVERAGE	15.16	472	15.06	451	14.89	420	11.54	339	7.95	240	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	3.4	2505	3.3	2865	3.6	3174	2.8	2805	3.7	3359	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

J-163

Table J-26

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 4/16/1998 AT 0530:00 TO 4/16/1998 AT 1000:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND 2

POST MILE: 31.73

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION AVE TOT		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL		
0545:00	21.92	897A	5.71	240A	6.94	258A	7.04	216A	5.56	162A	---	---	9.44A	1773A		63.16
0600:00	42.84	888	7.30	286	7.64	265	6.93	232	5.09	151	---	---	13.96	1822		43.87
0615:00	26.34*	809	8.97	352	8.13	292	7.27*	240	5.91*	167	---	---	25.27A	4157A		55.31
0630:00	15.15	615	10.00	401	9.39	346	9.26	301	6.92	198	---	---	10.14	1861	9613A	61.67
0645:00	14.83	605	12.74	497	12.28	448	11.26	379	8.82*	259	---	---	12.61A	2305A		61.45
0700:00	19.97*	737	13.45	513	13.49	495	12.66	404	10.69	314	---	---	13.26A	2345A		59.44
0715:00	18.15*	709	13.63	526	13.30	474	12.24	423	11.38*	336	---	---	20.76A	3721A		60.25
0730:00	15.41	601	14.87	560	15.13	534	13.79	450	13.71	388	---	---	14.58	2533	10903A	58.39
0745:00	14.53	557	15.13	549	16.06	546	14.90	489	15.04	426	---	---	15.13	2567		57.02
0800:00	14.91	567	15.26	558	16.21	542	15.90	485	16.60	449	---	---	15.78	2601		55.42
0815:00	13.85	538	14.14	531	14.86	476	14.65	468	13.68	379	---	---	14.24	2392		56.47
0830:00	13.74	534	14.39	526	14.34	489	15.95	482	14.50	401	---	---	14.58	2432	9992	56.05
0845:00	13.50	521	12.86	480	13.84	470	14.14	424	12.57	342	---	---	13.38	2237		56.19
0900:00	13.03	500	12.89	470	13.64	455	14.10	427	13.80	370	---	---	13.49	2222		55.36
0915:00	11.20	456	10.81	408	13.38	429	12.56	381	10.79	307	---	---	11.75	1981		56.68
0930:00	11.13	456	12.42	471	13.71	438	13.46	390	11.04	295	---	---	12.35	2050	8490	55.79
0945:00	11.61	455	11.70	444	14.03	433	13.74	389	11.00	307	---	---	12.42	2028		54.90
1000:00	12.84	522A	11.72	444A	14.40	477A	12.79	390A	11.61	318A	---	---	12.67A	2151A		57.05

AVERAGE 16 03 518 12.11 433 12.82 410 12.67 372 11.51 299

VARIANCE 57.5 22909 6.8 17967 7.6 16054 6.8 13951 10.8 13333

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-164

Table J-27

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 4/16/1998 AT 1400:00 TO 4/16/1998 AT 1915:00 PRINT DATE: 08/25/98
 FREEWAY LOCATION: 5 N/B @ GRAND TRAILER POST MILE: 31.66

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN	ESTMD
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT	VOLUME	SPEED
															TOTALS	(2.38)
1415:00	*** NO DATA ***															
1430:00	*** NO DATA ***															
1445:00	*** NO DATA ***															
1500:00	*** NO DATA ***															
1515:00	*** NO DATA ***															
1530:00	*** NO DATA ***															
1545:00	*** NO DATA ***															
1600:00	*** NO DATA ***															
1615:00	53.13*	279A	53.01*	282A	51.28*	258A	50.21*	273A	49.89*	255A	---	---	55.99A	0A		-----
1630:00	22.44	439	21.44	455	22.26	464	17.94	436	19.43	429	---	---	20.70	2223		36.09
1645:00	39.24*	372	39.66*	393	37.36*	369	31.69*	345	33.22*	362	---	---	74.23A	0A		-----
1700:00	25.14	419	27.08	465	25.55	443	20.01	377	21.17	410	---	---	23.79	2114	----	29.87
1715:00	32.21	436	33.49	436	33.19	419	23.60	380	26.17	404	---	---	29.73	2075		23.46
1730:00	35.90	354	35.46	355	33.76	354	26.47	333	30.12	350	---	---	32.34	1746		18.15
1745:00	32.82	350	32.08	361	29.27	361	22.67	302	24.26	352	---	---	28.22	1726		20.56
1800:00	32.01	306	30.84	329	31.71	348	24.27	279	28.59	360	---	---	29.48	1622	7169	18.49
1815:00	21.88	297	29.74	352	27.74	353	25.26	313	27.57	377	---	---	26.44	1692		21.51
1830:00	23.68	374	26.69	345	25.40	335	25.39	329	27.00	361	---	---	25.63	1744		22.87
1845:00	24.87	422	25.56	432	21.46	355	20.91	367	23.56	410	---	---	23.27	1986		28.68
1900:00	18.11	344	19.62	377	18.02	355	17.76	372	15.57	319	---	---	17.82	1767	7189	33.34
1915:00	98.40*	3	98.37*	2	98.40*	3	98.36*	2	98.38*	2	---	---	16.18A	0A		-----
AVERAGE	26.91	374	28.20	391	26.84	379	22.43	349	24.34	377	---	---	* = SUSPECT/MALFUNCTION DATA			
VARIANCE	31.0	2483	23.5	2315	25.0	1859	8.8	1923	18.4	1087	---	---	A = ADJUSTED DATA / --- = INACTIVE DETECTOR			
ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER																

Table J-28

J-165

CALIFORNIA DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE MAIN LANE OCCUPANCY AND VOLUME REPORT FROM 4/16/1998 AT 1400:00 TO 4/16/1998 AT 1915:00 PRINT DATE: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND 2

POST MILE: 31.73

----- ADJUSTED -----

TIME	MAIN LANE #1		MAIN LANE #2		MAIN LANE #3		MAIN LANE #4		MAIN LANE #5		MAIN LANE #6		LOCATION		60 MIN VOLUME TOTALS	ESTMD SPEED (2.38)
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	AVE	TOT		
1415:00	11.62	459A	13.56	486A	16.72	441A	14.69	420A	13.94	357A	---	---	14.11A	2163A		51.54
1430:00	11.71	456	12.56	444	13.80	410	14.25	401	13.10	330	---	---	13.08	2041		52.44
1445:00	13.57	517	12.92	439	14.66	432	14.04	403	13.45	343	---	---	13.73	2134		52.25
1500:00	14.28	522	14.21	495	14.88	432	15.21	417	15.23	395	---	---	14.76	2261	8599A	51.48
1515:00	13.60	517	12.56	447	15.32	440	14.50	417	13.98	341	---	---	13.99	2162		51.94
1530:00	13.88	509	14.15	484	15.78	475	14.12	400	13.44	352	---	---	14.27	2220		52.28
1545:00	14.39	529	13.56	471	15.67	436	14.24	418	14.07	360	---	---	14.38	2214		51.74
1600:00	23.84	424	24.42	437	27.02	397	22.03	407	26.59	462	---	---	24.78	2127	8723	28.85
1615:00	16.46	414	17.59	433	20.43	430	18.13	411	21.96	456	---	---	18.91	2144		38.10
1630:00	17.09	408	18.52	431	19.97	411	21.24	472	23.79	466	---	---	20.12	2188		36.55
1645:00	26.29	384	24.64	406	26.97	376	22.20	416	26.11	459	---	---	25.24	2041		27.18
1700:00	29.14	349	32.22	370	29.66	357	24.90	375	27.57	428	---	---	28.70	1879	8252	22.01
1715:00	35.77	336	38.81	338	41.80	308	32.07	344	34.77	425	---	---	36.64	1751		16.06
1730:00	46.88	236	53.01	235	51.89	242	43.75	292	40.21	369	---	---	47.15	1374		9.80
1745:00	50.22	257	49.52	244	49.47	251	43.06	317	35.53	387	---	---	45.56	1456		10.74
1800:00	51.26	230	50.34	235	56.61	210	45.97	283	40.98	381	---	---	49.03	1339	5920	9.18
1815:00	38.13	291	42.85	296	41.58	276	39.01	320	35.54	382	---	---	39.42	1565		13.34
1830:00	36.94	340	42.28	323	39.97	317	37.21	341	35.05	397	---	---	38.29	1718		15.08
1845:00	24.72	414	27.03	436	30.56	394	28.45	408	33.14	454	---	---	28.78	2106		24.60
1900:00	15.23	345	18.23	383	20.22	374	20.37	413	22.40	402	---	---	19.29	1917	7306	33.40
1915:00	9.07	353	8.89	347	9.41	341	10.27	322	8.49	248	---	---	9.23	1611		58.70

AVERAGE 24.48 380 25.80 374 27.26 355 24.27 367 24.25 379

VARIANCE 176.3 11030 201.6 8451 192.2 7328 124.4 4958 101.3 6153

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-166

Table J-29₁

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/05/1998 FROM 0530:00 TO 1000:00 PRINTED: 10/01/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28 35

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	0.00	0	0 47	13	1.85	54	3.02	55	---	---	0	0	0	0	0	100	0	61	0	0	819
0600:00	0.00	0	0 43	14	2.64	73	4.34	73	---	---	0	0	0	0	0	100	0	36	0	2	1079
0615:00	0.00	0	0.62	16	12.43	116	53.66	84	---	---	0	0	0	0	100	0	13	24	10	29	1229
0630:00	0.00	0	0.71	19	13.18	108	60.04	58	---	---	0	0	0	0	17	83	10	5	10	0	1514
0645:00	0.00	0	0.73	18	15.94	131	81.61*	59	---	---	0	0	0	0	0	100	10	0	10	0	1818
0700:00	0.00	0	0.78	20	18.85	156	91 83*	58	---	---	0	0	0	0	0	100	10	0	10	0	1909
0715:00	0.00	0	1.68	39	17.80	158	89 43*	70	---	---	0	0	0	0	0	100	10	0	10	0	1918
0730:00	0.00	0	1.43	42	8.07	216	13.80	217	---	---	0	0	0	0	0	100	10	0	10	0	1902
0745:00	0.00	0	1.44	44	7.91	199	13.13	198	---	---	0	0	0	0	0	100	10	0	10	0	1618
0800:00	0.00	0	1.17	33	7.02	183	11.77	178	---	---	0	0	0	0	0	100	10	0	10	0	1708
0815:00	0.00	0	1.29	34	6.99	180	11.80	180	---	---	0	0	0	0	0	100	10	0	10	0	1665
0830:00	0.00	0	0.93	27	6.31	161	10.53	162	---	---	0	0	0	0	0	100	10	0	10	0	1698
0845:00	0.00	0	0.77	23	6.37	162	10.64	161	---	---	0	0	0	0	0	100	10	0	10	0	1695
0900:00	0.00	0	0.66	19	5.17	133	8.49	132	---	---	0	0	0	0	0	100	10	0	10	0	1676
0915:00	0.00	0	0.96	30	5.02	137	8.26	136	---	---	0	0	0	0	0	100	10	2	10	0	1455
0930:00	0.00	0A	0.89	30A	2.75	75A	4.61	75A	---	---	0	0	0	0	0	100	10	5	10	0	1613A
AVERAGE	0.00	0	0.93	25	8.64	136	16.47	126	---	---	0	0	0	0	8	92	10	TOTALS		31	23918
VARIANCE	0.0	0	0.1	122	27.2	2780	308.7	3803	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-167

Table J-30

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/05/1998 FROM 0530:00 TO 1000:00 PRINTED: 10/01/98

FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER

POST MILE: 28.34

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	100.00*	0	100.00*	0	100.00*	0	100.00*	0	---	---	0	0	0	0	0	100	0	125	0	0	0
0600:00	43.65*	49	40.99*	13	42.68*	46	50.16*	40	---	---	0	0	0	0	0	100	12	58	1	18	1276
0615:00	6.84	131	1.72	24	13.27	155	60.77	64	---	---	0	0	0	0	0	100	12	0	12	0	2492
0630:00	5.93	105	2.28	29	11.78	132	59.37	51	---	---	0	0	0	0	0	100	12	0	12	0	2916
0645:00	7.54	135	1.89	27	13.54	158	75.03*	84	---	---	0	0	0	0	0	100	12	0	12	0	3578
0700:00	7.16	140A	3.13	37A	13.52	176A	81.74	83A	---	---	0	0	0	0	0	100	14	0	14	0	3593A
0715:00	8.45	174	4.02	51	12.19	175	75.49	113	---	---	13	0	0	0	0	87	15	0	15	4	3681
0730:00	4.07	126	1.27	39	4.07	131	10.56	183	---	---	100	0	0	0	0	0	0	0	15	30	3612
0745:00	5.04	145	1.83	49	4.68	131	13.12	195	---	---	100	0	0	0	0	0	0	0	15	30	3398
0800:00	3.64	115	1.30	35	3.23	112	11.65	162	---	---	100	0	0	0	0	0	0	0	15	30	3386
0815:00	3.46	113	1.30	37	3.37	110	12.64	171	---	---	100	0	0	0	0	0	0	0	12	30	3426
0830:00	3.56	114	1.34	35	3.73	132	12.09	165	---	---	100	0	0	0	0	0	0	0	12	30	3520
0845:00	3.56	112	1.08	27	3.67	117	11.74	155	---	---	100	0	0	0	0	0	0	0	12	30	3648
0900:00	3.41	103	1.01	27	3.49	111	8.77	130	---	---	100	0	0	0	0	0	0	0	12	30	3452
0915:00	3.04	110	1.26	39	3.17	114	10.16	139	---	---	100	0	0	0	0	0	0	0	12	30	2956
0930:00	3.67	129	1.43	40	3.66	134	10.47	154	---	---	100	0	0	0	0	0	0	0	10	28	2980
0945:00	42.17*	97	39.42	28	41.60*	86	57.60*	99	---	---	100	0	0	0	0	0	0	21	0	0	1974
1000:00	7.90	118	5.58	38	8.59	98	35.60	111	---	---	33	0	0	0	3	63	15	4	9	4	2940
AVERAGE	5.15	124	4.37	35	7.06	132	29.58	134	---	---	58	0	0	0	0	42	13		TOTALS	294	52708
VARIANCE	3.5	316	83.3	58	18.5	502	697.5	1842	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-168

Table J-31

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/09/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28.35

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	0.00	0	0.30	11	2.52	67	4.01	66	---	---	0	0	0	0	0	100	0	56	0	0	873
0600:00	0.00	0	0.59	18	3.29	87	5.40	86	---	---	0	0	0	0	0	100	0	31	0	2	1156
0615:00	0.00	0	0.34	9	11.74	102	46.21	72	---	---	0	0	0	0	73	27	12	15	10	14	1374
0630:00	0.00	0	0.47	13	11.50	101	46.94	72	---	---	0	0	0	0	0	100	10	0	10	0	1569
0645:00	0.00	0	0.61	16	15.62	158	61.37	98	---	---	0	0	0	0	0	100	10	0	10	0	1807
0700:00	0.00	0	1.01	28	16.20	147	62.82	94	---	---	0	0	0	0	0	100	10	0	10	0	1796
0715:00	0.00	0	1.24	31	15.54	141	62.63*	75	---	---	0	0	0	0	0	100	10	0	10	0	1789
0730:00	0.00	0	1.64	40	20.83	181	91.40*	85	---	---	0	0	0	0	0	100	10	0	10	0	1752
0745:00	0.00	0	1.79	46	21.51	184	87.54*	103	---	---	0	0	0	0	0	100	10	0	10	0	1771
0800:00	0.00	0	1.37	33	22.11	187	90.35*	101	---	---	0	0	0	0	0	100	10	0	10	0	1647
0815:00	0.00	0	2.36	52	21.32	180	93.21*	78	---	---	0	0	0	0	0	100	10	0	10	0	1701
0830:00	0.00	0	1.76	40	21.78	186	93.29*	78	---	---	0	0	0	0	0	100	10	0	10	0	1652
0845:00	0.00	0	1.00	24	17.80	150	74.42	83	---	---	0	0	0	0	0	100	10	0	10	0	1735
0900:00	0.00	0	1.60	32	17.67	141	70.62	86	---	---	0	0	0	0	0	100	10	0	10	0	1595
0915:00	0.00	0	1.17	27	15.30	134	61.23	84	---	---	0	0	0	0	13	87	10	4	10	0	1408
0930:00	0.00	0	0.96	22	14.17	125	54.61	77	---	---	0	0	0	0	87	13	13	15	9	11	1304
0945:00	0.00	0	0.69	22	4.73	126	7.69	126	---	---	0	0	0	0	0	100	0	9	0	0	1411
1000:00	0.00	0	0.76	23	4.04	118	6.71	115	---	---	0	0	0	0	0	100	0	6	0	0	1386
AVERAGE	0.00	0	1.09	27	14.31	140	41.84	88	---	---	0	0	0	0	10	90	10		TOTALS	27	27726
VARIANCE	0.0	0	0.3	136	42.4	1226	704.6	290	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-32

J-169

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/09/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER

POST MILE: 28.34

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	100.00*	0A100.00*	0A100.00*	0A100.00*	0A100.00*	0A	---	---	0	0	0	0	0	0	0	100	0	125	0	0	0A
0600:00	41.10*	55	40.07*	21	41.11*	50	49.16*	50	---	---	0	0	0	0	0	100	0	58	1	20	1279
0615:00	4.46	89	0.67	11	9.79	119	52.87	43	---	---	0	0	0	0	0	100	15	0	15	0	2462
0630:00	4.69	91	1.09	14	9.04	110	55.08	45	---	---	0	0	0	0	0	100	15	0	15	0	3014
0645:00	19.43	118	12.64	15	25.54*	139	81.61*	36	---	---	20	0	0	0	0	80	15	8	15	6	2758
0700:00	7.13	124	1.32	26	11.69	154	80.50*	33	---	---	0	0	0	0	0	100	15	0	15	0	3427
0715:00	8.11	141	1.17	20	10.73	144	71.83*	33	---	---	0	0	0	0	0	100	15	0	15	0	3555
0730:00	10.07	170	1.07	24	12.93	181	97.90*	14	---	---	0	0	0	0	0	100	15	0	15	0	3637
0745:00	11.05	178	2.14	33	12.36	190	96.53*	22	---	---	0	0	0	0	0	100	15	0	15	0	3560
0800:00	9.68	174	1.23	16	10.83	196	99.10*	14	---	---	0	0	0	0	0	100	15	0	15	0	3518
0815:00	9.96	185	1.72	35	9.88	177	99.30*	11	---	---	0	0	0	0	0	100	15	0	15	0	3642
0830:00	12.20	222	1.29	30	12.61	256	99.12*	21	---	---	0	0	0	0	0	100	15	0	15	0	3555
0845:00	9.70	169	1.70	19	9.42	171	81.56*	29	---	---	0	0	0	0	0	100	15	0	15	0	3617
0900:00	10.11	187	2.32	30	9.47	181	80.30*	34	---	---	0	0	0	0	0	100	15	0	15	0	3697
0915:00	8.90	163	1.21	20	9.44	179	73.21*	36	---	---	0	0	0	0	0	100	15	0	15	0	2903
0930:00	8.26	153	1.98	29	8.67	153	61.25	54	---	---	0	0	0	0	0	100	15	0	14	2	2668
0945:00	96.99*	9A	97.11*	3A	88.82*	12A	97.33*	9A	---	---	0	0	0	0	0	100	0	56	0	0	347A
1000:00	*** NO DATA ***																				
AVERAGE	9.55	155	2.25	23	10.53	170	56.40	47	---	---	1	0	0	0	0	99	15	TOTALS		28	47523
VARIANCE	11.9	1341	8.5	54	1.9	1251	12.6	23	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-170

Table J-33

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/09/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28.35

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	0.00	0	1.30	40	6.06	164	10.00	166	---	---	0	0	0	0	0	100	0	26	0	0	1212
1430:00	0.00	0	1.09	33	4.71	138	7.88	134	---	---	0	0	0	0	0	100	0	15	0	0	1301
1445:00	0.00	0	2.70	80	6.68	185	10.93	183	---	---	0	0	0	0	0	100	0	11	0	0	1425
1500:00	0.00	0	0.94	30	4.81	133	7.93	133	---	---	0	0	0	0	0	100	0	0	0	2	1596
1515:00	0.00	0	2.06	46	19.01	160	76.07*	90	---	---	0	0	0	0	33	67	10	7	10	0	1420
1530:00	0.00	0	2.07	44	16.09	133	63.54	75	---	---	0	0	0	0	0	100	10	0	10	0	1638
1545:00	0.00	0	2.07	47	19.40	168	77.90*	72	---	---	0	0	0	0	0	100	10	0	10	0	1689
1600:00	0.00	0	1.54	36	15.33	129	62.22	88	---	---	0	0	0	0	0	100	10	0	10	0	1801
1615:00	0.00	0	3.01	79	13.06	184	44.80	143	---	---	0	0	0	0	0	100	10	0	10	0	1579
1630:00	0.00	0	1.50	35	15.51	129	60.93	70	---	---	0	0	0	0	0	100	10	0	10	0	1648
1645:00	0.00	0	2.41	58	20.23	174	81.20*	82	---	---	0	0	0	0	23	77	11	5	10	0	1435
1700:00	0.00	0	1.83	45	17.73	149	71.69	68	---	---	0	0	0	0	0	100	10	0	10	0	1605
1715:00	0.00	0	3.21	83	20.07	179	84.66*	81	---	---	0	0	0	0	47	53	11	8	10	4	1430
1730:00	0.00	0	1.94	48	19.90	172	81.68*	75	---	---	0	0	0	0	0	100	10	0	10	0	1687
1745:00	0.00	0	2.71	57	18.78	158	75.71	82	---	---	0	0	0	0	40	60	11	7	10	4	1384
1800:00	0.00	0	1.46	40	14.07	122	59.14	71	---	---	0	0	0	0	60	40	11	11	10	9	1306
1815:00	0.00	0	1.93	49	17.22	148	68.57*	71	---	---	0	0	0	0	100	0	0	24	10	30	1194
1830:00	0.00	0	1.56	38	10.78	98	38.63	74	---	---	0	0	0	0	100	0	0	27	10	30	1147
1845:00	0.00	0	1.53	39	12.91	120	47.44	76	---	---	0	0	0	0	100	0	0	30	10	30	1123
1900:00	0.00	0	1.21	31	12.06	119	40.74	88	---	---	0	0	0	0	93	7	0	41	9	30	986
1915:00	0.00	0	0.87	30	3.74	114	6.26	115	---	---	0	0	0	0	0	100	0	48	0	0	883
AVERAGE	0.00	0	1.85	47	13.72	146	40.52	104	---	---	0	0	0	0	28	72	10		TOTALS	139	29489
VARIANCE	0.0	0	0.4	247	29.9	617	610.2	1369	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-34

J-171

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/09/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER

POST MILE: 28.34

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	***	NO DATA	***																		
1430:00	***	NO DATA	***																		
1445:00	***	NO DATA	***																		
1500:00	***	NO DATA	***																		
1515:00	***	NO DATA	***																		
1530:00	***	NO DATA	***																		
1545:00	***	NO DATA	***																		
1600:00	26.52	10A	0.00	0A	26.52	10A	26.52	10A	0.00	0A	33	0	0	0	0	0	0	170	0	1	60A
1615:00	20.96*	188A	5.18*	68A	21.84*	170A	72.92*	64A	0.00*	0A	32	0	0	0	0	64	15	0	9	12	3099A
1630:00	10.29	153	2.43	37	9.74	121	66.94*	41	---	---	0	0	0	0	0	100	15	0	15	0	3647
1645:00	14.39	214	3.41	65	13.78	168	88.36*	30	---	---	0	0	0	0	0	100	15	0	15	0	3341
1700:00	12.18	181	2.57	46	12.03	153	77.45*	34	---	---	0	0	0	0	0	100	15	0	15	0	3386
1715:00	14.93	243	3.79	86	13.97	177	88.20*	23	---	---	0	0	0	0	0	100	15	0	15	0	2979
1730:00	13.49	198	2.56	52	13.19	171	86.88*	16	---	---	0	0	0	0	0	100	15	0	15	0	3283
1745:00	13.25	200	3.89	58	13.16	155	82.15*	30	---	---	0	0	0	0	0	100	15	0	15	0	2830
1800:00	9.79	160	2.31	42	9.42	127	64.80	34	---	---	0	0	0	0	0	100	15	0	15	0	2612
1815:00	12.16	184	2.55	51	12.40	172	76.45*	32	---	---	0	0	0	0	0	100	15	0	15	0	2605
1830:00	7.14	141	1.55	35	6.61	97	50.24	67	---	---	0	0	0	0	0	100	15	0	15	0	2181
1845:00	8.05	192	1.53	36	7.67	136	65.02	68	---	---	0	0	0	0	0	100	15	0	15	0	2071
1900:00	7.47	184	1.30	32	7.31	129	63.67	70	---	---	0	0	0	0	0	100	15	0	14	2	1941
1915:00	98.08*	2A	98.11*	3A	98.08*	2A	98.30*	3A	---	---	0	0	0	0	0	100	0	100	0	0	17A
AVERAGE	12.47	171	2.33	45	12.15	134	54.05	48	0.00	0	3	0	0	0	0	97	15		TOTALS	15	33785
VARIANCE	24.5	3311	1.1	399	25.2	2160	220.2	730	0.0	0											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-172

Table J-35

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/10/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER

POST MILE: 28.34

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	100.00*	0A100.00*	0A100.00*	0A100.00*	0A100.00*	0A	---	---	0	0	0	0	0	0	100	0	125	0	0	0A	
0600:00	40.00*	50	38.48*	11	39.56*	46	46.28*	43	---	---	0	0	0	0	0	100	0	57	1	19	1307
0615:00	8.47	118	1.09	18	11.40	129	52.94	54	---	---	0	0	0	0	0	100	15	0	15	0	2417
0630:00	11.13	146	1.79	23	14.01	156	72.36*	44	---	---	0	0	0	0	0	100	15	0	15	0	2808
0645:00	11.24	153	1.48	27	13.89	148	70.62	38	---	---	0	0	0	0	0	100	15	0	15	0	3302
0700:00	13.42	242	2.45	33	15.42	201	89.74*	20	---	---	0	0	0	0	0	100	15	0	15	0	3483
0715:00	14.07	277	2.44	33	12.83	173	87.63*	23	---	---	0	0	0	0	0	100	15	0	15	0	3345
0730:00	14.91	241	2.16	40	14.29	205	94.35*	18	---	---	0	0	0	0	0	100	15	0	15	0	3483
0745:00	14.84	244	2.74	43	12.88	217	99.65*	9	---	---	0	0	0	0	0	100	15	0	15	0	3478
0800:00	13.00	224	2.67	45	12.11	218	99.30*	15	---	---	0	0	0	0	0	100	15	0	15	0	3380
0815:00	11.89	227	1.44	26	10.46	183	90.17*	29	---	---	0	0	0	0	0	100	15	0	15	0	3437
0830:00	11.14	216	2.15	38	10.73	196	81.97*	34	---	---	0	0	0	0	0	100	15	0	15	0	3094
0845:00	12.15	227	2.34	29	11.74	212	91.08*	23	---	---	0	0	0	0	0	100	15	0	15	0	3389
0900:00	10.57	188	3.37	30	10.88	195	76.27*	37	---	---	0	0	0	0	0	100	15	0	15	0	3411
0915:00	10.21	176	1.83	27	9.56*	161	68.09*	64	---	---	0	0	0	0	0	100	15	0	15	0	3478
0930:00	8.38	153	1.57	28	7.66	137	53.86	73	---	---	0	0	0	0	0	100	15	0	14	2	2822
0945:00	5.46	166A	0.85	25A	3.27	104A	19.69	210A	---	---	0	0	0	0	0	100	0	0	0	0	2928A
1000:00	*** NO DATA ***																				
AVERAGE	11.39	194	2.03	30	11.54	173	49.28	64	---	---	0	0	0	0	0	100	15	TOTALS		21	47903
VARIANCE	6.3	2943	0.4	78	8.8	2066	341.3	397	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-36

J-173

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/10/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28.35

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	0.00	0	0.53	18	2.47	64	3.90	63	---	---	0	0	0	0	0	100	0	60	0	0	829
0600:00	0.00	0	0.47	15	2.41	68	3.93	68	---	---	0	0	0	0	0	100	0	36	0	2	1053
0615:00	0.00	0	0.61	14	11.40	102	46.09	71	---	---	0	0	0	0	93	7	10	25	10	27	1292
0630:00	0.00	0	0.57	16	15.61	131	60.62	87	---	---	0	0	0	0	27	73	10	4	10	0	1503
0645:00	0.00	0	0.80	21	14.88	134	52.63	101	---	---	0	0	0	0	0	100	10	0	10	0	1731
0700:00	0.00	0	1.04	25	19.44	165	73.74	104	---	---	0	0	0	0	0	100	10	0	10	0	1841
0715:00	0.00	0	1.23	30	19.70	166	78.50*	74	---	---	0	0	0	0	0	100	10	0	10	0	1641
0730:00	0.00	0	2.09	44	20.66	178	85.72*	86	---	---	0	0	0	0	0	100	10	0	10	0	1836
0745:00	0.00	0	1.83	45	22.26	195	90.81*	99	---	---	0	0	0	0	0	100	10	0	10	0	1770
0800:00	0.00	0	1.84	42	22.03	184	92.69*	82	---	---	0	0	0	0	0	100	10	0	10	0	1644
0815:00	0.00	0	1.64	38	20.32	176	85.20*	76	---	---	0	0	0	0	0	100	10	0	10	0	1643
0830:00	0.00	0	1.21	28	19.71	162	73.26	97	---	---	0	0	0	0	0	100	10	0	10	0	1316
0845:00	0.00	0	0.88	19	21.18	166	81.51*	90	---	---	0	0	0	0	0	100	10	0	10	0	1625
0900:00	0.00	0	0.87	22	17.81	140	68.68	80	---	---	0	0	0	0	0	100	10	0	10	0	1681
0915:00	0.00	0	1.09	25	15.47	124	59.88	76	---	---	0	0	0	0	0	100	10	0	10	0	1686
0930:00	0.00	0	0.93	24	12.55	115	45.62	89	---	---	0	0	0	0	0	100	10	0	9	2	1464
0945:00	0.00	0A	0.88	27A	5.76	141A	8.99	138A	---	---	0	0	0	0	0	100	0	6	0	0	1401A
1000:00	*** NO DATA ***																				
AVERAGE	0.00	0	1.09	26	15.51	136	45.21	80	---	---	0	0	0	0	7	93	10	TOTALS		31	25022
VARIANCE	0.0	0	0.2	113	40.5	1881	671.2	284	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-174

Table J-37

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/10/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ TUSTIN RANCH

POST MILE: 28.35

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	***	NO DATA	***																		
1430:00	***	NO DATA	***																		
1445:00	***	NO DATA	***																		
1500:00	***	NO DATA	***																		
1515:00	***	NO DATA	***																		
1530:00	***	NO DATA	***																		
1545:00	***	NO DATA	***																		
1600:00	***	NO DATA	***																		
1615:00	0.00	0A	3.49	86A	20.92	180A	85.49	90A	---	---	0	0	0	0	0	100	10	0	10	0	1721A
1630:00	0.00	0	1.65	42	15.64	125	58.88*	77	---	---	0	0	0	0	0	100	10	0	10	0	1613
1645:00	0.00	0	3.31	71	19.86	173	82.45*	71	---	---	0	0	0	0	0	100	10	3	10	0	1510
1700:00	0.00	0A	1.69	40A	19.53	165A	79.98*	61A	---	---	0	0	0	0	0	100	10	0	10	0	1589A
1715:00	0.00	0	2.69	63	21.31	182	89.44*	83	---	---	0	0	0	0	3	97	10	2	10	0	1534
1730:00	0.00	0	2.63	62	20.98	178	86.14*	78	---	---	0	0	0	0	0	100	10	0	10	0	1667
1745:00	0.00	0	1.90	47	17.58	151	68.73	84	---	---	0	0	0	0	20	80	11	6	10	0	1387
1800:00	0.00	0	1.47	37	16.93	143	62.79*	84	---	---	0	0	0	0	57	43	12	9	10	4	1385
1815:00	0.00	0	1.83	46	17.49	150	68.65	91	---	---	0	0	0	0	100	0	0	28	10	30	1120
1830:00	0.00	0	1.71	43	14.93	125	52.30	82	---	---	0	0	0	0	100	0	15	23	10	29	1240
1845:00	0.00	0	2.24	48	14.64	129	51.87	83	---	---	0	0	0	0	100	0	0	26	10	30	1154
1900:00	0.00	0	1.46	37	11.57	111	36.96	94	---	---	0	0	0	0	93	7	0	28	9	30	1133
1915:00	0.00	0A	1.13	35A	3.46	102A	5.86	102A	---	---	0	0	0	0	0	100	0	40	0	0	959A
AVERAGE	0.00	0	2.09	48	16.53	140	52.83	81	---	---	0	0	0	0	38	62	10		TOTALS	123	17127
VARIANCE	0.0	0	0.5	171	22.0	876	575.6	97	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-38

J-175

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/10/1998 FROM 1400:00 TO 1915:00 PRINTED: 10/01/98

FREEWAY LOCATION: 5 N/B @ TUSTIN TRAILER

POST MILE: 28.34

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	*** NO DATA ***																				
1430:00	*** NO DATA ***																				
1445:00	*** NO DATA ***																				
1500:00	*** NO DATA ***																				
1515:00	*** NO DATA ***																				
1530:00	*** NO DATA ***																				
1545:00	*** NO DATA ***																				
1600:00	*** NO DATA ***																				
1615:00	17.18	266A	3.90	90A	15.29	191A	93.61*	26A	---	---	0	0	0	0	0	100	15	0	15	0	3852A
1630:00	11.46	163	4.07	51	10.16	127	65.08*	56	---	---	0	0	0	0	0	100	15	0	15	0	3555
1645:00	15.58	224	4.58	74	14.50	181	88.26*	23	---	---	0	0	0	0	0	100	15	0	15	0	3395
1700:00	14.16	205	2.59	47	13.64	167	85.60*	29	---	---	0	0	0	0	0	100	15	0	15	0	3395
1715:00	16.26	243	3.69	70	14.92	191	94.17*	22	---	---	0	0	0	0	0	100	15	0	15	0	3445
1730:00	14.96	224	3.62	63	14.07	186	92.09*	24	---	---	0	0	0	0	0	100	15	0	15	0	3302
1745:00	12.09	178	2.84	55	12.56	146	76.07	40	---	---	0	0	0	0	0	100	15	0	15	0	2835
1800:00	11.16	165	2.29	42	10.83	141	72.45	38	---	---	0	0	0	0	0	100	15	0	15	0	2634
1815:00	11.57	192	2.40	48	12.42	172	74.82*	38	---	---	0	0	0	0	0	100	15	0	15	0	2499
1830:00	9.44	182	1.83	42	8.23	125	64.96*	46	---	---	0	0	0	0	0	100	15	0	15	0	2344
1845:00	8.48	210	2.36	52	7.86	133	66.27	78	---	---	0	0	0	0	0	100	15	0	15	0	2145
1900:00	7.63	185	1.74	38	6.97	119	66.41*	65	---	---	0	0	0	0	0	100	15	0	14	2	2153
1915:00	97.89*	2A	97.89*	2A	97.89*	2A	98.64*	0A	---	---	0	0	0	0	0	100	0	106	0	0	18A
AVERAGE	12.50	194	2.99	53	11.79	150	71.60	52	---	---	0	0	0	0	0	100	15		TOTALS	2	33897
VARIANCE	9.0	726	0.8	114	7.8	748	16.4	339	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-176

Table J-39

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/11/1998 FROM 1400:00 TO 1915:00 PRINTED: 10/01/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE 1

POST MILE: 27.55

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	***	NO DATA		***																	
1430:00	***	NO DATA		***																	
1445:00	12.06	177A	0	80	12A	12.61	174A	20.20	162A	12.23	168A	0	0	0	0	100	0	20	0	0	1335A
1500:00	8.11	126	0.31	4	8.56	125	13.59	120	9.29	128	0	0	0	0	0	100	0	18	1	20	1222
1515:00	11.45	143	1.61	21	19.57	125	70.53*	57	10.18	141	0	0	0	0	93	7	13	24	10	21	1261
1530:00	11.29	137	1.59	20	19.51	121	68.14	59	10.18	133	0	0	0	0	70	30	12	13	10	7	1296
1545:00	14.01	186	2.44	34	23.48	156	90.47*	55	38.53	181	0	0	0	0	93	7	12	16	10	16	1330
1600:00	11.97	159	1.75	22	20.68	139	82.86*	38	16.07	138	0	0	0	0	10	90	10	5	10	0	1412
1615:00	11.84	185	2.28	32	20.57	158	82.67*	49	12.70	188	0	0	0	0	83	17	12	14	10	12	1319
1630:00	12.61	203	2.37	29	21.67	174	96.57*	46	51.24	169	0	0	0	0	97	3	13	15	10	14	1272
1645:00	11.91	182	2.18	29	20.08	156	83.37*	56	11.21	179	0	0	0	0	97	3	13	19	10	20	1300
1700:00	11.81	169	1.64	22	20.20	149	73.20*	57	10.62	161	0	0	0	0	73	27	11	14	10	13	1310
1715:00	12.20	193	1.99	27	21.44	169	92.81*	51	38.70	188	0	0	0	0	77	23	12	13	10	9	1358
1730:00	12.34	196	2.49	32	21.33	167	96.74*	34	49.52	160	0	0	0	0	0	100	10	1	10	0	1581
1745:00	10.26	168	2.16	22	17.59	145	76.83*	56	8.87	165	0	0	0	0	50	50	11	10	10	9	1315
1800:00	10.86	175	1.85	25	18.93	151	87.59*	38	9.79	172	0	0	0	0	100	0	13	20	10	25	1232
1815:00	9.85	156	1.61	23	17.20	137	79.83*	37	8.83	154	0	0	0	0	100	0	0	30	10	30	1108
1830:00	8.88	146	2.36	32	14.37	116	63.91*	47	7.86	143	0	0	0	0	100	0	0	26	10	30	1170
1845:00	8.39	131	1.51	22	14.90	111	59.47	41	6.69	123	0	0	0	0	93	7	10	27	10	28	1151
1900:00	5.00	83	0.59	8	8.65	75	34.38	40	4.41	83	0	0	0	0	93	7	0	31	9	30	1113
1915:00	4.44	82	0.31	6	4.43	79	7.39	77	4.63	81	0	0	0	0	0	100	0	38	1	20	978
AVERAGE	10.49	152	1.68	22	17.15	132	33.86	65	16.92	144	0	0	0	0	67	33	11		TOTALS	304	23173
VARIANCE	6.1	1593	0.5	88	26.0	1028	521.6	754	216.8	1329											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-40

J-177

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/11/1998 FROM 1400:00 TO 1915:00 PRINTED: 10/01/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER

POST MILE: 27.54

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	*** NO DATA ***																				
1430:00	*** NO DATA ***																				
1445:00	---	---	100.00*		0A100.00*		0A100.00*	0A	---	---	0	0	0	0	0	100	0	0	0	0	0A
1500:00	---	---	68.84*	1	32.96*	91	36.05*	83	---	---	0	0	0	0	0	100	0	0	1	20	2052
1515:00	---	---	2.17	23	28.18	135	64.51	80	---	---	0	0	0	0	0	100	12	0	12	0	2923
1530:00	---	---	1.86	20	26.21	136	67.80	77	---	---	0	0	0	0	0	100	12	0	12	0	3114
1545:00	---	---	3.28	36	31.81	186	85.88	93	---	---	0	0	0	0	0	100	12	0	12	0	3112
1600:00	---	---	2.44	23	29.03	189	81.94*	77	---	---	0	0	0	0	0	100	12	0	12	0	3237
1615:00	---	---	2.73	31	29.80	210	78.26*	69	---	---	0	0	0	0	0	100	15	0	15	0	3178
1630:00	---	---	3.47	30	31.37	265	93.40*	80	---	---	0	0	0	0	0	100	15	0	15	0	2653
1645:00	---	---	3.08	29	28.87	262	82.73*	77	---	---	0	0	0	0	0	100	15	0	15	0	2460
1700:00	---	---	2.70	26	28.81	260	77.35*	54	---	---	0	0	0	0	0	100	15	0	15	0	2540
1715:00	---	---	2.69	37	26.33	190	87.59*	85	---	---	0	0	0	0	0	100	15	0	15	0	2545
1730:00	---	---	3.16	41	25.51	169	89.39	103	---	---	0	0	0	0	0	100	15	0	15	0	2467
1745:00	---	---	2.34	22	21.72	150	73.27	97	---	---	0	0	0	0	0	100	15	0	15	0	1877
1800:00	---	---	1.99	25	22.20	156	79.01	97	---	---	0	0	0	0	0	100	15	0	15	0	1831
1815:00	---	---	1.92	26	21.52	147	75.08	68	---	---	0	0	0	0	0	100	12	0	12	0	1643
1830:00	---	---	6.37	54	24.30	162	63.46	58	---	---	0	0	0	0	0	100	12	0	12	0	1886
1845:00	---	---	8.91	67	23.95	196	59.02	49	---	---	0	0	0	0	0	100	12	0	12	0	1899
1900:00	---	---	4.20	41	14.83	124	36.71	41	---	---	0	0	0	0	0	100	12	0	11	4	1903
1915:00	---	---	98.84*	1	98.84*	1	98.84*	1	---	---	0	0	0	0	0	100	0	0	0	0	13
AVERAGE	---	---	3.33	33	25.90	184	69.41	76	---	---	0	0	0	0	0	100	14	TOTALS		24	41333
VARIANCE	---	---	3.2	152	18.3	1977	204.9	426	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-178

Table J-41

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/12/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98
 FREEWAY LOCATION: 5 N/B @ JAMBOREE 1 POST MILE: 27.55

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	2.00	39A	0.00	0A	2.23	42A	3.59	45A	1.64	36A	0	0	0	0	0	100	0	73	0	0	684A
0600:00	3.75	56	0.00	0	3.77	57	5.85	53	3.88	55	0	0	0	0	0	100	0	58	1	20	806
0615:00	5.27	64	0.56	7	9.01	58	31.56	37	4.27	63	0	0	0	0	100	0	0	46	10	30	973
0630:00	5.33	73	0.71	9	9.19	64	36.87	36	4.57	75	0	0	0	0	100	0	14	27	10	28	1224
0645:00	6.19	86	0.86	11	10.94	77	45.89	30	5.13	84	0	0	0	0	13	87	10	3	10	1	1527
0700:00	7.10	102	0.53	8	12.88	95	46.79	45	6.35	99	0	0	0	0	0	100	10	0	10	0	1713
0715:00	9.29	134	0.68	10	17.96	124	72.56*	40	11.89	130	0	0	0	0	0	100	10	0	10	0	1753
0730:00	10.70	153	0.84	13	19.19	144	76.64*	39	12.52	151	0	0	0	0	0	100	10	0	10	0	1849
0745:00	10.91	145	1.16	15	19.12	131	72.55*	50	9.25	137	0	0	0	0	0	100	10	0	10	0	1649
0800:00	9.84	127	1.19	15	16.72	113	62.03	41	8.32	124	0	0	0	0	0	100	10	0	10	0	1660
0815:00	10.48	140	1.23	13	18.39	127	72.89	39	8.34	130	0	0	0	0	0	100	10	0	10	0	1645
0830:00	9.81	148	1.45	19	17.02	132	70.94*	45	10.09	150	0	0	0	0	0	100	10	0	10	0	1657
0845:00	9.31	122	0.50	7	16.78	115	64.06*	42	7.48	112	0	0	0	0	0	100	10	0	10	0	1731
0900:00	10.27	118	2.34	18	16.26	103	58.37	48	10.11	122	0	0	0	0	0	100	10	0	10	0	1641
0915:00	7.09	94	1.13	14	11.66	80	43.02	43	5.54	84	0	0	0	0	70	30	11	15	10	18	1252
0930:00	5.62	78	0.46	7	9.84	76	36.70	51	5.05	80	0	0	0	0	93	7	15	20	9	25	1237
0945:00	5.60	92A	0.67	9A	6.01	81A	10.86	78A	5.89	84A	0	0	0	0	0	100	0	30	1	20	1113A
1000:00	*** NO DATA ***																				
AVERAGE	7.56	101	0.84	10	12.76	92	37.87	41	7.08	98	0	0	0	0	24	76	10	TOTALS		142	23287
VARIANCE	7.0	1482	0.3	28	28.2	1205	447.8	106	8.5	1412											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-42

J-179

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/12/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER POST MILE: 27.54

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	---	---	100.00*	0A	100.00*	0A	100.00*	0A	---	---	0	0	0	0	0	100	0	0	0	0	0A
0600:00	---	---	45.04*	0	46.44*	39	49.02*	35	---	---	0	0	0	0	0	100	0	0	1	20	849
0615:00	---	---	0.62	7	11.58	66	31.22	48	---	---	0	0	0	0	0	100	12	0	12	0	1746
0630:00	---	---	0.82	9	11.37	73	35.37	51	---	---	0	0	0	0	0	100	12	0	12	0	2050
0645:00	---	---	1.31	17	13.23	80	43.38	47	---	---	0	0	0	0	0	100	12	0	12	0	2452
0700:00	---	---	0.86	9	21.74	148	50.24	35	---	---	0	0	0	0	0	100	12	0	12	0	2588
0715:00	---	---	1.36	14	43.00	223	70.99	43	---	---	0	0	0	0	0	100	12	0	12	0	2529
0730:00	---	---	1.69	15	39.62	215	74.42	57	---	---	0	0	0	0	0	100	12	0	12	0	2674
0745:00	---	---	1.56	15	33.10	174	72.47	53	---	---	0	0	0	0	0	100	12	0	12	0	2493
0800:00	---	---	5.32	20	27.64	141	63.78	38	---	---	0	0	0	0	0	100	12	0	12	0	2345
0815:00	---	---	1.76	15	27.27	141	69.64	42	---	---	0	0	0	0	0	100	12	0	12	0	2371
0830:00	---	---	1.74	18	24.42	141	69.09*	54	---	---	0	0	0	0	0	100	12	0	12	0	2345
0845:00	---	---	0.90	9	24.47	125	64.15	58	---	---	0	0	0	0	0	100	12	0	12	0	2488
0900:00	---	---	2.32	19	22.31	110	57.00	66	---	---	0	0	0	0	0	100	12	0	12	0	2319
0915:00	---	---	1.21	13	16.36	89	45.10	53	---	---	0	0	0	0	0	100	12	0	12	0	2077
0930:00	---	---	0.56	7A	13.47	79A	36.87	60A	---	---	0	0	0	0	0	100	12	0	11	3	2070A
0945:00	---	---	97.94*	2A	98.18*	5A	98.29*	5A	---	---	0	0	0	0	0	100	0	0	0	0	60A
1000:00	*** NO DATA ***																				
AVERAGE	---	---	1.57	13	23.54	129	54.97	50	---	---	0	0	0	0	0	100	12	TOTALS		23	33367
VARIANCE	---	---	1.3	18	94.0	2381	219.4	73	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-180

Table J-43

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/12/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98
 FREEWAY LOCATION: 5 N/B @ JAMBOREE 1 POST MILE: 27.55

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	*** NO DATA ***																				
1430:00	*** NO DATA ***																				
1445:00	12.51	207A	0.36	6A	13.24	204A	21.20	195A	14.81	222A	0	0	0	0	0	100	0	14	0	0	1653A
1500:00	7.49	114	0.27	4	8.01	112	12.49	109	8.53	115	0	0	0	0	0	100	0	12	1	20	1271
1515:00	10.97	146	1.45	20	19.02	129	75.36*	57	11.59	148	0	0	0	0	100	0	0	26	10	30	1185
1530:00	12.20	138	2.17	27	19.25	112	78.08*	39	14.89	136	0	0	0	0	83	17	12	14	10	10	1343
1545:00	14.35	193	2.46	35	23.44	162	97.01*	31	24.43	187	0	0	0	0	83	17	11	13	10	10	1350
1600:00	14.99	197	3.37	43	24.01	156	94.17*	42	48.69	167	0	0	0	0	33	67	11	7	10	2	1392
1615:00	12.32	183	1.98	28	21.17	157	87.78*	39	23.84	169	0	0	0	0	77	23	11	14	10	15	1347
1630:00	14.01	202	2.86	36	23.46	171	96.07*	36	47.38	161	0	0	0	0	23	77	10	6	10	3	1393
1645:00	13.16	197	2.51	32	21.77	167	93.09*	35	30.46	194	0	0	0	0	100	0	13	21	10	26	1246
1700:00	12.10	188	1.16	17	21.97	171	97.02*	24	53.23	171	0	0	0	0	60	40	11	12	10	13	1332
1715:00	13.84	203	2.61	34	23.29	174	97.12*	35	29.78	195	0	0	0	0	87	13	11	18	10	23	1327
1730:00	14.17	203	2.56	37	23.34	168	94.16*	32	42.29	175	0	0	0	0	0	100	10	0	10	0	1582
1745:00	12.19	197	2.38	30	21.16	167	92.12*	29	21.76	186	0	0	0	0	40	60	11	9	10	2	1366
1800:00	9.06	139	1.41	19	15.51	121	67.05*	35	7.60	132	0	0	0	0	100	0	12	23	10	27	1191
1815:00	10.28	161	3.32	39	16.71	127	71.32*	30	9.46	162	0	0	0	0	100	0	15	25	10	28	1206
1830:00	8.89	145	1.58	23	15.41	124	64.39	46	7.80	138	0	0	0	0	100	0	0	31	10	30	1081
1845:00	7.70	126	1.32	17	13.39	108	54.61	48	7.04	125	0	0	0	0	100	0	0	34	10	30	1121
1900:00	5.65	90	0.95	12	10.36	80	39.07	41	5.26	90	0	0	0	0	93	7	0	30	9	30	1081
1915:00	4.37	82	0.27	4	4.47	78	7.26	74	4.56	82	0	0	0	0	0	100	0	44	1	20	921
AVERAGE	11.07	156	1.84	24	17.84	134	33.17	64	21.76	148	0	0	0	0	64	36	11	TOTALS		319	23286
VARIANCE	9.0	1875	0.9	148	31.8	1151	451.9	539	244.7	1317											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-44

J-181

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/12/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER POST MILE: 27.54

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	*** NO DATA ***																				
1430:00	*** NO DATA ***																				
1445:00	---	---	100.00*		0A100.00*		0A100.00*	0A	---	---	0	0	0	0	0	100	0	0	0	0	0A
1500:00	---	---	44.31*	2	45.48*	77	48.24*	71	---	---	0	0	0	0	0	100	0	0	1	20	1713
1515:00	---	---	1.65	20	24.41	140	72.30	88	---	---	0	0	0	0	0	100	12	0	12	0	2669
1530:00	---	---	2.48	26	24.19	133	61.76	78	---	---	0	0	0	0	0	100	12	0	12	0	3032
1545:00	---	---	2.88	35	28.05	172	89.23	89	---	---	0	0	0	0	0	100	12	0	12	0	2477
1600:00	---	---	3.69	44	27.94	175	87.98	88	---	---	0	0	0	0	0	100	12	0	12	0	2445
1615:00	---	---	1.97	27	26.00	169	81.51	88	---	---	0	0	0	0	0	100	15	0	15	0	2377
1630:00	---	---	2.93	37	27.92	185	89.53	92	---	---	0	0	0	0	0	100	15	0	15	0	2325
1645:00	---	---	2.64	32	26.80	183	86.47	97	---	---	0	0	0	0	0	100	15	0	15	0	2125
1700:00	---	---	1.27	18	26.43	179	89.19	98	---	---	0	0	0	0	0	100	15	0	15	0	2176
1715:00	---	---	2.65	34	28.40	188	89.66*	103	---	---	0	0	0	0	0	100	15	0	15	0	2213
1730:00	---	---	2.58	35	28.16	184	87.27	87	---	---	0	0	0	0	0	100	15	0	15	0	2397
1745:00	---	---	2.62	32	26.56	178	86.76	92	---	---	0	0	0	0	0	100	15	0	15	0	1978
1800:00	---	---	1.51	19	19.37	128	63.46	84	---	---	0	0	0	0	0	100	15	0	15	0	1748
1815:00	---	---	3.50	42	21.94	135	67.16	52	---	---	0	0	0	0	0	100	12	0	12	0	1718
1830:00	---	---	5.56	46	23.25	181	64.84	50	---	---	0	0	0	0	0	100	12	0	12	0	1834
1845:00	---	---	6.88	51	20.02	174	52.26	57	---	---	0	0	0	0	0	100	12	0	12	0	1901
1900:00	---	---	5.60	36	16.89	135	38.81	53	---	---	0	0	0	0	0	100	12	0	11	4	1943
1915:00	---	---	98.70*	1	98.70*	1	98.70*	1	---	---	0	0	0	0	0	100	0	0	0	0	13
AVERAGE	---	---	3.15	33	24.77	165	74.57	80	---	---	0	0	0	0	0	100	14		TOTALS	24	37084
VARIANCE	---	---	2.4	88	12.0	456	236.7	279	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-182

Table J-45

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/13/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE 1

POST MILE: 27.55

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]				RATE	LR	TOD	GRN BALL	ML		
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	2.11	33A	0.00	0A	2.21	33A	3.46	33A	2.22	33A	0	0	0	0	0	100	0	71	0	0	699A
0600:00	3.02	43	0.07	1	3.09	45	4.75	44	3.19	44	0	0	0	0	0	100	0	60	1	20	799
0615:00	5.03	66	0.50	7	8.83	60	34.39	35	4.10	66	0	0	0	0	100	0	0	51	10	30	902
0630:00	4.16	52	0.06	1	8.26	52	30.07	36	3.53	55	0	0	0	0	100	0	0	34	10	30	1119
0645:00	5.69	77	0.62	8	10.40	68	39.62	33	4.25	75	0	0	0	0	53	47	11	12	10	11	1416
0700:00	7.14	107	0.67	9	13.52	98	56.06	38	6.35	106	0	0	0	0	0	100	10	0	10	0	1618
0715:00	8.55	120	0.77	10	15.38	111	61.77*	39	7.18	118	0	0	0	0	0	100	10	0	10	0	1673
0730:00	8.62	122	1.23	12	15.47	111	63.19	34	7.90	121	0	0	0	0	0	100	10	0	10	0	1757
0745:00	10.15	148	0.71	11	19.06	139	77.44*	31	8.54	141	0	0	0	0	0	100	10	0	10	0	1711
0800:00	9.50	134	1.26	15	16.96	121	69.29*	41	8.13	126	0	0	0	0	0	100	10	0	10	0	1619
0815:00	9.97	145	1.33	16	18.39	130	74.96*	27	10.01	144	0	0	0	0	0	100	10	1	10	0	1499
0830:00	10.68	150	1.19	17	19.29	133	80.21*	38	9.53	142	0	0	0	0	33	67	11	7	10	1	1410
0845:00	10.31	135	0.76	11	18.97	125	74.03	48	8.89	134	0	0	0	0	30	70	10	7	10	1	1434
0900:00	6.97	100	1.17	15	12.11	86	46.93*	48	6.14	98	0	0	0	0	67	33	12	11	10	6	1314
0915:00	5.96	76	0.16	2	11.81	75	39.87	50	5.18	82	0	0	0	0	100	0	13	25	10	28	1137
0930:00	6.94	91	0.36	5	13.18	86	42.28	51	5.39	82	0	0	0	0	93	7	0	26	9	30	1195
0945:00	5.32	80A	0.31	5A	6.36	77A	10.58	75A	5.69	80A	0	0	0	0	0	100	0	29	1	20	1130A
1000:00	*** NO DATA ***																				
AVERAGE	7.06	96	0.66	8	12.55	88	36.21	39	6.25	94	0	0	0	0	36	64	10	TOTALS		177	21589
VARIANCE	6.6	1640	0.2	30	27.8	1283	488.6	124	5.2	1478											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-46

J-183

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/13/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER

POST MILE: 27.54

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	---	---	100.00*	0A	100.00*	0A	100.00*	0A	---	---	0	0	0	0	0	100	0	0	0	0	0A
0600:00	---	---	39.60*	2	42.00*	35	43.35*	32	---	---	0	0	0	0	0	100	0	0	1	20	858
0615:00	---	---	0.57	7	11.98	67	33.40	51	---	---	0	0	0	0	0	100	12	0	12	0	1595
0630:00	---	---	0.07	1	10.62	53	28.90	41	---	---	0	0	0	0	0	100	12	0	12	0	1904
0645:00	---	---	0.68	8	13.47	79	38.76	45	---	---	0	0	0	0	0	100	12	0	12	0	2277
0700:00	---	---	0.76	9	16.83	102	54.18	67	---	---	0	0	0	0	0	100	12	0	12	0	2430
0715:00	---	---	0.95	10	18.19	117	58.27	56	---	---	0	0	0	0	0	100	12	0	12	0	2448
0730:00	---	---	1.56	13	19.00	130	61.45	45	---	---	0	0	0	0	0	100	12	0	12	0	2474
0745:00	---	---	0.84	11	22.23	140	74.77*	61	---	---	0	0	0	0	0	100	12	0	12	0	2465
0800:00	---	---	1.51	16	21.60	145	68.83*	64	---	---	0	0	0	0	0	100	12	0	12	0	2288
0815:00	---	---	1.69	15	22.19	140	67.99*	68	---	---	0	0	0	0	0	100	12	0	12	0	2287
0830:00	---	---	1.39	17	23.77	140	74.90	94	---	---	0	0	0	0	0	100	12	0	12	0	2202
0845:00	---	---	0.84	11	21.26	139	67.93	74	---	---	0	0	0	0	0	100	12	0	12	0	2216
0900:00	---	---	1.35	15	15.52	94	45.49	64	---	---	0	0	0	0	0	100	12	0	12	0	2131
0915:00	---	---	0.16	2	15.19	80	37.93	56	---	---	0	0	0	0	0	100	12	0	12	0	1948
0930:00	---	---	0.41	5	17.69	95	41.51	60	---	---	0	0	0	0	0	100	12	0	11	4	2046
0945:00	---	---	0.32	5A	6.55	78A	10.51	74A	---	---	0	0	0	0	0	100	0	0	0	0	1877A
1000:00	*** NO DATA ***																				
AVERAGE	---	---	0.87	10	17.07	105	46.10	59	---	---	0	0	0	0	0	100	12	TOTALS		24	32820
VARIANCE	---	---	0.3	25	22.6	1046	301.7	203	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-184

Table J-47

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/13/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98
 FREEWAY LOCATION: 5 N/B @ JAMBOREE 1 POST MILE: 27.55

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	
1415:00	*** NO DATA ***																				
1430:00	*** NO DATA ***																				
1445:00	13.60	207A	0.00	0A	15 17	210A	24.53	201A	14.89	195A	0	0	0	0	0	100	0	7	0	0	1560A
1500:00	8.94	141	0.50	8	9.29	143	14.83	139	10.04	149	0	0	0	0	0	100	0	11	1	20	1315
1515:00	9.63	148	1.45	20	16.95	129	71.31*	49	10.76	151	0	0	0	0	87	13	13	19	10	20	1264
1530:00	11.07	169	1.76	23	18.96	149	81.79*	36	9.85	157	0	0	0	0	53	47	11	12	10	9	1352
1545:00	11.53	185	1.08	14	11.91	178	19.37	173	12.46	183	0	0	0	0	77	23	12	13	10	9	1342
1600:00	10.14	167	1.45	22	10.84	153	17.94	147	11.10	171	0	0	0	0	37	63	11	6	10	0	1419
1615:00	11.28	199	0.98	17	11.22	189	19.08	181	11.79	200	0	0	0	0	100	0	13	15	10	11	1289
1630:00	12.06	215	0.95	13	13.09	206	21.78	197	13.27	203	0	0	0	0	93	7	12	15	10	16	1300
1645:00	9.28	161	0.59	10	9.41	156	16.14	151	10.29	163	0	0	0	0	83	17	13	15	10	15	1327
1700:00	8.00	151	0.78	13	8.06	140	13.60	135	8.60	147	0	0	0	0	80	20	11	15	10	16	1248
1715:00	9.78	175	0.76	12	12.03	169	25.30	144	10.77	176	0	0	0	0	93	7	11	24	10	23	1247
1730:00	10.42	188	0.80	14	10.21	177	16.94	168	10.57	180	0	0	0	0	40	60	10	8	10	1	1403
1745:00	8.97	170	1.07	19	8.81	157	14.93	154	9.55	166	0	0	0	0	87	13	12	19	10	21	1234
1800:00	7.36	141	0.50	8	7.42	131	12.51	129	7.39	132	0	0	0	0	100	0	14	22	10	26	1198
1815:00	6.91	122	1.24	15	6.68	110	11.51	106	7.20	126	0	0	0	0	100	0	0	35	10	30	1050
1830:00	6.32	116	0.47	9	6.29	110	10.65	110	6.65	115	0	0	0	0	100	0	0	29	10	30	1132
1845:00	5.02	94	0.50	9	4.87	86	8.20	83	5.63	98	0	0	0	0	100	0	0	35	10	30	1076
1900:00	5.63	103	0.39	7	5 69	99	9.50	91	5.50	97	0	0	0	0	93	7	0	35	9	30	1066
1915:00	4.52	83	0.37	6	4.66	80	7.77	75	4.70	80	0	0	0	0	0	100	0	41	1	20	977
AVERAGE	8.97	147	0.82	13	10.08	139	15.56	132	9.53	145	0	0	0	0	72	28	12		TOTALS	327	22759
VARIANCE	6.0	1550	0.2	33	15.0	1383	26.8	1388	7.3	1486											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-48.

J-185

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 03/13/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ JAMBOREE TRAILER POST MILE: 27.54

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE	LR	TOD	GRN BALL	ML	
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	*** NO DATA ***																				
1430:00	*** NO DATA ***																				
1445:00	---	---	100.00*		0A100.00*		0A100.00*	0A	---	---	0	0	0	0	0	100	0	0	0	0	0A
1500:00	---	---	42.17*	4	45.67*	98	53.20*	78	---	---	0	0	0	0	0	100	0	0	1	20	1678
1515:00	---	---	1.60	19	23.48	140	69.43	87	---	---	0	0	0	0	0	100	12	0	12	0	2754
1530:00	---	---	2.09	24	26.20	160	78.74*	83	---	---	0	0	0	0	0	100	12	0	12	0	3044
1545:00	---	---	1.23	14	14.01	191	21.33	166	---	---	0	0	0	0	0	100	12	0	12	0	3008
1600:00	---	---	1.53	20	11.09	163	18.11	153	---	---	0	0	0	0	0	100	12	0	12	0	2486
1615:00	---	---	1.23	17	11.61	195	19.11	186	---	---	0	0	0	0	0	100	15	0	15	0	2417
1630:00	---	---	0.94	11	13.99	210	23.68	186	---	---	0	0	0	0	0	100	15	0	15	0	2459
1645:00	---	---	0.64	10	9.76	157	16.03	152	---	---	0	0	0	0	0	100	15	0	15	0	2203
1700:00	---	---	0.77	12	8.20	146	13.69	138	---	---	0	0	0	0	0	100	15	0	15	0	2049
1715:00	---	---	0.76	12	13.10	181	24.70	160	---	---	0	0	0	0	0	100	15	0	15	0	2189
1730:00	---	---	0.89	12	10.22	175	16.27	171	---	---	0	0	0	0	0	100	15	0	15	0	2100
1745:00	---	---	1.12	17	8.76	159	14.49	157	---	---	0	0	0	0	0	100	15	0	15	0	1818
1800:00	---	---	0.51	8	7.56	135	12.23	132	---	---	0	0	0	0	0	100	15	0	15	0	1690
1815:00	---	---	1.31	20	6.98	112	11.47	108	---	---	0	0	0	0	0	100	12	0	12	0	1541
1830:00	---	---	1.30	23	7.63	125	13.03	113	---	---	0	0	0	0	0	100	12	0	12	0	1837
1845:00	---	---	2.13	39	6.01	94	10.56	86	---	---	0	0	0	0	0	100	12	0	12	0	1951
1900:00	---	---	1.90	37	7.21	117	12.54	86	---	---	0	0	0	0	0	100	12	0	11	4	1951
1915:00	---	---	98.83*	1	98.83*	1	98.83*	1	---	---	0	0	0	0	0	100	0	0	0	0	12
AVERAGE	---	---	1.25	18	11.61	154	19.78	139	---	---	0	0	0	0	0	100	14		TOTALS	24	37187
VARIANCE	---	---	0.2	75	31.1	981	194.0	1154	---	---											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-186

Table J-49

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 04/14/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND 2

POST MILE: 31.73

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	4.22	90A	---	---	5.10	81A	7.71	75A	5.56	75A	0	0	0	0	0	100	0	23	0	0	1587A
0600:00	4.42	86	---	---	5.82	85	8.54	76	6.38	82	0	0	0	0	0	100	0	11	0	4	1838
0615:00	3.96	77	---	---	7.23	68	14.90	62	5.75	70	0	0	0	0	23	77	17	8	16	1	2004
0630:00	4.71	89	---	---	12.44	72	36.94	39	6.47	83	0	0	0	0	3	97	16	1	16	0	1918
0645:00	5.31	99	---	---	14.64	79	49.11	45	7.01	88	0	0	0	0	0	100	16	0	16	0	2553
0700:00	4.01	73	---	---	13.11	57	36.34	40	5.10	65	0	0	0	0	0	100	16	0	16	0	2685
0715:00	5.04	84	---	---	13.07	63	37.58	35	7.83	77	0	0	0	0	0	100	16	0	16	0	2490
0730:00	4.70	86	---	---	15.26	74	42.74	48	5.97	71	0	0	0	0	0	100	16	0	16	0	2650
0745:00	3.63	74	---	---	10.03	60	34.03	38	5.34	68	0	0	0	0	0	100	16	0	16	0	2562
0800:00	5.31	94	---	---	13.80	72	45.12	42	6.87	72	0	0	0	0	0	100	16	0	16	0	2536
0815:00	3.96	75	---	---	11.93	63	32.05	45	4.72	60	0	0	0	0	0	100	16	0	16	0	2395
0830:00	4.08	76	---	---	12.69	69	40.33	38	5.14	64	0	0	0	0	0	100	16	0	16	0	2393
0845:00	3.50	66	---	---	9.98	60	31.71	40	4.11	53	0	0	0	0	0	100	16	0	16	0	2230
0900:00	4.08	71	---	---	12.70	58	30.95	33	5.78	67	0	0	0	0	0	100	16	0	16	0	2100
0915:00	4.99	87	---	---	15.89	80	41.63	51	6.30	75	0	0	0	0	0	100	16	1	16	0	1858
0930:00	3.98	76	---	---	11.64	69	32.34	43	5.04	67	0	0	0	0	0	100	16	1	16	0	1964
0945:00	3.86	80	---	---	6.11	76	9.66	71	5.09	64	0	0	0	0	0	100	22	0	22	0	2054
1000:00	4.01	78A	---	---	5.48	75A	8.73	66A	4.91	63A	0	0	0	0	0	100	22	1	22	0	1896A
AVERAGE	4.32	75	---	---	10.94	64	30.02	44	5.74	65	0	0	0	0	2	98	17		TOTALS	5	37391
VARIANCE	0.3	342	---	---	11.8	243	179.2	185	0.8	290											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-50 ,

J-187

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 04/14/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND TRAILER

POST MILE: 31.66

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]				RATE	LR	TOD	GRN BALL	ML		
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	100.00*	0A	---	---	100.00*	0A	100.00*	0A	100.00*	0A	0	0	0	0	0	100	0	125	0	0	0A
0600:00	58.87*	38	---	---	44.93*	41	60.69*	31	48.93*	50	0	0	0	0	0	100	0	69	1	20	904
0615:00	12.37	62	---	---	6.77	69	16.33	56	6.83	66	0	0	0	0	100	0	28	34	16	22	1356
0630:00	14.58	79	---	---	12.83	86	37.06	36	7.90	88	0	0	0	0	97	3	22	24	16	4	1558
0645:00	18.43	92	---	---	16.87	93	50.97	41	6.93	86	0	0	0	0	7	93	16	7	16	0	1773
0700:00	14.33	70	---	---	17.09	77	37.80	42	7.76	75	0	0	0	0	0	100	16	1	16	0	1959
0715:00	20.99	88	---	---	13.91	80	38.57	39	7.62	89	0	0	0	0	0	100	16	2	16	0	2022
0730:00	22.45	86	---	---	12.23	85	42.55	45	6.35	87	0	0	0	0	0	100	16	0	16	0	2300
0745:00	15.36	70	---	---	7.29	60	32.67	36	6.21	74	0	0	0	0	0	100	16	0	16	0	2198
0800:00	32.70	90	---	---	11.88	99	56.84	47	4.91	72	0	0	0	0	0	100	16	0	16	0	2260
0815:00	16.12	68	---	---	8.05	73	32.83	44	0.23	5	0	0	0	0	0	100	16	0	16	0	2057
0830:00	29.10	63	---	---	10.80	83	41.27	36	2.50	24	0	0	0	0	0	100	16	0	16	0	1963
0845:00	14.35	57	---	---	8.75	75	33.35	41	1.11	14	0	0	0	0	0	100	16	0	16	0	1898
0900:00	16.24	60	---	---	6.38	56	31.05	33	1.67	10	0	0	0	0	0	100	16	2	16	0	1809
0915:00	17.03	84	---	---	10.25	81	41.27	42	0.40	4	0	0	0	0	47	53	18	16	16	0	1596
0930:00	15.79	72	---	---	8.39	69	34.91	44	1.29	16	0	0	0	0	30	70	17	13	14	4	1693
0945:00	99.87*	2	---	---	99.73*	1	99.73*	1	99.76*	2	0	0	0	0	0	100	0	105	0	0	8
1000:00	95.29*	0A	---	---	95.29*	0A	95.29*	0A	95.29*	0A	0	0	0	0	0	100	0	125	0	0	0A
AVERAGE	18.56	74	---	---	10.82	78	37.68	42	4.41	51	0	0	0	0	17	83	17		TOTALS	50	27354
VARIANCE	32.4	133	---	---	11.4	130	83.5	31	8.5	1174											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-88

Table J-51

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 04/14/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND 2

POST MILE: 31.73

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	6.13	135A	---	---	7.67	120A	11.50	108A	8.58	117A	0	0	0	0	0	100	22	0	22	0	2049A
1430:00	6.09	125	---	---	8.16	118	11.89	115	8.60	113	0	0	0	0	0	100	22	0	22	0	1896
1445:00	5.21	96	---	---	17.42	81	49.14	42	7.00	91	0	0	0	0	0	100	16	0	16	0	2024
1500:00	10.33	164	---	---	17.76	87	52.44	43	6.83	95	0	0	0	0	0	100	16	0	16	0	1466
1515:00	11.20	162	---	---	15.47	82	49.11	48	6.77	90	0	0	0	0	0	100	16	0	16	0	1391
1530:00	19.09	167	---	---	18.64	93	62.25*	42	8.25	106	0	0	0	0	0	100	16	0	16	0	1108
1545:00	12.63	199	---	---	21.84	107	66.56*	41	9.90	135	0	0	0	0	0	100	16	0	16	0	1614
1600:00	11.34	194	---	---	19.41	101	60.94	45	10.00	126	0	0	0	0	0	100	16	0	16	0	1861
1615:00	10.39	182	---	---	21.02	109	71.90	40	8.96	123	0	0	0	0	0	100	16	0	16	0	1968
1630:00	13.90	198	---	---	20.30	104	67.01	47	7.82	105	0	0	0	0	0	100	16	0	16	0	1824
1645:00	11.21	202	---	---	23.71	104	66.73	44	8.60	126	0	0	0	0	0	100	16	0	16	0	1868
1700:00	12.10	197	---	---	21.22	97	61.30	43	7.76	101	0	0	0	0	0	100	16	0	16	0	1719
1715:00	15.07	221	---	---	18.84	100	59.00	52	7.22	112	0	0	0	0	0	100	16	0	16	0	1033
1730:00	15.05	236	---	---	26.10	106	65.94	44	7.29	112	0	0	0	0	0	100	16	0	16	0	1043
1745:00	13.15	193	---	---	18.79	81	49.95	49	5.85	84	0	0	0	0	0	100	16	0	16	0	1042
1800:00	14.79	230	---	---	15.85	90	59.46	38	7.23	100	0	0	0	0	0	100	16	0	16	0	937
1815:00	8.46	171	---	---	13.04	78	53.67*	43	5.43	82	0	0	0	0	0	100	16	0	16	0	1761
1830:00	8.19	158	---	---	13.22	78	48.13	37	5.27	75	0	0	0	0	0	100	16	0	16	0	1755
1845:00	9.47	173	---	---	16.69	90	55.87	47	7.66	102	0	0	0	0	0	100	16	0	16	0	2061
1900:00	4.73	101	---	---	12.36	87	39.11	51	5.32	79	0	0	0	0	13	87	16	8	14	4	1679
1915:00	3.38	74	---	---	5.17	68	8.18	58	4.29	61	0	0	0	0	0	100	0	18	0	0	1622
AVERAGE	10.57	166	---	---	16.79	91	49.31	49	7.36	98	0	0	0	0	1	99	16		TOTALS	4	32355
VARIANCE	15.3	2487	---	---	27.2	280	364.4	287	2.2	506											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-52

J-189

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 04/14/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND TRAILER

POST MILE: 31.66

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	100.00*	0A	---	---	100.00*	0A	100.00*	0A	100.00*	0A	0	0	0	0	0	100	0	125	0	0	0A
1430:00	64.55*	67	---	---	46.40*	68	65.41*	263	48.71*	87	0	0	0	0	0	100	0	60	1	20	1139
1445:00	24.51	138	---	---	19.69	103	48.90	63	16.64	154	0	0	0	0	0	100	16	4	16	0	1952
1500:00	27.42	179	---	---	21.70	106	55.00	47	15.89	158	0	0	0	0	0	100	16	0	16	0	2014
1515:00	26.71	147	---	---	20.79	91	51.98	57	13.76	149	0	0	0	0	0	100	16	0	16	0	1885
1530:00	28.35	158	---	---	21.32*	108	61.92*	70	15.35	213	0	0	0	0	0	100	16	0	16	0	1505
1545:00	34.62	164	---	---	29.64	130	68.79*	50	18.27	182	0	0	0	0	0	100	16	0	16	0	1899
1600:00	32.82	156	---	---	24.26	131	63.96*	50	18.05	194	0	0	0	0	0	100	16	0	16	0	2146
1615:00	36.21	191	---	---	23.71*	124	66.24	100	20.85	224	0	0	0	0	0	100	16	0	16	0	2201
1630:00	27.55	130	---	---	21.35	130	66.39	64	17.01	176	0	0	0	0	0	100	16	0	16	0	2116
1645:00	26.76	130	---	---	23.67	120	66.15	69	15.27	168	0	0	0	0	0	100	16	0	16	0	2220
1700:00	29.10	164	---	---	18.39	129	66.70*	65	20.84	197	0	0	0	0	0	100	16	0	16	0	2180
1715:00	28.84	149	---	---	21.81*	121	62.29	107	16.20	167	0	0	0	0	0	100	16	0	16	0	1451
1730:00	29.23	134	---	---	26.81*	125	66.49	79	14.40	161	0	0	0	0	0	100	16	0	16	0	1290
1745:00	23.81	130	---	---	16.79	105	54.38	98	12.94	149	0	0	0	0	0	100	16	0	16	0	1323
1800:00	23.76	122	---	---	17.27	101	61.86	58	11.37	129	0	0	0	0	0	100	16	0	16	0	1189
1815:00	22.91	124	---	---	14.43*	90	50.78	111	11.47	121	0	0	0	0	13	87	17	6	16	1	1697
1830:00	22.24	102	---	---	14.55*	87	50.18	79	14.75	156	0	0	0	0	0	100	16	0	16	0	1789
1845:00	25.54	129	---	---	18.42	105	58.50	78	15.58	153	0	0	0	0	0	100	16	0	16	0	2020
1900:00	19.93	121	---	---	12.39*	99	46.63	146	11.74	139	0	0	0	0	40	60	18	20	14	11	1435
1915:00	99.73*	1	---	---	99.66*	1	99.74*	3	99.66*	1	0	0	0	0	0	100	0	106	0	0	12
AVERAGE	27.24	143	---	---	21.09	114	57.56	83	15.58	166	0	0	0	0	3	97	16		TOTALS	32	33463
VARIANCE	17.2	483	---	---	12.7	191	49.4	675	7.5	716											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-190

Table J-53

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 04/16/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND 2

POST MILE: 31.73

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]						RATE	LR	TOD	GRN BALL	ML
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	5.04	108A	---	---	6.61	105A	10.28	84A	6.32	93A	0	0	0	0	0	100	0	31	0	0	1773A
0600:00	3.43	70	---	---	4.54	66	6.66	60	5.10	67	0	0	0	0	0	100	0	7	0	4	1822
0615:00	3.89	76	---	---	5.20	74	7.44	67	5.90	74	0	0	0	0	17	83	16	8	16	4	1860
0630:00	4.88	90	---	---	11.87	75	32.47	46	7.42	89	0	0	0	0	0	100	16	4	16	0	1861
0645:00	5.22	95	---	---	13.92	72	43.87	44	7.10	86	0	0	0	0	0	100	16	0	16	0	2188
0700:00	4.73	80	---	---	13.58	65	36.61	39	6.77	72	0	0	0	0	0	100	16	0	16	0	2463
0715:00	4.06	73	---	---	12.80	58	36.37	37	5.54	67	0	0	0	0	0	100	16	0	16	0	2468
0730:00	4.12	80	---	---	14.17	69	36.61	44	5.49	69	0	0	0	0	0	100	16	0	16	0	2533
0745:00	5.61	90	---	---	14.48	71	47.59	38	7.52	78	0	0	0	0	0	100	16	0	16	0	2567
0800:00	5.16	106	---	---	16.82	82	48.00	40	6.51	85	0	0	0	0	0	100	16	0	16	0	2601
0815:00	4.04	73	---	---	10.09	57	30.11	37	4.69	55	0	0	0	0	0	100	16	0	16	0	2392
0830:00	4.81	90	---	---	14.94	70	44.68	40	6.62	81	0	0	0	0	0	100	16	0	16	0	2432
0845:00	5.14	94	---	---	14.64	72	47.52	35	6.24	80	0	0	0	0	0	100	16	0	16	0	2237
0900:00	4.29	89	---	---	15.49	66	40.09	45	5.43	69	0	0	0	0	0	100	16	0	16	0	2222
0915:00	5.43	91	---	---	16.36	80	46.07	46	6.93	81	0	0	0	0	0	100	16	0	16	0	1981
0930:00	5.13	90	---	---	17.01	77	39.89	46	6.42	72	0	0	0	0	0	100	16	0	16	0	2050
0945:00	4.61	85	---	---	5.99	79	8.43	75	6.26	71	0	0	0	0	0	100	22	0	22	0	2028
1000:00	4.94	99A	---	---	7.60	99A	10.44	93A	7.59	96A	0	0	0	0	0	100	22	0	22	0	2151A
AVERAGE	4.70	80	---	---	12.01	67	31.84	44	6.33	70	0	0	0	0	1	99	17		TOTALS	8	37013
VARIANCE	0.3	338	---	---	16.8	178	231.6	136	0.7	249											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-54

J-91

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 04/16/1998 FROM 0530:00 TO 1000:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND TRAILER

POST MILE: 31.66

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]				RATE	LR	TOD	GRN BALL	ML		
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
0545:00	100.00*	0A	---	---	100.00*	0A	100.00*	0A	100.00*	0A	0	0	0	0	0	100	0	125	0	0	0A
0600:00	46.90*	35	---	---	43.38*	33	59.75*	21	44.38*	32	0	0	0	0	0	100	0	73	1	20	817
0615:00	9.63	64	---	---	4.67	70	9.04	63	4.07	68	0	0	0	0	100	0	0	36	16	30	1340
0630:00	14.17	77	---	---	13.13	86	33.67	41	6.39	84	0	0	0	0	97	3	24	25	16	4	1510
0645:00	17.09	91	---	---	14.40	97	48.11	43	3.98	72	0	0	0	0	10	90	17	6	16	0	1877
0700:00	17.58	84	---	---	13.44	94	38.91	42	6.70	84	0	0	0	0	0	100	16	0	16	0	2085
0715:00	18.43	76	---	---	10.91	76	35.37	37	4.78	60	0	0	0	0	0	100	16	0	16	0	2036
0730:00	16.39	80	---	---	10.33	76	34.21	51	4.49	64	0	0	0	0	0	100	16	0	16	0	2212
0745:00	19.85	81	---	---	11.41	74	42.91	47	5.14	71	0	0	0	0	0	100	16	0	16	0	2198
0800:00	16.41	91	---	---	10.53	94	41.73	37	4.31	74	0	0	0	0	0	100	16	0	16	0	2233
0815:00	11.75	65	---	---	8.24	66	32.71	36	2.76	50	0	0	0	0	0	100	16	0	16	0	2051
0830:00	26.09	84	---	---	10.91	82	44.93	43	1.89	20	0	0	0	0	0	100	16	0	16	0	2079
0845:00	17.18	93	---	---	11.94	85	44.23	42	1.79	7	0	0	0	0	0	100	16	0	16	0	1911
0900:00	22.05	107	---	---	12.28	86	38.63	38	0.46	7	0	0	0	0	0	100	16	0	16	0	1970
0915:00	27.12	76	---	---	12.85	98	49.82	40	2.49	7	0	0	0	0	0	100	16	8	16	0	1735
0930:00	19.36	103	---	---	11.94	92	40.30	48	0.34	7	0	0	0	0	0	100	16	3	14	4	1818
0945:00	95.33*	6	---	---	94.75*	4	94.97*	5	94.55*	1	0	0	0	0	0	100	0	109	0	1	75
1000:00	95.62*	0A	---	---	95.62*	0A	95.62*	0A	95.62*	0A	0	0	0	0	0	100	0	125	0	0	0A
AVERAGE	18.08	84	---	---	11.21	84	38.18	43	3.54	48	0	0	0	0	12	88	17		TOTALS	59	27947
VARIANCE	21.5	145	---	---	5.5	99	91.4	47	3.7	906											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

J-192

Table J-55

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 04/16/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND 2

POST MILE: 31.73

	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]				RATE	LR	TOD	GRN BALL	ML		
TIME	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR	TOD	USED	RATE	RATE	CYCLES	VOL
1415:00	4.81	111A	---	---	6.76	108A	10.02	105A	6.04	87A	0	0	0	0	0	100	22	0	22	0	2163A
1430:00	6.26	137	---	---	8.58	129	12.28	122	8.25	113	0	0	0	0	0	100	22	0	22	0	2041
1445:00	4.98	110	---	---	7.15	105	10.00	97	6.07	89	0	0	0	0	0	100	16	0	16	0	2134
1500:00	7.33	151	---	---	10.45	140	14.59	131	10.85	134	0	0	0	0	0	100	16	0	16	0	2261
1515:00	6.70	146	---	---	9.15	135	12.82	123	9.10	122	0	0	0	0	0	100	16	0	16	0	2162
1530:00	6.23	128	---	---	8.31	121	11.65	104	7.27	100	0	0	0	0	0	100	16	0	16	0	2220
1545:00	6.90	149	---	---	9.66	145	14.02	130	9.20	125	0	0	0	0	0	100	16	0	16	0	2214
1600:00	6.80	135	---	---	7.25	97	10.61	91	5.98	85	0	0	0	0	0	100	16	0	16	0	2127
1615:00	6.03	135	---	---	7.82	118	11.51	111	7.21	106	0	0	0	0	0	100	16	0	16	0	2144
1630:00	7.16	145	---	---	10.78	106	20.64	86	7.62	102	0	0	0	0	0	100	16	0	16	0	2188
1645:00	8.03	160	---	---	14.01	99	44.98	59	8.05	114	0	0	0	0	0	100	16	0	16	0	2041
1700:00	10.15	188	---	---	21.49	104	69.75*	40	7.13	105	0	0	0	0	0	100	16	0	16	0	1879
1715:00	12.06	216	---	---	20.58	102	69.34*	32	9.64	146	0	0	0	0	0	100	16	0	16	0	1751
1730:00	13.56	220	---	---	17.77	90	73.66*	40	7.07	100	0	0	0	0	0	100	16	0	16	0	1374
1745:00	10.00	180	---	---	19.47	92	64.60	39	6.49	95	0	0	0	0	0	100	16	0	16	0	1456
1800:00	11.02	190	---	---	15.35	89	55.93	54	5.75	90	0	0	0	0	0	100	16	0	16	0	1339
1815:00	9.66	168	---	---	17.21	82	49.20	41	5.83	79	0	0	0	0	0	100	16	0	16	0	1565
1830:00	9.80	160	---	---	13.41	76	45.73	41	5.32	80	0	0	0	0	0	100	16	0	16	0	1718
1845:00	6.64	137	---	---	13.46	69	39.95	33	5.45	77	0	0	0	0	0	100	16	0	16	0	2106
1900:00	4.89	99	---	---	15.42	65	37.68	39	4.77	62	0	0	0	0	0	100	16	1	14	4	1917
1915:00	4.48	96	---	---	5.40	87	7.67	81	5.96	83	0	0	0	0	0	100	0	16	0	0	1611
AVERAGE	7.79	147	---	---	12.36	99	26.33	79	7.10	97	0	0	0	0	0	100	16	TOTALS		4	38969
VARIANCE	6.1	1654	---	---	23.1	675	342.6	1246	2.4	630											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

Table J-56

J-193

CALIFORNIA, DEPARTMENT OF TRANSPORTATION - CALTRANS DISTRICT 12 - SATMS DATA COLLECTED IN FIELD

15-MINUTE DETECTOR OCCUPANCY AND VOLUME COUNTS ON 04/16/1998 FROM 1400:00 TO 1915:00 PRINTED: 08/25/98

FREEWAY LOCATION: 5 N/B @ GRAND TRAILER

POST MILE: 31.66

TIME	RMON		RHOV		RPAS		RDMD		RQUE		[M E T E R I N G M O D E (%)]					RATE USED	LR RATE	TOD RATE	GRN BALL CYCLES	ML VOL	
	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	OCC	VOL	FM	TOC	PSO	CORM	LR						TOD
1415:00	*** NO DATA ***																				
1430:00	*** NO DATA ***																				
1445:00	*** NO DATA ***																				
1500:00	*** NO DATA ***																				
1515:00	*** NO DATA ***																				
1530:00	*** NO DATA ***																				
1545:00	*** NO DATA ***																				
1600:00	*** NO DATA ***																				
1615:00	55.93*	69A	---	---	44.91*	78A	58.16*	156A	51.29*	84A	80	0	0	0	0	0	63	13	8	1347A	
1630:00	35.66*	86	---	---	13.14*	127	38.86	239	26.66	105	70	0	0	0	0	30	16	0	16	2223	
1645:00	47.94*	93	---	---	34.44*	94	67.05*	132	25.27*	106	23	0	0	0	0	77	16	8	16	1841	
1700:00	27.54	191	---	---	23.12	109	61.63	59	12.11	137	0	0	0	0	0	100	16	0	16	2114	
1715:00	35.83	232	---	---	28.60	131	64.98	38	15.35	172	0	0	0	0	0	100	16	0	16	2075	
1730:00	32.76	196	---	---	21.93	115	52.16	54	12.52	133	0	0	0	0	0	100	16	0	16	1746	
1745:00	24.15	156	---	---	21.66	120	54.69	48	10.92	121	0	0	0	0	0	100	16	0	16	1726	
1800:00	24.81	192	---	---	18.37	109	51.20	49	9.85	132	0	0	0	0	0	100	16	0	16	1622	
1815:00	23.50	162	---	---	20.03	103	46.47	36	10.18	112	0	0	0	0	0	100	16	0	16	1688	
1830:00	21.84	137	---	---	16.51	94	43.29	38	11.71	125	0	0	0	0	0	100	16	0	16	1744	
1845:00	19.02	92	---	---	15.29	79	43.19	28	8.16	91	0	0	0	0	0	100	16	0	16	1986	
1900:00	15.46	100	---	---	21.26	80	36.64	38	11.31	76	0	0	0	0	7	93	16	5	14	1767	
1915:00	98.33*	1	---	---	98.33*	1	98.33*	1	98.42*	2	0	0	0	0	0	100	0	105	0	0	12
AVERAGE	24.99	162	---	---	20.75	104	49.31	63	12.88	120	10	0	0	0	1	89	16		TOTALS	40	20993
VARIANCE	36.0	1911	---	---	13.8	273	79.0	3532	24.3	640											

* = SUSPECT/MALFUNCTION DATA

A = ADJUSTED DATA / --- = INACTIVE DETECTOR

ALL VALUES ARE SUSPECT UNTIL VERIFIED BY ENGINEER

For more information, please contact:

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