South Dakota
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Office of Research

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State of South Dakota
CVISN Program Support Project
FINAL REPORT

Study SD2001-17
DRAFT Report

Developed by
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Office of Research
Pierre, South Dakota

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South Dakota CVISN Program Support
Final Report Table of Contents

Introduction

In March 2002, the South Dakota Department of Transportation (SDDOT) hired Meyer, Mohaddes Associates (MMA) to provide support services for the South Dakota Commercial Vehicle Information Systems and Networks (CVISN) Program. The services provided technical and administrative expertise and software development that helped South Dakota achieve CVISN Level 1 compliance. This Final Report documents the support services project, describes the work performed, final results, and makes recommendations for next steps.

The Final Report contains the following:

- A Description of the National CVISN Program and South Dakota's CVISN Mission, Goals and Objectives;
- A summary of the major elements of South Dakota's CVISN Program and the achievements in each area during the CVISN Program Support Project;
- A brief summary of the CVISN Program Support Project scope of work and the resulting deliverables;
- A report on the status of each work element in the South Dakota CVISN Program, marking each as complete, ongoing, or providing an estimated date for completion;
- The appendices contain a description of all Project documents and the National CVISN Program Deployment Checklist for South Dakota.

The CVISN Program

CVISN is a national program administered by the Federal Motor Carrier Safety Administration (FMCSA). The objectives of the program are to improve motor carrier safety and to improve the efficiency of administrative processes for the motor carrier industry and government agencies. The CVISN Program focuses on the sharing of information. This information sharing largely occurs by integrating existing state and federal information systems, such as the national Safety and Fitness Electronic Record (SAFER) and stateside commercial vehicle data.

At the national level, CVISN Level 1 focuses on three areas: safety information exchange, credential administration, and electronic screening. Table 1 provides a description of the capabilities required for a state to reach CVISN Level 1 compliance as defined by the FMCSA. In addition, Table 1 shows South Dakota's efforts that are related to CVISN, but go beyond the Level 1 requirements in electronic permitting and Performance and Registration Information Systems Management (PRISM) efforts.

TABLE 1: CVISN LEVEL 1 AND ADDITIONAL SOUTH DAKOTA CVO CAPABILITIES

Capability Area	State CVISN Level 1 Capabilities
Safety Information Exchange	• Install and operate ASPEN motor vehicle inspection system (or equivalent) at all major inspection sites. • Connect to the national SAFER system to provide exchange of interstate carrier and vehicle snapshots among states. • Deploy a Commercial Vehicle Information Exchange Window

Capability Area	State CVISN Level 1 Capabilities
	(CVIEW) or equivalent system for exchange of intrastate snapshots of motor carrier information within the state and connect to SAFER for exchange of interstate snapshots.
Credential Administration	• Automate processing (i.e., carrier application, state application processing, credential issuance, fuel tax filing) of at least International Registration Plan (IRP) and International Fuel Tax Agreement (IFTA) credentials; be ready to extend to other credentials (such as intrastate credentials, titles, oversize/overweight (OS/OW) permits, carrier registration, and hazardous materials permits). • Connect to IRP Clearinghouse. • Connect to IFTA Clearinghouse. • Handle at least 10% of transaction volume electronically; be ready to bring on more carriers as they subscribe.
Electronic Screening	• Deploy electronic screening at a minimum of one fixed or mobile inspection site. • Be ready to replicate at other sites.
Automated Permitting	• Develop a permitting system and deploy web-based permitting for all major commercial vehicle permits
PRISM	• Achieve the registration and enforcement requirements of the PRISM.

CVISN Goals and Objectives

South Dakota's CVISN goals and objectives derive from the South Dakota Intelligent Transportation Systems/Commercial Vehicle Operations (ITS/CVO) Business Plan[1], which all organizations involved in CVISN endorsed in a Memorandum of Understanding in 1998.

The mission of South Dakota's ITS/CVO program is to:

Enhance safe and efficient movement of commercial goods and passengers through the application of technologies, improved business practices, as well as interagency and industry cooperation.

South Dakota's goals and their subordinate objectives, which were identified through discussions with public and industry stakeholders when the business plan was developed, are to:

Goal 1: Improve the safety and efficiency of CVO.

Objective 1: Focus inspection and enforcement activities on high-risk carriers.
Objective 2: Educate motor carriers about safe and responsible operations.

[1] SD97-10, January, 1998

Objective 3: Educate the traveling public about sharing roads with commercial vehicles.

Goal 2: Increase the efficiency of the state CVO regulatory processes.

Objective 4: Streamline desk-side procedures.
Objective 5: Automate credentialing procedures.
Objective 6: Network systems to ensure the effective exchange of critical information among government agencies and industry.

Goal 3: Safely use the capacity of the state's transportation system while preserving its integrity.

Objective 7: Increase the ability to comply with existing regulations.
Objective 8: Optimize safe and efficient movement throughout the state.

Goal 4: Provide better service to industry.

Objective 9: Streamline desk-side procedures.
Objective 10: Automate credentialing procedures.
Objective 11: Increase industry involvement through public and private partnerships.
Objective 12: Provide timely weather, construction, and regulatory information.

These goals and objectives not only address recognized state needs, but are consistent with and exceed nationally established CVISN Level 1 requirements in the areas of Safety Information Exchange, Credentials Administration, and Electronic Screening.

CVISN Program Support Project Summary

MMA was contracted to help South Dakota achieve its objectives and to meet and exceed CVISN Level 1 capabilities under the South Dakota CVISN Program Support Contract (SD2001-17). This section describes the CVISN-specific, PRISM, and related CVO projects that MMA supported.

South Dakota CVIEW

The South Dakota Commercial Vehicle Information Exchange Window (SDCVIEW) is the central component of CVISN deployment for the State. South Dakota chose to develop a CVIEW product based on the SAFER Version 4.2 Interface Control Document[2]. SAFER v4.2 is the first version that is able to exchange data in the eXtensible Markup Language (XML) format. SDCVIEW is primarily a Microsoft Sequel Server 2000 database populated by SAFER compliant import and export software procedures. SDCVIEW acts as a local repository for integrated carrier and vehicle information that includes credential, safety, and permitting data. In addition to serving as a local repository for national data from the SAFER database, SDCVIEW is a repository for South Dakota-generated data that is then sent up to SAFER and made available to all states. Data imported into SDCVIEW include:

- Interstate vehicle and carrier snapshots from SAFER

[2] POR-02-7374 Baseline Version 1.0, September 2003

- Credential data for the International Registration Plan (IRP) and International Fuel Tax Agreement (IFTA) from COVERS and COVERSft
- Tax and Registration data for intrastate carriers
- Transponder enrollment information

Data from SDCVIEW may be used for:

- Electronic screening
- Carrier and vehicle web queries
- PRISM web queries
- Uploading new information to SAFER regarding South Dakota-based carrier and vehicle registration
- Permit application screening

Motor Carrier Web Site

A commercial vehicle one-stop-shop (OSS) web site was developed. It can be viewed at http://www.sdtruckinfo.com. The OSS is a single web location where motor carriers can conduct their business with state agencies and find useful information pertaining to operating a commercial vehicle in South Dakota. The motor carrier can view or link to the following:

- Rules and regulations
- Permitting and credentialing information
- Online permits
- Contact information
- The South Dakota Motor Carrier Handbook
- Information regarding South Dakota's electronic screening program
- Bridge, road and weather information
- Links to other useful sites.

Carriers will also be able to conduct their credentialing and transponder administration business through the site when the automated credentialing and transponder systems are deployed.

The site was developed with a simple interface that allows South Dakota to easily make modifications to the information displayed, including creating new areas, links and changing existing text.

Electronic Screening

Electronically screening vehicles is an important component of CVISN. It allows safe, properly credentialed carriers to save time, and for South Dakota to focus its enforcement efforts on high-risk carriers. There are two competing electronic screening systems available, the commercial PrePass and the non-proprietary NorPass. MMA developed a cost and benefit analysis for each program and supported South Dakota in the screening system selection process.

South Dakota chose to become a NorPass Member. The selected system will be interoperable with the other thirteen NorPass partner and member states. NorPass complies with the electronic screening objectives of the federal CVISN program. NorPass also offers the potential for carriers to use one in-vehicle transponder in all 37 states that have either PrePass or NorPass electronic screening. South Dakota decided that NorPass is superior to PrePass in the critical areas of data ownership, screening criteria flexibility, and the ability to do more thorough and accurate screenings. NorPass offers simplified integration with other CVISN elements such as CVIEW. It will also cost carriers less.

International Road Dynamics (IRD) is constructing the electronic screening system at the Jefferson Port of Entry. The Roadside Operations Computer (ROC) will perform the screening using data from SDCVIEW. As NorPass-transponder-equipped vehicles pass the port, they will be screened for a pass, no-pass decision based upon the following criteria:

1. The vehicle is 80,000 lbs. or under.
2. The vehicle is not too heavy for its axle configuration.
3. The vehicle's Gross Vehicle Weight (GVW) does not exceed to the vehicle's registered GVW by more than 5%.
4. The vehicle and carrier are not subject to an Out of Service Order.
5. The vehicle and carrier have valid registration.
6. The vehicle and carrier do not have a suspended account(s).
7. The carrier has a satisfactory ISS/2 score (satisfactory is established by South Dakota)

The first two criteria will be dynamically screened by the weigh-in-motion (WIM) device. The other five criteria will be screened against information exported to the ROC from SDCVIEW.

Automated Permitting

The South Dakota Automated Permitting System (SDAPS) was developed by C. W. Beilfuss and is a fully automated permitting system. This system allows state personnel to administer permits and carriers to apply for and receive South Dakota's full range of commercial vehicle permits via the Internet. SDAPS also uses vehicle, road and bridge information to generate routing for each permit. MMA developed technical specification for exporting data from SDCVIEW to SDAPS.

PRISM

The PRISM Program is a cooperative state and federal program that links motor carrier safety performance with vehicle registration, providing a powerful incentive to improve safety. If a carrier's safety rating falls below a certain level, the carrier is placed in the Motor Carrier Safety Improvement Process (MCSIP) and targeted for more frequent inspections and oversight until safety performance improves. Should a carrier fail to take actions that improve the safety rating over time, registration is eventually revoked.

In April 2001, South Dakota finalized the Performance Registration Information Systems Management Implementation Project Plan[3]. The Plan detailed 35 registration and enforcement requirements which, when completed, represent full implementation of PRISM. MMA helped South Dakota achieve three of the PRISM requirements via SDCVIEW. Those requirements are:

1. Use title information to relate vehicle & carrier. (PRISM Plan Requirement R17 in the PR.)
2. Provide ability to query target file. (PRISM Plan Requirement E2.)
3. Provide Enforcement Query (PRISM Plan Requirement R18.)

SDCVIEW is designed to link directly to the FMCSA, SAFERv4.2/PRISM database with regular upload and download procedures. Daily uploads from SDCVIEW to SAFER meet the requirement to provide the PRISM Vehicle File to the PRISM central site on a nightly basis. It is therefore logical to use SDCVIEW as the local repository for PRISM data and the source for PRISM queries. MMA developed processes to ensure data required for PRISM was populated in SDCVIEW. MMA then created PRISM web-based query windows that allow South Dakota staff to view PRISM-related data.

CVISN Architecture

Development of the CVISN Architecture consistent with the National ITS Architecture is a necessary process to insure compliance with national programs and other South Dakota ITS elements. In fact, it is a federal requirement when spending federal ITS deployment funds. When linked to the statewide ITS architecture, it also allows South Dakota to identify synergies with other systems and to identify potential links that can improve or enhance transportation system performance.

During the CVISN Program Support Project, MMA developed a CVISN Architecture in coordination with the development of the statewide ITS Architecture. MMA also provided two updates to the architecture that reflected system changes affecting the electronic screening program, SDAPS, and PRISM. At the end of the CVISN Program Support Project, MMA delivered the architecture to South Dakota in Turbo Architecture format. That format allows the state to make further changes and updates to keep the Architecture current and consistent with the statewide ITS Architecture.

CVISN Top-Level Design and Program Plan

In July 2001, South Dakota completed the first iteration of the CVISN Top-Level Design and Program Plan[4] as a single document. The document describes South Dakota's involvement in the CVISN program. The document is intended to communicate to cabinet officials and other administrators the motivation, proposed functionality, and physical and logical designs of CVISN and its constituent projects in the state. It also advises of fiscal, technical, and institutional issues associated with deployment of CVISN.

[3] Study SD1999-06, April, 2001
[4] Study SD1999-16, July, 2001

Throughout the CVISN Program Support Project, MMA maintained the Top-Level Design and Program Plan[5]. It was updated to accurately reflect changes to project descriptions, network design, schedules, and budgets. Additionally, the plan was modified to include the CVISN measures of effectiveness and baseline data. One major revision and two further updates to the Program Plan were completed during the project. At the project's conclusion, the Top-Level Design and Plan reflect the current status of all CVISN and PRISM projects and budgets.

CVISN Program Support Scope and Deliverables

The CVISN Program Support Project consisted of 14 tasks. An additional 3 tasks were added to perform PRISM-related work. Table 2 summarizes the scope of all 17 tasks and describes the deliverables produced for each. A more detailed description of the scope and deliverables is in the MMA CVISN Program Support scope of work and the PRISM Support scope of work. The full scope can be found on the CVISN Program Support Project compact disc.

TABLE 2: CVISN PROGRAM SUPPORT PROJECTS TASKS AND DELIVERABLES

TASK	SCOPE	DELIVERABLES
1. Project Scope and Work Plan	Work with the CVISN Program Team to review the project scope and work plan based on the specific needs of the Team.	1. Draft CVISN Program Support work plan and schedule (04/02) 2. Final CVISN Program Support work Plan and schedule (04/02)
2. South Dakota CVISN Program Plan Revision	Revise the South Dakota CVISN Top-Level Design and Program Plan, including work breakdown structures and budgets.	1. Draft Revision 1 (05/02) 2. Final Revision 1 (01/03)
3. CVISN Program Project Management Support	Monitor South Dakota's CVISN Level 1 deployment and update the Top-Level Design and Program Plan to reflect the changes and propose modifications necessary to maintain the schedule and budget, and meet emerging state and federal requirements.	1. Draft Update 1 (08/03) 2. Final Update 1 (09/03) 3. Draft Update 2 (04/04) 4. Final Update 2 (04/04)
4. Develop and Capture Performance Measures	Develop measures of effectiveness (MOE) that can be used to evaluate the CVISN Program's success, and calculate baseline values. As CVISN components are deployed, finalize performance values.	1. Draft MOE document (06/02) 2. Final MOE document (07/02) 3. Baseline data collected and documented (1/03)
5. Develop CVISN System Architecture	Based upon the architecture defined in South Dakota's CVISN Top-Level Design and Program Plan, and within active CVISN projects, develop an initial architecture for South Dakota's complete CVISN Level 1 deployment using Turbo Architecture.	1. Draft CVISN Architecture (08/02) 2. Final CVISN Architecture (08/02)

[5] Study SD1999-16F, August, 2003

TASK	SCOPE	DELIVERABLES
6. CVISN System Architecture Maintenance	Update South Dakota's CVISN Level 1 detailed architecture using Turbo Architecture software throughout deployment, as CVISN components are designed, developed and deployed.	1. Draft CVISN Architecture Update 1 (03/03) 2. Final CVISN Architecture Update 1 (04/03) 3. Draft CVISN Architecture Update 2 (10/03) 4. Final CVISN Architecture Update 2 (11/03)
7. Requirements and Specifications Documentation	Define the functional requirements, specifications, standards and protocols necessary to develop CVIEW and each of the other products that must be developed within the CVISN Program Support Project.	1. Technical specifications and requirements for SDCVIEW (04/03) 2. Technical specifications and requirements for Motor Carrier Web site (04/03) 3. Technical specifications and requirements for IFTA/IRP extracts (01/03) 4. Technical specifications and requirements for Title &Registration Extracts (01/03) 5. Technical specifications and requirements for some PRISM elements (04/03) 6. South Dakota CVIEW Electronic Screening and Transponder Data Integration Requirements and Specifications (03/03) 7. Graphical data mapping for SDCVIEW (03/03) 8. SDCVIEW Maintenance Documentation (10/03) 9. SDAPS Extract requirements (10/03) 10. E-screening review and criteria selection document (09/03) 11. Review of IRD port of entry plans (11/03) 12. Data map for IRD electronic screening (11/03)
8. CVIEW Deployment	Use the SAFER 4.2 Control Interface Document to establish a local CVIEW (SDCVIEW) and interface with all appropriate state and national legacy systems to meet CVISN Level 1 goals.	1. Installed and functioning SDCVIEW (09/03)* 2. Transition SDCVIEW database to Bureau of Information Technology Standard Query Language (SQL) Server Cluster (01/04)* 4. SDAPS extract procedure (12/03)

* - Partial functionality, pending R. L. Polk's development of IFTA/IRP data extracts.

TASK	SCOPE	DELIVERABLES
9. Draft and Final PRISM Deployment Proposal	Document steps to be taken to integrate PRISM functions into SDCVIEW and other tools related to this support contract.	1. Draft PRISM proposal (01/03) 2. Final PRISM proposal (01/03) 3. Motor Carrier Safety Profile function via SAFER Web Site incorporated into the Motor Carrier Web Site (01/03)*
10. Technical Compatibility and Compliance	Draft technical memos describing technical compatibility issues among the Motor Carrier Web Site, SDCVIEW and legacy systems.	No deliverables. Issues were addressed and resolved as they arose.
11. Testing and Validation	Develop and execute a systems and interoperability testing plan for all CVISN components to ensure compatibility with state and national information systems.	1. Draft Interoperability Test Plan (06/03) 2. Final Interoperability Test Plan (08/03) 3. Partial Testing (10/03)* 4. CVISN Level 1 Compliance Checklist review and comments (02/04)
12. Develop High-Level Plan for Enhanced CVISN	Develop a high-level plan to guide South Dakota's continuing CVISN investment beyond Level 1 compliance.	1. Draft CVISN Level 2 Plan (08/03) 2. CVISN Level 2 Planning Workshop (02/04) 3. Final CVISN Level 2 Plan (02/04)
13. Prepare Final Report	Prepare a final report and executive summary of the research, findings, conclusion and recommendations for South Dakota's CVISN Program.	1. Draft Final Project Report (02/04) 2. Final Project Report (02/04)
14. Present Project Results	Prepare and present the project findings to the SDDOT Research Board and CVISN agency managers at the conclusion of the project.	1. Draft Final Project Presentation (02/04) 2. Final Project Presentation (02/04)
15. Use Title Information to Relate Vehicle & Carrier	Develop a system that populates title and registration information on intrastate carriers into SDCVIEW and a comprehensive web-browser-based query system.	1. PRISM Query Windows (09/03)
16. Provide Ability to Query Target File	Develop system to allow enforcement personnel to access vehicle information through SDCVIEW web-browser-based queries in order to assist in making vehicle inspection decisions.	1. PRISM Query Windows (09/03)*
17. Provide Enforcement Query	Develop the capability for registration and law enforcement personnel to query SDCVIEW by registrant (name or USDOT Number), motor carrier (name or USDOT Number), or vehicle (plate number or VIN).	1. PRISM Query Windows (09/03)*

* - Partial functionality, pending R. L. Polk's development of IFTA/IRP data extracts.

CVISN Program Status

Table 3 describes the tasks and budget for each effort contained in the South Dakota CVISN Program. The table includes all major tasks undertaken by MMA, other consultants, and South Dakota agencies. Tasks that have been completed have been marked as "Completed." Ongoing tasks that will continue through CVISN deployment are marked as "Ongoing." For incomplete tasks, the estimated completion date is given.

TABLE 3: **CVISN PROGRAM STATUS AND BUDGET**

TASK	WBS	STATUS	TOTAL COST
CVISN	1	Ongoing	$6.808,972
CVISN Program Management	1.1	Ongoing	$94,866
Planning & Coordination	1.1.1	Ongoing	60,942
Program Oversight	1.1.1.1	Ongoing	9,720
CVISN Workshops	1.1.1.2	Completed	28,000
CVISN Western Conference Calls	1.1.1.3	Ongoing	2,160
SD Team Planning & Coordination Meetings	1.1.1.4	Ongoing	21,062
Funding Acquisition	1.1.2	Ongoing	$2,740
SD State Budget Preparation	1.1.2.1	Ongoing	1,460
Congressional Funding Requests	1.1.2.2	Ongoing	1,280
Executive Presentations	1.1.3	Completed	$5,280
SD Transportation Commission Briefings	1.1.3.1	Completed	960
SD Legislative Briefings	1.1.3.2	Completed	640
SD Cabinet Briefings	1.1.3.3	Completed	1,440
SD Trucking Association Presentations	1.1.3.4	Completed	1,280
SD Highway Patrol Briefings	1.1.3.5	Completed	960
Project Scope and Workplan	1.1.4	Completed	$8,261
Update Program Plan	1.1.5	Completed	$13,138
Program Plan Executive Status	1.1.6	Completed	$27,523
CVISN Level 2 High-level Plan	1.1.7	Completed	$27,070
Document Understanding of CVISN Level 2 Capabilities	1.1.7.1	Completed	1,410
Capture Both Specific Capabilities from Core Project Team	1.1.7.2	Completed	3,728
Prepare Draft CVISN Level 2 Plan	1.1.7.3	Completed	3,857
Submit Draft and Collect Comments	1.1.7.4	Completed	1,254
Prepare/Publish Final Level 2 Plan	1.1.7.5	Completed	2,186
Technical Compatibility and Compliance Assurity	1.1.8	Completed	$11,136
Project Definitions	1.1.8.1	Completed	2,603
Plans	1.1.8.2	Completed	4,371
Products	1.1.8.3	Completed	4,162
Final Report and Presentation	1.1.9	Completed	$12,053
Final Report	1.1.9.1	Completed	8,968
Presentation of Results	1.1.9.2	Completed	3,085

TASK	WBS	STATUS		TOTAL COST
CVISN System Engineering and Integration	1.2	Completed		$263,968
CVISN Program Management	1.2.1	Ongoing		$74,463
Performance Measures	1.2.2	Completed		$42,212
CVISN Architecture	1.2.3	Completed		$15,174
Develop CVISN Architecture	1.2.3.1	Completed		9,501
Update CVISN Architecture	1.2.3.2	Completed		5,673
SAFETY INFORMATION EXCHANGE	1.3	To Finish 03/31/04		$1,504,747
Project Management	1.3.1	To Finish 03/31/04		$12,552
System Engineering and Integration	1.3.2	To Finish 03/31/04		$12,552
Commercial Inspection Reporting	1.3.3	Completed		$0
Deploy ASPEN-32 to South Dakota Highway Patrol (SDHP)	1.3.3.1	Completed		$0
Commercial Vehicle Accident Reporting	1.3.4	06/01/00	12/31/03	$866,700
Product Management	1.3.4.1	06/01/00	12/31/03	29,164
Systems Engineering & Integration	1.3.4.2	Completed		6,594
Requirements Study	1.3.4.3	Completed		131,496
Unified Accident Reporting via Forms	1.3.4.4	10/08/02	12/31/03	581,659
Accident Report Form Beta	1.3.4.4.1	Completed		686
Develop Model Design	1.3.4.4.2	10/23/02	03/04/03	118,237
Office OAR Config Design	1.3.4.4.3	02/25/03	04/07/03	11,509
Mobile OAR Config Design	1.3.4.4.4	04/08/03	04/21/03	3,662
Office LE Config Design	1.3.4.4.5	03/05/03	03/26/03	476
Mobile LE Config Design	1.3.4.4.6	03/27/03	04/14/03	2,350
Web Public Config Design	1.3.4.4.7	04/22/03	05/05/03	4,328
Database Design	1.3.4.4.8	10/24/02	02/28/03	80,154
System Metrics Development	1.3.4.4.9	02/25/03	03/03/03	5,200
Test Plan	1.3.4.4.10	07/15/03	08/11/03	11,146
Migration / Deployment Plan	1.3.4.4.11	03/28/03	04/10/03	10,960
Training Plan	1.3.4.4.12	08/29/03	09/25/03	10,400
System Maintenance & Support Plan	1.3.4.4.13	05/06/03	05/19/03	10,400
Development	1.3.4.4.14	05/13/03	11/04/03	190,865
Testing	1.3.4.4.15	07/29/03	12/02/03	25,864
Post Beta / Pilot Adjustment	1.3.4.4.16	11/20/03	11/24/03	4,943
Documentation Development	1.3.4.4.17	05/29/03	12/31/03	45,070
Training	1.3.4.4.18	11/19/02	12/09/03	15,600
Installation & Deployment	1.3.4.4.19	12/03/03	12/17/03	7,590
Project Mangement	1.3.4.4.20	10/08/02	12/19/03	21,918
Automated Accident Reporting	1.3.4.5	10/12/01	03/19/02	117,788
Product Management	1.3.4.5.1	10/12/01	03/19/02	19,068
System Engineering & Integration	1.3.4.5.2	10/12/01	03/19/02	3,164
Final Design	1.3.4.5.3	10/12/01	11/22/01	11,520
Build Accident Reporting Software	1.3.4.5.4	11/23/01	01/17/02	50,000

TASK	WBS	STATUS		TOTAL COST
Pilot Test Accidents to Accident System	1.3.4.5.5	01/18/02	01/24/02	1,920
Pilot Test NGA Elements to SAFETYNET	1.3.4.5.6	01/25/02	01/31/02	2,960
SDHP Training	1.3.4.5.7	02/01/02	02/04/02	1,600
SDHP Deployment	1.3.4.5.8	02/05/02	02/11/02	2,026
SDHP Operational Test	1.3.4.5.9	02/12/02	03/11/02	9,760
Local Jurisdiction Training	1.3.4.5.10	02/05/02	02/11/02	2,800
Local Jurisdiction Deployment	1.3.4.5.11	02/05/02	02/07/02	1,680
Local Jurisdiction Operational Test	1.3.4.5.12	02/12/02	03/11/02	4,808
Final Report	1.3.4.5.13	02/12/02	02/25/02	3,840
Final Report Review	1.3.4.5.14	02/25/02	03/18/02	2,642
Automated Accident Reporting Done	1.3.4.5.15	03/18/02	03/18/02	0
Commercial Vehicle Citation Reporting	1.3.5	To Finish 12/31/04		$172,000
Product Management	1.3.5.1	To Finish 12/31/04		4,236
Systems Engineering & Integration	1.3.5.2	To Finish 12/31/04		2,590
Requirements Study	1.3.5.3	Completed		47,651
Automated Citation Reporting	1.3.5.4	To Finish 12/31/04		117,523
PRISM	1.3.6	To Finish 03/31/04		$399,383
Product Management	1.3.6.1	To Finish 03/31/04		66,736
General Management	1.3.6.1.1	To Finish 03/31/04		8,376
Letter of Intent	1.3.6.1.2	Completed		480
Draft Implementation Plan	1.3.6.1.3	Completed		3,360
Federal PRISM Training	1.3.6.1.4	Completed		4,960
Final Implementation Plan	1.3.6.1.5	Completed		1,200
Prepare Grant Agreement	1.3.6.1.6	Completed		560
Requirements Study	1.3.6.1.7	Completed		47,800
System Engineering & Integration	1.3.6.2	To Finish 03/31/04		53,177
Support for Request for Proposal (RFP)/Contract Development	1.3.6.2.1	Completed		2,186
Review and Comment on Responses	1.3.6.2.2	Completed		2,507
Monitor Vendor Progress and Adherence to Requirements	1.3.6.2.3	To Finish 03/31/04		8,324
PRISM Registration Capabilities	1.3.6.3	To Finish 03/31/04		355,527
R1: United States Department of Transportation (USDOT) Number for Registrant & Motor Carrier	1.3.6.3.1	Completed		59,400
R2: Require Registrants to Submit TIN	1.3.6.3.2	Completed		19,200
R3: Require Registrants to Complete MCS-150	1.3.6.3.3	Completed		20,868
R4: Load & Maintain Local Census File	1.3.6.3.4	To Finish 03/31/04		90,070
R5: Validate USDOT Number Prior to Renewals	1.3.6.3.5	Completed		17,997
R6: Send MCS-150 to Registrants w/Renewals	1.3.6.3.6	Completed		1,053
R7: Update MCS-150 Info to MCMIS	1.3.6.3.7	Completed		320
R8: Training to Staff	1.3.6.3.8	Completed		7,720
R9: Training to Motor Carriers	1.3.6.3.9	Completed		4,400
R10: Issue USDOT Numbers Online	1.3.6.3.10	Completed		21,920

TASK	WBS	STATUS	TOTAL COST
R11: Check Carrier Safety Before Issuing Credentials	1.3.6.3.11	To Finish 03/31/04	6,563
R12: Seek Authority to Suspend, Revoke or Deny	1.3.6.3.12	Completed	2,064
R13: Seek Authority to Retreive Plates	1.3.6.3.13	Completed	1,806
R14: Provide Enforcement List of Out-of-Service (OOS) Vehicles	1.3.6.3.14	NO LONGER APPLIES	0
R15: Enforce Suspend, Revoke, or Deny	1.3.6.3.15	Completed	240
R16: Deny Registration to Federally Prohibited	1.3.6.3.16	Completed	800
R17: Use Title Info to Relate Vehicle & Carrier	1.3.6.3.17	Completed	1,190
R18: Provide Enforcement Query	1.3.6.3.18	Completed	20,200
R19: Determine Short & Long Term Leases	1.3.6.3.19	Completed	7,400
R20: Incorporate PRISM in Temporary Authority	1.3.6.3.20	Completed	200
R21: Assist FMCSA Find Carrier Addresses	1.3.6.3.21	Completed	0
R22: Update PRISM Target File Nightly-Registration	1.3.6.3.22	To Finish 03/31/04	13,000
R23 DELETED	1.3.6.3.23	NO LONGER APPLIES	0
R24: Provide Enforcement Info for Specific Carriers	1.3.6.3.24	Completed	160
R25: Create Plan to Improve Data Quality	1.3.6.3.25	To Finish 03/31/04	58,957
PRISM Enforcement Requirements	1.3.6.4	To Finish 03/31/04	80,565
E1: Seek Authority to Stop & Inspect	1.3.6.4.1	Completed	0
E2: Provide Ability to Query Target File	1.3.6.4.2	Completed	62,400
E3:Perform Level 2 Safety Analysis	1.3.6.4.3	To Finish 03/31/04	1,320
E4: Coordinate Level 2 Activities with FMCSA	1.3.6.4.4	Completed	1,400
E5: Ensure Training to Appropriate Staff	1.3.6.4.5	To Finish 03/31/04	14,645
E6: Coordinate MCSIP Step Updates with FMCSA	1.3.6.4.6	Completed	160
E7: Procedures for Un- or Mis-assigned Events	1.3.6.4.7	Completed	0
E8: Upload Driver Moving Violations	1.3.6.4.8	Completed	160
E9: Coordinate Leased Vehicles with FMCSA	1.3.6.4.9	NO LONGER APPLIES	0
E10: Provide Staff to Answer Warning Questions	1.3.6.4.10	Completed	160
Motor Carrier Safety Profile	1.3.7	Completed	$41,570
Product Management	1.3.7.1	Completed	1,260
System Engineering & Integration	1.3.7.2	Completed	490
Define Motor Carrier Needs	1.3.7.3	Completed	3,535
Define SD State Agency Needs	1.3.7.4	Completed	3,535
Define Error Correction Process	1.3.7.5	Completed	1,581
Define Security Requirements	1.3.7.6	Completed	1,093
Specify System Interface	1.3.7.7	Completed	5,268
Carrier Web Site	1.3.7.8	Completed	3,514
Present Prototype to Carriers and Agency for Comment	1.3.7.9	Completed	500
Incorporate Comments in Prototype	1.3.7.10	Completed	1000
Include CVIEW/SAFER Data	1.3.7.11	Completed	5,459
Include IRP/IFTA Data	1.3.7.12	Completed	9,900
Test Web Site and Capture Carrier and Agency Comments	1.3.7.13	Completed	750

TASK	WBS	STATUS	TOTAL COST
Modify Web Site	1.3.7.14	Completed	2,185
Deploy Final Version	1.3.7.15	Completed	1,500
CREDENTIALS ADMINISTRATION	1.4	To Finish 07/31/04	$1,091,471
Project Management	1.4.1	To Finish 07/31/04	$30,600
System Engineering & Integration	1.4.2	To Finish 07/31/04	$27,200
IRP/IFTA Initial/Renewal/Supplements	1.4.3	To Finish 07/31/04	$253,818
Product Management	1.4.3.1	To Finish 07/31/04	12,705
System Engineering & Integration	1.4.3.2	To Finish 07/31/04	14,700
Support SDDORR RFP/Contract Development	1.4.3.3	Completed	3,268
Review and Comment on Responses	1.4.3.4	Completed	2,800
Monitor Vendor Progress and Adherence to Requirements	1.4.3.5	To Finish 07/31/04	9,942
Replace IRP System	1.4.3.6	Completed	133,592
IFTA Electronic Filing	1.4.3.7	To Finish 07/31/04	46,111
Product Management	1.4.3.7.1	To Finish 07/31/04	5,136
System Engineering & Integration	1.4.3.7.2	To Finish 07/31/04	5,992
Define Payment Option Requirements	1.4.3.7.3	Completed	560
Specify Operational Characteristics	1.4.3.7.4	Completed	1,680
Survey COTS Solutions	1.4.3.7.5	Completed	2,240
Develop COTS Characteristics vs. Requirements Matrix	1.4.3.7.6	Completed	1,937
Develop and Document Build/Buy Recommendations	1.4.3.7.7	Completed	2,497
Evaluate Polk System	1.4.3.7.8	Completed	1,588
Determine Remaining Development	1.4.3.7.9	Completed	1,563
Purchase Polk System Enhancements	1.4.3.7.10	To Finish 03/31/04	20,600
Recruit & Train Carriers	1.4.3.7.11	To Finish 07/31/04	1,358
Pilot Project	1.4.3.7.12	To Finish 07/31/04	960
IFTA Electronic Filing Done	1.4.3.7.13	To Finish 07/31/04	0
IRP Electronic Filing	1.4.3.8	To Finish 07/31/04	30,699
Product Management	1.4.3.8.1	To Finish 07/31/04	3,840
System Engineering & Integration	1.4.3.8.2	To Finish 07/31/04	784
Evaluate Polk System	1.4.3.8.3	Completed	1,588
Determine Remaining Development	1.4.3.8.4	Completed	1,563
Purchase Polk System Enhancements	1.4.3.8.5	To Finish 03/31/04	20,600
Educate & Recruit Carriers	1.4.3.8.6	To Finish 03/31/04	1,364
Pilot Project	1.4.3.8.7	To Finish 03/31/04	960
IRP Electronic Filing Done	1.4.3.8.8	To Finish 03/31/04	0
Automated Permitting System	1.4.4	Completed	$750,000
Product Management	1.4.4.1	Completed	26,984
Issue RFP	1.4.4.1.1	Completed	3,600
Receive Proposals	1.4.4.1.2	Completed	720
Select Vendor	1.4.4.1.3	Completed	2,400
Negotiate Contract	1.4.4.1.4	Completed	1,200

TASK	WBS	STATUS	TOTAL COST
Manage Contract	1.4.4.1.5	Completed	19,064
System Engineering & Integration	1.4.4.2	Completed	15,070
Construct System	1.4.4.3	Completed	704,222
Project Initiation	1.4.4.3.1	Completed	5,195
Review Other Systems	1.4.4.3.2	Completed	5,627
Interview Stakeholders	1.4.4.3.3	Completed	6,926
Update Requirements	1.4.4.3.4	Completed	4,762
Develop Design & Refined Work Plan	1.4.4.3.5	Completed	38,959
Develop and test web-based permit application, processing & billing	1.4.4.3.6	Completed	131,691
Develop and test query and reporting	1.4.4.3.7	Completed	57,943
Develop and test geographical road & bridge database	1.4.4.3.8	Completed	194,796
Develop and test application program interfaces to road & bridge databases	1.4.4.3.9	Completed	26,406
Develop and test map generation routing engine	1.4.4.3.10	Completed	85,576
Provide & test automated routing system	1.4.4.3.11	Completed	56,274
Provide training and help capabilities	1.4.4.3.12	Completed	64,932
Provide operational plan	1.4.4.3.13	Completed	4,329
Final Report & Executive Summary	1.4.4.3.14	Completed	7,792
Deploy System Statewide	1.4.4.3.15	Completed	8,958
Investigate Payment Options	1.4.4.3.16	Completed	1,400
Automated Permitting System Done	1.4.4.3.17	Completed	0
USDOT # for Intrastate Carriers	1.4.5	Completed	$6,560
Motor Carrier Web Site	1.4.6	Completed	$23,293
Define Motor Carrier Needs	1.4.6.1	Completed	3,021
Define SD State Agency Needs	1.4.6.2	Completed	3,021
Identify and Document Current Information Sources	1.4.6.3	Completed	1,600
Specify System Interfaces	1.4.6.4	Completed	1,280
Create Web Site Prototype	1.4.6.5	Completed	2,764
Present Prototype to Carriers and Agency for Comment	1.4.6.6	Completed	750
Incorporate Comments into Prototype	1.4.6.7	Completed	1,000
Develop Materials for Inclusion in Web Site	1.4.6.8	Completed	3,839
Test Web Site and Capture Carrier and Agency Comments	1.4.6.9	Completed	750
Modify Web Site	1.4.6.10	Completed	3,768
Deploy Final Version	1.4.6.11	Completed	1,500
ELECTRONIC SCREENING	1.5	To Finish 04/30/04	$3,553,293
Project Management	1.5.1	To Finish 04/30/04	$5,352
System Engineering & Integration	1.5.2	To Finish 04/30/04	$7,136
E-Screening Enrollment	1.5.3	To Finish 04/30/04	$22,005
Product Management	1.5.3.1	To Finish 04/30/04	5,352
Subcontract & Procurement	1.5.3.2	To Finish 04/30/04	6,244
Collect and Document State Agency Requirements	1.5.3.3	Completed	200

TASK	WBS	STATUS	TOTAL COST
Collect and Document Motor Carrier Requirements	1.5.3.4	Completed	200
Develop Requirements vs. Characteristics Matrix	1.5.3.5	Completed	2,282
Document and Present Results to Core Project Team	1.5.3.6	Completed	3535
Select Enrollment System	1.5.3.7	Completed	600
Install Enrollment at Jefferson Port of Entry (POE)	1.5.3.8	To Finish 04/30/04	1,728
Publicize Enrollment System	1.5.3.9	To Finish 04/30/04	1,864
JeffersonPOE	1.5.4	To Finish 04/30/04	$3,518,800
Product Management	1.5.4.1	To Finish 04/30/04	9,904
Subcontract & Procurement	1.5.4.2	Completed	9,904
Environmental Assessment	1.5.4.3	Completed	32,000
Acquire Right of Way (ROW)	1.5.4.4	Completed	64,000
Complete Design	1.5.4.5	Completed	92,000
Award Construction Contract	1.5.4.6	Completed	11,000
Construct Physical POE	1.5.4.7	To Finish 04/30/04	2,800,000
Install Electronic Systems	1.5.4.8	To Finish 04/30/04	500,000
Jefferson POE Complete	1.5.4.9	To Finish 04/30/04	0
CV INFORMATION EXCHANGE WINDOW	1.6	Completed	$100,617
Project Management	1.6.1	Completed	$5,184
System Engineering & Integration	1.6.2	Completed	$6,912
Requirements Study	1.6.3	Completed	$8,836
Product Management	1.6.3.1	Completed	648
System Interfaces	1.6.3.2	Completed	1,562
Security	1.6.3.3	Completed	909
Error Checking Routines	1.6.3.4	Completed	1,818
Communication Infrastructure	1.6.3.5	Completed	953
Administration	1.6.3.6	Completed	1,562
Document Requirements	1.6.3.7	Completed	1,384
Communication Infrastructure	1.6.4	Completed	$19,110
Product Management	1.6.4.1	Completed	1,120
Interface to IFTA	1.6.4.2	Completed	5,560
Interface to IRP	1.6.4.3	Completed	6,710
Interface to Permit System	1.6.4.4	Completed	5,560
SD System Communication Done	1.6.4.5	Completed	0
CVIEW Development and Installation	1.6.5	Completed	$5,066
Product Management	1.6.5.1	Completed	720
Modify CVIEW	1.6.5.2	Completed	3,202
Install and Test	1.6.5.3	Completed	1,304
Testing	1.6.6	To Finish 03/31/04	$55,509
CVIEW/SAFER	1.6.6.1	Completed	19,797
CVIEW/COVERS	1.6.6.2	To Finish 03/31/04	17,716
CVIEW/Permitting	1.6.6.3	Completed	17,996
Testing Done	1.6.6.4	To Finish 03/31/04	0

CVISN Program Continuation Recommendations

The South Dakota CVISN Program has achieved a significant portion of its scope; however additional tasks have been identified that require completion, as indicated in Table 3. Once the initial tasks of the program are complete, South Dakota should evaluate the future of CVISN and how the state can improve CVO safety and efficiency by expanding it. A prioritized list of projects has been developed as the CVISN Level 2 High-Level Plan to assist in this process.

Evaluation

The CVISN Program Support Project created measures of effectiveness (MOEs) and a methodology for analyzing the measures. As the Support Project ends, it is still too early to determine how some CVISN deployments have achieved the program's goals and objectives. South Dakota should continue to collect MOE data and analyze those data in order to quantify the successes of CVISN. The analysis will be invaluable in helping the state determine where future CVISN investment and resources should be targeted.

CVISN Enhancements

As part of the Support Project, a high-level plan for CVISN enhancements has been developed. The plan included several project ideas that will improve safety and efficiency by leveraging the existing CVISN infrastructure and/or create related advanced technology projects that directly address CVO needs. South Dakota should consider the plan a first step toward further deployment. A more detailed plan should be developed that identifies specific funding and resource requirements. The more detailed plan should follow the outline established by the initial CVISN Program plan, and include:

- Updated CVISN goals and objectives;
- Project descriptions;
- A detailed Work Breakdown Structure;
- An organizational chart for the CVISN program and the new projects;
- A schedule and budget;
- An updated memorandum of agreement;
- An updated CVISN architecture; and
- Potential issues.

Funding

South Dakota was creative in finding and using funds to support its CVISN Level 1 deployment. Project funding included a mix of several federal and state resources including funds for safety improvements, a National Highway Transportation Safety Administration (NHTSA) grant and Intelligent Transportation System funds.

Future funding for CVISN is undetermined. The same resources and creative solutions should be explored, and funding availability should be considered a factor in the selection of future projects. In addition, South Dakota has committed significant funds and effort that should be tracked to be used as matching and in-kind funds for any federal programs.

Finally, research funds should still be considered for CVISN deployment. The state will soon achieve Level 1 compliance, but future deployments will require research such as feasibility studies and assessment of innovative technologies.

Program Organization

The existing CVISN Program Team has been very effective at identifying, developing and completing projects. Consensus and coordination and a strong working relationship between agencies have been established. It is recommended that the existing organization structure be kept intact as the state moves forward.

New projects may require the involvement of new public and private agencies, and they can be incorporated into the Program Team. However, the CVISN Program Team should be cautious in expanding the team in order to remain compact, cooperative and relatively quick to respond to changes.

A new memorandum of agreement should be developed among the Program Team agencies, and the support of the SDDOT Research Review Board should be obtained.

APPENDIX A

Directory of South Dakota CVISN Program Support Project Documents

Table A-1 summarizes the documents delivered to South Dakota by MMA as part of the CVISN Program Support Project. The documents are available electronically on the *South Dakota CVISN Program Support Electronic Library* compact disc. The table describes the contents of each document and its location on the compact disc.

TABLE A-1: **PROJECT DOCUMENTS**

Directory	File	Description
CVISN Architecture	SDCVISN Architecture.PDF	Initial CVISN Architecture
	SD CVISN Architecture Rev1.TBO	Turbo Architecture output for Architecture Update 1
	SD CVISN Architecture Update1.DOC	CVISN Architecture Update 1
	SD CVISN Architecture Rev2.TBO	Turbo Architecture output for Architecture Update 2
	SD CVISN Architecture Update2.DOC	CVISN Architecture Update 2
CVISN Level 2	CVISN Level 2 Draft.DOC	CVISN Level 2 High-Level Plan Draft
	CVISN Level 2 Draft.PDF	CVISN Level 2 High-Level Plan Draft in Adobe Acrobat Format
	CVISN Level 2.DOC	CVISN Level 2 High-Level Plan Final
	CVISN Level 2.PDF	CVISN Level 2 High-Level Plan Final in Adobe Acrobat Format
Final Report and Presentation	CVISN Deployment Checklist SD.DOC	National CVISN Deployment Checklist modified for South Dakota's status and comments.
	SD Final Report.DOC	SD CVISN Final Report summarizing overall project and program status
	SD Final Presentation.PPT	Powerpoint Final Presentation for SDDOT Research Review Board
Interoperability Test Plan	South Dakota CVISN Interoperability Testing.DOC	SD CVISN Interoperability Test Plan and Test Results
Motor Carrier Web Site	SD Motor Carrier Web Site Requirements.DOC	Requirements for Web Site functionality and operation.
	SD Motor Carrier Web Site Maintenance Overview.DOC	Maintenance and operation manual for the Motor Carrier Web Site.
	SD Motor Carrier Web Site Maintenance Overview.PDF	Maintenance and operation manual for the Motor Carrier Web Site in Adobe Acrobat format.
Measures of Effectiveness	SDMOE Assignments-Data.XLS	Contact information for all MOE data, and a compilation of all collected baseline data.
	SD CVISN MOE.DOC	Description of the MOEs and the methodology for data collection and analysis.
	MOE Baseline Data.DOC	Description of the baseline data collected for MOE analysis.
PRISM	SD PRISM Deployment Scope.DOC	Scope of effort by MMA to deploy PRISM functionality.
	PRISM System Specifications.PDF	Technical specifications for MMA-developed elements of PRISM Program.
	SDCVIEW PRISM QW Manual.DOC	Operational Manual for using the PRISM Web Query Windows.
	PRISM Implementation Alternatives.PDF	Analysis of different approaches to achieving PRISM compliance.
SDCVIEW	PUCLayout.XLS	Description of the fields from the PUC title and registration system to be used in SDCVIEW.

Directory	File	Description
	SDCVIEW Deployment Methods.DOC	A graphical depiction of SDCVIEW connections to state and national legacy systems.
	SDCVIEW IRP & IFTA Data Integration Requirements and Specifications2.DOC	Description of the specifications and requirements for data output by the IFTA/IRP systems for use in SDCVIEW.
	SDCVIEW E-Screening & Transponder Data Integration Requirements and Specifications.DOC	Description of the specifications and requirements for transponder and e-screening system input/output to/from SDCVIEW
	SD PRISM Requirements Source.DOC	Description of SD PRISM requirements and how SDCVIEW will be used in addressing them.
	SDCVIEW Requirements Matrix.DOC	Description of SDCVIEW functions and requirements and who will be responsible for maintaining and providing them.
	SDCVIEW Maintenance.DOC	Describes the maintenance and location of each element of SDCVIEW, including legacy systems it interacts with.
TLD and Program Plan	SDCVISN.Plan.Final.DOC	SD CVISN TLD and Program Plan Update, February 2004
	SDCVISN.Plan.Mar2003.DOC	SD CVISN TLD and Program Plan Update, March 2003
	SDCVISN.Plan.Oct2003.DOC	SD CVISN TLD and Program Plan Update, October 2003
	SDCVISN.Plan.Sep2002.DOC	SD CVISN TLD and Program Plan Update, September 2002
	SDCVISN.Plan.July2002.DOC	SD CVISN TLD and Program Plan Update, July 2002

APPENDIX B

National CVISN Level 1 Deployment Capabilities Checklist

Checklist to Document States Deployment of CVISN Core (Level 1) Capabilities

The Transportation Equity Act for the 21st Century (TEA-21) established a goal of completing deployment of the commercial vehicle infrastructure component of the Intelligent Transportation System (ITS) Deployment Program, Commercial Vehicle Information Systems and Networks (CVISN), in a majority of States by September 30, 2003. The Federal Motor Carrier Safety Administration (FMCSA) has defined a set of CVISN capabilities that can be deployed incrementally by a State and its motor carriers. These "Core," formerly know as Level 1, capabilities focus on electronically exchanging safety and credentialing information, electronically processing interstate registration and fuel tax credentials, and implementing roadside electronic screening at one fixed or mobile site. These capabilities constitute the goal for CVISN deployment by 2003.

Detailed requirements for implementing these capabilities are provided in the *CVISN Operational and Architectural Compatibility Handbook (COACH), Parts 1-4*.

To implement the provisions of TEA-21, FMCSA has developed interoperability tests to verify that State systems conform with the CVISN aspects of the national ITS architecture, applicable standards, and protocols. Interoperability tests have been developed that verify that the intended interfaces were implemented correctly and that the systems operate together to accomplish shared functions. There are two types of interoperability tests:

- Pair-wise tests verify interfaces between selected pairs of deployed systems.
- End-to-End tests verify dataflow and data usage among several selected systems.

The guidelines, roles, and responsibilities in accomplishing the CVISN interoperability tests are identified below:

- A representative of the State's FMCSA Division Office (Division Administrator, State Director, or designee) will work with the State to introduce the concepts of CVISN interoperability testing, make sure the tests are planned, witness the tests, and report the results to the Office of Research and Technology.
- The ITS/CVO Specialist from the FMCSA Service Center will be available to support the Division Office staff in answering questions.
- States will execute the CVISN interoperability tests, tailored as needed to match their own system implementations. States will document the tests' results to the FMCSA Division Office and summarize testing activities. States are encouraged to share lessons learned during the monthly CVISN program managers' teleconferences and in other appropriate meetings (Commercial Vehicle Safety Alliance, ITS America, ITS/CVO and CVISN Deployment Forums, etc.)

- The Johns Hopkins University Applied Physics Laboratory (JHU/APL) has developed a set of interoperability tests, and will provide support (telephone, email, possibly limited travel) to the States in planning and preparing for the tests, conducting the tests, and analyzing the results.
- Upon reviewing the checklist documentation provided from the State's FMCSA Division Office, the Office of Research and Technology will provide a letter to the State acknowledging that it has successfully implemented CVISN Core capabilities and has completed the required interoperability tests.

How Does a State Verify Deployment of CVISN Core (Level 1) Capabilities?

The four tables in this checklist present the Core (Level 1) capabilities paired with required and recommended tests or demonstrations that the States can carry out in order to show achievement of CVISN deployment. The requirements listed in the tables are extracted from the State Systems Design Requirements Checklists (Tables 4.1-2, 4.2-2, 4.3-2, and 4.4-2) of CVISN *COACH Part 1*. The test scenarios listed in the tables are described in detail in the Interoperability Test Suite Package Part 2, Test Cases and Procedures. This checklist is for States to use to easily correlate the CVISN Core (Level 1) requirements to interoperability tests and to check off tests and demonstrations as they are completed.

The four tables are:

- Table A-1. General State Systems Design Requirements Checklist
- Table A-2. State Safety Information Exchange and Safety Assurance Systems Design Requirements Checklist
- Table A-3. State Commercial Vehicle (CV) Administration Systems Design Requirements Checklist
- Table A-4. State Electronic Screening Systems Design Requirements Checklist

The format of the tables is as follows:

- Column 1 "Check When Done" provides a place for the State to check off that a capability fulfilling a CVISN Core (Level 1) requirement has been tested.
- Column 2 "Item #" specifies the item number in the corresponding tables in *COACH Part 1*; the numbers are not always sequential, because *COACH Part 1* also includes capabilities beyond those identified for CVISN Core (Level 1) deployment, which are not included in these checklists.

- Column 3 "Compatibility Criteria" lists the requirements from *COACH Part 1*.
- Column 4 "Required Core (Level 1) Interoperability Tests" provides a list of required tests or demonstrations/inspections to verify achievement of the CVISN Core (Level 1) capabilities. A place is provided for States to note the date of completion of the tests. If the cell is gray, then no required test is defined at that level.
- Column 5 "Recommended Interoperability Tests" lists recommended pair-wise tests. If the cell is gray, then no recommended test is defined at that level.
- *The table has been modified by South Dakota to include an additional column (Column 6) for South Dakota's comments regarding CVISN deployment.*

A key operational concept of CVISN is to share data among safety, credentialing and screening systems. Thus the tests of conformance for CVISN Core (Level 1) capabilities are the End-to-End tests that demonstrate the sharing of data among systems. The End-to-End tests (denoted by scenarios labeled ETE and WETE in the table) will demonstrate that data is shared and transferred through the applicable systems in order to carry out the desired function. The tests would be chosen based on what would be appropriate for the State CVISN design [i.e., Web-based test, ASPEN-Commercial Vehicle Information Exchange Window (CVIEW) (or CVIEW equivalent) or ASPEN-Safety and Fitness Electronic Records (SAFER) interface test]. The recommended pair-wise tests could be carried out during the development phase of the CVISN project, with the specific tests chosen based on the State's CVISN design. In particular, if implementing an EDI solution, it is recommended that these tests be run early in the process to uncover and resolve any syntactic errors.

The following abbreviations are used in the Interoperability Test columns of the tables:

- EDI = Electronic Data Interchange
- CIA = Custom Interface Agreement
- ETE = End-to-End interoperability tests
- WETE = Web-based End-to-End interoperability tests
- PW = Pairwise interoperability tests

Please refer to the *ITS/CVO CVISN Glossary* for other acronyms that may be used in this document.

Table B-1. General State Systems Design Requirements Checklist

Tests associated with the requirements in this table are addressed in the subsequent tables. It is still recommended that you check off the items in this table as the related tests are completed.

The CVISN Core (Level 1) Capabilities addressed in this table apply to the design of all State systems; they are summarized as follows:

- An organizational framework for cooperative system development has been established among State agencies and motor carriers.
- A State CVISN System Design has been established that conforms to the CVISN Architecture and can evolve to include new technology and capabilities.
- All the elements of the three CVISN Core capability areas (Safety Information Exchange, Credentials Administration, and Electronic Screening) have been implemented using applicable architectural guidelines, operational concepts, and standards.

The format of the table is:

- Column 1 "Check When Done" provides a place for the State to check off that a capability fulfilling a CVISN Core (Level 1) requirement has been tested.
- Column 2 "Item #" specifies the item number in the corresponding tables in *COACH Part 1*; the numbers are not always sequential, because *COACH Part 1* also includes capabilities beyond those identified for core deployment, which are not included in these checklists.
- Column 3 "Compatibility Criteria" lists the requirements from *COACH Part 1*.
- Column 4 "Required Core (Level 1) Interoperability Tests" provides a list of required tests or demonstrations/inspections to verify achievement of the CVISN Core (Level 1) capabilities. A place is provided for States to note the date of completion of the tests. If the cell is gray, then no required test is defined at that level.
- Column 5 "Recommended Interoperability Tests" lists recommended pair-wise tests. If the cell is gray, then no recommended test is defined at that level.
- *The table has been modified by South Dakota to include an additional column (Column 6) for South Dakota's comments regarding CVISN deployment.*

Table B-1
General State Systems Design Requirements Checklist

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔	**4.1.1**	Adopt standard identifiers for carriers, vehicles, drivers, and transponders to support information exchange.			
✔	1	Adopt standard identifiers for interstate carrier, vehicle, driver, and transponder.	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2**		Interstate Carriers = USDOT Intrastate Carriers = USDOT Vehicle = VIN Driver = CDL Transponder = Unique Hex
✔	**4.1.2**	Use the World Wide Web for person-to-computer interactions between private citizens and state information systems.	South Dakota CVISN Interoperability Test Plan **Test 6.1**		**Motor Carrier Website for rules, regulations, information, gateway to other services** COVERSnet for credential administration (***Planned*** on vendor web server) SDAPS for permitting
	4.1.3	Use open standards for computer-to-computer exchange of information with other jurisdictions and with the public.			

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔ Partial	1	Use open standards[1] for transactions between state information systems and private systems (CV operators, insurance companies, etc.).			COVERSnet - proprietary SDAPS – proprietary Motor Carrier Website – open web development standards SDCVIEW – XML PRISM – XML Transponder Administration - AFF
✔	2	Use open standards for transactions between state information systems and CVISN Core Infrastructure systems, where available.	South Dakota CVISN Interoperability Test Plan **Test 2.5** **Test 2.6**		**SDCVIEW - SAFER 4.2.3** (XML File Interchange Protocol) ASPEN - SAFETYNET
✔	**4.1.4**	Ensure that all information transfers, fee payments, and money transfers are authorized and secure, e.g., through access control and encryption.	South Dakota CVISN Interoperability Test Plan **Test 3.1** **Test 3.2** **Test 3.3** **Test 3.4** **Test 3.5** **Test 3.6** **Test 3.8**		**COVERSnet (*Planned* on Vendor server)** SDAPS

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	4.1.5	Exchange safety and credentials data electronically within the state to support credentialing, safety, and other roadside functions. Where useful, exchange snapshots.			
✔	1	Data for interstate carriers	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2** **Test 2.3** **Test 2.4** **Test 4.1** **Test 4.2** **Test 4.3** **Test 5.2** **Test 5.3** **Test 5.4** **Test 5.5** **Test 6.0** **Test 6.1** **Test 6.5** **Test 7.1**		**Credentials:** (SD-Based: COVERS Extract to SDCVIEW.) (Non-Domiciled: SAFER to SDCVIEW downloads.) **Safety:** (SAFER to SDCVIEW downloads.) **Roadside:** (SDCVIEW to ROC data exchange procedures.)

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔	2	Data for interstate vehicles	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2** **Test 2.3** **Test 2.4** **Test 4.1** **Test 4.2** **Test 4.3** **Test 5.1** **Test 5.3** **Test 5.4** **Test 5.5** **Test 6.0** **Test 6.1** **Test 6.5** **Test 7.2**		**Credentials:** (SD-Based: COVERS Extract to SDCVIEW.) (Non-Domiciled: SAFER to SDCVIEW downloads.) **Safety:** (SAFER to SDCVIEW downloads.) **Roadside:** (SDCVIEW to ROC data exchange procedures.)

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔	3	Data for intrastate carriers	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2** **Test 2.3** **Test 2.4** **Test 4.1** **Test 4.2** **Test 4.3** **Test 5.4** **Test 5.5** **Test 5.6** **Test 6.0** **Test 6.1** **Test 6.5** **Test 7.1**		***Note:*** *This is a new requirement as of 08-03.* **Credentials:** (If state is authorized to require intrastate USDOT #'s, than census info would come through a SAFER – SDCVIEW download. Modification would need to be made to the T&R system to tie into the USDOT#.) **Roadside:** (Assuming above happens, SDCVIEW to ROC data exchange procedures.)
✔	4	Data for intrastate vehicles	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2** **Test 2.3** **Test 2.4** **Test 4.1** **Test 4.2** **Test 4.3** **Test 5.4** **Test 5.5** **Test 5.6** **Test 6.0** **Test 6.1** **Test 6.5** **Test 7.2**		**Note:** This is a new requirement as of 08-03. **Credentials:** (T&R extract to SDCVIEW.) **Roadside:** (SDCVIEW to ROC data exchange procedures.)

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔	**4.1.6**	Demonstrate technical interoperability by performing Interoperability Tests.			Summarized in the subsequent tables.

[1] Open standards are publicly available specifications or standards that promote interoperability.

Table B-2. State Safety Information Exchange and Safety Assurance Systems Design Requirements Checklist

The CVISN Core (Level 1) Capabilities addressed in this table apply to the design of State safety-related systems; they are summarized as follows:

- Inspection reporting using ASPEN (or equivalent) at all major inspection sites. ASPEN data sent to SAFER directly or indirectly.
- Connection to SAFER system to provide exchange of interstate carrier and vehicle data snapshots among States.
- Implementation of the CVIEW (or equivalent) system for exchange of intrastate and interstate data within State and connection to SAFER for exchange of interstate data through snapshots.

– OR –

- Utilization of SAFER option for exchange of inter- and intrastate data through snapshots.

The format of the table is:

- Column 1 "Check When Done" provides a place for the State to check off that a capability fulfilling a CVISN Core (Level 1) requirement has been tested.
- Column 2 "Item #" specifies the item number in the corresponding tables in *COACH Part 1*; the numbers are not always sequential, because *COACH Part 1* also includes capabilities beyond those identified for core deployment, which are not included in these checklists.
- Column 3 "Compatibility Criteria" lists the requirements from *COACH Part 1*.
- Column 4 "Required Core (Level 1) Interoperability Tests" provides a list of required tests or demonstrations/inspections to verify achievement of the CVISN Core (Level 1) capabilities. A place is provided for States to note the date of completion of the tests. If the cell is gray, then no required test is defined at that level.
- Column 5 "Recommended Interoperability Tests" lists recommended pair-wise tests. If the cell is gray, then no recommended test is defined at that level.
- *The table has been modified by South Dakota to include an additional column (Column 6) for South Dakota's comments regarding CVISN deployment.*

Table B-2
State Safety Information Exchange and Safety Assurance Systems Design Requirements Checklist

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔	**4.2.1**	Use ASPEN (or equivalent) at all major inspection sites	**For designs with direct ASPEN-SAFER interface:** ▪ Scenario ETE-02 [vehicle inspected and placed Out-Of-Service (OOS)] **For designs with indirect ASPEN-SAFER (e.g., via CVIEW or equivalent) interface:** ▪ Scenario ETE-08 and ETE-09 [ASPEN requests inspection report (IR) from SAFER via CVIEW, and ASPEN sends IR to SAFER via CVIEW, respectively]	**For ASPEN/SAFER CIA interface:** • Scenario PW-Safe-15 (SAFER receives request for carrier snapshot from ASPEN) • Scenario PW-Safe-09 (SAFER receives IR from ASPEN) • Scenario PW-Safe-14 (SAFER receives request for IR from ASPEN) **For ASPEN/CVIEW (or equivalent) CIA interface:** ▪ Scenario PW-Safe-03 [CVIEW (or equivalent) receives request for carrier snapshot from ASPEN]	There is no link between ASPEN and SDCVIEW. Carrier or vehicle information requests from inspectors will be accomplished through a web-based query window system (***Planned***).
✔	1	Select vehicles and drivers for inspection based on availability of inspector, standard inspection selection system, vehicle measures, and random process, as statutes permit.	▪ Demonstration or inspection of State system design documents		SD standard operating procedure will incorporate tools such as SDCVIEW Query Windows, and electronic screening will use SDCVIEW snapshot data for screening.

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔	2	Report interstate inspections to MCMIS (Motor Carrier Management Information System) via SAFETYNET	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2** **Test 2.3**		Is done with ASPEN and standard operating procedures.
✔	3	Report intrastate inspections to SAFETYNET	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2** **Test 2.3**		**Note:** Demonstration required only. This intrastate requirement pre-supposes that intrastate carriers have a USDOT # for tracking purposes and that SD has developed the capability and authority to inspect intrastate trucks.

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔	4	Submit interstate and intrastate inspections for 60-day storage to SAFER.	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2** **Test 2.3**	**For ASPEN/SAFER CIA interface:** • Scenario PW-Safe-15 (SAFER receives request for carrier snapshot from ASPEN) • Scenario PW-Safe-09 (SAFER receives inspection report from ASPEN) • Scenario PW-Safe-14 (SAFER receives request for inspection report from ASPEN) **For ASPEN/CVIEW (or equivalent) CIA interface:** ▪ Scenario PW-Safe-03 [CVIEW (or equivalent) receives request for carrier snapshot from ASPEN] **Date Completed:** _____	**Note:** There are no links between ASPEN and SDCVIEW. Carrier or vehicle information requests from inspectors will be accomplished through a web-based query window system. (***Planned*** upgrade of SDCVIEW with query windows capability.)
✔	**4.2.2**	SAFETYNET submits inspection reports to SAFER.			
✔	1	SAFETYNET submits interstate inspection reports to SAFER.	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2** **Test 2.3**		**Is done now with standard operating procedures.**

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔	2	SAFETYNET submits intrastate inspection reports to SAFER.	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2** **Test 2.3**		**Note:** This requirement is new as of 08-03. This pre-supposes that intrastate carriers have a USDOT # for tracking purposes and that SD has developed the capability and authority to inspect intrastate trucks.
✔	**4.2.4**	Use Compliance Analysis Performance Review Information (CAPRI) (or equivalent) for compliance reviews.			
✔	1	Report interstate compliance reviews to MCMIS via SAFETYNET	▪ Demonstration or inspection of State system design documents		Is done now with standard operating procedures.

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
✔	**4.2.9**	Implement the CVIEW (or equivalent) system for exchange of intrastate and interstate data within State and connection to SAFER for exchange of interstate data through snapshots - OR - utilize the SAFER option for exchange of inter- and intrastate data through snapshots.	South Dakota CVISN Interoperability Test Plan **Test 2.1** **Test 2.2**	**For Roadside to CVIEW (or equivalent) EDI (XML) queries:** ▪ Scenario PW-Safe-02 (roadside requests vehicle snapshot from CVIEW) **Date Completed: _9/12/03_**	There is no link between ASPEN and SDCVIEW. Carrier or vehicle information requests from inspectors will be accomplished through a web-based query window system. (***Planned*** upgrade of SDCVIEW with query windows capability.) South Dakotas uses XML, which SAFER 4.2 and above accept.

Table B-3. State Commercial Vehicle (CV) Administration Systems Design Requirements Checklist

The CVISN Core (Level 1) Capabilities addressed in this table apply to the design of State credentials-related systems; they are summarized as follows:

- Automated electronic processing via Web-based or computer-to-computer solutions from carrier to State (processing includes carrier application, State application processing, credential issuance, and tax filing) of at least International Registration Plan (IRP) and International Fuel Tax Agreement (IFTA) credentials; ready to extend to other credentials (intrastate, titling, oversize/overweight (OS/OW), carrier registration, and HazMat). Note: processing does not necessarily include electronic payment.
- Update SAFER with credential information for interstate operators as actions are taken.
- Update CVIEW (or equivalent) with interstate and intrastate credential information as actions are taken.
- Connection to IRP and IFTA Clearinghouses.
- At least 10 percent of the transaction volume handled electronically; ready to bring on more carriers as carriers sign up; ready to extend to branch offices where applicable.

Also note that the requirements for electronic screening enrollment (ESE) are included in Table A-4 with requirements for State screening-related systems.

The format of the table is:

- Column 1 “Check When Done” provides a place for the State to check off that a capability fulfilling a CVISN Core (Level 1) requirement has been tested.
- Column 2 “Item #” specifies the item number in the corresponding tables in *COACH Part 1*; the numbers are not always sequential, because *COACH Part 1* also includes capabilities beyond those identified for core deployment, which are not included in these checklists.
- Column 3 “Compatibility Criteria” lists the requirements from *COACH Part 1*.
- Column 4 “Required Core (Level 1) Interoperability Tests” provides a list of required tests or demonstrations/inspections to verify achievement of the CVISN Core (Level 1) capabilities. A place is provided for States to note the date of completion of the tests. If the cell is gray, then no required test is defined at that level.

- Column 5 “Recommended Interoperability Tests” lists recommended pair-wise tests. If the cell is gray, then no recommended test is defined at that level.
- *The table has been modified by South Dakota to include an additional column (Column 6) for South Dakota's comments regarding CVISN deployment.*

Table B-3
State Commercial Vehicle (CV) Administration Systems Design Requirements Checklist

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	4.3.1	Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for IRP.			
	1	Provide a Web site for a person-to-computer process. Either a Web-based or a computer-to-computer interface is required for Core (Level 1) deployment.	South Dakota CVISN Interoperability Test Plan **Test 3.1** **Test 3.2** **Test 3.3** **Test 3.4**		***Planned*** COVERSnet deployment will achieve requirement.
	2	Provide a computer-to-computer automated process. Either a Web-based or a computer-to-computer interface is required for Core (Level 1) deployment.			**SD is *planning* to implement a web-based system.**
	2a	Use EDI standards to provide a computer-to-computer automated process.		▪ Scenario PW-Cred-01 (CAT to CI, add vehicle) **Date Completed:** _____	N/A – SD does not plan to implement computer-to-computer automated processing.

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	4.3.2	Proactively provide updates to vehicle snapshots as needed when IRP credentials actions are taken.	South Dakota CVISN Interoperability Test Plan **Test 3.1** **Test 3.2** **Test 3.3** **Test 3.4**		This is done through SDCVIEW taking COVERS daily extracts and the processing the transaction set data up to SAFER. ***Pending completion of IFTA/IRP Transaction File development.***
	1	Interface to SAFER for interstate vehicle snapshots, using available SAFER interface.			
	4.3.3	Proactively provide updates to carrier snapshots as needed when IRP credentials actions are taken.	South Dakota CVISN Interoperability Test Plan **Test 3.1** **Test 3.2** **Test 3.3** **Test 3.4**		This is done through SDCVIEW taking COVERS daily extracts and the processing the transaction set data up to SAFER. ***Pending completion of IFTA/IRP Transaction File development.***
	1	Interface to SAFER for interstate carrier snapshots, using available standards.			
	4.3.4	Provide IRP Clearinghouse with IRP credential application information (recaps).	▪ Demonstration of IRP Clearinghouse connection **Date Completed:** _____		**SD is *planning* to join the IRP Clearinghouse.**
	4.3.5	Review fees billed and/or collected by a jurisdiction and the portion due other jurisdictions (transmittals) as provided by the IRP Clearinghouse.	▪ Demonstration of IRP Clearinghouse connection **Date Completed:** _____		SD is ***planning*** to join the IRP Clearinghouse.

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	4.3.6	Support electronic State-to-State fee payments via IRP Clearinghouse	▪ Inspection of IRP Clearinghouse agreement **Date Completed:** _____		SD is ***planning*** to join the IRP Clearinghouse.
	4.3.7	Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for IFTA registration.			

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	1	Provide a Web site for a person-to-computer process. Either a Web-based or a computer-to-computer interface is required for Core (Level 1) deployment.	South Dakota CVISN Interoperability Test Plan **Test 3.5** **Test 3.6** **Test 3.7**		SD is ***planning*** to implement a web-based system.
	2	Provide a computer-to-computer automated process. Either a Web-based or a computer-to-computer interface is required for Core (Level 1) deployment.			N/A – SD does not plan to implement computer-to-computer automated processing.
	2a	Use EDI standards to provide a computer-to-computer automated process.			
	4.3.8	Proactively provide updates to carrier snapshots as needed when IFTA credentials actions are taken or tax payments are made.			

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	1	Interface to SAFER for interstate carrier snapshots, using available SAFER interface.	South Dakota CVISN Interoperability Test Plan **Test 3.6** **Test 3.7**		This is done through SDCVIEW taking COVERS daily extracts and the processing the transaction set data up to SAFER. ***Pending completion of IFTA/IRP Transaction File development.***
	4.3.9	Provide IFTA Clearinghouse with IFTA credential application information, using available interface.	▪ Demonstration of IFTA Clearinghouse connection **Date Completed:** _____		SD is ***planning*** to join the IFTA Clearinghouse.
	4.3.10	Support electronic tax filing for IFTA quarterly fuel tax returns.			
	1	Provide a Web site for a person-to-computer process. Either a Web-based or a computer-to-computer interface is required for Core (Level 1) deployment.	South Dakota CVISN Interoperability Test Plan **Test 3.7**		SD is ***planning*** to implement a web-based system.
	2	Provide a computer-to-computer automated process. Either a Web-based or a computer-to-computer interface is required for Core (Level 1) deployment.			**N/A – SD does not plan to implement computer-to-computer automated processing.**

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	2a	Use EDI standards to provide a computer-to-computer automated process.			N/A – SD does not plan to implement computer-to-computer automated processing.
	4.3.11	Provide information on taxes collected by own jurisdiction and the portion due other jurisdictions (transmittals) to the IFTA Clearinghouse, using available interface.	▪ Inspection of IFTA Clearinghouse agreement **Date Completed:** _____		SD is ***planning*** to join the IFTA Clearinghouse.
	4.3.12	Download for automated review the demographic information from the IFTA Clearinghouse.	▪ Demonstration of IFTA Clearinghouse connection **Date Completed:** _____		SD is ***planning*** to join IFTA Clearinghouse.
	4.3.13	Download for automated review the transmittal information from the IFTA Clearinghouse.			
	4.3.14	Retrieve IFTA tax rate information electronically from IFTA, Inc.			
✔	**4.3.19**	Provide commercial driver information to other jurisdictions via Commercial Driver's License Information System (CDLIS).	▪ Does the State operate CDLIS? __X__ Yes ____ No		

Table B-4. State Electronic Screening Systems Design Requirements Checklist

The CVISN Core (Level 1) Capabilities addressed in this table apply to the design of State screening-related systems; they are summarized as follows:

- Use snapshots to support screening decisions.
- Implemented at a minimum of one fixed or mobile inspection site.
- Ready to replicate at other sites.

The CVISN architecture and standards provide the technical framework for any given roadside reader or interrogation device to meaningfully query, send or receive, and process data from any given transponder mounted in a vehicle, regardless of which manufacturer produced either the reader or transponder. The capabilities to electronically screen transponder-equipped commercial vehicles at one or more fixed or mobile sites and to replicate this at other sites are key premises of CVISN deployment. The FMCSA strongly supports electronic screening programs using various business models, including public-private partnerships such as the PrePass™ program, administered by Heavy Vehicle Electronic License Plate (HELP), Inc. and the North American Pre-clearance and Safety System (NORPASS), as well as other State-administered programs, such as Oregon's Green Light electronic screening system.

The format of the table is:

- Column 1 "Check When Done" provides a place for the State to check off that a capability fulfilling a CVISN Core (Level 1) requirement has been tested.
- Column 2 "Item #" specifies the item number in the corresponding tables in *COACH Part 1*; the numbers are not always sequential, because *COACH Part 1* also includes capabilities beyond those identified for core deployment, which are not included in these checklists.
- Column 3 "Compatibility Criteria" lists the requirements from *COACH Part 1*.
- Column 4 "Required Core (Level 1) Interoperability Tests" provides a list of required tests or demonstrations/inspections to verify achievement of the CVISN Core (Level 1) capabilities. A place is provided for States to note the date of completion of the tests. If the cell is gray, then no required test is defined at that level.
- Column 5 "Recommended Interoperability Tests" lists recommended pair-wise tests. If the cell is gray, then no recommended test is defined at that level.

- *The table has been modified by South Dakota to include an additional column (Column 6) for South Dakota's comments regarding CVISN deployment.*

Table B-4
State Electronic Screening Systems Design Requirements Checklist

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	4.4.1	Follow FHWA guidelines for Dedicated Short Range Communications (DSRC) equipment.			
	1	For the immediate future, all CVO and Border crossing projects will continue to utilize the current DSRC configuration employed by the programs. This is the "American Society for Testing and Materials (ASTM) version 6" active tag. (The DSRC provisional standard is defined in the FHWA specification.)	South Dakota CVISN Interoperability Test Plan **Test 4.2** **Test 4.3**		South Dakota ***will use*** DSRC standards for electronic screening. Transponders will be distributed and tested in the second quarter of 2004.

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	4.4.2	Use snapshots updated by a SAFER/CVIEW subscription in an automated process to support screening decisions.		▪ Scenario PW-Scr-01, Screening a Vehicle that carries a Type II Transponder ▪ Scenario PW-Scr-02, Screening a Vehicle that carries a Type III Transponder ▪ Scenario PW-Scr-03, Screening a Vehicle that carries a Type **IIIm** Transponder ▪ Scenario PW-Scr-04, Screening a Vehicle that carries a Type **IIIm** Transponder with Commercial Motor Vehicle ID Message **Date Completed:** _____	South Dakota ***will use*** SAFER snapshot data via SDCVIEW and the roadside screening system.
	1	Carrier snapshots.	South Dakota CVISN Interoperability Test Plan **Test 4.2** **Test 4.3**		
	2	Vehicle snapshots.	South Dakota CVISN Interoperability Test Plan **Test 4.2** **Test 4.3**		
	4.4.4	At one or more sites, provide electronic mainline or ramp screening for transponder-equipped vehicles, and clear for bypass if carrier & vehicle were properly identified and screening criteria were passed.	South Dakota CVISN Interoperability Test Plan **Test 4.2** **Test 4.3**		SD ***will*** deploy electronic screening at the Jefferson Port of Entry
	1	For transponder-equipped vehicles, identify carrier at mainline or ramp speeds.	South Dakota CVISN Interoperability Test Plan **Test 4.2** **Test 4.3**	▪ Scenario PW-Scr-01 ▪ Scenario PW-Scr-02 ▪ Scenario PW-Scr-03 ▪ Scenario PW-Scr-04 **Date Completed:** _____	Pending completion of Jefferson POE and installation of ROC (roadside system). **Pending completion of Jefferson POE and installation of ROC (roadside system).**
	2	For transponder-equipped vehicles, identify vehicle at mainline or ramp speeds.	South Dakota CVISN Interoperability Test Plan **Test 4.2** **Test 4.3**		

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	3	Use Weigh-In-Motion (WIM) at mainline speed or on the ramp, or weight history in making screening decisions.	South Dakota CVISN Interoperability Test Plan **Test 4.2** **Test 4.3**		Pending completion of Jefferson POE and installation of ROC.
	4	Use safety data from snapshots and other sources.	South Dakota CVISN Interoperability Test Plan **Test 4.2** **Test 4.3**	▪ Scenario PW-Scr-01 ▪ Scenario PW-Scr-02 ▪ Scenario PW-Scr-03 ▪ Scenario PW-Scr-04 **Date Completed:** _____	Pending completion of Jefferson POE and installation of ROC and completion of IFTA/IRP transaction files.
	5	Use credentials data from snapshots and other sources.	South Dakota CVISN Interoperability Test Plan **Test 4.2** **Test 4.3**		
	4.4.5	Carrier enrollment: Collect from the carrier a list of jurisdictions and/or e-screening programs in which it wishes to participate. Inform those jurisdictions and/or e-screening programs.	▪ Check if a member of: ♦ NORPASS: ___X____ ♦ PrePass™: _____; or South Dakota CVISN Interoperability Test Plan **Test 4.1**		Pending Transponder Administration Website. Data will be transmitted to SAFER via T0023 & T0024 through SDCVIEW.
	4.4.6	Vehicle enrollment: Collect from the carrier a list of the vehicles for each jurisdiction and/or e-screening program. Inform those jurisdictions and/or e-screening program.	▪ Check if a member of: ♦ NORPASS: ___X____ ♦ PrePass™: _____; or South Dakota CVISN Interoperability Test Plan **Test 4.1**		Pending Transponder Administration Website. Data will be transmitted to SAFER via T0023 & T0024 through SDCVIEW.

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	4.4.7	Record transponder number and default carrier ID for each vehicle that intends to participate in e-screening.	▪ Check if a member of: ♦ NORPASS: ___X____ ♦ PrePass™: _____; or South Dakota CVISN Interoperability Test Plan **Test 4.1**		Pending Transponder Administration Website and administrative procedures.
	4.4.8	Share carrier ID for each carrier that intends to participate in e-screening with other jurisdictions and/or e-screening programs as requested by the carrier.	▪ Check if a member of: ♦ NORPASS: ___X____ ♦ PrePass™: _____ South Dakota CVISN Interoperability Test Plan **Test 4.1** **Test 5.3**		Pending Transponder Administration Website. Data will be transmitted to SAFER via T0023 & T0024 through SDCVIEW.
	4.4.9	Share transponder number and default carrier ID for each vehicle that intends to participate in e-screening with other jurisdictions, e-screening programs, or other agencies as requested by the carrier.	▪ Check if a member of: ♦ NORPASS: ___X____ ♦ PrePass™: _____ South Dakota CVISN Interoperability Test Plan **Test 4.1** **Test 5.3**		Pending Transponder Administration Website. Data will be transmitted to SAFER via T0023 & T0024 through SDCVIEW.
	4.4.10	Accept each qualified vehicle already equipped with a compatible transponder into your e-screening program without requiring an additional transponder.	▪ Check if a member of: ♦ NORPASS: ___X____ ♦ PrePass™: _____		Pending Transponder Administration Website. Data will be transmitted to SAFER via T0023 & T0024 through SDCVIEW.

Check When Done	Item #	Compatibility Criteria	Required Core (Level 1) Interoperability Tests (or other method of verifying capability)	Recommended Interoperability Tests for Technical Deployment	SD Compliance Notes
	4.4.11	Enable the carrier to share information about the transponder that you issue with other jurisdictions, e-screening programs, or agencies.	▪ Check if a member of: ♦ NORPASS: ___X____ ♦ PrePass™: _____		
	4.4.12	Verify credentials/safety information with authoritative source prior to issuing citation.	South Dakota CVISN Interoperability Test Plan **Test 5.1** **Test 5.2** **Test 5.4** **Test 5.6**		It is ***planned*** that Port staff will have access to SDCVIEW via web queries to verify credential and safety information.