U.S Department
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A Guide to Developing a Regional ITS/CVO Coordination Plan

prepared for

Federal Highway Administration

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A Guide to Developing a Regional ITS/CVO Coordination Plan

■ What Is a Regional ITS/CVO Coordination Plan?

A Regional ITS/CVO Coordination Plan outlines a strategy for the deployment of Intelligent Transportation Systems (ITS)/Commercial Vehicle Operations (CVO) technologies by a group of states with common economic and transportation needs. The Coordination Plan defines strategies to ensure that future deployments of ITS/CVO systems are consistent with the Commercial Vehicle Information Systems and Networks (CVISN) architecture and compatible across states. It also may define multi-state projects to be conducted in each region. The Coordination Plan is developed by an ITS/CVO regional mainstreaming forum, which is a consortium of public agencies and motor carriers in each region.

Under the auspices of its ITS/CVO mainstreaming initiative, the Federal Highway Administration (FHWA) is supporting the development of Regional ITS/CVO Coordination Plans for seven consortia comprising a total of 34 states (see Figure 1). Additional states are expected to join these consortia in 1998.

Figure 1. Regional ITS/CVO Mainstreaming Consortia

Northwest

Alliance for CVO/ Great Lakes

I-95 Corridor Coalition/ Northern States

Midwest

West

Alliance for CVO/Southeast

I-95 Corridor Coalition/ Eastern States
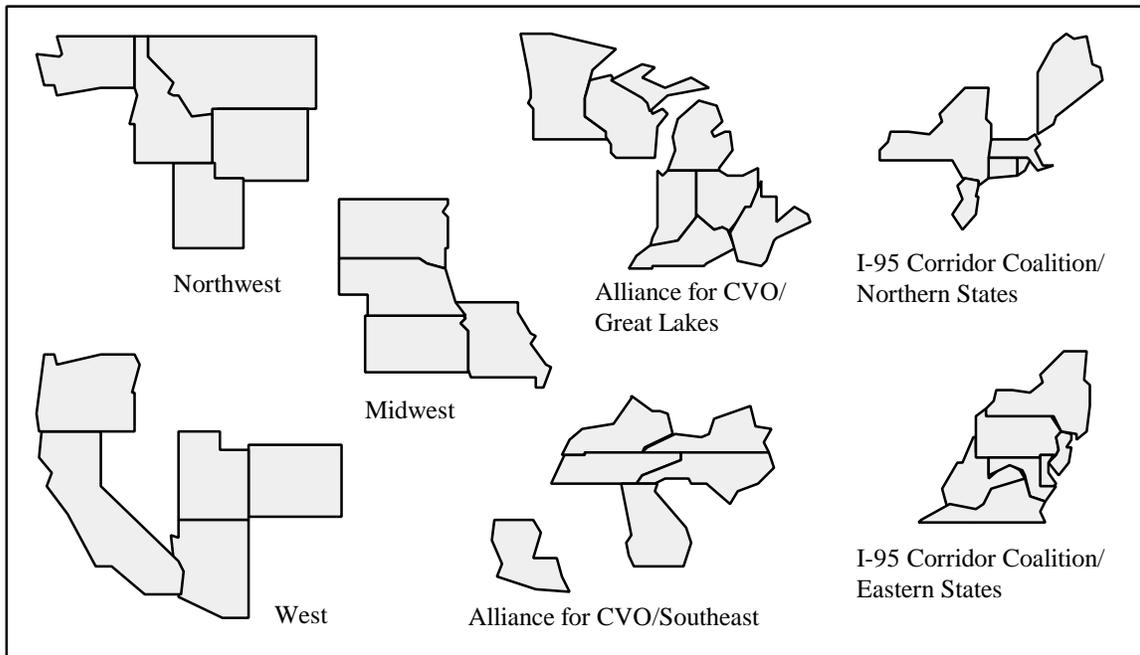
■ What Are the Expected Outputs of a Regional ITS/CVO Coordination Plan?

The development of a Regional ITS/CVO Coordination Plan is a critical step toward ensuring safe and efficient commercial vehicle operations nationwide. Regional deployment strategies may be the best opportunity for implementing interoperable, nationwide ITS/CVO services without Federal mandates. The Plan will contribute to this goal in the following ways (see Table 1):

- The Plan will help guide the states in the consortia to begin CVISN deployment by sharing lessons learned in the CVISN pilot states and technologies, standards, and protocols developed in the CVISN program;

- The Plan will define multi-state technical initiatives that will address issues common to two or more states;

- The Plan will identify areas where coordination is needed among individual state deployment activities, therefore creating opportunities for the states to share "lessons learned";

- The Plan will describe future activities of the regional forum and its full-time champion or program coordinator; and

- The Plan will help ensure coordination with other regions and the national ITS/CVO program.

**Table 1. Expected Outcome of
Regional ITS/CVO Coordination Plans**

Element of Plan	Outcome
Regional CVISN deployment strategy	• Participation by constituent states in CVISN planning and design workshops
	• State of state CVISN project plan development
	• Transfer of technology and lessons learned from CVISN pilot state
Multi-state technical initiatives	• Commitment by participating states to work toward solutions for common problems
	• Project concepts for implementation by groups of states
Single-state project summary	• Improved coordination among states
Regional mainstreaming plan	• Future meetings of regional forum
	• Effective use of regional champion
	• Regional training and outreach activities
National coordination plan	• Improved coordination among regions
	• More effective use of resources
	• More accurate deployment tracking

◼ Why Should ITS/CVO Be Deployed with a Regional Focus?

Individual states are the building blocks of the ITS/CVO program because they have the first-line responsibility for administering and enforcing CVO regulatory programs. However, regional collaboration facilitates the deployment of interoperable systems that can serve motor carriers who operate in more than one state. The creation of regional ITS/CVO programs parallels the way the trucking industry operates. Most truck trips occur in more than one state; carrier operations tend to be clustered around the major distribution centers such as New York, Atlanta, Chicago, Los Angeles, and Seattle. Local and regional motor carriers will benefit from regional ITS/CVO programs that simplify and standardize regulatory credentialing and compliance processes within these "trucksheds" (see Figure 2). In the early 1990s, states in many of these regions pooled their resources for institutional issues studies, research projects, and operational tests; today, these states are working together toward the goal of deployment.

Figure 2. Regional "Trucksheds"
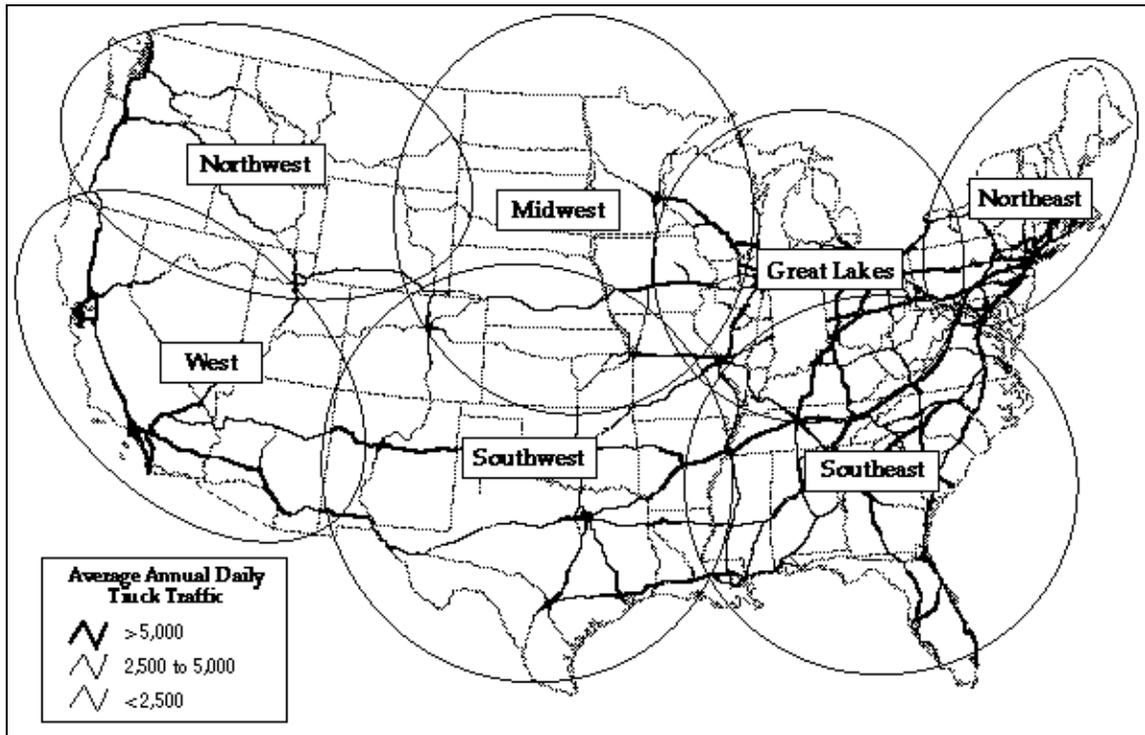
In addition, collaboration among states can present unique opportunities to conserve resources and to create innovative solutions surpassing the capability of individual states. For large-scale activities such as the development of electronic screening programs and new safety information systems, multi-state projects help achieve economies of scale and create a larger market for industry; for example, the Eastern States Consortium is testing the SAFER data mailbox, which uses information systems to provide data on safety inspections and out-of-service orders on a near-real-time basis. For other activities such as roadside enforcement, interstate cooperation may conserve resources; for example, two states could operate a shared port-of-entry on their border rather than operating two separate facilities.

■ What Kinds of Multi-State Projects Are Underway in the Regions?

Regional ITS/CVO projects currently are underway in the areas of safety assurance, credentials administration, electronic screening, and carrier operations. Table 2 identifies some key projects. These projects are in various stages of development, representing research projects, operational tests, and deployed systems.

Table 2. Examples of Regional ITS/CVO Projects

Safety Assurance
- Out-of-service verification (Wisconsin, Minnesota)
- SAFER data mailbox (Eastern States Consortium)

Credentials Administration
- Electronic one-stop shopping (HELP, Midwest, Southwest)
- OS/OW permitting (Northeast, Southeast, West)
- Electronic data sharing (COVE II)

Electronic Screening
- Automated clearance systems (HELP PrePass, Advantage I-75 MACS, MAPS)

Carrier Operations
- TruckDesk (I-95 Corridor Coalition)

■ How Does the Regional ITS/CVO Coordination Plan Relate to the State Business Plans?

The State ITS/CVO Business Plans are building blocks for the Regional ITS/CVO Coordination Plans (see Figure 3). A State Business Plan functions as a "roadmap" to a state's ITS/CVO program. At its core, the State Business Plan is a summary of current and planned projects to develop, test, and deploy specific ITS/CVO products and services. For each project, the State Business Plan will define goals and objectives, an expected outcome, location, a technical approach, an organizational and management approach, a schedule and milestones, and a funding strategy.

The Regional Coordination Plan should list each individual state's projects, particularly those with interstate implications. A comparison of objectives, technical approaches, participants, and milestones may identify opportunities for coordination among these projects. The focus should be on ensuring interoperability among projects and conformance with the CVISN, international border clearance (IBC), and national ITS architectures.

Figure 3. ITS/CVO Coordination Plans
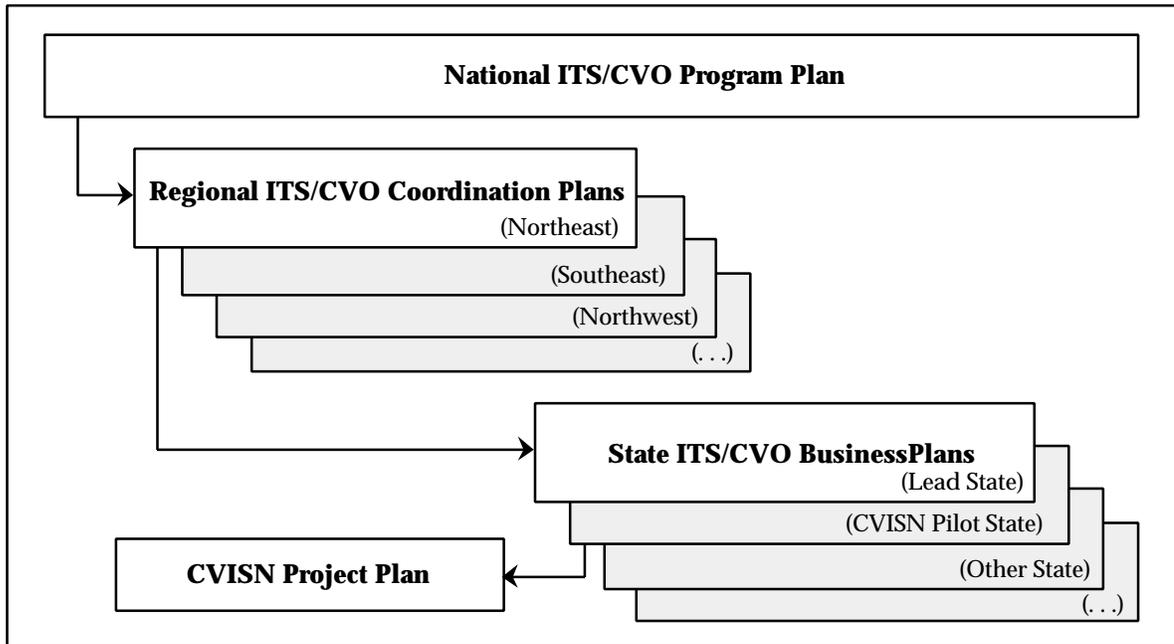
■ How Does the Regional ITS/CVO Coordination Plan Relate to the CVISN Project Plans?

The CVISN model deployment initiative currently involves two prototype states (Maryland and Virginia) and eight pilot states (California, Colorado, Connecticut, Kentucky, Michigan, Minnesota, Oregon, and Washington). Each of these states has developed a detailed project plan that describes the tasks, milestones, and budget for implementing the model deployment. These project plans provide specific detail on how the states will implement the high-level strategies outlined in the state ITS/CVO business plans. To be eligible for future CVISN deployment funding, the remaining states must participate in a series of CVISN planning and design workshops and develop a CVISN project plan that reflects the state's unique needs. The regional coordination plan will build upon the lessons learned in creating the pilot state project plans, and will describe a process for involving other states in CVISN deployment.

■ How Does the Regional ITS/CVO Coordination Plan Relate to the National ITS/CVO Program Plan?

The National ITS/CVO Program Plan, which is published by the FHWA, defines overall goals and objectives for the national program; summarizes the key projects funded or managed by the FHWA; and describes the national technical and institutional architectures. The National ITS/CVO Program Plan incorporates major state and multi-state projects. The Regional ITS/CVO Coordination Plans should be consistent with the overall goals, technical approach, and schedule of the national ITS/CVO program.

■ What Does a Regional ITS/CVO Coordination Plan Include?

Figure 4 presents a suggested outline for the Regional ITS/CVO Coordination Plan. This format is similar to that of the state business plans, which will facilitate future updates of both plans.

**Figure 4. Suggested Outline for a
Model Regional ITS/CVO Coordination Plan**

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        Executive Summary
1.0  Introduction
2.0  Overview of the Business Planning Process
3.0  Description of the Region
     3.1  Constituent States
     3.2  Economic and Organizational Characteristics
     3.3  Issues and Opportunities
4.0  Strategic Overview
     4.1  Mission Statement
     4.2  Guiding Principles
     4.3  Goals and Objectives
5.0  Program Summary
     5.1  CVISN Deployment Strategy
     5.2  Multi-state Projects
     5.3  Single-state Projects Summary
     5.4  Regional Mainstreaming Plan
     5.5  National Coordination Plan
6.0  Organization and Management Approach
     6.1  Stakeholders
     6.2  Scheduling and Milestones
     6.3  Funding Strategy
7.0  Contact Names
Appendices (as necessary)
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Description of the Region's CVO Environment

This description provides the context within which the Regional ITS/CVO Coordination Plan is developed and implemented. This section of the Plan should list the constituent states, describe key economic and organizational characteristics of the region, and assess the major issues associated with current CVO processes and procedures in the region. It should identify major CVO agreements in which member states participate, and specify current systems used in each state for Dedicated Short-Range Communication (DSRC) and Electronic Data Interchange (EDI).

Strategic Overview

The strategic overview states the vision and direction of the Regional ITS/CVO Coordination Plan. This section should include the mission statement for the CVO program, the principles guiding its ITS/CVO program, and the ITS/CVO program's goals and objectives.

Program Summary

The program summary should describe the regional ITS/CVO program, which will fall into five categories (see Figure 5):

- **CVISN deployment strategy.** The Coordination Plan should develop an approach for meeting the goal of nationwide CVISN deployment by the year 2003. The Plan should define a strategy for the development of state CVISN project plans that build upon the state business plans; for example, the regional forum may choose to jointly sponsor CVISN planning and design workshops with the FHWA. The Plan also should indicate ways for the region's CVISN pilot state(s) to share their technologies and lessons learned with other states in the region, drawing upon the resources provided by the regional champion. The Plan also may suggest priorities for phased CVISN implementation in constituent states. It also should describe how the states in the region will ensure that their ITS/CVO deployment activities conform with the CVISN architecture.

- **Multi-state projects.** The Coordination Plan may define one or more technical projects to address issues common to the states in each region. The Coordination Plan should include a brief description of each multi-state initiative, including its objectives, technical approach, organization, schedule and milestones, and funding. This description should explain how the initiative will help to fulfill the Regional Coordination Plan's objectives. The multi-state projects may be sorted by major functional area, such as safety assurance, credentials administration, electronic screening, international border clearance, and carrier operations; and ranked in order of priority. The individual states with responsibility for particular projects will develop more detailed project plans based on the conceptual outlines provided here.

- **Single-state project summary.** The Coordination Plan should list all major CVO projects planned for deployment by individual states in the region, particularly those with interstate implications. A matrix is recommended for easy comparison. The Plan should identify potential areas for coordination across states by comparing project objectives, approaches, dates, and participants. These projects should include international border clearance projects, where appropriate.

- **Regional mainstreaming plan.** The Regional ITS/CVO Coordination Plan should outline the regional ITS/CVO mainstreaming program, including the planned activities of the regional ITS/CVO forum and champion. This section should identify potential outreach and training activities to be undertaken by the champion or forum. It also should describe the process for dispute resolution among members of the regional consortium.

- **National coordination.** The Plan should identify how the region will coordinate its deployment activities with other regions and the national ITS/CVO program. This section should identify opportunities for participation by regional ITS/CVO program representatives in national organizations such as ITS America. It also should describe how the region will monitor deployment as part of the FHWA's deployment tracking initiative.

Figure 5. Program Summary Framework
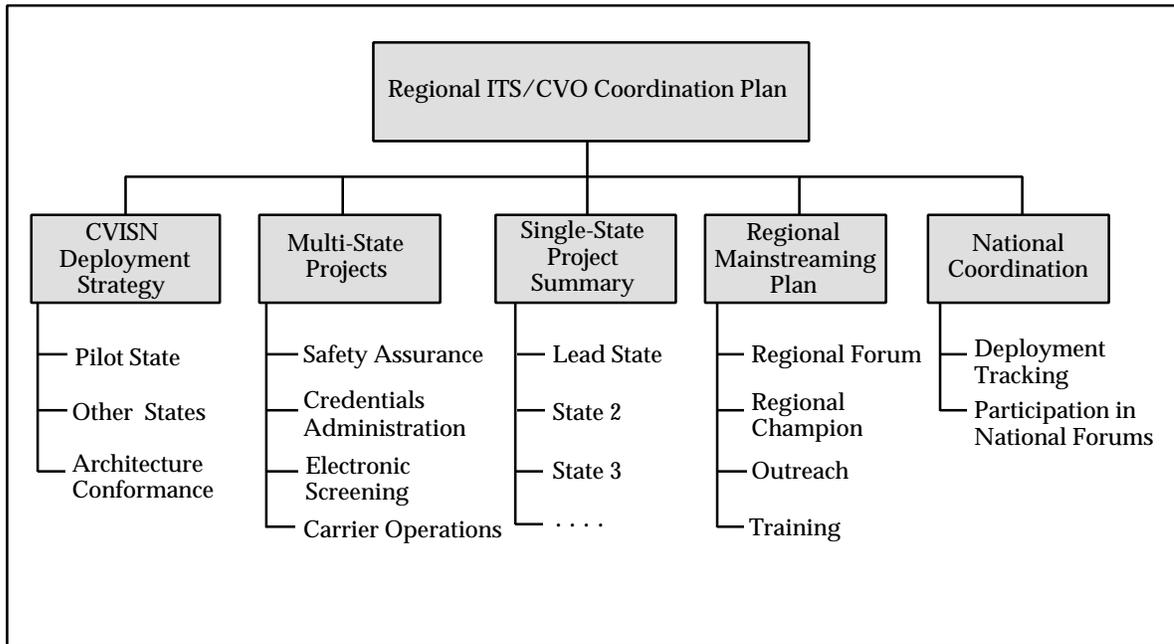
Organization and Management Approach

The final section of the Plan should indicate who will take responsibility for implementing the Plan, how and when the Plan will be implemented, and how projects will be funded. This section should:

- Identify the roles and responsibilities of the key stakeholders, including the lead state, other states, and the regional champion;

- Describe the scheduling of projects, including milestones, duration, and sequencing;

- Outline the sources and levels of funding for the projects identified in the Plan; and

- Describe how to secure approval for the Regional ITS/CVO Coordination Plan, market the Plan, implement individual projects, and update the Plan.

■ Who Is Responsible for Producing the Regional ITS/CVO Coordination Plan?

The development of the Regional ITS/CVO Coordination Plan is the joint responsibility of the lead state for the region's mainstreaming initiative and the regional forum. The forum should include representatives from major agencies with CVO responsibilities in each state, including the departments of transportation, revenue, and motor vehicles, and the state police; the motor carrier and motor coach industries; and the division and regional FHWA offices.

The lead state and forum are supported by a regional champion. The regional champion serves as the equivalent of a full-time coordinator in the region, facilitating the work of the forum and educating state agencies and the motor carrier industry about the opportunities presented by ITS/CVO. In addition, the development of the Coordination Plan may be supported by an outside contractor.

■ What Is Involved in Producing a Regional ITS/CVO Coordination Plan?

Typically, an ITS/CVO Coordination Plan is developed in an iterative fashion. A typical work program for developing the Regional Coordination Plan may include the following steps:

- **Establish a Coordination Plan Steering Committee**. The Steering Committee works closely with the lead state, the regional champion, and any other outside contractors to develop the Coordination Plan. If the number of voting members of the regional mainstreaming forum is small, the entire forum may serve as the Steering Committee. A larger forum may wish to designate a subcommittee of its members to fill this role.

- **Define a strategic overview for the Coordination Plan**. The Steering Committee should define a preliminary strategic overview for the Coordination Plan. This strategic overview should include the Coordination Plan's mission statement, goals and objectives, and guiding principles. Although it may be refined later in the process, a strategic overview should be developed early in the process to provide a context for future work.

- **Review constituent State ITS/CVO Business Plans**. The Steering Committee should review the ITS/CVO Business Plans of its constituent states, with an emphasis on identifying projects of interstate significance, potential areas of coordination among the states, and common issues that should be addressed from a regional perspective. Although the Regional Coordination Plan can be developed most effectively after all of the State Business Plans are completed, the Steering Committee should not wait for all state plans to be finalized before beginning its work.

- **Review other key background documents**. The Steering Committee also should review other documents, including documentation of existing multi-state operational tests and deployment projects involving states in the region; the ITS/CVO institutional issues studies involving the constituent states; the National ITS/CVO Program Plan; and other Regional ITS/CVO Coordination Plans. This review should identify key issues that should be addressed in the Coordination Plan, as well as best practices and lessons learned from other regions.

- **Define multi-state projects**. Based on the needs assessment and review of existing single-state activities, the Steering Committee should identify potential objectives for multi-state projects. The committee then should define specific projects that address these objectives.

- **Document the Coordination Plan in a report**. Once the Coordination Plan is in its final form, it should be documented in a report. Although the research conducted in

the development of the Coordination Plan may be extensive, the final written document should be concise.

■ What Is the Deadline for Completing the Regional Coordination Plan?

Each region must submit its Regional ITS/CVO Coordination Plan to the appropriate regional FHWA Office of Motor Carriers (OMC) representative by March 1998. The FHWA is ready to work with each region to develop an ITS/CVO Coordination Plan.

■ How Will the Region Fund the Plan's Development?

Each participating region received at least $150,000 in fiscal year 1996 from the FHWA's ITS/CVO mainstreaming program. This money is intended to fund the development of the Regional ITS/CVO Coordination Plans, as well as the work of the regional champion and other regional CVO organizational activities. The FHWA provided each region with an additional $100,000 in fiscal year 1997 to continue these activities. Regions with complex CVO programs may need to acquire additional funding from constituent states to produce a more comprehensive Regional ITS/CVO Coordination Plan.

■ Who Must Endorse the ITS/CVO Coordination Plan?

The Regional ITS/CVO Coordination Plan should be approved by the regional mainstreaming forum on behalf of the participating states. It also should be reviewed by the FHWA regional and national offices to ensure consistency with the national plan, other regional plans, and the CVISN, IBC, and national ITS architectures. The forum members should identify any other stakeholders whose endorsement is essential to the success of the ITS/CVO Coordination Plan. For example, the support of the senior management of relevant CVO agencies and the motor carrier industry are critical to the successful implementation of the Plan and its projects.

■ What Happens Once the ITS/CVO Coordination Plan is Approved?

Once the ITS/CVO Coordination Plan has been approved, the regional champion and the lead state are responsible for implementing and marketing the Plan within constituent states and the motor carrier industry. The management of each individual project should be assigned to a particular state in the regional consortium. This state will be responsible for implementing the project, often by selecting industry partners or contractors.

■ How Often Should a Plan be Updated?

The Regional ITS/CVO Coordination Plan should be updated annually. The Plan should include the schedule and process for the annual update, which should be coordinated with the updating of individual ITS/CVO Coordination Plans for the states in the region and the budget cycles of constituent states, whenever feasible.

■ Who Can Help If We Have Questions?

For more information, please contact the regional FHWA Office of Motor Carriers ITS/CVO representative (see Figure 6) or the regional champions (see Figure 7).

Figure 6. Regional FHWA OMC Contacts

	Name	Address	Telephone/Fax/E-Mail
Region 1	Carolyn K. Temperine	Leo W. O'Brien Federal Building Seventh Floor Albany, NY 12207	(518) 431-4239 (t) (518) 431-4208 (f) carolyn.temperine@ fhwa.dot.gov
Region 3	Robert Ketenheim II	City Crescent Building 100 South Howard Street Suite 4000 Baltimore, MD 21201	(410) 962-4571 (t) (410) 962-2273 (f) robert.ketenheim@ fhwa.dot.gov
Region 4	Glennon W. Musial	61 Forsyth Street Atlanta, GA 30303-3104	(404) 562-3600 (t) (404) 562-3704 (f) glennon.musial@ fhwa.dot.gov
Region 5	Michael C. Nighbert	19900 Governors Drive Suite 210 Olympia Fields, IL 60461-1021	(708) 283-3577 (t) (708) 283-3579 (f) michael.nighbert@ fhwa.dot.gov
Region 6	D. Leon Feazell	8A00 Federal Building 819 Taylor Street, PO Box 902003 Fort Worth, TX 76102	(817) 633-6875 (t) (817) 633-8243 (f) david.feazell@ fhwa.dot.gov
Region 7	John Carkin	6301 Rockhill Road PO Box 419715 Kansas City, MO 64141-6715	(816) 276-2760 (t) (816) 363-3804 (f) john.carkin@ fhwa.dot.gov
Region 8	Alan T. Brown	555 Zang Street Room 190 Lakewood, CO 80228	(303) 969-6744 (t) (303) 969-6967 (f) alan.brown@ fhwa.dot.gov
Region 9	Susan Seckler	201 Mission Street Suite 2100 San Francisco, CA 94105	(415) 744-3088 (t) (415) 744-2665 (f) susan.seckler@ fhwa.dot.gov
Region 10	Joel L. Hiatt	KOIN Center, Suite 600 222 Southwest Columbia Street Portland, OR 97201	(503) 326-4902 (t) (503) 326-5835 (f) joel.hiatt@ fhwa.dot.gov
Head-quarters	Jeffrey Loftus	400 Seventh Street, SW Washington, D.C. 20590	(202) 366-4516 (t) (202) 366-7908 (f) jeffrey.loftus@

Figure 7. Regional ITS/CVO Champions

Region	Name	Address	Telephone/Fax/ E-Mail
I-95 Corridor Coalition	Signe Furlong Kim Witherow	Castle Rock Consultants 18 Liberty Street, S.W. Leesburg, VA 22075	(703) 771-0200 (t) (703) 771-4274 (f) furlong@crc.corp.us witherow@crc.corp.us
Alliance for CVO	Don Hartman	University of Kentucky Transportation Center Room 176A CE/KTC Building Lexington, KY 40506-0043	(606) 257-3729 (t) (606) 257-1815 (f) dhartman@ engr.uky.edu
Midwest	Bill McCall	ISU Research Park 2665 North Loop Suite 2100 Ames, IA 50010-8615	(515) 294-9501 (t) (515) 294-0467 (f) bill@ctre.eastate.edu
Northwest & Western	Gene S. Bergoffen	TransCore 1710 Goodridge Drive McLean, VA 22102	(703) 790-2908 (t) (703) 790-5267 (f) gene.bergoffen@ cpmx.saic.com
Northwest & Western	Larry Pursley	Northwest Transporter c/o Washington Trucking Assoc. South 336 Street, Suite B Federal Way, WA 98003	(253) 838-1650 (t) (253) 838-1715 (f) wtassns@ worldnet.att.net