Document ITS 2000(994)-2
TxDOT CSJ 091400159

AUSTIN REGIONAL INTELLIGENT TRANSPORTATION SYSTEMS DEPLOYMENT PLAN

Prepared For:
Texas Department of Transportation
Austin District

Prepared By:

1900 Founders Drive, Suite 102
Kettering, OH 45420
Phone: (937) 259-4164
Fax: (937) 259-4885
www.trw.com

August 2002

THIS PAGE INTENTIONALLY LEFT BLANK.

Executive Summary

The primary mission of the Texas Department of Transportation (TxDOT) Austin District Intelligent Transportation Systems (ITS) initiative is to enhance the safety and efficiency of transportation throughout the Austin region. This will be accomplished by the application of traffic, transportation, and emergency management technology to reduce traveler frustrations associated with recurring ("peak"-type), non-recurring ("surprise"-type), and construction-related congestion. Additionally, TxDOT Austin District working with the City of Austin and Travis County to implement an integrated regional emergency communications and transportation management center for the Austin Region (The 9-1-1 RDMT Project). The project will also upgrade the communications systems (voice and data communications) and the dispatch system used by the project partners.

The 9-1-1 RDMT project presents a unique opportunity to integrate emergency management and traffic management. To guild the integration of these systems, a regional ITS architecture was developed based on the National ITS Architecture.

The primary focus of this document is to identify and prioritize the user needs of the region, existing and planned projects, and to describe a procedure for submitting additional projects within the scope of the regional architecture. This deployment plan will be used as a guide for implementation of the Austin Regional ITS Architecture.

The user needs, represented by market packages, were derived from initial interviews with stakeholders and prioritized through a Delphi survey. These market packages have a direct correlation with equipment used to perform tasks to satisfy a need. They therefore can be easily organized into projects to be implemented. The projects are prioritized for implementation using synergies from the market packages and available funding. A detailed listing of the projects is enclosed.

Finally, a procedure is presented for submitting new projects for the region. This procedure involves the Austin steering committee, their roles and responsibilities and how to become a member. A project approval process is set forth which includes the Capitol Area Metropolitan Planning Organization and TxDOT Austin District ensuring conformity to the architecture.

The companion document, "The Austin Region ITS Architecture," documents the regional architecture the projects in this document support. The regional architecture was developed over a one-year period based on inputs of the Steering Committee. The projects identified in this document where obtain from the Capital Area Metropolitan Planning Organization, TxDOT Austin District, RDMT 911 Project documentation, and the City of Austin Signal Center.

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

THIS PAGE INTENTIONALLY LEFT BLANK.

List of Tables

List of Figures

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 1

INTRODUCTION

The primary mission of this Texas Department of Transportation (TxDOT) Austin District Intelligent Transportation System (ITS) initiative is to enhance the safety and efficiency of driving throughout the Austin region. This is to be accomplished by the application of traffic, transportation, and emergency management to existing and planned methods for reducing traveler frustrations associated with recurring ("peak"-type), non-recurring ("surprise"-type), and construction-related congestion.

The TxDOT's Austin District is working with the local entities, including the City of Austin, Travis County, and Capital Metropolitan Transportation Authority (Capital Metro), to plan, design, construct, operate, and maintain an integrated regional emergency communications and transportation management center for the Austin Region. This new center will integrate public safety, transportation, and public service operations and systems. To guide the integration of all ITS systems, a regional ITS architecture was developed based on the National ITS Architecture.

1.1 DOCUMENT OVERVIEW

This document presents the Austin region's Deployment Plan as expressed by its program partners, likely users, and related agencies. This deployment plan provides a plan to implement the Austin regional architecture (see Austin Regional Intelligent Transportation Systems Architecture & Operation Concept, ITS 2000(994)-1, August 2002). The Austin Regional ITS Architecture is the direct outcome of interviews with regional stakeholders. A Steering Committee was convened to select and prioritize a set of Market Packages. The results of the Steering Committee and the interviews were used to develop the architecture. Participants in the Steering Committee included regional law enforcement, Austin Fire Department, Austin Emergency Medical Service, TxDOT, the Capital Area Metropolitan Plan Organization (CAMPO), and others.

This document consists of the following sections:

- Section 2 – Prioritization of Market Packages. This section presents the Market Packages selected and prioritized by the Steering Committee. This section also identifies the projects that support implementation of the Market Package.
- Section 3 – Prioritization of Planned Projects. This section presents additional information on the projects presented in Section 2.
- Section 4 – Procedure for Submitting ITS Projects. This section documents the procedures for adding ITS projects to the Deployment plan.

1.2 DEFINITION OF THE AUSTIN REGION

The region defined for the architecture includes the City of Austin, Round Rock, Travis County, and Williamson County (basically the area supported by the TxDOT Austin District office). Figure 1-1 shows a map of the Region.

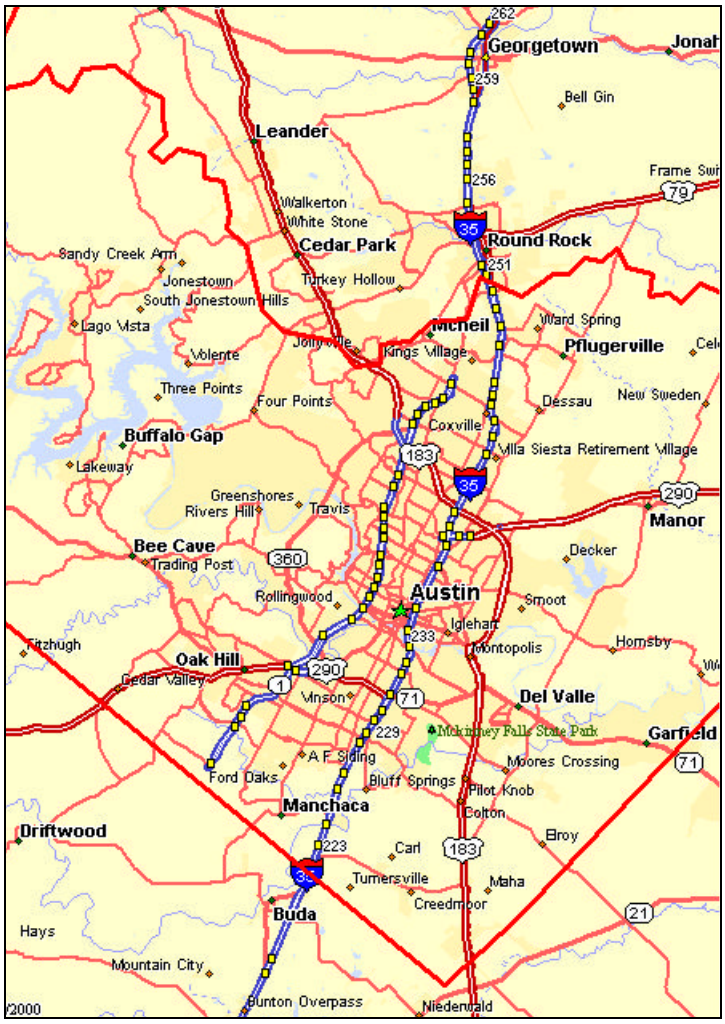

Figure 1-1 Austin Region

1.3 REGIONAL STAKEHOLDERS

The first step in the development of the Austin Regional ITS Architecture was to identify and schedule interviews with the stakeholders. The stakeholders were selected based on their involvement in transportation and public safety in the Austin region. Based on the results of the interviews, the members of the Steering Committee were selected from the group of stakeholders. Their knowledge and experience was key to the development of an effective Regional ITS Architecture for the Austin region. The Table 1-1 identifies the Steering Committee members and provides contact information.

Table 1-1. Steering Committee Members

Name	Agency	Phone	Email
David Belknap	Austin Fire Department	(512) 416-3323	david.belknap@ci.austin.tx.us
Charlie Brindell	TxDOT Traffic Operations Division	(512) 416-3268	cbrinde@dot.state.tx.us
Brian Burk	TxDOT Austin District Transportation Operations	(512) 832-7014	bburk@dot.state.tx.us
Carl Burklund	TxDOT Maintenance	(512) 385-0862	cburklu@dot.state.tx.us
Kelley Cook	Austin Police Department – 911	(512) 974-1697	kelley.cook@ci.austin.tx.us
Sam Cox	TxDOT Austin District Courtesy Patrol	(512) 832-7310	scox4@dot.state.tx.us
Michael Dutton	Capitol Area Metro Planning Org	(512) 974-2881	michael.dutton@ci.austin.tx.us
David Gerard	City of Austin Public Works Signals	(512) 974-7022	david.gerard@ci.austin.tx.us
Mike Hooffstetter	Travis County Sheriff Dept.	(512) 974-6083	mike.hooffstetter@ci.austin.tx.us
John Lancaster	Capital Metro	(512) 389-7586	john.lancaster@capmetro.org
Roland Merz	TxDOT Traffic Operations	(512) 416-3299	rmerz@dot.state.tx.us
Greg Middleton	City of Austin Emergency Medical Services	(512) 974-1695	greg.middleton@ci.austin.tx.us
David Powell	TxDOT Texas Turnpike Authority	(512) 225-1357	dpowel3@dot.state.tx.us
Teresa Reel	Travis County Justice and Public Safety	(512) 708-4416	teresa.reel@co.travis-tx.us
Tom Rioux	University of Texas	(512) 471-0513	rioux@mail.utexas.edu
Russ Rumney	City of Austin Police Department – CAD	(512) 974-3323	russ.rumney@ci.austin.tx.us
Geniva Simpson	Williamson County EMS	(512) 943-1399	gsimpson@wilco.org
Scott Swearengin	Office of Emergency Management	(512) 370-8862	scott.swearengin@ci.austin.tx.us
David Walther	Round Rock Public Works Department	(512) 218-5566	davidw@round-rock.tx.us
Catherine Wolff	TxDOT Planning/Programs	(512) 486-5124	cwolff@dot.state.tx.us

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 2

PRIORITIZATION OF MARKET PACKAGES

The market packages for the Austin Region were selected by a Steering Committee and prioritized using the Delphi Survey process (see Section 3.2. of the Austin Regional ITS Architecture and Operational Concept document). The Delphi Survey is a decision-making process used to help a group of experts move toward consensus on subjective decisions. Delphi is an attempt to elicit expert opinion in a systematic manner for useful results. It involves iterative rounds of questionnaires administered to individual experts in a manner protecting the anonymity of their responses. Feedback of results accompanies each round of the questionnaire, which continues until convergence of opinion, or a point of diminishing returns, is reached. The product is the consensus of experts, including their commentary, on each of the items, usually organized as a written report by the Delphi investigator(s).

The market packages are presented in the following sections in the order selected by the Steering Committee. Each market package is assigned a priority relating to the time frame for implementation by the Steering Committee. A priority of High indicates completion within 5 years. A priority of Medium is assigned for completion within 5 to 10 years. A priority of Low means completion date of 10 years or greater. Market packages assigned a priority of Low were not included in the Austin Regional ITS Architecture because of changes in technology and user needs that may occur in the next 10 years.

With each market package, a table shows the existing infrastructure related to the region. It includes the subsystems and terminators associated with the National ITS Architecture, the current status, the element name, and the owning stakeholder.

A list of planned projects related to the market package is presented. Finally an additional needs section is listed for those market packages that require projects that are not yet planned for the region.

2.1 NETWORK SURVEILLANCE (ATMS01)

Priority:
High

Existing Infrastructure:

Table 2-1. Network Surveillance Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Construction and Maintenance	Existing	City of Austin Maintenance System	City of Austin
Construction and Maintenance	Existing	City of Round Rock Maintenance System	City of Round Rock
Construction and Maintenance	Existing	TxDOT Highway Maintenance Management System	TxDOT Maintenance
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Map Update Provider	Existing	City of Austin GIS Agency	City of Austin
Roadway Subsystem	Existing	Austin Flood Early Warning System	Austin Office of Emergency Management
Roadway Subsystem	Existing	Austin Sensors, Cameras, and HAR	City of Austin
Roadway Subsystem	Planned	RWIS Network	TxDOT Austin District
Roadway Subsystem	Planned	Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers	Texas Turnpike Authority
Roadway Subsystem	Existing	TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers	TxDOT Austin District
Roadway Subsystem	Existing	TxDOT Austin Signals	TxDOT Austin District
Traffic	Existing	Vehicles on the Road	Various Ownerships
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Traffic Operations Personnel	Existing	TMC Operators/Dispatchers	TxDOT Austin District

Planned Projects:

1. Extend network surveillance equipment along Loop1 from north of Gaines Creek to Slaughter Creek

2. Extend TxDOT Network Surveillance - IH35 from Colorado River Bridge to St. Elmo Street
3. Extend TxDOT Network Surveillance - IH35 from FM 1825 to Braker Lane
4. Extend TxDOT Network Surveillance - IH35 from St. Elmo Street to Slaughter Lane
5. Extend TxDOT Network Surveillance System - IH35 from Williamson County Line/SH 45 to FM 1825
6. Extend TxDOT Network Surveillance System - Loop 1 from Parmer Lane to Braker Lane
7. Extend TxDOT Network Surveillance System - Loop 1 from RM 2244 to Gaines Creek
8. Extend TxDOT Network Surveillance System - US 290 from East of Williamson Creek to Loop 360
9. Extend TxDOT Network Surveillance System - US 290 from SPRR to US 183
10. Extended the network surveillance system along US 290 from the Hays County Line (SH 45) to East of Williamson Creek.
11. Install conduit, detection equipment, and freeway management equipment along US 183 from FM 1625 to 0.2 miles south of FM
12. Install conduit, detection equipment, and freeway management equipment along US 183 from SH 71 to FM 1625.
13. Install conduit, detection equipment, and freeway traffic equipment along from Loop 1 from SH 45 to Travis County line.
14. Install Conduit, detection equipment, and Freeway Traffic Management - IH-35 from Slaughter Lane to the Hays County Line
15. Install conduit, detection equipment, and freeway traffic management equipment along Loop 1 from 35th Street to RM 2244
16. Install conduit, detection equipment, and freeway traffic management equipment along Loop 1 from Slaughter Creek to SH 45
17. Install Conduit, Detection, and Freeway Traffic Management - IH35 M.L.K Blvd (19th Street) to Colorado River Bridge
18. Install Conduit, Detection, and Freeway Traffic Management - IH35 from Braker Lane to Reinli Street
19. Install Conduit, Detection, and Freeway Traffic Management - IH35 from Reinli Street to M.L.K Blvd (19th Street)
20. Install freeway management equipment along SH 71 from RM 620/SH 45 to US 290 west of Austin
21. Install freeway traffic management equipment along Loop 1 from the Williamson County line to FM734
22. Install freeway traffic management equipment along SH 71 from South Congress Ave. to west of Dalton Ln.
23. Install freeway traffic management equipment along SH 71 from west of Dalton Lane to 1.3 miles east of FM 973/SH 45
24. Install freeway traffic management equipment along US 183 from east of IH-35 to US 290 East.
25. Install freeway traffic management equipment along US 183 from FM 969 to the Colorado River Bridge.
26. Install freeway traffic management equipment along US 183 from north of Lakeline Blvd to the Travis County line.

27. Install freeway traffic management equipment along US 183 from the north end of the Colorado River bridge to SH 71
28. Install freeway traffic management equipment along US 183 from US 290 East to FM 969
29. Install freeway traffic management equipment along US 290 from FM 3177 to SH 45/FM 973.
30. Install freeway traffic management equipment along US 290 from the west end of the US 183 over pass to FM 3177.
31. TxDOT CCTV Surveillance Cameras - IH35 from US 290 to Colorado River
32. TxDOT Detector Installation - IH35 from US 290 to Colorado River

Additional Needs:

TxDOT Austin District's and the City of Austin's implementations of this Market Package are in progress in the region. The Network Surveillance Market Package is a key to implementation of the regional architecture because it enables the following Market Packages:

- Freeway Control
- Surface Street Control
- Incident Management System
- Traffic Information Dissemination
- Traffic Forecast and Demand Management

2.2 FREEWAY CONTROL (ATMS04)

Priority:
High

Existing Infrastructure:

Table 2-2. Freeway Control Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Construction and Maintenance	Existing	City of Austin Maintenance System	City of Austin
Construction and Maintenance	Existing	City of Round Rock Maintenance System	City of Round Rock
Construction and Maintenance	Existing	TxDOT Highway Maintenance Management System	TxDOT Maintenance
Driver	Existing	Driver Operating A Vehicle	Individual
Other TM	Existing	TxDOT Austin District TMC	TxDOT Austin District
Roadway Subsystem	Existing	Austin Sensors, Cameras, and HAR	City of Austin
Roadway Subsystem	Planned	Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers	Texas Turnpike Authority
Roadway Subsystem	Existing	TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers	TxDOT Austin District
Roadway Subsystem	Existing	TxDOT Austin Signals	TxDOT Austin District
Traffic	Existing	Vehicles on the Road	Various Ownerships
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Traffic Operations Personnel	Existing	TMC Operators/Dispatchers	TxDOT Austin District

Planned Projects:

1. Construct centralized multi-agency Emergency Management Center and Traffic Management Center
2. Extend TxDOT Freeway Control – IH35 from 49TH Street to 12TH Street
3. Install Ramp Metering-Freeway Traffic Management Expansion IH-35 FY2002
4. Replace Lane Control Signals – IH35 from US 290 to Colorado River

Additional Needs:
This market package provides the communications and roadside equipment to support ramp control, lane controls, and interchange control for freeways. Coordination and integration of

ramp meters are included as part of this market package. To complete the implementation of this Market Package, the following projects should be considered[1]:

- Updating the TxDOT Austin ATMS software to manage ramp meters
- Implement the ramp meter status and control messages in the Center-to-Center software
- Implement interfaces between TxDOT Austin TMC and the region's roadway maintenance agencies

[1] Derived from the National ITS Architecture CD, Version 3

2.3 EMERGENCY RESPONSE (EM1)

Priority:
High

Existing Infrastructure:

Table 2-3. Emergency Response Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders
Emergency Personnel	Existing	ABIA (Airport) Police	Austin Bergstrom International Airport
Emergency Personnel	Existing	Austin Police, Fire, EMS Responders	City of Austin
Emergency Personnel	Existing	Travis County Emergency Personnel	Travis County
Emergency Personnel	Planned	Turnpike Courtesy Patrol	Texas Turnpike Authority
Emergency Personnel	Existing	TxDOT Austin Courtesy Patrol	TxDOT Austin District
Emergency System Operator	Planned	Austin CECC/TMC Dispatchers	CECC/TMC Stakeholders
Emergency System Operator	Planned	Emergency Call 911 Operator	CECC/TMC Stakeholders
Emergency Telecommunications System	Planned	Emergency Call 911 PSAP	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Existing	3M Opticom Signal Preemption System	Austin Fire Department
Emergency Vehicle Subsystem	Planned	ABIA (Airport) Vehicle Mobile Data Terminal	Austin Bergstrom International Airport
Emergency Vehicle Subsystem	Planned	ABIA (Airport) Vehicle Radio Communications	Austin Bergstrom International Airport
Emergency Vehicle Subsystem	Planned	Austin Police, Fire, EMS Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Austin Police, Fire, EMS Vehicle Radio Communications	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Travis County Emergency Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Travis County Emergency Vehicle Radio Communications	CECC/TMC Stakeholders

Table 2-3. Emergency Response Infrastructure (continued)

Subsystem/Terminator	Status	Element Name	Stakeholder
Emergency Vehicle Subsystem	Planned	Turnpike Authority Courtesy Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Turnpike Authority Courtesy Vehicle Radio Communications	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	TxDOT Austin Courtesy Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	TxDOT Austin Courtesy Vehicle Radio Communications	CECC/TMC Stakeholders
Map Update Provider	Existing	City of Austin GIS Agency	City of Austin
Other EM	Existing	Round Rock Dispatch System	City of Round Rock
Other EM	Existing	Texas Highway Patrol Dispatch Center	Texas Department of Public Safety
Other EM	Existing	Williamson County Dispatch Center	Williamson County EMS/EOC
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Transit Management	Existing	CapMetro Dispatch System	CapMetro

Planned Projects:

1. CECC CAD System TxDOT ATMS Integration
2. City of Round Rock Communication Integration
3. Williamson County Communication Integration

Additional Needs:

Implementation of this Market Package for the TxDOT Austin TMC, City of Austin, and Travis County is progressing. The region needs to implement interfaces to the City of Round Rock, Williamson County EMS, and CapMetro. Implementation of the Emergency Response Market Package will simplify the implementation of the Transit Security Market Package.

2.4 INCIDENT MANAGEMENT SYSTEM (ATMS08)

Priority:
High

Existing Infrastructure:

Table 2-4. Incident Management System Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Construction and Maintenance	Existing	City of Austin Maintenance System	City of Austin
Construction and Maintenance	Existing	City of Round Rock Maintenance System	City of Round Rock
Construction and Maintenance	Existing	Travis County Construction and Maintenance Management System	Travis County Natural Resources and Transportation
Construction and Maintenance	Existing	TxDOT Highway Maintenance Management System	TxDOT Maintenance
Construction and Maintenance	Existing	Williamson County Highway Maintenance Management System	Williamson County Road Department
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders
Emergency System Operator	Planned	Austin CECC/TMC Dispatchers	CECC/TMC Stakeholders
Emergency System Operator	Planned	Emergency Call 911 Operator	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	ABIA (Airport) Vehicle Mobile Data Terminal	Austin Bergstrom International Airport
Emergency Vehicle Subsystem	Planned	ABIA (Airport) Vehicle Radio Communications	Austin Bergstrom International Airport
Emergency Vehicle Subsystem	Planned	Austin Police, Fire, EMS Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Austin Police, Fire, EMS Vehicle Radio Communications	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Travis County Emergency Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Travis County Emergency Vehicle Radio Communications	CECC/TMC Stakeholders

Table 2-4. Incident Management System Infrastructure (continued)

Subsystem/Terminator	Status	Element Name	Stakeholder
Emergency Vehicle Subsystem	Planned	Turnpike Authority Courtesy Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Turnpike Authority Courtesy Vehicle Radio Communications	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	TxDOT Austin Courtesy Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	TxDOT Austin Courtesy Vehicle Radio Communications	CECC/TMC Stakeholders
Event Promoters	Existing	Special Event Sponsors and Promoters	Various Ownerships
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Map Update Provider	Existing	City of Austin GIS Agency	City of Austin
Media	Existing	Traffic and Travel Information System	Various Ownerships
Other EM	Existing	Round Rock Dispatch System	City of Round Rock
Other EM	Existing	Texas Highway Patrol Dispatch Center	Texas Department of Public Safety
Other EM	Existing	Williamson County Dispatch Center	Williamson County EMS/EOC
Other TM	Existing	Austin Signal Control Center	City of Austin
Other TM	Planned	Round Rock TMC	City of Round Rock
Roadway Subsystem	Existing	Austin Sensors, Cameras, and HAR	City of Austin
Roadway Subsystem	Planned	Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers	Texas Turnpike Authority
Roadway Subsystem	Existing	TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers	TxDOT Austin District
Traffic	Existing	Vehicles on the Road	Various Ownerships
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Traffic Operations Personnel	Existing	TMC Operators/Dispatchers	TxDOT Austin District
Weather Service	Existing	Weather Network Subscription	Various Ownerships

Planned Projects:

None.

Additional Needs:

This market package manages both predicted and unexpected incidents so that the impact to the transportation network and traveler safety is minimized. Requisite incident detection capabilities are included in the Freeway Control Market Package and through the regional coordination with the City of Austin Signal Control Center and the Austin CECC, weather service entities, and event promoters supported by this market package. Information from these diverse sources are collected and correlated by this market package to detect and verify incidents and implement an appropriate response. This market package provides Traffic Management Subsystem equipment that supports traffic operations personnel in developing an appropriate response in coordination with emergency management and other incident response personnel to confirmed incidents. The coordination with the City of Austin and Travis County emergency management will be through the CAD system. The region should look at implementing interfaces with the City of Round Rock and Williamson County CAD systems. Additional projects the region may consider are:[2]

The Austin Region Construction and Maintenance Database. The Austin Region Construction/Maintenance database will allow the region's Transportation departments to coordinated construction and maintenance plans. The database will also allow the region's Public Safety agencies to track road closures. The system should meet the following functional and technical requirements:

1. The database should have a web interface.
2. Allow regional transportation departments create, update, and delete road maintenance/closure records.
3. Allow regional contractors to submit road closure requests.
4. Allow regional transportation departments to review, approve or disapprove closure requests.
5. Allow regional public safety agencies to view road maintenance/closure records.
6. Allow the public to view road maintenance/closure records.

Route Diversion Planning for Incident Management along IH-35. This project would establish alternate routes using US 79, FM 685 and FM 1825. It would determine the adequacy and appropriateness of each diversion route. The project would also establish the capacity and signal timing plans necessary to support the diverted traffic.

[2] Derived from the National ITS Architecture CD, Version 3

2.5 EMERGENCY ROUTING (EM2)

Priority:
High

Existing Infrastructure:

Table 2-5. Emergency Routing Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders
Emergency Personnel	Existing	ABIA (Airport) Police	Austin Bergstrom International Airport
Emergency Personnel	Existing	Austin Police, Fire, EMS Responders	City of Austin
Emergency Personnel	Existing	Travis County Emergency Personnel	Travis County
Emergency Personnel	Planned	Turnpike Courtesy Patrol	Texas Turnpike Authority
Emergency Personnel	Existing	TxDOT Austin Courtesy Patrol	TxDOT Austin District
Emergency System Operator	Planned	Austin CECC/TMC Dispatchers	CECC/TMC Stakeholders
Emergency System Operator	Planned	Emergency Call 911 Operator	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Existing	3M Opticom Signal Preemption System	Austin Fire Department
Emergency Vehicle Subsystem	Existing	ABIA (Airport) Vehicle Mobile Data Terminal	Austin Bergstrom International Airport
Emergency Vehicle Subsystem	Existing	ABIA (Airport) Vehicle Radio Communications	Austin Bergstrom International Airport
Emergency Vehicle Subsystem	Planned	Austin Police, Fire, EMS Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Austin Police, Fire, EMS Vehicle Radio Communications	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Emergency Vehicles Equipped with AVL	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Travis County Emergency Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Travis County Emergency Vehicle Radio Communications	CECC/TMC Stakeholders

Table 2-5. Emergency Routing Infrastructure (continued)

Subsystem/Terminator	Status	Element Name	Stakeholder
Emergency Vehicle Subsystem	Planned	Turnpike Authority Courtesy Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	Turnpike Authority Courtesy Vehicle Radio Communications	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	TxDOT Austin Courtesy Vehicle Mobile Data Terminal	CECC/TMC Stakeholders
Emergency Vehicle Subsystem	Planned	TxDOT Austin Courtesy Vehicle Radio Communications	CECC/TMC Stakeholders
Map Update Provider	Existing	City of Austin GIS Agency	City of Austin
Roadway Subsystem	Existing	Austin Signals	City of Austin
Roadway Subsystem	Existing	TxDOT Austin Signals	TxDOT Austin District
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Vehicle	Existing	System That Provides Accurate Position Information	City of Austin

Planned Projects:
The 911 RDMT project is implement most of this Market Package.

Additional Needs:
None.

2.6 SURFACE STREET CONTROL (ATMS03)

Priority:
High

Existing Infrastructure:

Table 2-6. Surface Street Control Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Construction and Maintenance	Existing	City of Austin Maintenance System	City of Austin
Construction and Maintenance	Existing	City of Round Rock Maintenance System	City of Round Rock
Construction and Maintenance	Existing	TxDOT Highway Maintenance Management System	TxDOT Maintenance
Driver	Existing	Driver Operating A Vehicle	Individual
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders
Roadway Subsystem	Existing	Austin Sensors, Cameras, and HAR	City of Austin
Roadway Subsystem	Planned	Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers	Texas Turnpike Authority
Roadway Subsystem	Existing	TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers	TxDOT Austin District
Roadway Subsystem	Existing	TxDOT Austin Signals	TxDOT Austin District
Traffic	Existing	Vehicles on the Road	Various Ownerships
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Traffic Operations Personnel	Existing	TMC Operators/Dispatchers	TxDOT Austin District

Planned Projects:
The City of Austin is implementing most of this Market Package.

Additional Needs:
The Network Surveillance and Regional Traffic Control Market Packages share functionality with this Market Package. The cost of implementing the interfaces to Construction and Maintenance, and Emergency Management subsystems can be reduced by taking advantage of the common functions.

2.7 TRAFFIC INFORMATION DISSEMINATION (ATMS06)

Priority:
High

Existing Infrastructure:

Table 2-7. Traffic Information Dissemination Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Basic Vehicle	Existing	Individual Vehicle Car Radio/CB-Radio	Individual
Driver	Existing	Driver Operating A Vehicle	Individual
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Media	Existing	Traffic and Travel Information System	Various Ownerships
Roadway Subsystem	Existing	Austin Sensors, Cameras, and HAR	City of Austin
Roadway Subsystem	Planned	Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers	Texas Turnpike Authority
Roadway Subsystem	Existing	TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers	TxDOT Austin District
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Traffic Operations Personnel	Existing	TMC Operators/Dispatchers	TxDOT Austin District
Transit Management	Existing	CapMetro Dispatch System	CapMetro

Planned Projects:

1. Capital Metro Transit Integration

Additional Needs:

This Market Package allows traffic information to be disseminated to drivers and vehicles using the dynamic message signs and highway advisory radios installed in the region. This package also covers the equipment and interfaces that provide traffic information from the TxDOT Austin

TMC to the media (for instance via a direct tie-in between a traffic management center and radio or television station computer systems), transit management center, emergency management center, and information service provider. Projects the region may consider to support the implementation of this package are:[3]

The Austin Region Commodities Freight System. This project would develop and deploy a private commodities freight system that would use traffic data collected by the TxDOT Austin District Advanced Traffic Management System (ATMS). Local companies such as IBM, Dell, Compaq, Samsung, etc. would use traffic information concerning to plan the timely delivery of goods and materials required to support business operations.

TxDOT Austin TMC Traffic Information Dissemination. This project supports the implementation of the Traffic Information Dissemination market package. The market package allows traffic information to be disseminated to drivers and vehicles using roadway equipment such as dynamic message signs (DMS) or highway advisory radio (HAR). The package provides the functionality that can be used to notify drivers of incidents; careful placement of the roadway equipment provides the information at points in the network where the drivers have recourse and can tailor their routes to account for the new information. This package also covers the equipment and interfaces that provide traffic information from a traffic management center to the media (for instance via a direct tie-in between a traffic management center and radio or television station computer systems), Transit Management, Emergency Management, and Information Service Providers.

Currently in the Austin region, TxDOT Austin District has deployed several HARs and DMSs. Therefore, this project is focused on implementing the interfaces to the media, and Information Service Providers. This project will implement the TMC Traffic Information Dissemination equipment package. The equipment package provides the software processes needed to automate the interfaces to the media, Information Service Providers, Emergency Management, and Transit Management. A similar project could be used to implement traffic information dissemination for the City of Austin Signals Center.

[3] Derived from the National ITS Architecture CD, Version 3

2.8 ITS DATA MART (AD1)

Priority:
High

Existing Infrastructure:

Table 2-8. ITS Data Mart Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Archived Data Administrator	Planned	TxDOT Austin CECC Archive System Administrator	TxDOT Austin District
Archived Data Management Subsystem	Planned	Record Management System (Police, Fire, EMS)	CECC/TMC Stakeholders
Archived Data Management Subsystem	Planned	TxDOT Austin Historical Incident Data Repository	TxDOT Austin District
Archived Data Management Subsystem	Planned	TxDOT Austin Historical Traffic Data Repository	TxDOT Austin District
Archived Data User Systems	Existing	Academic/Research Organizations	Various Ownerships
Archived Data User Systems	Planned	Emergency Management Scenario Training	Austin Office of Emergency Management
Archived Data User Systems	Planned	TxDOT Researchers	TxDOT
Construction and Maintenance	Existing	City of Austin Maintenance System	City of Austin
Construction and Maintenance	Existing	City of Round Rock Maintenance System	City of Round Rock
Construction and Maintenance	Existing	Travis County Construction and Maintenance Management System	Travis County Natural Resources and Transportation
Construction and Maintenance	Existing	TxDOT Highway Maintenance Management System	TxDOT Maintenance
Construction and Maintenance	Existing	Williamson County Highway Maintenance Management System	Williamson County Road Department
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders

Table 2-8. ITS Data Mart Infrastructure (continued)

Subsystem/Terminator	Status	Element Name	Stakeholder
Government Reporting Systems	Existing	Fatal Analysis Reporting System	Texas Department of Public Safety
Government Reporting Systems	Existing	Highway Performance Monitoring System	Federal Highway Administration
Other Archives	Planned	Record Management System (Police, Fire, EMS)	CECC/TMC Stakeholders
Roadway Subsystem	Existing	Austin Flood Early Warning System	Austin Office of Emergency Management
Roadway Subsystem	Existing	Austin Sensors, Cameras, and HAR	City of Austin
Roadway Subsystem	Planned	RWIS Network	TxDOT Austin District
Roadway Subsystem	Planned	Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers	Texas Turnpike Authority
Roadway Subsystem	Existing	TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers	TxDOT Austin District
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District

Planned Projects:
None.

Additional Needs:
This market package provides a focused archive that houses data collected and owned by a single agency, district, private sector provider, research institution, or other organization. This focused archive typically includes data covering a single transportation mode and one jurisdiction that is collected from an operational data store and archived for future use. It provides the basic data quality, data privacy, and meta data management common to all ITS archives and provides general query and report access to archive data users. To implement this Market Package the region should consider the following project:[4]

The ITS Data Mart Project. This project would develop a ITS Data Mart that provides for the storage and retrieval of ITS related data. It would also provide summary data views of related information (e.g., data pulled from various data sources to create reports on a particular subject). A view may involve simple calculations of data as well as correlation of records based on similar fields such as date and time.

[4] Derived from the National ITS Architecture CD, Version 3

A high capacity SQL compliant database would be used for the data storage and retrieval. System integration will be necessary to setup and administer the database. Integrators will also be used to add new data requirements as requested by end users.

The data mart will initially store information on traffic, roadside, construction and maintenance, emergency data. It will also house Government reporting data. The information for each category is specified in the regional ITS architecture.

2.9 HAZMAT MANAGEMENT (CVO10)

Priority:
High

Existing Infrastructure:

Table 2-9. HAZMAT Management Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders
Fleet and Freight Management	Existing	Motor Carrier CVO System	Texas Department of Public Safety
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District

Planned Projects:
None.

Additional Needs:
To improve the access to HAZMAT information, the TxDOT Austin District TMC should be interfaced to the Statewide CVO system.

2.10 TRANSIT SECURITY (APTS5)

Priority:
High

Existing Infrastructure:

Table 2-10. Transit Security Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders
Remote Traveler Support	Planned	Distress Signal Wireline Communications	CapMetro
Remote Traveler Support	Planned	Transit Secure Area Monitoring System	CapMetro
Secure Area Environment	Planned	Transit Stops and Stations	CapMetro
Transit Driver	Existing	Transit Vehicle Drivers	CapMetro
Transit Management	Existing	CapMetro Dispatch System	CapMetro
Transit User	Existing	Individual Using Transportation Services	Individual
Transit Vehicle Subsystem	Existing	Transit Vehicle Monitoring System	CapMetro

Planned Projects:

1. Capital Metro Public Security Integration

Additional Needs:
None.

2.11 BROADCAST TRAVELER INFORMATION (ATIS1)

Priority:
High

Existing Infrastructure:

Table 2-11. Broadcast Traveler Information Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
ISP Operator	Existing	Travel and Traffic Information Operator	Commercial Information Provider
Media	Existing	Traffic and Travel Information System	Various Ownerships
Personal Information Access	Existing	Individual Cell- and Land-Line Telephones	Individual
Personal Information Access	Existing	Individual Fax	Individual
Personal Information Access	Existing	Individual Pagers	Individual
Personal Information Access	Existing	Internet Browser	Individual
Remote Traveler Support	Planned	Traveler Kiosk Network	TxDOT Austin District
Toll Administration	Existing	TxDOT Texas Turnpike Authority Division	Texas Turnpike Authority
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Transit Management	Existing	CapMetro Dispatch System	CapMetro
Traveler	Existing	Pre-Trip Individual Using Transportation Services	Individual

Planned Projects:

1. City of Austin Web Page

Additional Needs:

Austin Region 511 Telephone System. This project would implement a 511 telephone service for the Austin region. The system would provide information to the public on traffic conditions in the region. The system would obtain the information it would need via interfaces with the

Austin District TMC and the City of Austin Signal Control Center. This project could be implemented by a commercial ISP.

2.12 ROAD WEATHER INFORMATION SYSTEM (ATMS18)

Priority:
High

Existing Infrastructure:

Table 2-12. Road Weather Information System Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Construction and Maintenance	Existing	City of Austin Maintenance System	City of Austin
Construction and Maintenance	Existing	City of Round Rock Maintenance System	City of Round Rock
Construction and Maintenance	Existing	Travis County Construction and Maintenance Management System	Travis County Natural Resources and Transportation
Construction and Maintenance	Existing	TxDOT Highway Maintenance Management System	TxDOT Maintenance
Construction and Maintenance	Existing	Williamson County Highway Maintenance Management System	Williamson County Road Department
Other TM	Existing	TxDOT Austin District TMC	TxDOT Austin District
Roadway Environment	Existing	Conditions that may Affect ITS Equipment Operations	TxDOT Austin District
Roadway Environment	Existing	Conditions that will Impact Driving	TxDOT Austin District
Roadway Subsystem	Existing	Austin Flood Early Warning System	Austin Office of Emergency Management
Roadway Subsystem	Planned	RWIS Network	TxDOT Austin District
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Traffic Operations Personnel	Existing	TMC Operators/Dispatchers	TxDOT Austin District
Weather Service	Existing	Weather Network Subscription	Various Ownerships

Planned Projects:
None.

Additional Needs:

Austin Region Roadway Weather Information System (RWIS). The RWIS monitors current weather conditions using data collected from environmental sensors deployed on and about the roadway. The collected road weather information is monitored and analyzed to detect and forecast environmental hazards such as icy road conditions, dense fog, and approaching severe weather fronts. This information can be used to more effectively deploy road maintenance resources, issue general traveler advisories, and support location specific warnings to drivers.

This project would implement the TMC Road Weather Monitoring equipment package. The equipment package, located at the CECC, assimilates current and forecast road conditions and weather information using a combination of weather service information and an array of environmental sensors deployed on and about the roadway. The collected road weather information is monitored and analyzed to detect and forecast environmental hazards such as icy road conditions and dense fog. The system could be interfaced with the existing Austin Flood Warning System to monitor surface streets in the City of Austin.

The project would also implement the Roadway Environmental Monitoring equipment package. Each monitoring station measures environmental conditions and communicates the collected information back to the CECC where it can be monitored and analyzed. A broad array of general weather and road surface information may be collected. Weather conditions that may be measured include temperature, wind, humidity, precipitation, and visibility. Surface and sub-surface sensors can measure road surface temperature, moisture, icing, salinity, and other measures.

2.13 REGIONAL TRAFFIC CONTROL (ATMS07)

Priority:
Medium

Existing Infrastructure:

Table 2-13. Regional Traffic Control Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Other TM	Existing	Austin Signal Control Center	City of Austin
Other TM	Planned	Round Rock TMC	City of Round Rock
Other TM	Existing	TxDOT Austin District TMC	TxDOT Austin District
Roadway Subsystem	Existing	Austin Sensors, Cameras, and HAR	City of Austin
Roadway Subsystem	Planned	Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers	Texas Turnpike Authority
Roadway Subsystem	Existing	TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers	TxDOT Austin District
Roadway Subsystem	Existing	TxDOT Austin Signals	TxDOT Austin District
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Traffic Operations Personnel	Existing	TMC Operators/Dispatchers	TxDOT Austin District

Planned Projects:

1. City of Austin IH35 Signal System Integration
2. City of Austin Signal System Integration
3. Texas Turnpike Authority Integration

Additional Needs:
None.

2.14 ITS DATA WAREHOUSE (AD2)

Priority:
Medium

Existing Infrastructure:

Table 2-14. ITS Data Warehouse Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Archived Data Administrator	Planned	TxDOT Austin CECC Archive System Administrator	TxDOT Austin District
Archived Data Management Subsystem	Planned	Record Management System (Police, Fire, EMS)	CECC/TMC Stakeholders
Archived Data Management Subsystem	Planned	TxDOT Austin Historical Incident Data Repository	TxDOT Austin District
Archived Data Management Subsystem	Planned	TxDOT Austin Historical Traffic Data Repository	TxDOT Austin District
Archived Data User Systems	Existing	Academic/Research Organizations	Various Ownerships
Archived Data User Systems	Planned	Emergency Management Scenario Training	Austin Office of Emergency Management
Archived Data User Systems	Planned	TxDOT Researchers	TxDOT
Construction and Maintenance	Existing	City of Austin Maintenance System	City of Austin
Construction and Maintenance	Existing	City of Round Rock Maintenance System	City of Round Rock
Construction and Maintenance	Existing	Travis County Construction and Maintenance Management System	Travis County Natural Resources and Transportation
Construction and Maintenance	Existing	TxDOT Highway Maintenance Management System	TxDOT Maintenance
Construction and Maintenance	Existing	Williamson County Highway Maintenance Management System	Williamson County Road Department
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders

Table 2-14. ITS Data Warehouse Infrastructure (continued)

Subsystem/Terminator	Status	Element Name	Stakeholder
Government Reporting Systems	Existing	Fatal Analysis Reporting System	Texas Department of Public Safety
Government Reporting Systems	Existing	Highway Performance Monitoring System	Federal Highway Administration
Other Archives	Planned	Record Management System (Police, Fire, EMS)	CECC/TMC Stakeholders
Other Archives	Planned	TxDOT Austin Historical Incident Data Repository	TxDOT Austin District
Other Archives	Planned	TxDOT Austin Historical Traffic Data Repository	TxDOT Austin District
Roadway Subsystem	Existing	Austin Flood Early Warning System	Austin Office of Emergency Management
Roadway Subsystem	Existing	Austin Sensors, Cameras, and HAR	City of Austin
Roadway Subsystem	Planned	RWIS Network	TxDOT Austin District
Roadway Subsystem	Planned	Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers	Texas Turnpike Authority
Roadway Subsystem	Existing	TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers	TxDOT Austin District
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District

Planned Projects:

None.

Additional Needs:

This Market Package includes all the data collection and management capabilities provided by the ITS Data Mart, and adds the functionality and interface definitions that allow collection of data from multiple agencies and data sources spanning across modal and jurisdictional boundaries. It performs the additional transformations and provides the additional meta data management features that are necessary so that all this data can be managed in a single repository with consistent formats. The potential for large volumes of varied data suggests additional on-line analysis and data mining features that are also included in this market package in addition to the basic query and reporting user access features offered by the ITS Data Mart. To implement this Market Package, the region should consider the following projects[5]:

[5] Derived from the National ITS Architecture CD, Version 3

The ITS Data Warehouse Project. This project would develop an ITS Data Warehouse that provides for the storage and retrieval of ITS related data. It would also provide summary data views of related information (e.g., data pulled from various data sources to create reports on a particular subject). A view may involve simple calculations of data as well as correlation of records based on similar fields such as date and time.

A high capacity SQL compliant database would be used for the data storage and retrieval. System integration will be necessary to setup and administer the database. Integrators will also be used to add new data requirements as requested by end users.

Emergency Management Scenario Training. This subsystem of the ITS Data Warehouse would collect data from TxDOT Austin ATMS, Austin Police Department Record Management System, and the Austin Fire Department Record Management System to support the training of emergency management personnel.

Incident Command System. This subsystem would be a browser-based system that would enhance the exchange of data between TxDOT, the City of Austin, and Travis County. The subsystem would provide a common user interface to the data available from all the system in the Austin CECC.

2.15 MAYDAY SUPPORT (EM3)

Priority:
Medium

Existing Infrastructure:

Table 2-15. Mayday Support Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Emergency Management	Planned	Austin CECC/TMC Dispatch System	CECC/TMC Stakeholders
Emergency System Operator	Planned	Austin CECC/TMC Dispatchers	CECC/TMC Stakeholders
Emergency System Operator	Planned	Emergency Call 911 Operator	CECC/TMC Stakeholders
Other EM	Existing	Round Rock Dispatch System	City of Round Rock
Other EM	Existing	Texas Highway Patrol Dispatch Center	Texas Department of Public Safety
Other EM	Existing	Williamson County Dispatch Center	Williamson County EMS/EOC
Personal Information Access	Existing	Individual Cell- and Land-Line Telephones	Individual
Remote Traveler Support	Planned	Distress Signal Wireline Communications	CapMetro
Remote Traveler Support	Planned	Transit Secure Area Monitoring System	CapMetro

Planned Projects:
None.

Additional Needs:
Install Extended Mile Markers and Ramp Signs. This project would install extended mile markers every 2/10 of a mile along each freeway in the Austin Region. The project would also install signs identifying ramps and flyovers. The extended mile marker signs would assist motorist in identifying the location of an incident and assist public safety agencies in finding the incident.

2.16 TRANSIT TRAVELER INFORMATION (APTS8)

Priority:
Medium

Existing Infrastructure:

Table 2-16. Transit Traveler Information Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Media	Existing	Traffic and Travel Information System	Various Ownerships
Personal Information Access	Existing	Individual Cell- and Land-Line Telephones	Individual
Personal Information Access	Existing	Individual Fax	Individual
Personal Information Access	Existing	Internet Browser	Individual
Remote Traveler Support	Planned	Traveler Kiosk Network	TxDOT Austin District
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Transit Management	Existing	CapMetro Dispatch System	CapMetro
Transit User	Existing	Individual Using Transportation Services	Individual
Transit Vehicle Subsystem	Existing	Transit Vehicle Monitoring System	CapMetro

Planned Projects:

1. City of Austin Signal System Transit Integration

Additional Needs:
CapMetro Transit Traveler Information System. This project would implement the Transit Center Information Services equipment package. The equipment package collects the latest available information for a transit service and makes it available to transit customers and to Information Service Providers for further distribution. Customers are provided information at transit stops and other public transportation areas before they embark and on-board the transit vehicle once they are enroute. Information provided can include the latest available information on transit routes, schedules, transfer options, fares, real-time schedule adherence, current

incidents, weather conditions, and special events. In addition to general service information, tailored information (e.g., itineraries) could be provided to individual transit users.

2.17 TRAFFIC FORECAST AND DEMAND MANAGEMENT (ATMS09)

Priority:
Medium

Existing Infrastructure:

Table 2-17. Traffic Forecast and Demand Management Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Event Promoters	Existing	Special Event Sponsors and Promoters	Various Ownerships
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Map Update Provider	Existing	City of Austin GIS Agency	City of Austin
Other TM	Existing	Austin Signal Control Center	City of Austin
Other TM	Planned	Round Rock TMC	City of Round Rock
Other TM	Existing	TxDOT Austin District TMC	TxDOT Austin District
Roadway Subsystem	Existing	Austin Sensors, Cameras, and HAR	City of Austin
Roadway Subsystem	Planned	Texas Turnpike Authority Sensors, Cameras, DMS, and HAR w/Flashers	Texas Turnpike Authority
Roadway Subsystem	Existing	TxDOT Austin Sensors, Cameras, DMS, and HAR w/Flashers	TxDOT Austin District
Toll Administration	Existing	TxDOT Texas Turnpike Authority Division	Texas Turnpike Authority
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Traffic Operations Personnel	Existing	TMC Operators/Dispatchers	TxDOT Austin District
Transit Management	Existing	CapMetro Dispatch System	CapMetro

Planned Projects:
None.

Additional Needs:
Traffic Forecast and Demand Management System. This project installs the equipment package needed to implement the Traffic Forecast and Demand Management mark package. The equipment package provides the capability to predict travel demand patterns to support traffic flow optimization, demand management, and incident management. The equipment package

requires the data collected by network surveillance equipment packages as well as input from other management subsystems including the ISP Subsystem.

2.18 STANDARD GRADE CROSSING (ATMS13)

Priority:
Low

Existing Infrastructure:

Table 2-18. Standard Grade Crossing Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Driver	Existing	Driver Operating A Vehicle	Individual
Multimodal Crossings	Existing	Rail Crossing Control Equipment	Various Ownerships
Roadway Subsystem	Existing	Grade Crossing Warning System	Various Ownerships
Wayside Equipment	Existing	Train Interface Equipment	Various Rail Operations

Planned Projects:
None

Additional Needs:
This Market Package has been implemented in the Austin region on a limited basis. There are no plans to expand the implementation of this project.

2.19 TRANSIT PASSENGER AND FARE MANAGEMENT (APTS4)

Priority:
Low

Existing Infrastructure:

Table 2-19. Transit Passenger and Fare Management Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Enforcement Agency	Existing	Austin Police Department	City of Austin
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Remote Traveler Support	Planned	Traveler Kiosk Network	TxDOT Austin District
Transit Management	Existing	CapMetro Dispatch System	CapMetro
Transit System Operators	Existing	Transit Operators (Day-to-Day Activity Managers)	CapMetro
Transit User	Existing	Individual Using Transportation Services	Individual
Transit Vehicle Subsystem	Existing	Transit Vehicle Monitoring System	CapMetro

Planned Projects:
None.

Additional Needs:
None.

2.20 DEMAND RESPONSE TRANSIT OPERATIONS (APTS3)

Priority:
Low

Existing Infrastructure:

Table 2-20. Demand Response Transit Operations Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Transit Driver	Existing	Transit Vehicle Drivers	CapMetro
Transit Fleet Manager	Existing	CapMetro Fleet Operations Manager	CapMetro
Transit Management	Existing	CapMetro Dispatch System	CapMetro
Transit Vehicle Subsystem	Existing	Transit Vehicle Monitoring System	CapMetro
Weather Service	Existing	Weather Network Subscription	Various Ownerships

Planned Projects:
None.

Additional Needs:
This Market Package has been implemented in the Austin region on a limited basis.

2.21 TRANSIT FIXED-ROUTE OPERATIONS (APTS2)

Priority:
Low

Existing Infrastructure:

Table 2-21. Transit Fixed-Route Operations Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Transit Driver	Existing	Transit Vehicle Drivers	CapMetro
Transit Fleet Manager	Existing	CapMetro Fleet Operations Manager	CapMetro
Transit Management	Existing	CapMetro Dispatch System	CapMetro
Transit System Operators	Existing	Transit Operators (Day-to-Day Activity Managers)	CapMetro
Transit Vehicle Subsystem	Existing	Transit Vehicle Monitoring System	CapMetro
Weather Service	Existing	Weather Network Subscription	Various Ownerships

Planned Projects:
None.

Additional Needs:
This Market Package has been implemented in the Austin region on a limited basis.

2.22 TRANSIT VEHICLE TRACKING (APTS1)

Priority:
Low

Existing Infrastructure:

Table 2-22. Transit Vehicle Tracking Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Location Data Source	Existing	Device That Provides Accurate Position Information	City of Austin
Map Update Provider	Existing	City of Austin GIS Agency	City of Austin
Other TRM	Existing	CapMetro Dispatch System	CapMetro
Transit Management	Existing	CapMetro Dispatch System	CapMetro
Transit Vehicle	Existing	Vehicle Used for Transit	CapMetro
Transit Vehicle Subsystem	Existing	Transit Vehicle Monitoring System	CapMetro
Vehicle	Existing	System That Provides Accurate Position Information	City of Austin

Planned Projects:
1. City of Austin Transit Integration

Additional Needs:
None.

2.23 ELECTRONIC TOLL COLLECTION (ATMS10)

Priority:
Low

Existing Infrastructure:

Table 2-23. Electronic Toll Collection Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
DMV	Existing	Vehicle Title and Registration Division	TxDOT
Driver	Existing	Driver Operating A Vehicle	Individual
Enforcement Agency	Existing	Texas Traffic Law Enforcement	Texas Department of Public Safety
Financial Institution	Existing	Commercial Bank	Various Ownerships
Information Service Provider	Existing	Travel and Traffic Information Provider	Commercial Information Provider
Payment Instrument	Planned	Transponder Card	Texas Turnpike Authority
Toll Administration	Existing	TxDOT Texas Turnpike Authority Division	Texas Turnpike Authority
Toll Administrator	Existing	TTA Controller	Texas Turnpike Authority
Toll Collection	Planned	TxDOT TTA Division Customer Service Center	Texas Turnpike Authority
Toll Operator	Planned	Toll Operator/Supervisor	Texas Turnpike Authority
Traffic Management	Existing	TxDOT Austin District TMC	TxDOT Austin District
Vehicle	Planned	Toll Tag Interface	Texas Turnpike Authority

Planned Projects:
The Texas Turnpike Authority is implementing this Market Package.

Additional Needs:
None.

2.24 TRANSIT MAINTENANCE (APTS6)

Priority:
Low

Existing Infrastructure:

Table 2-24. Transit Maintenance Infrastructure

Subsystem/Terminator	Status	Element Name	Stakeholder
Transit Fleet Manager	Existing	CapMetro Fleet Operations Manager	CapMetro
Transit Maintenance Personnel	Existing	CapMetro Vehicle Maintenance	CapMetro
Transit Management	Existing	CapMetro Dispatch System	CapMetro
Transit Vehicle Subsystem	Existing	Transit Vehicle Monitoring System	CapMetro

Planned Projects:
None.

Additional Needs:
None.

SECTION 3

PRIORITIZATION OF PLANNED PROJECTS

The following sections provide information on each planned project that was identified in Section 2. The following information is provided for each project:

- Description – A brief description of the project.
- Priority – The priority assigned to the project. The project is assigned a priority based on the priority of the Market Package. A priority of High has been assigned to projects to be completed in 5 years. A priority of Medium has been assigned to projects to be completed in 5 to 10 years. A priority of Low has been assigned to projects to be completed in 10 years or greater.
- Responsible Agencies – Identifies the agencies responsible for implementing, operating, and maintaining the results of the project.
- Related Market Packages – Identifies the Market Packages the project supports.
- Prerequisite Projects – Identifies the projects that must be completed before implementing the project being described.
- Funding – Provides an estimated cost and possible sources of funding for a project.

3.1 AUSTIN REGION ITS MOU

This project will develop a Memorandum of Understanding between the members of the Steering Committee to do the following:
1). Agree to implement Austin Regional ITS Architecture.
2). Maintain and Update the Austin Regional ITS Architecture.
3). Maintain and Update the Austin Regional ITS Deployment Plan

Priority **Implementing Agency Project Number**
High

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	ITS Steering Committee
Maintaining Agency:	ITS Steering Committee

Related Market Packages

Project Funding
Project Duration: 3 months Project Cost: $0.00

Funding Source
Member agencies operating funds

3.2 EXTEND NETWORK SURVEILLANCE EQUIPMENT ALONG LOOP1 FROM NORTH OF GAINES CREEK TO SLAUGHTER CREEK

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	3136-01-093

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 2 Yr. Project Cost: $3,018,000.00

Funding Source

Title V - ITS Deployment

3.3 EXTEND TXDOT NETWORK SURVEILLANCE - IH35 FROM COLORADO RIVER BRIDGE TO ST. ELMO STREET

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0015-13-247

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Year

Project Cost: $2,276,250.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.4 EXTEND TXDOT NETWORK SURVEILLANCE - IH35 FROM FM 1825 TO BRAKER LANE

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0015-13-244

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Year

Project Cost: $31,147,500.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.5 EXTEND TXDOT NETWORK SURVEILLANCE - IH35 FROM ST. ELMO STREET TO SLAUGHTER LANE

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0015-13-234

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Year

Project Cost: $2,603,250.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.6 EXTEND TXDOT NETWORK SURVEILLANCE SYSTEM - IH35 FROM WILLIAMSON COUNTY LINE/SH 45 TO FM 1825

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0015-10-040

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Year

Project Cost: $2,359,500.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.7 EXTEND TXDOT NETWORK SURVEILLANCE SYSTEM - LOOP 1 FROM PARMER LANE TO BRAKER LANE

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	3136-01-096

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Year

Project Cost: $2,173,500.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.8 EXTEND TXDOT NETWORK SURVEILLANCE SYSTEM - LOOP 1 FROM RM 2244 TO GAINES CREEK

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	3136-01-099

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Year

Project Cost: $2,300,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.9 EXTEND TXDOT NETWORK SURVEILLANCE SYSTEM - US 290 FROM EAST OF WILLIAMSON CREEK TO LOOP 360

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0113-09-057

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Year

Project Cost: $2,500,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.10 EXTEND TXDOT NETWORK SURVEILLANCE SYSTEM - US 290 FROM SPRR TO US 183

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0114-01-044

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Year

Project Cost: $2,031,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.11 EXTENDED THE NETWORK SURVEILLANCE SYSTEM ALONG US 290 FROM THE HAYS COUNTY LINE (SH 45) TO EAST OF WILLIAMSON CREEK.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0133-08-052

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr Project Cost: $4,757,250.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.12 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY MANAGEMENT EQUIPMENT ALONG US 183 FROM FM 1625 TO 0.2 MILES SOUTH OF FM 1327/SH 45

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0152-01-053

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 2 Yr

Project Cost: $3,057,750.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.13 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY MANAGEMENT EQUIPMENT ALONG US 183 FROM SH 71 TO FM 1625.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0152-01-053

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 2 Yr Project Cost: $4,067,250.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.14 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY TRAFFIC EQUIPMENT ALONG FROM LOOP 1 FROM SH 45 TO TRAVIS COUNTY LINE.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	3136-02-004

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr Project Cost: $650,000.00

Funding Source

Title V - ITS Deployment

3.15 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY TRAFFIC MANAGEMENT - IH-35 FROM SLAUGHTER LANE TO THE HAYS COUNTY LINE

This project will install conduit, traffic detection equipment, and video equipment along the identified corridor.

Priority	**Implementing Agency Project Number**
High	0016-01-086

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin Courtesy Patrol
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr Project Cost: $3,373,500.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.16 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG LOOP 1 FROM 35TH STREET TO RM 2244

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	3136-01-098

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 2 Yr. Project Cost: $2,779,347.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.17 INSTALL CONDUIT, DETECTION EQUIPMENT, AND FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG LOOP 1 FROM SLAUGHTER CREEK TO SH 45

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	3136-01-100

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin Courtesy Patrol
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr Project Cost: $1,095,250.00

Funding Source

Title V - ITS Deployment

3.18 INSTALL CONDUIT, DETECTION, AND FREEWAY TRAFFIC MANAGEMENT - IH35 M.L.K BLVD (19TH STREET) TO COLORADO RIVER BRIDGE

This project will extend the freeway network surveillance system. The project installs traffic detectors and conduit along the project segment.

Priority	**Implementing Agency Project Number**
High	0015-13-246

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr Project Cost: $1,147,500.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.19 INSTALL CONDUIT, DETECTION, AND FREEWAY TRAFFIC MANAGEMENT - IH35 FROM BRAKER LANE TO REINLI STREET

This project will extend the freeway network surveillance system. The project installs traffic detectors and conduit along the project segment.

Priority	**Implementing Agency Project Number**
High	0015-13-235

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: Project Cost: $0.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.20 INSTALL CONDUIT, DETECTION, AND FREEWAY TRAFFIC MANAGEMENT - IH35 FROM REINLI STREET TO M.L.K BLVD (19TH STREET)

This project will extend the freeway network surveillance system. The project installs traffic detectors and conduit along the project segment.

Priority	**Implementing Agency Project Number**
High	0015-13-245

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Year

Project Cost: $2,727,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.21 INSTALL FREEWAY MANAGEMENT EQUIPMENT ALONG SH 71 FROM RM 620/SH 45 TO US 290 WEST OF AUSTIN

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0700-03-063

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 2 Yr Project Cost: $3,550,000.00

Funding Source

Title V - ITS Deployment

3.22 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG LOOP 1 FROM THE WILLIAMSON COUNTY LINE TO FM734

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	3136-01-092

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 2 Yr Project Cost: $1,925,000.00

Funding Source

Title V - ITS Deployment Plan

3.23 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG SH 71 FROM SOUTH CONGRESS AVE. TO WEST OF DALTON LN.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0133-13-111

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr. Project Cost: $2,653,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.24 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG SH 71 FROM WEST OF DALTON LANE TO 1.3 MILES EAST OF FM 973/SH 45

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0265-01-082

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr Project Cost: $2,261,750.00

Funding Source

Title I - ITS Deployment

3.25 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 183 FROM EAST OF IH-35 TO US 290 EAST.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0151-09-052

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 6 Months

Project Cost: $849,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.26 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 183 FROM FM 969 TO THE COLORADO RIVER BRIDGE.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0151-09-054

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr. Project Cost: $1,646,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.27 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 183 FROM NORTH OF LAKELINE BLVD TO THE TRAVIS COUNTY LINE.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0151-05-064

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 6 Months

Project Cost: $102,006.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.28 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 183 FROM THE NORTH END OF THE COLORADO RIVER BRIDGE TO SH 71

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0265-01-081

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr. Project Cost: $921,500.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.29 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 183 FROM US 290 EAST TO FM 969

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0151-09-053

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr Project Cost: $1,144,500.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.30 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 290 FROM FM 3177 TO SH 45/FM 973.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0114-02-067

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr. Project Cost: $2,023,500.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.31 INSTALL FREEWAY TRAFFIC MANAGEMENT EQUIPMENT ALONG US 290 FROM THE WEST END OF THE US 183 OVER PASS TO FM 3177.

This project will extend the freeway network surveillance system. The project installs conduit, fiber optic cable, network equipment, and loop detectors along the project corridor.

Priority	**Implementing Agency Project Number**
High	0114-02-065

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin Courtesy Patrol
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 1 Yr. Project Cost: $2,255,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.32 TxDOT CCTV Surveillance Cameras - IH35 from US 290 to Colorado River

This project will extend the freeway network surveillance system. The project installs CCTV cameras along the project segment.

Priority	**Implementing Agency Project Number**
High	0015-13-300

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
Incident Management System
Traffic Information Dissemination

Project Funding

Project Duration: 6 Months Project Cost: $300,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.33 TxDOT Detector Installation - IH35 from US 290 to Colorado River

This project will extend the freeway network surveillance system. The project installs traffic detectors along the project segment.

Priority	Implementing Agency Project Number
High	0015-13-301

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Network Surveillance
Freeway Control
ITS Data Mart
Traffic Information Dissemination

Project Funding

Project Duration: 6 Months Project Cost: $300,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.34 CONSTRUCT CENTRALIZED MULTI-AGENCY EMERGENCY MANAGEMENT CENTER AND TRAFFIC MANAGEMENT CENTER

This project is TxDOT Austin District share of the combined City of Austin, Travis County, and TxDOT RDMT project.

Priority	**Implementing Agency Project Number**
High	0914-00-100

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Freeway Control
Network Surveillance
Emergency Response
Emergency Routing
Traffic Information Dissemination

Project Funding

Project Duration: 2 Yr

Project Cost: $3,700,000.00

Funding Source

3.35 EXTEND TXDOT FREEWAY CONTROL - IH35 FROM 49TH STREET TO 12TH STREET

This project will extend the freeway control system. The project installs ramp gates along the project segment.

Priority	**Implementing Agency Project Number**
High	0015-13-299

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Freeway Control
Traffic Forecast and Demand Management

Project Funding

Project Duration: 6 Months Project Cost: $300,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.36 INSTALL RAMP METERING-FREEWAY TRAFFIC MANAGEMENT EXPANSION IH-35 FY2002

This programmed project will install ramp metering along IH 35 from the Austin City Central Business District (CBD) to Cesar Chavez Street. This is an element in the Freeway Traffic Management System for the Austin District and Austin City.

Priority	**Implementing Agency Project Number**
High	TEX-35-10,11,12

Responsible Agencies

Implementation
Operating Agency: TxDOT Austin District Traffic Operations Division
Maintaining Agency: TxDOT Austin District Traffic Operations Division

Related Market Packages

Freeway Control
Network Surveillance

Project Funding

Project Duration: 6 Months Project Cost: $300,000.00

Funding Source

Title I - National Highway System

Title V - ITS Deployment

3.37 REPLACE LANE CONTROL SIGNALS - IH35 FROM US 290 TO COLORADO RIVER

This project will replace the Lane Control Signals along IH 35.

Priority	**Implementing Agency Project Number**
High	0015-13-266

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Austin District Traffic Operations Division
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Freeway Control
Network Surveillance

Project Funding

Project Duration: 1 Yr Project Cost: $77,000.00

Funding Source

3.38 CECC CAD SYSTEM TXDOT ATMS INTEGRATION

This project will provide the hardware and software to interface the CECC CAD system with the TxDOT Austin District ATMS system. The Center-to-Center system developed by TxDOT Traffic Operations Division will be used to implement the interface integrating the two systems. The two systems will exchange incident data, provide traffic data to the CAD system, and provide CECC Dispatchers access to TxDOT's CCTV system.

Priority **Implementing Agency Project Number**
High

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	RDMT 9-1-1 Project
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Incident Management System
Emergency Response
Emergency Routing
HAZMAT Management
Transit Security
ITS Data Warehouse
Mayday Support

Project Funding

Project Duration: 2 years Project Cost: $325,000.00

Funding Source

RDMT 9-1-1 Project Team Members

3.39 CITY OF ROUND ROCK COMMUNICATION INTEGRATION

Installation of conduit along IH 35 and US 79 from north Austin to Round Rock for communications between integrated systems. TxDOT advanced traffic management system and Round Rock emergency services computer aided dispatch system proposed to be integrated with FY01 ITS Integration Component funds.

Priority **Implementing Agency Project Number**
High

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	City of Round Rock Police Department
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages
Incident Management System
Emergency Response
Mayday Support

Project Funding
Project Duration: 1 year Project Cost: $500,000.00

Funding Source
Title I - National Highway System, FY 2003

Title V - ITS Deployment, FY 2003

3.40 WILLIAMSON COUNTY COMMUNICATION INTEGRATION

Installation of conduit along IH 35 and BI 35 from north Round Rock to Georgetown for communications between integrated systems. TxDOT advanced traffic management system and Williamson County emergency services computer aided dispatch system proposed to be integrated with FY01 ITS Integration Component funds.

Priority **Implementing Agency Project Number**
High

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	Williamson County EMS
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages

Mayday Support
Incident Management System
Emergency Response

Project Funding

Project Duration: 1 year Project Cost: $500,000.00

Funding Source

Title I - National Highway System, FY 2003

Title V - ITS Deployment, FY 2003

3.41 CAPITAL METRO TRANSIT INTEGRATION

Integration of Capital Metropolitan Transportation Authority (Capital Metro) public transit management system with TxDOT advanced traffic management system (ATMS). Capital Metro needs timely and accurate traffic information concerning State roadways to provide efficient management of public transit operations.

Priority **Implementing Agency Project Number**
High

Responsible Agencies
Implementation
Operating Agency: Capital Metro
Maintaining Agency: TxDOT Austin District Traffic Operations Division

Related Market Packages
Traffic Information Dissemination
Transit Traveler Information

Project Funding
Project Duration: 1 year Project Cost: $500,000.00

Funding Source
Title I - National Highway System, FY 2003

Title III - Formula Grants, FY 2003

Title V - ITS Deployment, FY 2003

3.42 CAPITAL METRO PUBLIC SECURITY INTEGRATION

Integration of Capital Metropolitan Transportation Authority (Capital Metro) public transit management system with TxDOT advanced traffic management system (ATMS). Capital Metro needs video surveillance of transit centers near State roadways to provide public transportation security operations.

Priority **Implementing Agency Project Number**
High

Responsible Agencies
Implementation
Operating Agency: Capital Metro
Maintaining Agency: TxDOT Austin District Traffic Operations Division

Related Market Packages
Transit Security

Project Funding
Project Duration: 1 year Project Cost: $300,000.00

Funding Source
Title I - National Highway System, FY 2003

Title III - Formula Grants, FY 2003

Title V - ITS Deployment

3.43 CITY OF AUSTIN WEB PAGE

Integration of City of Austin and TxDOT video and traffic flow (system detector data) with the city's web page. This project would provide traffic flow and congestion conditions to the general public. This information is valuable in selecting trip time, route selection, mode,

Priority **Implementing Agency Project Number**
High

Responsible Agencies

Implementation	City of Austin Public Works/Signals Department
Operating Agency:	City of Austin Public Works/Signals Department
Maintaining Agency:	City of Austin Public Works/Signals Department

Related Market Packages
Broadcast Traveler Information
Traffic Information Dissemination

Project Funding
Project Duration: 1 year Project Cost: $125,000.00

Funding Source
Title I - National Highway System, FY 2003

Title V - ITS Deployment, FY 2003

3.44 CITY OF AUSTIN IH35 SIGNAL SYSTEM INTEGRATION

Integration of the TxDOT traffic signals with the COA computerized traffic signal system will enable TxDOT and the city to quickly respond to incidents on the main lanes of the freeway. Staff will be able to monitor traffic conditions in the freeway main lanes and make manual or automatic signal timing changes to accommodate detoured traffic.

Priority **Implementing Agency Project Number**
Medium

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	City of Austin Public Works/Signals Department
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages
Regional Traffic Control

Project Funding
Project Duration: 1 year Project Cost: $300,000.00

Funding Source
Title I - National Highway System, FY 2003

Title V - ITS Deployment, FY 2003

3.45 CITY OF AUSTIN SIGNAL SYSTEM INTEGRATION

Integration of city's traffic responsive system with TxDOT freeway incident response. This project would integrate the TxDOT freeway management system with the city's ATMS to utilize the traffic responsive capabilities of the city's system to respond to incidents. This would utilize TxDOT or city installed detectors at freeway exit/entrance ramps to trigger traffic signal timing plans.

Priority **Implementing Agency Project Number**
Medium

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	City of Austin Public Works/Signals Department
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages
Regional Traffic Control

Project Funding
Project Duration: 1 year Project Cost: $300,000.00

Funding Source
Title I - National Highway System, FY 2003

Title V - ITS Deployment, FY 2003

3.46 TEXAS TURNPIKE AUTHORITY INTEGRATION

Integration of the Texas Turnpike Authority toll road system with TxDOT advanced traffic management system. The project would implement interfaces to electronically share information between systems to efficiently manage traffic flow and information. The Austin District TMC would be able to monitor traffic conditions on the Toll Road, verify and monitor incidents, dispatch the Toll Road Courtesy Patrol as required.

Priority **Implementing Agency Project Number**
Medium

Responsible Agencies

Implementation	TxDOT Austin District Traffic Operations Division
Operating Agency:	TxDOT Texas Turnpike Authority
Maintaining Agency:	TxDOT Austin District Traffic Operations Division

Related Market Packages
Regional Traffic Control

Project Funding
Project Duration: 2 years Project Cost: $500,000.00

Funding Source
Title V - ITS Deployment Program

3.47 CITY OF AUSTIN TRANSIT INTEGRATION

Integration of the city's ITS signal system 2070 advanced traffic controllers have the capability, with the added appropriate bus hardware/software, to track Capitol Metro bus location and on - time performance. These data are very valuable components is improving transit reliability and performance.

Priority **Implementing Agency Project Number**
Medium

Responsible Agencies

Implementation	City of Austin Public Works/Signals Department
Operating Agency:	Capital Metro
Maintaining Agency:	Capital Metro

Related Market Packages
Transit Traveler Information

Project Funding
Project Duration: 1 year Project Cost: $250,000.00

Funding Source
Title I - National Highway System, FY 2003

Title III - Formula Grants, FY 2003

Title V - ITS Deployment, FY 2003

SECTION 4

PROCEDURES FOR SUBMITTING ITS PROJECTS

The regional ITS architecture is not static. It must change as plans change, ITS projects are implemented, and the ITS needs and services evolve in the region. Much as ITS systems require planning for operations and maintenance, a plan should be put in place during the original development of the regional ITS architecture to keep it up to date.[6]

The regional ITS architecture is described by an inventory of subsystems and terminators, user services (Market Packages), architecture flows, and process specifications. This section address the review and approval process for including additional stakeholders to the Steering Committee, maintaining and updating the Austin Regional ITS Architecture, and the process for submitting ITS projects for conformance review and inclusion in the Deployment Plan. This process is really one of Configuration Control and Change Management. Some of the key aspects of the process are:

- Determine who will be responsible for architecture maintenance
- Define the architecture baseline
- Define the change management process
- Document the process in a Maintenance Plan.

4.1 STEERING COMMITTEE

The Steering Committee provides guidance on the Austin Regional ITS Architecture and sets the priorities for implementing ITS Services in the Austin Region. The Steering Committee shall be responsible for:

- Reviewing and approving changes to the Austin Regional ITS Architecture
- Dissemination of information on ITS projects within a member organization
- Managing roles and responsibilities for implementing ITS Services in the Austin Region
- ITS Training and Education in the region.

Any stakeholder wishing to modify the regional architecture must obtain the approval of the Steering Committee for the change. The Steering Committee shall ensure that the stakeholders impacted by the change agree to the change. The Steering Committee shall ensure the sponsor of a change to the regional architecture provides all the data required by the maintainer to update the regional architecture.

Membership

Any Transportation or Public Safety related organization within the TxDOT Austin District's area of responsibility is eligible to join the Steering Committee. Any organization joining the

[6] Derived from Regional Architecture Guidance; Developing, Using and Maintaining an ITS Architecture for Your Region; National ITS Architecture Team; October 12, 2001

Steering Committee must agree to the terms of the Steering Committee Memorandum of Understanding (MOU) and sign the MOU. If the organization joining the Steering Committee does not agree to the terms of the MOU, the Steering Committee may consider updating the terms of the MOU.

Meetings

The Steering Committee shall meet at least once a quarter to discuss ITS Services in the Austin Region. Subgroups of the Steering Committee may meet as required to discuss projects.

4.2 PROJECT PLANNING AND APPROVAL

Since 8 April 2001, the Federal Highway Administration (FHWA) requires all projects with ITS elements to be reviewed against the regional ITS architecture. Depending on the source of funding, the Capitol Area Metropolitan Planning Organization (CAMPO) or TxDOT Austin District shall be responsible for ensuring a project conforms to the regional architecture.

CAMPO and/or TxDOT Austin District shall work with the Steering Committee and its members to help identify opportunities to reduce the cost of deploying/implementing ITS in the Austin region. For example, a road repair project could include the installation of sensors and communications equipment.

4.3 PROJECT CONFORMITY APPROVAL

To support the approval process for an ITS related project, the project's sponsoring agency shall submit to CAMPO and TxDOT Austin District for review the following data during the project's definition phase (before the specifications and Request for Proposal or Quote are developed):

- An inventory report showing the subsystems and terminators the project will affect or add/delete to the regional architecture inventory.
- A Turbo Architecture project architecture that shows the architecture flows between the subsystems and terminators the project will affect or the pages from the regional architecture that shows where the project fits into the regional architecture.
- The market package(s) and process specification(s) the project will implement or enhance.
- A report detailing the differences, if any, between the project architecture and the existing regional architecture.
- A letter from the Steering Committee stating that the proposed changes (if any) to the regional architecture have been approved.
- The TxDOT Statement of Conformity (see Appendix A).
- Any other data required by CAMPO and/or TxDOT Austin District

The sponsoring agency is responsible for producing the data that will needed for the review. When the data has been reviewed, the reviewing agency shall inform the sponsoring agency and the Steering Committee if the proposed project conforms to the regional architecture. If the

project does not conform to the regional architecture, reviewing agency shall provide in writing details on why the project does not conform to the sponsoring agency and the Steering Committee.

When the project has been reviewed, CAMPO and the submitting agency should determine if the project should be added to the Transportation Improvement Program (TIP). TxDOT Austin District shall add the project to the Deployment Plan.

4.4 REGIONAL ARCHITECTURE AND DEPLOYMENT PLAN MAINTENANCE

TxDOT Austin District shall be responsible for maintaining the Austin Regional ITS Architecture, the Austin Regional ITS Deployment Plan, and the Turbo Architecture DB using TxDOT's configuration management polices and procedures. TxDOT Austin District shall work with CAMPO in maintaining this document.

For example, changes to the regional architecture could occur for the following reasons;

- Changes to the National ITS Architecture
- The needs of the region change
- New user services (Market Packages) are planned for the region
- The rolls and responsibilities of a Stakeholder changes
- An ITS project changes the regional architecture

When a change to the regional architecture has been approved by the Steering Committee, the responsible stakeholder shall submit the required documentation to update the regional architecture to TxDOT Austin District. TxDOT Austin District shall update the regional architecture based on their polices and procedures. TxDOT Austin District shall provide changes pages to the Steering Committee on a quarterly basis and publish the entire regional architecture on a yearly basis.