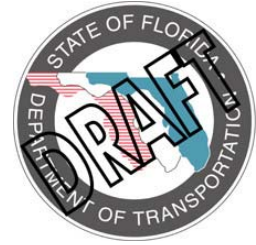


Technical Memorandum No. 2



Florida's 2003 Intelligent Transportation Systems Strategic Plan Update –

Draft Updated Intelligent Transportation Systems Program Vision, Goals, and Objectives

**July 23, 2004
Version 1**



Prepared for:

Florida Department of Transportation
Traffic Engineering and Operations Office
Intelligent Transportation Systems (ITS) Section
605 Suwannee Street, M.S. 90
Tallahassee, Florida 32399-0450
(850) 410-5600

*Technical Memorandum No. 2
 Florida's 2003 ITS Strategic Plan Update
 Draft Updated ITS Vision, Goals, and Objectives*



DOCUMENT CONTROL PANEL		
File Name:	<i>Technical Memorandum No. 2: Florida's 2003 Intelligent Transportation Systems Strategic Plan Update – Draft Updated Intelligent Transportation Systems Vision, Goals, and Objectives</i>	
File Location:	W:\ITS Program\ITS GC\TWO25-StrategicPlanUpdate\TM2 - Mission and Vision\040723 TWO25 TM2 V1.pdf	
Deliverable Number:	2	
Version Number:	1	
	Name	Date
Created By:	Diane E. Quigley	April 25, 2004
Reviewed By:	Diane E. Quigley	June 22, 2004
	Diane E. Quigley	July 21, 2004
Modified By:	Dave Hodges	May 7, 2004
	Pamela L. Hoke	June 4, 2004
	Pamela L. Hoke	July 8, 2004
Completed By:	Pamela L. Hoke	July 23, 2004



Table of Contents

List of Tables	iii
List of Acronyms.....	iv
1. Introduction	1
1.1 The Need for Update	3
2. Purpose.....	4
3. Document Organization	5
4. Vision, Goals, and Objectives of Florida's Existing Intelligent Transportation Systems Program	6
4.1 The Intelligent Transportation Systems Program Vision.....	6
4.2 The Intelligent Transportation Systems Program Goals and Objectives	7
4.2.1 2020 Florida Transportation Plan – Goal No. 1	7
4.2.2 2020 Florida Transportation Plan – Goal No. 2	8
4.2.3 2020 Florida Transportation Plan – Goal No. 3	8
4.2.4 2020 Florida Transportation Plan – Goal No. 4	9
4.3 Planning Guidelines from Florida's Intelligent Transportation System Strategic Plan.....	10



5.	National and State Missions, Visions, Goals, and Objectives that Impact Florida's Intelligent Transportation Systems Program	12
5.1	<i>The National Intelligent Transportation Systems Program Plan ...</i>	12
5.1.1	Goals	13
5.1.2	Programmatic Themes	14
5.1.3	Enabling Themes	14
5.2	<i>The 2020 Florida Transportation Plan</i>	15
5.2.1	<i>The 2003 Short-Range Component of the 2020 Florida Transportation Plan.....</i>	15
5.3	<i>Florida's Intelligent Transportation Systems Plan</i>	16
5.3.1	Mission.....	16
5.3.2	Vision.....	17
5.3.3	Goals	18
5.3.4	Themes and Strategies	18
6.	The Updated Mission, Vision, Goals, and Objectives for Florida's Intelligent Transportation Systems Program	19
6.1	<i>The Updated Mission and Vision for Florida's Intelligent Transportation Systems</i>	19
6.2	<i>Revised Goals and Objectives</i>	20
7.	References.....	29

List of Appendices

Appendix A – *Intelligent Transportation Systems Plan* Goals and Objectives



List of Tables

Table 6.1 – Comparison of State and National Transportation System and Intelligent Transportation System Goals	21
--	----

List of Acronyms

AVL	Automatic Vehicle Location
CAD	Computer-Aided Dispatch
CFR	Code of Federal Regulations
CVO	Commercial Vehicle Operations
ETC	Electronic Toll Collection
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FIHS	Florida Intrastate Highway System
FMS	Freeway Management System
FTP	2020 Florida Transportation Plan
HAZMAT	Hazardous Materials
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
ITS	Intelligent Transportation System
IVR	Interactive Voice Response
MPO	Metropolitan Planning Organization
NITSA	National ITS Architecture
RITSA	Regional ITS Architecture
RTMC	Regional Transportation Management Center
RWIS	Road Weather Information System
SITSA	Statewide ITS Architecture
SPO	Systems Planning Office
SUL	Special-Use Lane
TDM	Transportation Demand Management
TEOO	Traffic Engineering and Operations Office
TMC	Transportation Management Center
USDOT	United States Department of Transportation
VMT	Vehicle-Miles Traveled



1. Introduction

Florida's *Intelligent Transportation System Strategic Plan*, hereinafter the *Plan*,¹ was designed to guide the Florida Department of Transportation (FDOT), Florida's metropolitan planning organizations (MPOs), and local governments in the planning, programming, and deployment of integrated multimodal intelligent transportation systems (ITS). The primary purpose of the *Plan* was to present a 20-year vision for ITS in Florida and to recommend strategies to achieve this vision.

The FDOT Traffic Engineering and Operations Office (TEOO) and the Systems Planning Office (SPO) developed the *Plan* as part of a joint effort with support from a statewide task team that included both Central Office and District staff representing planning, design, construction, maintenance, public transportation, motor carrier compliance, and the MPOs. In addition, the team conducted a comprehensive public outreach program during the creation of the *Plan* to ensure that the needs and requirements of various stakeholders were also addressed.

The *Plan* is composed of six major sections:

- 1) *Section 1, Purpose and Need*, identifies the purpose and application of the *Plan* from a statewide, multimodal perspective;
- 2) *Section 2, The Challenge*, discusses the status of transportation in Florida, and presents the barriers and constraints that agencies may face in providing expanded transportation services. The document concludes that improved management and operation of the transportation system is necessary to improve mobility;
- 3) *Section 3, What is ITS?*, presents an overview of ITS applications and the benefits associated with the implementation of ITS. It describes components of the *National ITS Architecture (NITSA)*,² and recommends the development of a statewide ITS architecture with regional and corridor architecture components;
- 4) *Section 4, ITS Vision for Florida*, provides a 20-year vision for ITS in Florida as a guide in developing a statewide ITS consistent with the FDOT's transportation policy. Goals and objectives for the *Plan* are presented as they relate to the *2020 Florida Transportation Plan (FTP)*³ goals;
- 5) *Section 5, ITS Strategic Planning Guidelines*, identifies guiding principles to characterize Florida's ITS Program and describe how Florida's ITS vision will be realized over the next 20 years; and



- 6) *Section 6, ITS Business Plan*, serves as a short-term component of the *Plan* and identifies the resources, processes, and program elements necessary to implement Florida's ITS vision. It is recommended that this short-term plan be accomplished through the implementation of several initial processes and ITS operational strategies presented in the form of Initial Actions.

The *Plan* is also supported by a series of resource documents and issue papers. These documents provide data, analysis, research, and documentation necessary to support the conclusions and recommendations contained in the *Plan*. Supporting resource documents include the:

- *Summary of Survey Results*,⁴ which presents the findings from a survey of ITS activities and programs of other state agencies;
- *Vision, Guiding Principles, Goals and Objectives*,⁵ which details the development of the *Plan's* vision, guiding principles, goals, and objectives;
- *ITS Project Cost Comparison*,⁶ which compares similar freeway management system (FMS) costs in the State of Florida;
- *The Business Plan*,⁷ which identifies the resources, arrangements, and program elements necessary to implement the *Plan* over the initial five years. These elements are summarized in the 31 Initial Actions or Strategies.
- *Department Organizational Structure Alternatives to Implement ITS*,⁸ which recommends an organizational structure for the establishment of a statewide FDOT ITS program and office.

The supporting issue papers present information regarding the advanced technologies, policies, and applications designed to guide the focus and implementation of the ITS initial strategies. The recommendations contained in these issue papers are based on practical applications and research from various ITS programs across the nation. They include the:

- *ITS Project Cost Analysis Issue Paper*,⁹
- *Economic Impacts of ITS Issue Paper*,¹⁰
- *Integration of ITS into the MPO Planning Process Issue Paper*,¹¹
- *Operations, Management, and Maintenance Issues Paper*,¹²
- *Florida Statewide ITS Strategic Plan Procurement Issue Paper*,¹³
- *Rural/Inter-Urban ITS Applications Issue Paper*,¹⁴ and
- *Implementation Authority Review and Recommendations Issue Paper*.¹⁵



These resource documents and issue papers explore the various components of a successful ITS program, and recommend the best strategies and actions that are needed to establish an ITS program in Florida. These documents, in addition to the *Plan*, comprise *Florida's Intelligent Transportation System Strategic Plan*. Therefore, subsequent updates to the *Plan* must also consider updates to the supporting resource documents and issue papers.

1.1 The Need for Update

The primary purpose for the update of the *Plan* is to expand and redirect the efforts and resources of Florida's ITS Program to be consistent with the evolution of the national ITS program goals and the FDOT organizational structure.

Since the *Plan's* completion in 1999, the FDOT has developed and implemented its ITS Program to oversee and guide the development of ITS on the State's highway system. This Program, initiated in July 2000, consists of a state ITS Office, District ITS programs, and other FDOT offices. Together, these offices and programs form a collaborative effort in funding, developing, deploying, and operating an integrated statewide ITS. Recently, however, the ITS Office was merged with the FDOT TEOO, thus requiring a consolidation of business plans and a revision of the organizational structure outlined in the original *Plan*.

The ITS Program was created based on the Initial Actions and Strategies recommended by the agencies involved in the *Plan's* development. These short-term strategies were designed to focus interagency resources on the development of the ITS Program. Since the inception of the ITS Section in July 2000, many of these Initial Actions and Strategies have been completed or addressed. The findings and recommendations identified in several of the *Plan's* resource documents and issue papers have been expanded in detail or developed into projects that have been or are currently being completed.

Additionally, recent national ITS documents, policies, and programs have been formulated that impact the findings and recommendations initially documented in the *Plan*. Many of the strategies and actions contained in the current *Plan* require updating based on new national policies, programs, and technologies. One example of this new documentation is the recently completed *National Intelligent Transportation Systems Program Plan*.¹⁶ This document defines a new vision and goals for the national ITS program. The *National Intelligent Transportation Systems Program Plan* includes a new goal for enhancing and encouraging the use of ITS in homeland security applications, which was not considered in Florida's original *Plan*.



The update of *Florida's Intelligent Transportation System Strategic Plan* will redefine the goals and objectives of Florida's ITS Program; reflect Program accomplishments over the last several years; revise the organizational structure and business plan; and provide new direction for the next phases of ITS deployment in Florida.

2. Purpose

The purpose of this *Technical Memorandum* is to review existing state and national ITS missions, visions, goals, and objectives, and to determine how these may impact the currently adopted mission, vision, and goals of Florida's ITS Program. Additionally, the TEOO, with assistance from District traffic operations staff, is crafting a new business plan that presents an updated mission and vision, and identifies the major focus areas and functions for the service areas. Based on the national and state guiding principles and the new business plan, modifications to the existing ITS mission, vision, goals, and objectives will be recommended to guide Florida's ITS Program over the next several years.



3. Document Organization

This document is organized in the following sections:

- *Section 1, Introduction*, presents the background information regarding the *Plan*, and documents project goals and objectives;
- *Section 2, Purpose*, documents the purpose of this *Technical Memorandum*;
- *Section 3, Document Organization*, identifies the contents and organization of this *Technical Memorandum*;
- *Section 4, Vision, Goals, and Objectives of Florida's Existing Intelligent Transportation Systems Program*, presents the existing ITS mission, vision, and goals from the *Plan*;
- *Section 5, National and State Missions, Visions, Goals, and Objectives that Impact Florida's Intelligent Transportation Systems Program*, details ITS guiding principles from the *National Intelligent Transportation Systems Program Plan*, in addition to goals and objectives from the *2020 FTP* that will be considered for inclusion in the *Plan's* update;
- *Section 6, The Updated Mission, Vision, Goals, and Objectives of Florida's Intelligent Transportation Systems Program*, compares the national and state transportation and ITS policy frameworks and strategies with the existing Florida ITS Program tenets, and recommends modifications to the existing ITS mission, vision, goals, and objectives; and
- *Section 7, References*, identifies the documents and programs cited to support the findings of this *Technical Memorandum*.



4. Vision, Goals, and Objectives of Florida's Existing Intelligent Transportation Systems Program

Florida's Intelligent Transportation System Strategic Plan, which was completed in 1999, included a vision, four goals, and several objectives designed to assist the FDOT in accomplishing the ITS Program's goals. From the goals and objectives, several strategic planning guidelines were derived to identify immediate actions or activities that could be initiated to advance the Program's goals. This section presents Florida's existing ITS Program's vision, goals, objectives, and strategic guidelines.

4.1 The Intelligent Transportation Systems Program Vision

The ITS Program's vision was composed by combining statewide ITS requirements with similar states' ITS program visions. It was designed to reflect the goals and strategies of the ITS stakeholder agencies, and to relate to the goals and objectives of the *2020 FTP*. This vision presents an ideal concept of the ITS Program in 20 years, assuming the goals and recommendations of the *Plan* are implemented.

Florida's ITS Vision

Nearly two decades into the 21st century, travelers in Florida are seeing more and more benefits from an integrated and coordinated Intelligent Transportation System within each of its urbanized areas and along all major transportation corridors. ITS provides valuable services to travelers, business, industry and government that were unavailable just a few decades ago. Pedestrian, automobile and transit mobility have benefited from real-time information sharing, route navigation, electronic payment systems and system management activities made possible through ITS. Business and commerce are both partners and benefactors in ITS using the improved information and intermodal linkages provided by the system to improve business operations. The economic vitality of Florida has never been better aided by a statewide transportation system made safer and more efficient by ITS. All stakeholders in Florida's transportation system benefit from improved safety provided by ITS technologies in our vehicles and the network of systems assisting emergency service providers. Florida's ITS Strategic Plan, first adopted in 1999 and updated regularly ever since, assures that Intelligent Transportation Systems are considered at all levels of planning, production, operations and management, providing improvements in safety, mobility and economic vitality to maximize the investment in Florida's multimodal transportation system.¹⁷



Through this vision, Florida's ITS Program will ensure that ITS is integrated in all institutional policies, programs, and procedures to develop a seamless, coordinated information infrastructure that maximizes the safety and efficiency of the transportation network while encouraging multimodal and consumer choices.

4.2 The Intelligent Transportation Systems Program Goals and Objectives

The goals of the *Plan* were designed to parallel the four *2020 FTP* goals. Corresponding ITS objectives identify ITS Program strategies for implementing the goals of the *2020 FTP* that can be measured through a common set of performance measures. Information contained in parentheses identifies the potential ITS applications that relate to the objectives. The goals are outlined below.¹⁸

4.2.1 2020 Florida Transportation Plan – Goal No. 1

The *2020 FTP's* first goal is to provide safe transportation for residents, visitors, and commerce. The ITS objectives associated with this goal include:

- Minimizing the response time for incidents and accidents using incident management programs;
- Reducing commercial vehicle safety violations using commercial vehicle operations (CVO) safety programs;
- Reducing weather-related traffic incidents using road weather information systems (RWIS);
- Minimizing grade crossing accidents using highway-rail interface safety systems;
- Improving emergency management communications by coordinating the communication frequencies, and using real-time traveler information systems for evacuation and major route closings, reroutings, or restrictions;
- Improving security for highway and transit users using surveillance cameras, call boxes, and emergency services support; and
- Improving the security, safety, and convenience of pedestrians and bicyclists using improved interfaces at pedestrian crossings, signalized intersections, kiosks, and surveillance systems.



4.2.2 2020 Florida Transportation Plan – Goal No. 2

The second goal of the 2020 FTP is the protection of the public's investment in transportation. The ITS objectives associated with this goal include:

- Reducing vehicular delays from incidents using incident response programs;
- Improving peak period flow and throughput using traffic control systems and operations;
- Reducing the cost of commercial vehicle fleet operations using CVO and intermodal systems; and
- Assisting with the provision of safe and efficient maintenance of traffic during project construction using work zone monitoring systems and real-time traveler information systems.

4.2.3 2020 Florida Transportation Plan – Goal No. 3

The 2020 FTP's third goal is the development and deployment of a statewide, interconnected transportation system that enhances Florida's economic competitiveness. The ITS objectives associated with this goal include:

- Reducing the cost and delay of intermodal connections using CVO information systems;
- Minimizing shipping and delivery delays to improve freight operations using real-time system management programs;
- Improving the predictability of travel and delivery times using incident management systems;
- Improving the efficiency of fleet operations using CVO information systems;
- Improving tourist access and convenience using special traveler information systems; and
- Increasing employment through the development of new ITS industries in Florida.



4.2.4 2020 Florida Transportation Plan – Goal No. 4

The development of travel choices to ensure mobility, sustain the quality of the environment, reserve community values, and reduce energy consumption is the fourth goal of the *2020 FTP*. The ITS objectives associated with this goal include:

- Improving mobility and choices for highway and transit users with traveler information systems for conditions and modal/route options;
- Improving tourist access using specialized traveler information systems;
- Reducing the need to travel using a communications infrastructure that supports telecommuting, teleconferencing, teleshopping, etc.;
- Reducing energy use and environmental degradation using ITS management services to reduce vehicle trips, and vehicle miles of travel;
- Improving service for special traveler needs with the use of smart cards, computer-aided dispatch (CAD), and automatic vehicle location (AVL) systems to enable true demand-responsive transit systems;
- Improving multimodal travel using smart cards, traveler information, and transit management systems to reduce transit travel times;
- Reducing the energy use and delays associated with major incidents using ITS management services and route diversions;
- Improving the efficiency of toll operations using electronic toll collection (ETC) systems; and
- Enhancing and supporting ride-sharing opportunities using high occupancy vehicle (HOV) and high occupancy toll (HOT) systems.

These goals and objectives represent strategies for implementing an ITS program that fulfills the goals of the *2020 FTP*.



4.3 Planning Guidelines from Florida's Intelligent Transportation System Strategic Plan

In addition to the goals and objectives, strategic planning guidelines were recommended to ensure that the ITS Program's policies, goals, and objectives are integrated into the FDOT's procedures to guide decision makers in implementing ITS strategies, and to allocate ITS resources to problems and opportunities in the existing transportation system. These strategies represent actions necessary to ensure that the ITS Program's vision is realized over the next 20 years. These guiding principles are divided into categories and include:¹⁹

- Planning and Development –
 - Undertake strategic deployments;
 - Provide a common framework for the planning, deployment, and integration of systems through ITS architecture and standards consistency;
 - Promote institutional and interjurisdictional cooperation and coordination in the planning, deployment, operations, management, and maintenance of ITS infrastructures;
 - Provide service on a regional, integrated, and interoperable basis;
 - Integrate ITS planning and ITS-related operations planning with statewide, metropolitan, authority, and local government planning processes;
 - Support concurrency/growth management programs;
 - Emphasize intermodal/multimodal orientation to enhance both passenger and freight connections and transfers at ports, airports, and via all applicable modes; and
 - Utilize proven cost-effective technologies to deliver new and enhanced services to travelers and system users; use a total life-cycle cost analysis to select ITS components and designs;

- Operations and Management –
 - Provide performance-driven service, and real-time operations and management of all transportation systems to maximize system performance, safety, and time reliability performance;
 - Adapt system operations and management strategies to changing conditions;
 - Provide emergency operations support; and
 - Actively pursue interagency operations and management agreements;

*Technical Memorandum No. 2
Florida's 2003 ITS Strategic Plan Update
Draft Updated ITS Vision, Goals, and Objectives*



- Finance –
 - Provide ITS funding for architecturally consistent projects;
 - Leverage the value of “conventional” capital investments;
 - Develop ITS funding strategies; and
 - Capitalize on private sector resources;

- Public Awareness / Involvement –
 - Include education, training, and outreach;
 - Respond to special user needs; and
 - Identify and support ITS advocates and champions; and

- Research and Development –
 - Support continued research and operational testing.

As part of the *Plan's* update, the original ITS Program's vision, goals, objectives, and strategies will be reevaluated to ensure that they continue to reflect the current vision and goals of the ITS Program and the ITS stakeholders.



5. National and State Missions, Visions, Goals, and Objectives that Impact Florida's Intelligent Transportation Systems Program

This section identifies national and state prescribed ITS visions, goals, and strategies for consideration in the update of the Florida ITS Program's guiding principles.

5.1 The National Intelligent Transportation Systems Program Plan

The *National Intelligent Transportation Systems Program Plan* prescribes a vision, goals, and programmatic and enabling themes that set forth the development policy for an efficient, effective, integrated transportation system.

The objective of the national plan is to "advance the safety, efficiency and security of the surface transportation system, provide increased access to transportation services and reduce fuel consumption and environmental impact."²⁰ This objective can be realized by utilizing ITS to improve the management, operations, and maintenance of the surface transportation system.

The ITS vision is to ensure that:

- *Future transportation systems will be managed and operated to provide seamless, end-to-end intermodal passenger travel regardless of traveler age, disability, or location and efficient, seamless, end-to-end intermodal freight movement.*
- *Public policy and private sector decision-makers will seize the opportunity to make ITS a vital driver in achieving the vision of the transportation system for the 21st century.*
- *Future transportation systems will be secure, customer oriented, performance driven and institutionally innovative, enabled by information from a fully integrated spectrum of computing, communications and sensor technologies.²¹*

This vision is further supported by goals and themes that identify measurable guidelines for full ITS integration to further the realization of the national transportation system vision. The goals and themes are identified in the following sections.



5.1.1 Goals

The *National Intelligent Transportation Systems Program Plan* goals include:

- *Safety – The goal is to reduce annual transportation-related fatalities by 15% overall by 2011, saving 5,000-7,000 lives per year.*
- *Security – The goal is a transportation system which is well-protected against attacks and responds effectively to natural and manmade threats and disasters, enabling the continued movement of people and goods even in times of crisis.ⁱ*
- *Efficiency/Economy – The goal is to save at least \$20 billion per year by enhancing through-put and capacity through better information, better system management and the containment of congestion by providing for the efficient end-to-end movement of people and goods, including quick, seamless intermodal transitions.*
- *Mobility/Access – The goal is universally available information that supports seamless, end-to-end travel choices for all users of the transportation system.*
- *Energy/Environment – The goal is to save a minimum of one billion gallons of gasoline each year and to reduce emissions at least in proportion to this fuel saving.²²*

These goals are further enhanced by the development of programmatic and enabling themes to identify future activities, benefits, and challenges in achieving these national ITS goals.

ⁱ It should be noted that this goal was modified from the original security goal identified in the *National Intelligent Transportation Systems Program Plan*. The modified goal is presented in the *Homeland Security and ITS Supplement*,²³ which was developed in response to the September 11, 2001, events.



5.1.2 Programmatic Themes

Programmatic themes were designed to identify opportunities where ITS may be applied at a program level to alleviate transportation system problems or address critical issues. These themes include:

- An integrated network of transportation information;
- Advanced crash avoidance technologies;
- Automatic crash and incident detection, notification, and response; and
- Advanced transportation management.²⁴

5.1.3 Enabling Themes

Enabling themes were created to identify opportunities where ITS can enable the provision of a safe, secure, seamless, and efficient surface transportation system. These themes include the:

- Culture of transportation system management and operations;
- Public sector roles, relationships, and funding;
- Federal policies and initiatives to achieve extensive private sector product deployments; and
- Human factors.²⁵



5.2 The 2020 Florida Transportation Plan

The *2020 FTP* is the policy framework that guides the development of Florida's multimodal transportation system. The goals identified in the *2020 FTP* should be reflected in the long-range and strategic plans for each service unit or function within the FDOT. As discussed previously, the *2020 FTP* goals parallel the *Plan's* goals. These four goals are:

- Safe transportation for residents, visitors, and commerce;
- Preservation and management of Florida's transportation system;
- A transportation system that enhances Florida's economic competitiveness; and
- A transportation system that enhances Florida's quality of life.

These goals are reinforced in the strategies and objectives set forth in the *2003 Short-Range Component* of the *2020 FTP*.²⁶

5.2.1 The 2003 Short-Range Component of the 2020 Florida Transportation Plan

The *2003 Short-Range Component* identifies the short-term objectives and strategies needed to implement the long-range goals of the *2020 FTP*. This document is updated annually to reflect the changing needs and resources of the FDOT, and to continually define strategic objectives and focus areas to manage and maintain Florida's transportation system in accordance with the *2020 FTP*. Strategic goals include:

- Strategic Goal No. 1 – Preserve and Manage a Safe, Efficient Transportation System – This goal combines several strategic focus areas identified in the *2020 FTP* goals regarding system preservation and system efficiency. The strategic objectives identified for use in achieving this goal include the efficiency and safety of the transportation system through ITS deployments, and increasing the use of the applications available with incident and emergency management, transportation demand management (TDM), and the access management initiatives and program;
- Strategic Goal No. 2 – Enhance Florida's Economic Competitiveness, Quality of Life, and Transportation Safety – This goal combines the strategic focus areas of mobility, economic competitiveness, and quality of life and safety. Strategic objectives for this goal include the implementation of ITS to maximize system capabilities, reduce vehicle delays, improve safety, and provide more efficient intermodal connectivity with minimal impact to the physical environment; and



- Strategic Goal No. 3 – Organizational Excellence – Organizational excellence is identified as a strategy to assist the FDOT in achieving these important goals. The objectives for this goal include the implementation of the Sterling Business Model for organizational performance excellence and ensuring that this model is incorporated in all aspects of the FDOT business processes. Additionally, the FDOT will continue to measure and improve on its performance through customer surveys, and the development of business plans and performance measures for the delivery of core functions.

5.3 Florida's Intelligent Transportation Systems Plan

The *Intelligent Transportation Systems Plan*²⁷ was developed to guide the deployment of statewide, integrated ITS along the five Florida Intrastate Highway System (FIHS) limited-access corridors. The *Intelligent Transportation Systems Plan* was prepared to provide the policy and program guidelines for the development of the *Ten-Year ITS Cost Feasible Plan*.²⁸ *Technical Memorandum No. 2, ITS Needs Model*,²⁹ developed as part of the FIHS corridors' project, identified a mission, vision, and goals and objectives for achieving a 20-year vision of ITS along the FIHS corridors. The following text presents the mission, vision, goals, and strategies for the FIHS' *Intelligent Transportation System Plan* as identified in *Technical Memorandum No. 2*.

5.3.1 Mission

*Provide effective ITS services for the five principal FIHS corridors that enhance the safety and mobility of people and goods, economic competitiveness, and the quality of our environment and communities.*³⁰



5.3.2 Vision

Two decades into the 21st century, travelers and shippers of goods along Florida's limited-access transportation corridors are benefiting from infrastructure, and information and communications technologies that improve the safety, mobility, economic competitiveness, and livability of communities in Florida. Information is available that assists travelers and shippers in route planning, predicting travel times, and scheduling their trips/shipments to reduce delays and arrive at scheduled times. When congestion is severe along specific facilities, alternate routes and modes of travel will be suggested that may be more reliable or cost-effective. During their trip, information of travel conditions is provided in real-time so that scheduling and diversions can be planned if needed as a result of an incident. If an incident occurs, automated information technologies are capable of verifying the location and assessing the appropriate response to incidents. If necessary, emergency personnel or roadside assistance is dispatched, arriving in a short period of time. Traffic flow is restored quickly and delays minimized.

During normal operations, traffic flow is managed within the corridor to keep traffic moving. Information on weather conditions is provided to an in-vehicle information service that alerts the driver when visibilities are compromised and advises a safe travel speed. If a natural disaster is impending, information is provided on appropriate local shelter locations, routes for travelers choosing to drive to another area, and other modes of travel that are available instead of driving.

The economy is thriving as a result of world-class access to international markets at ports, airports, and railheads from our agricultural, mining, and manufacturing industries and efficient deliveries of goods and services at the local level. Decisions on the operations, management, and future improvements to the corridors are made through a number of key partners. These decisions are based on measured benefits and a record of the performance of various technologies and elements are customized for communities to reflect their unique values and priorities. However, similar services are available statewide and on related arterial systems and are easily recognized by elderly drivers or visitors since strong name recognition exists for traveler information, roadside assistance, electronic tolls, and other essential services. FDOT is viewed as an ITS powerhouse and a model for how to cost-effectively deploy ITS services and partner with other public agencies and the private sector to create win-win agreements for the benefit of the citizens of Florida.³¹



5.3.3 Goals

The goals identified in the *Intelligent Transportation Systems Plan*, again, parallel the four goals of the *Plan* and the *2020 FTP*, as presented previously. However, the *Intelligent Transportation Systems Plan* did include the following additional ITS goal:

- Deploy an integrated, effective system.³²

This goal was added for consistency with national ITS policies that encourage ITS integration, and the deployment of ITS based on a common framework to achieve interoperability. Similarly, this goal reflects the FDOT's efforts to provide an interoperable statewide system through the development of statewide standards for ITS field devices, a common communication infrastructure, and a synthesized transportation management center (TMC) software library.

A copy of the *Intelligent Transportation Systems Plan's* goals and objectives are contained in *Appendix A*.

5.3.4 Themes and Strategies

Also as part of the *Intelligent Transportation Systems Plan*, themes and strategies were developed to summarize the intended outcome of the ITS deployments along the five major FIHS corridors. These include:

- Coordinated operations;
- Active facilities management; and
- Information sharing.

The mission, vision, and ITS goals presented in the *Intelligent Transportation Systems Plan* will be compared with the *National Intelligent Transportation Systems Program Plan's* mission, vision, and goals, and will be considered in the *Plan's* update.



6. The Updated Mission, Vision, Goals, and Objectives for Florida's Intelligent Transportation Systems Program

This section recommends revised mission, vision, goals, and objectives for the *Plan's* update. These strategic guidelines will provide a framework for the identification of new core strategies for the ITS Program, and will reflect national and state strategic guidelines.

6.1 The Updated Mission and Vision for Florida's Intelligent Transportation Systems

The FDOT is in the process of developing the *Statewide FDOT Business Plan* to further the objectives of the FDOT Business Model. The *Statewide FDOT Business Plan* consists of three tiers of business plans:

- The Tier 1 *Statewide FDOT Business Plan* contains elements of the 2020 FTP, the 2003 Short-Range Component of the 2020 FTP, the annual strategic objectives, and the Executive Board's initiatives;
- The Tier 2 Statewide Function Plan, which is used by all FDOT functional units, outlines their primary functions and provides links to the *Statewide FDOT Business Plan*; and
- The Tier 3 Functional Unit Plan is used by all units or divisions that support the Statewide Function Plan.

The TEOO, of which ITS is a unit, is preparing its Tier 2 Statewide Function Plan as a cooperative effort between the Central Office, its various units, and the District traffic operations offices. During the Tier 2 planning process, the traffic operations representatives defined the following revised mission and vision for the ITS Program:

- ITS Mission – Enhance the safety and efficiency of Florida's transportation system through the implementation of ITS technology in support of local, regional, and statewide mobility.
- ITS Vision – Be the national leader in ITS by providing the most efficient, reliable, and safe transportation system.



The recently created ITS mission and vision encompass the guiding principles of the national ITS program – safety, efficiency, and mobility – while still ensuring that the ITS needs of the local, regional, and state ITS agencies are considered (i.e., customer orientation). However, there are still two important aspects of the *National Intelligent Transportation Systems Program Plan* that should remain as major focus areas for Florida's ITS Program: security and integration, or interoperability.

It is recommended that the revised ITS mission and vision be further refined to capture the key initiatives and full foundation of the *National Intelligent Transportation Systems Program Plan*. The revised policy statements are identified below with the revised text in bold.

Revised ITS Mission:

Enhance the safety, **security**, and efficiency of Florida's transportation system through the implementation of **interoperable** ITS technology in support of local, regional, and statewide mobility.

Revised ITS Vision:

Be the national leader in ITS by promoting multijurisdictional coordination for the provision of an efficient, **secure**, reliable, and safe transportation system.

Upon further review and approval by the TEOO, the revised mission and vision will be implemented in the *Plan's* update through the creation of new ITS Program goals and objectives that are designed to support the mission and vision.

Additionally, as part of this update process, a Tier 3 Business Plan for the statewide ITS business unit will be compiled with links to the Tier 2 Plan to further define and detail the core functions of Florida's ITS Program.

6.2 Revised Goals and Objectives

A review and comparison of the national and state ITS and transportation system goals revealed that the primary goals of safety, systems management/mobility, economic competitiveness, and quality of life were consistently represented in all program policies. Table 6.1 illustrates the comparison of state and national transportation system and ITS goals.



However, two additional goals should be considered for inclusion in the *Plan* to reflect national and state efforts to advance the use of ITS applications for homeland security, and to promote integration of ITS services and technologies.

The *National Intelligent Transportation Systems Program Plan* was recently supplemented to enhance and revise the security goal in response to the September 11, 2001, events. The *Supplement to the National ITS Plan*:

*... raised the consciousness of the transportation community along with countless others, about the need for better critical infrastructure protection and crisis management, disaster planning and prevention, as well as effective detection and response, particularly in the case of deliberate terrorist attacks.*³³

Table 6.1 – Comparison of State and National Transportation System and Intelligent Transportation System Goals

ITS Goal	Florida's Intelligent Transportation Systems Strategic Plan	National Intelligent Transportation Systems Program Plan	2020 FTP	2003 Short Range Component of the 2020 FTP	Florida's Intelligent Transportation Systems Plan
Safety	✓	✓	✓	✓	✓
Systems Management/Mobility	✓	✓	✓	✓	✓
Economic Competitiveness	✓	✓	✓	✓	✓
Quality of Life/Environment	✓	✓	✓	✓	✓
Integrated, Effective System		✓			✓
Security		✓			

Additionally, *Version 5.0* of the *NITSA* was updated to provide security coverage enhancement in the *NITSA*. This update involved the inclusion of new user services and market packages for homeland security ITS applications designed to protect surface transportation information and infrastructure.



Recent federal ITS policies, such as *Parts 655 and 940 of Chapter 23 of the Code of Federal Regulations (CFR)*,³⁴ stress the importance of utilizing a regional ITS architecture (RITSA) and ITS standards to ensure interoperability among ITS services. Interoperability of ITS is important for improving interagency communications and data sharing among regional ITS stakeholders. Among the interoperability benefits for both system users and owners/operators are seamless ITS services from region to region; more accurate and timely travel information; improved incident response times; more coordinated and responsive traffic management systems; and the leveraging of limited resources (i.e., more bang for the buck).

Because of this commitment by the United States Department of Transportation (USDOT) and the Federal Highway Administration (FHWA) to expand ITS capabilities specifically for homeland security purposes and to ensure interoperability of ITS, these two goals are recommended for addition to the Florida ITS Program goals and objectives.

With these additions, the goals and objectives from the previous version of the *Plan* were combined with the goals and objectives of the FDOT's *Ten-Year ITS Cost Feasible Plan*, and were modified and updated to reflect recent national and state ITS trends and initiatives.

The updated ITS Program goals and objectives are recommended as follows:

1. *Move People and Goods Safely*

- 1.1 Reduce accident rates.
 - 1.1.1 Reduce accident rates and severities in construction work zones.
 - 1.1.2 Reduce accident rates at highway-rail grade crossings.
 - 1.1.3 Reduce weather-related traffic incidents.
 - 1.1.4 Reduce commercial vehicle safety violations.
 - 1.1.5 Improve the safety and convenience for pedestrians and bicyclists.
- 1.2 Reduce queuing on mainlines.
 - 1.2.1 Reduce queues on limited-access roadways from highway-rail grade crossings.
 - 1.2.2 Reduce mainline queues at limited access facility exit ramps.
 - 1.2.3 Reduce queues at weigh and inspection stations along the corridors.
 - 1.2.4 Reduce queues at intermodal facilities that impact corridor operations.
- 1.3 Improve safety of commercial vehicle operators at rest areas



- 1.4 Provide evacuation coordination services and emergency management.
 - 1.4.1 Provide pre-trip planning information for evacuation conditions.
 - 1.4.2 Provide traffic management during evacuation conditions.
 - 1.4.3 Provide route guidance information and information on traffic/travel conditions and weather, including winds, rainfalls, and storm surges.
 - 1.4.4 Support remote configuration management of highways during evacuation conditions or other emergencies.
 - 1.4.5 Provide accurate and timely traveler information regarding incidents on evacuation routes.
 - 1.4.6 Share emergency information among local and regional traffic management centers (RTMCs) and emergency management facilities.
 - 1.4.7 Detect, verify, respond to, and clear incidents and manage traffic around accidents, emergencies, and other incidents.

2. Preserve and Manage the System

- 2.1 Enhance mobility and efficiency.
 - 2.1.1 Improve travel time predictability and reliability on the corridors.
 - 2.1.2 Reduce accidents and other incidents during normal flows that result from congestion and delays caused by “rubber-necking” during incidents.
 - 2.1.3 Reduce congestion-related delays by decreasing queues and spillback from other facilities.
 - 2.1.4 Reduce delays caused by congestion in construction work zones.
 - 2.1.5 Manage traffic at interchange entrance ramps to improve mainline throughput and traffic flow.
 - 2.1.6 Reduce delays at tollbooths.
 - 2.1.7 Encourage multi-jurisdictional and multi-agency electronic payment service strategies for transit, parking and tolls.
 - 2.1.8 Reduce delays at the gates of intermodal facilities.
 - 2.1.9 Improve multimodal travel access and connections.
 - 2.1.10 Provide traveler information services with route and mode choice information.
 - 2.1.11 Provide inter and intra regional travel information services that seamlessly deliver information across jurisdictions, agencies and modes.
 - 2.1.12 Encourage the use of transit signal priority to improve transit travel time and reliability



- 2.1.13 Promote the use of advance vehicle locations systems to improve transit operations efficiency.
- 2.1.14 Balance demand throughout a regional network by better coordination of freeway management with arterial signal systems.
- 2.2 System Preservation
 - 2.2.1 Improve enforcement of illegally overweight vehicles.
- 2.3 Incident Management
 - 2.3.1 Improve ability to detect, verify, respond to, and clear incidents through effective communication and coordination between local governments, public safety officials and transportation system operators.
 - 2.3.2 Improve incident-related traveler information.
 - 2.3.2.1. Predict delays and clearance times.
- 2.4 Manage Special-Use Lanes (SULs)
- 2.5 Provide Data Archiving and Warehousing
 - 2.5.1 Conduct system evaluation and alternative analysis.
 - 2.5.2 Support and supplement other statewide data collection programs.
 - 2.5.3 Support highway operational performance reporting, modeling simulation, and other techniques for operations and management of the system.
 - 2.5.4 Develop before and after studies for ITS deployments.
- 3. *Enhance Economic Competitiveness*
 - 3.1 Ensure efficient landside access to intermodal, port, airport, and truck terminal facilities.
 - 3.2 Ensure efficient intermodal transfer of people and goods.
 - 3.3 Improve predictability of commercial travel and delivery times.
 - 3.4 Promote safe and efficient access of vehicles to markets.
 - 3.5 Expedite permitting and clearance of commercial vehicles at weigh and agricultural inspection sites to keep commerce moving.



- 3.6 Ensure efficient access to major activity centers such as tourist attractions, state parks, and other areas of interest.
 - 3.7 Provide safe and efficient tourist travel and reduce vehicle-miles traveled (VMT) through the provision of accurate and timely traveler information.
 - 3.8 Support the designation of corridors as strategic intermodal corridors and funding for ITS deployments.
4. *Enhance Quality of Life and the Environment*
- 4.1 Provide efficient statewide ITS services with autonomy for decision-making to support local needs and regional cooperation to promote efficiency and support regional and statewide goals.
 - 4.2 Improve interoperability of ITS services through the development of statewide uniform device standards and specifications.
 - 4.3 Support integration of ITS into state and local planning processes, programs, and capacity projects.
 - 4.4 Provide name recognition of key ITS-related services through branding that will instill trust and confidence in traveler information services, roadside assistance, electronic payment services, and other strategic services.
 - 4.5 Provide easy access and data mining capabilities for transportation planning and design for all partners to support decision-making.
 - 4.6 Provide accurate real-time data to technology, business and operational users for effective and responsive transportation operations.
 - 4.7 Reduce air-quality emissions from mobile sources.
 - 4.8 Reduce energy consumption.
 - 4.9 Reduce travel demand and promote ridesharing opportunities.



- 4.10 Reduce the potential for impacts from hazardous materials' (HAZMAT) incidents.
 - 4.10.1 Improve HAZMAT response systems.
 - 4.10.2 Provide real-time travel information for safe routes for HAZMAT that avoid densely populated areas.

- 5. *Deploy an Integrated, Effective System*
 - 5.1 Provide research and development for technologies to support deployments.
 - 5.2 Develop statewide standards and specifications for ITS field devices.
 - 5.3 Develop statewide standards for TMC software.
 - 5.4 Add a goal to the FTP to support an integrated, effective system.
 - 5.5 Develop regionally accepted system performance standards and measures that will drive transportation resource investment decisions.
 - 5.6 Promote the establishment of regional operating organizations to develop regional collaboration closely linked to the MPO transportation planning and decision process creating stronger links between operations and planning.
 - 5.7 Develop a communications architecture and backbone for statewide deployment.
 - 5.8 Develop standard procedures for operations and management.
 - 5.9 Develop statewide information exchange network standards and criteria.
 - 5.10 Standardize performance measures and archive data to produce a history of trends and establish benchmarks.
 - 5.11 Develop statewide procurement guidelines.
 - 5.12 Develop a statewide systems engineering process for design, integration, and testing that includes regular updates and enhancements of statewide architecture.



- 5.13 Develop statewide procurement contracts to leverage economies of scale.
 - 5.14 Develop an ITS asset management program to track and program replacement parts, migrate legacy systems, and manage the life cycle of deployments.
 - 5.15 Establish a statewide-managed funding program for ITS with project decision recommendations made by the ITS Office.
 - 5.16 Dedicate a percent of all FDOT funds, statewide-managed and district-allocated, for operations and management of ITS deployments.
 - 5.17 Update work program instructions to develop traceability with the *Statewide ITS Architecture (SITSA)*.³⁵
 - 5.18 Increase the professional capacity of the public and private sector in Florida to support planned deployments.
 - 5.19 Promote public-public partnerships to leverage financial and human resources.
 - 5.20 Promote public-private partnerships to leverage financial and human resources.
6. *Provide A Well-Prepared and Secure Transportation System*
- 6.1 Monitor and protect critical infrastructure.
 - 6.2 Add a goal to the FTP to provide a well-prepared and secure transportation system.
 - 6.3 Conduct formal vulnerability and threat assessments, both physical and cyber, of TMCs and field equipment, and their associated functions.
 - 6.4 Conduct formal vulnerability and threat assessments of related telecommunications infrastructures.
 - 6.5 Develop and implement mitigation plans to address vulnerabilities.
 - 6.6 Prepare recovery plan to maximize available resources, traffic capacity, and balance loading during recovery.



- 6.7 Prepare standard operating procedure for information collection, messaging, and dissemination of transportation system status to stakeholders and general public during response.
- 6.8 Screen and monitor commercial vehicles, cargo, and cargo handling facilities.
- 6.9 Establish and test alternative modes/alternative routes in emergency situations.
- 6.10 Provide for hazardous material movement electronic identification, monitoring and tracking to be coordinated by regional traffic management and public safety agencies.
- 6.11 Implement quick response plan for threatening or high-risk transit passengers.
- 6.12 Improve security for transit operators.
- 6.13 Promote the development of a wide-area alert to notify the traveling public in an emergency or disaster.



7. References

- ¹ Florida Department of Transportation, *Florida's Intelligent Transportation System Strategic Plan – Final Report* (August 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ² United States Department of Transportation, *National ITS Architecture, Version 5.0*. Available online at <http://itsarch.iteris.com/itsarch/index.htm>
- ³ Florida Department of Transportation, *2020 Florida Transportation Plan* (December 2000). Available online at www.dot.state.fl.us/planning/policy/default.htm
- ⁴ Florida Department of Transportation, *Florida Statewide ITS Strategic Plan – Summary of Survey Results* (August 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ⁵ Florida Department of Transportation, *Florida Statewide ITS Strategic Plan – Vision, Guiding Principles, Goals and Objectives* (August 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ⁶ Florida Department of Transportation, *Florida Statewide ITS Strategic Plan – ITS Project Cost Comparison* (August 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ⁷ Florida Department of Transportation, *The Business Plan of the Florida Statewide ITS Strategic Plan, 1999: An Implementation Program for the Next Five Years* (August 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ⁸ Florida Department of Transportation, *Florida Statewide ITS Strategic Plan – Department Organizational Structure Alternatives to Implement ITS* (August 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ⁹ Florida Department of Transportation, *Florida Statewide ITS Strategic Plan – ITS Cost Analysis Issue Paper* (August 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ¹⁰ KPMG, *Economic Impacts of Intelligent Transportation Systems in Florida – An Issue Paper – Final Report* (April 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems

Technical Memorandum No. 2
Florida's 2003 ITS Strategic Plan Update
Draft Updated ITS Vision, Goals, and Objectives



- ¹¹ Florida Department of Transportation, *Florida Statewide ITS Strategic Plan – Integration of ITS into the MPO Transportation Planning Process Issue Paper* (June 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ¹² Florida Department of Transportation, *Operations, Management and Maintenance Issues Paper* (June 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ¹³ Florida Department of Transportation, *Florida Statewide ITS Strategic Plan Procurement Issue Paper – Final* (January 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ¹⁴ Florida Department of Transportation, *Rural/Inter-Urban ITS Applications Issue Paper* (March 1999). Available online at www.dot.state.fl.us/IntelligentTransportationSystems
- ¹⁵ Florida Department of Transportation, *Florida Statewide ITS Strategic Plan – Implementation Authority Review and Recommendations Issue Paper* (August 1999). Available online at www.dot.state.fl.us/planning/systems/sm/its/NewITS.htm
- ¹⁶ Intelligent Transportation Society of America in cooperation with the United States Department of Transportation, *National Intelligent Transportation Systems Program Plan: A Ten-Year Vision* (January 2002). Available online at www.itsa.org/research.html
- ¹⁷ Florida Department of Transportation, *Florida's Intelligent Transportation System Strategic Plan – Final Report: 9.*
- ¹⁸ Florida Department of Transportation, *Florida's Intelligent Transportation System Strategic Plan – Final Report: 10-11.*
- ¹⁹ Florida Department of Transportation, *Florida's Intelligent Transportation System Strategic Plan – Final Report: 12-14.*
- ²⁰ Intelligent Transportation Society of America in cooperation with the United States Department of Transportation, *National Intelligent Transportation Systems Program Plan: A Ten-Year Vision: 1.*
- ²¹ Intelligent Transportation Society of America in cooperation with the United States Department of Transportation, *National Intelligent Transportation Systems Program Plan: A Ten-Year Vision: 3.*



- ²² Intelligent Transportation Society of America in cooperation with the United States Department of Transportation, *National Intelligent Transportation Systems Program Plan: A Ten-Year Vision*: 4.
- ²³ Intelligent Transportation Society of America in cooperation with the United States Department of Transportation, *Homeland Security and ITS: Using Intelligent Transportation Systems to Improve and Support Homeland Security – Supplement to the National ITS Plan: A Ten-Year Vision* (September 2002). Available online at www.itsa.org/research.html
- ²⁴ Intelligent Transportation Society of America in cooperation with the United States Department of Transportation, *National Intelligent Transportation Systems Program Plan: A Ten-Year Vision*: 4-5.
- ²⁵ Intelligent Transportation Society of America in cooperation with the United States Department of Transportation, *National Intelligent Transportation Systems Program Plan: A Ten-Year Vision*: 5-7.
- ²⁶ Florida Department of Transportation, *The 2003 Short-Range Component: The Department's Plan for Implementing the 2020 Florida Transportation Plan* (December 2003). Available online at www.dot.state.fl.us/planning/2020ftp
- ²⁷ PBS&J, *Intelligent Transportation Systems Plan: Saving Lives, Time, and Money*, FDOT Contract No. C-7772 (January 2003). Available online at www.dot.state.fl.us/IntelligentTransportationSystems/ITSDeployment/
- ²⁸ Florida Department of Transportation, *Ten-Year ITS Cost Feasible Plan*. Available online at www.dot.state.fl.us/IntelligentTransportationSystems/ITSDeployment/
- ²⁹ Florida Department of Transportation, *Technical Memorandum No. 2 – ITS Needs Model: ITS Corridor Master Plans for Florida's Principal FIHS Limited-Access Corridors*, Contract No. C-7772 (June 2002). Available online at www.dot.state.fl.us/IntelligentTransportationSystems/ITSDeployment/
- ³⁰ Florida Department of Transportation, *Technical Memorandum No. 2*: 12.
- ³¹ Florida Department of Transportation, *Technical Memorandum No. 2*: 12.
- ³² PBS&J, *Intelligent Transportation Systems Plan: Saving Lives, Time, and Money*: 341.

Technical Memorandum No. 2
Florida's 2003 ITS Strategic Plan Update
Draft Updated ITS Vision, Goals, and Objectives



- ³³ Intelligent Transportation Society of America in cooperation with the United States Department of Transportation, *Homeland Security and ITS: Using Intelligent Transportation Systems to Improve and Support Homeland Security – Supplement to the National ITS Plan: A Ten-Year Vision*: 1.
- ³⁴ United States Department of Transportation, *23 Code of Federal Regulations, Parts 655 and 940, Intelligent Transportation System Architecture and Standards, Final Rule*, Washington, D.C. (January 2001).
- ³⁵ Ice, Ron (Jaffe Engineering), *Florida Statewide Intelligent Transportation System Architecture and Standards* (June 2000). Kimley-Horn and Associates, Inc., FDOT Contract No. C-7354. Available online at www.consystem.com/html/florida/



Appendix A

Intelligent Transportation Systems Plan Goals and Objectives



Florida ITS Plan Goals and Objectives

1. Move People and Goods Safely

- 1.1. Reduce accident rates.
 - 1.1.1. Reduce accident rates caused by driver errors and the severity of accidents.
 - 1.1.2. Reduce accident rates and severities in construction work zones.
 - 1.1.3. Reduce accident rates at highway-rail grade crossings.
- 1.2. Reduce queuing on mainlines.
 - 1.2.1. Reduce queues on limited-access roadways from highway-rail grade crossings.
 - 1.2.2. Reduce queues at weigh and inspection stations along the corridors.
 - 1.2.3. Reduce queues at intermodal facilities that impact corridor operations.
- 1.3. Improve the safety of commercial vehicle operators in rest areas.
- 1.4. Provide evacuation coordination services and emergency management.
 - 1.4.1. Provide pre-trip planning information for evacuation conditions.
 - 1.4.2. Provide traffic management during evacuation conditions.
 - 1.4.3. Manage demand through communication with shelters and other safe harbors.
 - 1.4.4. Provide route guidance information and information on traffic/travel conditions and weather including winds, rainfalls, and storm surges.
 - 1.4.5. Support remote configuration management of highways during evacuation conditions or other emergencies.
 - 1.4.6. Provide accurate and timely traveler information regarding incidents on evacuation routes and updated weather information.
 - 1.4.7. Share emergency information among local and regional traffic management centers (TMCs) and emergency management facilities.
 - 1.4.8. Detect, verify, respond to, and clear incidents and manage traffic around accidents, emergencies, and other incidents.
 - 1.4.9. Support infrastructure security through surveillance at critical structures and interchanges.



2. *Preserve and Manage the System*

- 2.1. Enhance mobility and efficiency.
 - 2.1.1. Improve travel times along the corridors.
 - 2.1.2. Improve predictability and reliability of travel times.
 - 2.1.3. Reduce accidents and other incidents during normal flows that result from congestion and delays that are caused by “rubber-necking” during incidents.
 - 2.1.4. Reduce congestion-related delays by decreasing queues and spillback from other facilities.
 - 2.1.5. Reduce delays caused by congestion in construction work zones.
 - 2.1.6. Manage traffic accessing these major corridors at interchanges to improve mainline throughput and traffic flow.
 - 2.1.7. Reduce unnecessary delays at tollbooths.
 - 2.1.8. Reduce unnecessary delays at the gates of intermodal facilities.
 - 2.1.9. Provide traveler information services with route and mode choice information.

- 2.2. System Preservation
 - 2.2.1. Improve enforcement of illegally overweight vehicles.

- 2.3. Incident Management
 - 2.3.1. Improve ability to detect, verify, respond to, and clear incidents.
 - 2.3.2. Improve incident-related traveler information.
 - 2.3.2.1. Predict delays and clearance times.

- 2.4. Manage Special-Use Lanes (SULs)

- 2.5. Provide Data Archiving and Warehousing
 - 2.5.1. Conduct system evaluation and alternative analysis
 - 2.5.2. Support and supplement other statewide data collection programs
 - 2.5.3. Support highway operational performance reporting, modeling simulation and other techniques for operations and management of the system.
 - 2.5.4. Develop before and after studies for ITS deployments.



3. *Enhance Economic Competitiveness*

- 3.1. Ensure efficient landside access to intermodal, port, airport, and truck terminal facilities.
- 3.2. Ensure efficient intermodal transfer of people and goods.
- 3.3. Promote safe and efficient access of vehicles to markets.
- 3.4. Expedite permitting and clearance of commercial vehicles at weigh and agricultural inspection sites to keep commerce moving.
- 3.5. Ensure efficient access to major activity centers such as tourist attractions, state parks, and other areas of interest.
- 3.6. Provide safe and efficient tourist travel and reduce vehicle-miles traveled (VMT) through the provision of accurate and timely traveler information.
- 3.7. Support the designation of corridors as strategic intermodal corridors and funding for ITS deployments.

4. *Enhance Quality of Life and the Environment*

- 4.1. Provide efficient statewide ITS services with autonomy for decision-making to support local needs and regional cooperation to promote efficiency and support regional and statewide goals.
- 4.2. Improve interoperability of ITS services through the development of statewide uniform device standards and specifications.
- 4.3. Support integration of ITS into local planning processes, programs, and capacity projects.
- 4.4. Provide name recognition of key ITS-related services through branding that will instill trust and confidence in traveler information services, roadside assistance, electronic payment services, and other strategic services.
- 4.5. Provide easy access and data mining capabilities for transportation planning and design for all partners to support decision-making.



- 4.6. Provide accurate real-time data to technology, business and operational users for effective and responsive transportation operations.
- 4.7. Reduce air-quality emissions from mobile sources.
- 4.8. Reduce the potential for impacts from hazardous materials' (HAZMAT) incidents.
 - 4.8.1. Improve HAZMAT response systems.
 - 4.8.2. Improve the availability of traveler, weather, and shelter information during man-made and natural disasters.
 - 4.8.3. Provide safe routes for HAZMAT that avoid densely populated areas.
- 5. *Deploy an Integrated, Effective System*
 - 5.1. Provide research and development for technologies to support deployments.
 - 5.2. Develop statewide standards and specifications for ITS field devices.
 - 5.3. Develop statewide standards for TMC software.
 - 5.4. Develop a communications architecture and backbone for statewide deployment.
 - 5.5. Develop standard procedures for operations and management.
 - 5.6. Develop statewide information exchange network standards and criteria.
 - 5.7. Brand all critical statewide services such as traveler information, interactive voice response (IVR) systems (511 or 1-800 services), Road Ranger (RR) Service Patrols, **SunPass**®, Pre-Pass, etc.
 - 5.8. Standardize performance measures and archive data to produce a history of trends and establish benchmarks.
 - 5.9. Develop statewide procurement guidelines.
 - 5.10. Develop a statewide systems engineering process for design, integration, and testing that includes regular updates and enhancements of statewide architecture.



- 5.11. Develop statewide procurement contracts to leverage economies of scale.
- 5.12. Develop an ITS asset management program to track and program replacement parts, migrate legacy systems, and manage the life-cycle of deployments.
- 5.13. Establish a statewide-managed funding program for ITS with project decision recommendations made by the ITS Office.
- 5.14. Dedicate a percent of all FDOT funds, statewide-managed and district-allocated, for operations and management of ITS deployments.
- 5.15. Update work program instructions to develop traceability with the *Statewide ITS Architecture (SITSA)*.
- 5.16. Increase the professional capacity of the public and private sector in Florida to support planned deployments.
- 5.17. Promote public-public partnerships to leverage financial and human resources.
- 5.18. Promote public-private partnerships to leverage financial and human resources.