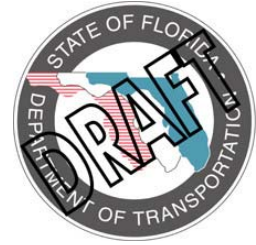


## Technical Memorandum 4.1



### *Florida's 2003 Intelligent Transportation System Strategic Plan Update –*

# **Recommended New Strategies for Rural / Interurban Intelligent Transportation System Applications**

**July 23, 2004  
Version 2**



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## **List of Acronyms**

ATSS.....	Airborne Traffic Surveillance System
CCTV .....	Closed-Circuit Television
CTD.....	Commission for the Transportation Disadvantaged
FDOT .....	Florida Department of Transportation
FIHS .....	Florida Intrastate Highway System
FSRDC .....	Florida State Rural Development Council
I-10.....	Interstate 10
I-75.....	Interstate 75
I-95 .....	Interstate 95
ITS.....	Intelligent Transportation System
NPS .....	National Park Service
NRITS .....	National Rural ITS (Conference)
REDI.....	Rural Economic Development Initiative
SIS.....	Strategic Intermodal System
SR.....	State Road
TTMS.....	Telemetered Traffic Monitoring Site



## **1. Purpose**

This *Technical Memorandum* contains recommendations that will be used to update the original *Rural/Inter-Urban ITS Applications Issue Paper*.<sup>1</sup> Based on the implications of the Florida Department of Transportation's (FDOT) *Ten-Year ITS Cost Feasible Plan*<sup>2</sup> and other emerging rural concerns, such as incident detection/response, emergency evacuation, and economic sustainability, new priorities will be identified for deploying rural intelligent transportation systems (ITS) in Florida.

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<sup>1</sup> Florida Department of Transportation, *Rural / Inter-Urban ITS Applications Issue Paper* (1999). Available online at <http://www.dot.state.fl.us/planning/systems/sm/its/NewITS.htm>

<sup>2</sup> PBS&J, *Ten-Year ITS Cost Feasible Plan* (October 2002). FDOT Contract No. C-7772. Available online at <http://www.dot.state.fl.us/IntelligentTransportationSystems/ITSDeployment/>



## 2. Background

The original *Rural/Inter-Urban ITS Applications Issue Paper* identified four primary areas of focus for rural ITS applications:

- 1) Safety and emergency management services;
- 2) Rural tourist information services;
- 3) Paratransit productivity; and
- 4) Intermodal connectivity.

These transportation-related areas should remain the general focus of rural ITS applications in Florida.

Rural Florida's economy is based on agriculture, citrus, forestry, mining, and tourism. The original *Issue Paper* clearly noted that the overriding objective in any rural ITS application is to stimulate economic redevelopment, in accordance with the legislative mandated rural marketing strategy, *Crossroads Florida*.<sup>3</sup> In its efforts to address rural development policy and program issues, the Florida State Rural Development Council (FSRDC) has focused on a wide range of rural development matters, including land and wildlife, leisure time, improving communities, job opportunities, government spending, education, families, diversity, safety, and health. In combination with the Rural Economic Development Initiative (REDI), a multiagency troubleshooting team created by the Florida Lieutenant Governor and the Secretary of Commerce over 10 years ago, a development strategy has been put in place to assist rural communities in Florida.

Areas of geographic focus for rural ITS deployments could be any of Florida's 32 rural counties, or, more specifically, the counties where federally-designated rural enterprise communities are located (e.g., Gadsden, Putnam, DeSoto, Hamilton, Hardee, Madison, and Okeechobee counties).

Rural travel corridors exhibiting the greatest crash numbers provide a particular focus for rural ITS applications. These corridors include State Road (SR) 43 in Hillsborough and Manatee counties, SR 44 in Volusia county, SR 54 in Pasco county, SR 64 in Manatee county, and SR 100 in Union and Putnam counties. Additionally, the rural portions of Interstate 10 (I-10) and Interstate 75 (I-75) that were identified as "high accident" locations in the legacy catalogue from the *Ten-Year ITS Cost Feasible Plan* are already being addressed.

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<sup>3</sup> Florida State Rural Development Council, *Crossroads Florida: Opportunities for Business Growth in Florida's Heartland*.



To date, the emphasis for Florida ITS deployments has been on the urban Florida Intrastate Highway System (FIHS) corridors at the direction of FDOT management, the Districts, and the Executive Committee. However, the interstate and intrastate systems that link major Florida cities also pass through almost every rural county in the State. All of rural Florida is near a population center. As the *Ten-Year ITS Cost Feasible Plan* is implemented, the basic infrastructure foundation for extension into rural Florida will also be established. The *Cost Feasible Plan* does recognize the need to address the high-incident rural corridors; however, under current FDOT policy, this issue will not be addressed until after most of the urban infrastructure is completed.

Another trend affecting rural Florida is its appeal to visitors. Almost 14 million “eco-tourists” a year are coming to Florida to hunt, fish, camp, hike, or visit national and state parks. Another 11 million “heritage tourists” are coming each year to visit Florida’s historical or cultural/ethnic heritage sites.

In 2003, legislation was signed into law to create the Florida Strategic Intermodal System (SIS).<sup>4</sup> The goal of the SIS is to provide a seamless transportation network that serves Florida’s residents, visitors, and businesses more efficiently, while enhancing Florida’s economic prosperity, competitiveness, and quality of life as the demand to move more people and goods continues to dramatically increase. Now, in Stage II, the initial strategic plan development stage, existing and emerging SIS hubs and corridors – many of which are located in Florida’s rural areas – are being classified according to their level of interregional and/or statewide significance (e.g., rail-freight terminals handling 4 million bulk tons or 36,000 intermodal tons per year; seaports with 250,000 home-port passengers per year, etc.).<sup>5</sup>

Once this assessment and prioritization process is completed, specific facilities and services appropriate for ITS applications will be clearly identified. These facilities and services can then be linked by various real-time information management and surveillance technologies to provide greater efficiencies in accessibility, mobility, processing, operations, safety, and security.

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<sup>4</sup> FLA. STAT. § 339.61-64

<sup>5</sup> More information regarding Florida’s SIS is available online at <http://www.dot.state.fl.us/planning/sis/>



### 3. Lessons Learned from the 2003 National Rural ITS Conference

In August 2003, Florida hosted the National Rural ITS (NRITS) Conference. This provided an excellent and convenient opportunity to learn first-hand how other states have developed their rural ITS programs. Many of the recognized leaders in rural ITS development and deployment were in attendance and their insight was documented. As a result, the summary of “lessons learned” noted below can provide a more focused strategy for Florida to successfully launch a rural ITS program.

- We must clearly identify what Florida’s rural safety and mobility needs are.
- We need to better understand and appreciate the issues that affect rural Florida’s economy, sustainability, and quality of life.
- We need to establish working relationships in rural Florida.
- We need to develop a marketing and funding plan for mainstreaming rural ITS deployments in Florida.
- We need to implement stand-alone ITS projects based on consensus and anticipated effectiveness – find “early winners” and “hot-spot” applications. A rural ITS “program” is too much commitment at this time.
- Fire Chief Carl Plaughter, a guest speaker from Orange County, Florida, identified what he believed was the most appropriate and needed application for ITS in rural areas: automatic crash notification and warning for approaching emergency vehicles (e.g., Opti-Coms at rural intersections).



Figure 3.1

Rural crashes are often difficult to detect.

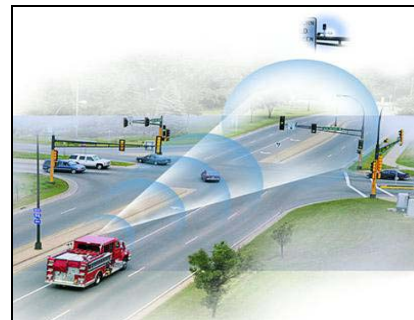


Figure 3.2

Intelligent transportation systems enhance emergency response.



## **4. Recommendations**

In accordance with the aforementioned “lessons learned,” the following new strategies are offered for rural ITS deployments in Florida, and are to be considered as recommended “start-up” actions.

### **1) Conduct Outreach Workshops**

Focus on quantifying mobility and safety needs by conducting multiple outreach workshops or town meetings in various locations to build ITS awareness and broaden stakeholder support.

### **2) Build a Partnership with the FSRDC**

Transportation should not be the only “hook” for rural ITS applications. This multiagency council can help build critical alliances and identify other ITS applications. Other key partners should include the Florida Commission for the Transportation Disadvantaged (CTD), VISIT FLORIDA, Native American organizations, and the National Park Service (NPS).



### **3) Engage Rural Districts and Rural Legislators as “Champions”**

Solicit FDOT Districts 1, 2, or 3 to take the leadership role in providing venues for pilot project deployments, recruitment of legislative “champion(s),” and authorship of Item 4 (below). Also, the FDOT must involve District maintenance and construction personnel for deployment support. Top-down executive support from the FDOT and primary rural industries is imperative.

### **4) Develop a Marketing and Funding Plan**

Local integration is the key for mainstreaming. Emphasis should be placed on leveraging funding from tourism, public safety, transit, and federal lands. Some initial funding could come from the I-95 Corridor Coalition as part of a matching fund demonstration project. (Refer to Item 5 below.) Incentives and economies of scale should be created for private sector involvement, too.



5) **Identify “Hot-Spot” Projects for Immediate Deployment**

Implementing District ideas is the key. Besides improving incident detection and emergency response in rural areas, other ITS project deployments should include detection and monitoring systems for statewide evacuations, and customized rural tourism information systems (e.g., the Everglades Radio Network).

Coordinating the FDOT’s 274 active telemetered traffic monitoring sites (TTMS) – Hardee county is the only county not covered – and unifying an ever-increasing, disaggregated system of hundreds of closed-circuit television (CCTV) cameras into a “shared network” that will provide immediate benefits to the State’s emergency operations center should be the first priority. As part of the *i*Florida project, a pilot project will be developed to integrate 54 key TTMS with 30 adjacent video detection locations to support real-time traffic data collection with images. If this project proves successful, it will likely be recommended for statewide corridor monitoring implementation.

Discussions have recently begun on testing the capability of the FDOT’s airborne traffic surveillance system (ATSS) in improving rural incident detection. A joint Florida-Georgia proposal to the I-95 Corridor Coalition for a dual, customized, rural tourist and evacuation information system is also in the formative stages. Finally, as mentioned previously, SIS facilities are soon to be prioritized and this will further identify specific rural areas for ITS applications in Florida.