



FDOT's Monthly ITS News

SUNGUIDE®



# DISSEMINATOR

## ITS Plays Key Role for Florida's Turnpike During Emergency Bridge Repair

During the early morning hours of Monday, December 14, 2009, a tractor trailer carrying food supplies, including cans of flammable cooking spray, overturned and caught on fire when the driver was cut off by another motorist running a stop sign on County Road (CR) 561 in Minneola, part of Lake County. While the crash event did not occur on Florida's Turnpike, what resulted was a significant truck fire, causing major damage to at least five concrete beams in the center bridge span carrying the northbound section of Florida's Turnpike over CR 561 at Mile Post 282. Northbound lanes of the Florida's Turnpike were closed to manage the incident and all traffic was detoured to State Road (SR) 50 in Clermont, approximately 10 miles south of the incident location, as interchanges in this area of the Turnpike are approximately 13 miles apart.

After structural engineers completed the assessment of the bridge that morning, it was determined that all center span beams and deck would require replacement, while other elements, such as bridge piers, required certain rehabilitation to strengthen them from the damage sustained. At the same time, the traffic detour had already resulted in traffic gridlock to the area, including the required re-routing of all northbound Turnpike traffic, made up of both local trips and interregional traffic, onto SR 50 and US 27—a 19-mile detour route through Clermont in order to rejoin the Turnpike near Leesburg. By Monday afternoon, Orlando traffic reporters were advising that the detour was adding multiple hours to commuters' trips and even creating impacts south into Orange County corridors, such as SR 50 and US 441. This Turnpike section serves to connect the Orlando area with I-75 at Wildwood.



With the holidays quickly approaching, some of the busiest traffic days of the year were anticipated; it was clear it would be necessary to determine a way to reopen the Turnpike to northbound traffic. Luckily, the southbound Turnpike bridge over CR 561 was not damaged; however, this southbound cross-section is only two lanes in total. The Roadway Maintenance, Construction, Production, and Traffic

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Operations divisions at Florida's Turnpike Enterprise (FTE) put their heads together to determine how to best accommodate two-way traffic through the area and also provide a safe work zone for the bridge replacement to occur. Within 36 hours of the event, two sets of emergency contracts were awarded, following a declaration of emergency being signed by the Florida Department of Transportation (FDOT) Secretary. The first emergency contract was to construct and maintain an emergency traffic diversion plan. This plan narrows the southbound Turnpike to one lane and crosses the northbound traffic over to the inside lane of the southbound roadway, after first narrowing the two northbound lanes to one. The second emergency contract would be an expedited replacement of the center bridge span of the damaged northbound bridge with an incentive structured to encourage work around-the-clock and a completion by December 31, 2009—with the goal of reopening all Turnpike lanes by the start of the new approaching decade and reducing traffic impacts over the holidays.

The more difficult portion of managing this emergency was just about to begin. Fortunately, FTE has a complete complement of intelligent transportation systems (ITS) to monitor traffic conditions, advise motorists, and provide traffic data to make decisions. The FTE's transportation management center (TMC) recently integrated vehicle detection devices (manufactured by Wavetronix LLC) in this section of the Turnpike in its new SunGuide® software deployment. Closed-circuit television monitoring cameras also exist spaced approximately every one-mile. Dynamic message signs (DMS), highway advisory radio (HAR) and citizens' band radio advisory system elements all exist in each direction of the incident location. During the time period which the Turnpike would be narrowed to one lane in each direction, it was estimated that significant backups would occur in each direction, particularly on the Fridays, Saturdays, and Sundays within the Christmas and New Year's weeks. While the Turnpike's vehicle detection infrastructure has just been integrated into SunGuide within recent months, a telemetric traffic monitoring site maintained by FDOT's Planning Office exists within one-mile of the bridge, and provided hourly traffic trend information from 2008 to assist in traffic management efforts.

Turnpike Traffic Operations staff reviewed traffic volume trends and worked with other departments, including the Public Information Office (PIO), to develop extensive plans to reach as many potential travelers with pre-trip and real-time information as possible. One challenge realized was that the traffic conditions would change significantly during the two-to-three week period, with periods when the one-lane capacity in each direction would be sufficient to handle traffic demands, and other time periods when more than 2,500 vehicles per hour were anticipated to approach the one-lane section in each direction, or roughly 700 vehicles per hour more than this altered section's traffic capacity could handle. A big challenge to overcome was that while some traffic is local, a majority of the traffic was long-distance trips, particularly over the holiday period. Traffic advisories must reach travelers in enough time for them to alter their trip; FTE must provide real-time delay information to enable travelers to make an informed decision on whether to proceed through the work zone with delays, or use an alternate route. It would be especially challenging to get advance notice to those motorists coming from other states down the I-75 corridor.

FTE's TMC reached out to the FDOT Central Office and Districts Two and Five to assist in providing additional advisory tools, such as statewide 511 traveler information floodgate messages, portable HARs on I-75 between I-10 (the Lake City area) and Ocala, and portable variable message signs to place on I-75. The Southern Traffic Information Exchange (STIX) partnership was activated, with correspondence to the Georgia Department of Transportation's TMC in Atlanta, and an offer



to activate southbound DMSs on I-75 in southern Georgia, whenever warranted. Messaging protocols in the Turnpike's TMC were adjusted to use a time-based delay message on the DMS, ranging from minimal delays to the number of hours. Therefore, travel time 'delay' was taken out of the SunGuide software on a real-time basis and placed on a rotating line of the DMS with alternate route information, to draw extra attention. Statewide 511 incidents were updated as delays grew, with the length of delay being reported.

Additional attention was also focused on incident management elements since only one lane was open in each direction. Even a short-duration incident would create a severe traffic situation; therefore, extra State Farm Safety Patrol (Road Ranger) hours were requested, and a special extension of the Turnpike's Towing and Roadside Repair Program had wreckers staged at the approach to the work zone in both directions to more effectively clear any incidents in the one-lane section. Extensive coordination took place with the Florida Highway Patrol to ensure that motorists would see blue lights and slow when approaching the transition area as well as in areas of anticipated queuing.

During the emergency, Turnpike managers debated how such a repair and restoration event could have been successfully completed without having real-time traffic information available to our customers; the data to make decisions on when to plan traffic impacts of certain traffic shifts; and the ability to monitor progress via CCTVs, available from multiple TMC locations in Orlando and Pompano, as was provided by FTE's TMC. At the time of writing, FTE planned to reopen all northbound lanes, including restoration of the second southbound lane, at Mile Post 282 approximately one week early—by midday on December 24, Christmas Eve. Complaint levels logged by our PIO were minimal—mostly due to the great teamwork displayed by all parties involved in effectively getting the word out. This emergency repair provides a great example of the value ITS can have to effectively manage such an event.



This article was provided by John Easterling, Florida's Turnpike Enterprise. For information, please contact Mr. Easterling at (954) 934-1292 or email to [John.Easterling@dot.state.fl.us](mailto:John.Easterling@dot.state.fl.us).

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# A New Safer Traffic Signal Head Indication: The Flashing Yellow Arrow

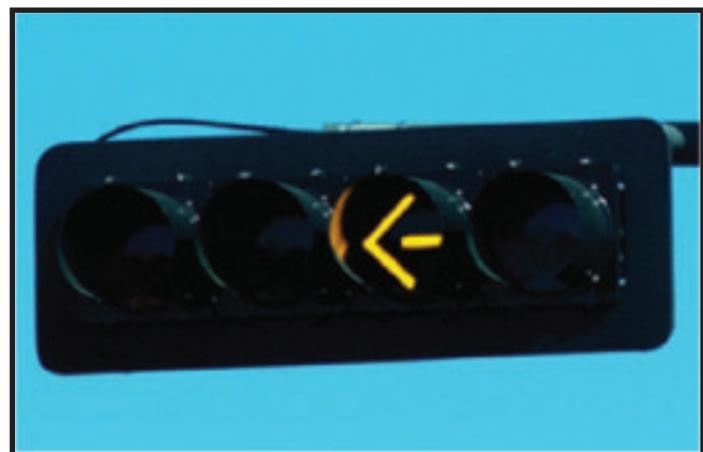
The Florida Department of Transportation (FDOT), along with 17 other states, received interim approval from the Federal Highway Administration (FHWA) to install the flashing yellow arrow (FYA) signal indication for permissive left turns at signals on state-maintained highways in Florida.

Traffic investigators have concluded that the FYA is a safer and more effective signal at conveying the need to yield before turning left to drivers than the simple circular green light. Based on National Cooperative Highway Research Program (NCHRP) Report 493, Impacts on Practice, recommendations, and subsequent additional experimentation, FHWA considers the FYA to be successful.

Motorists responded strongly and favorably to the concept with little or no public information; these highway users intuitively knew what the flashing yellow arrow meant. The FHWA believes that the FYA has a low risk of safety or operational concerns. Further, the optional use of the FYA provides safety and operational benefits that merit earlier implementation by agencies that wish to use it, pending official Manual on Uniform Traffic Control Devices (MUTCD) rulemaking.

FYA provides the ability to easily implement lead-lag, left-turn phasing and/or variable phasing by time-of-day, without revising signal hardware or creating the "left-turn yellow trap" that can occur with the traditional circular green display. Discussions at recent meetings of the National Committee on Uniform Traffic Control Devices (NCUTCD) indicate a consensus in the practitioner community in support of optional FYA use. There is a low risk of negative reactions by industry or specific manufacturers or suppliers, and FHWA does not perceive any adverse financial impacts. All existing signal manufacturers make standard signal faces capable of displaying the FYA for left-turn sequences.

The FYA display in a separate signal face for the left-turn movement also offers more versatility in field applications. It is capable of being operated in any of the various modes of left-turn operation by time-of-day.

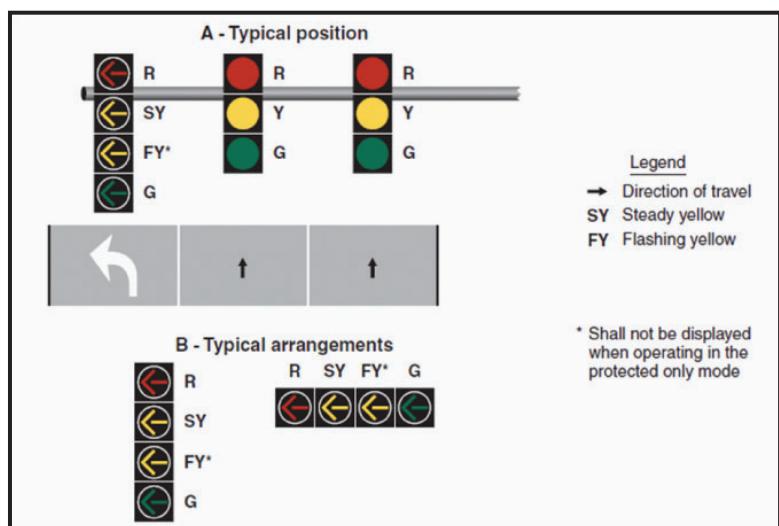


RED

STEADY YELLOW

FLASHING YELLOW

GREEN



Typical Position and Arrangements of Separate Signal Faces with Flushing Yellow Arrow for Protected/Permissive Mode and Protected Only Mode Left Turns

A logical extension is the application of flashing arrow indications for right-turn movements. This has also been added to Part 4 for optional use in separate right-turn signal faces, to provide jurisdictions with a useful tool to effectively control a wide variety of situations involving right turns.

This interim approval does not create a new mandate compelling installation of the FYA for left turns, but for those agencies that do wish to use it, it is a low-cost measure to implement. Effective January 15, 2010, the provisions of the interim approval have been incorporated into the MUTCD 2009 edition.

This article was provided by Alan El-Urfali, FDOT Traffic Engineering and Operations Office. For information, please contact Mr. El-Urfali at (850) 410-5413 or email to Alan.El-Urfali@dot.state.fl.us.

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# All Roadways Covered—District Six Completes ITS Deployment Project

The Florida Department of Transportation (FDOT) District Six Office recently completed the Interstate 395 (I-395)/State Road 826 (SR 826) Intelligent Transportation Systems (ITS) Project and now has complete coverage along every FDOT limited-access roadway in Miami-Dade County.

This project was designed to incorporate the previously unmanaged sections on I-395 with the SunGuide® Transportation Management Center (TMC) as well as to enhance a few areas with better coverage and reliability along SR 826.

The I-395 portion of the project was divided into three segments and began construction in June 2008. The first segment included installation of fiber optic cable, ten microwave vehicle detectors (MVDS) units and eight closed-circuit television (CCTV) cameras from the I-95/I-395 interchange to Alton Road. This stretch connects the various surrounding islands of Miami Beach as well as the City of Miami Beach to the mainline. It is among the most scenic and important causeways of South Florida and is also used as one of the main east/west evacuation routes for businesses and residents during times of emergency situations. The second segment implemented two CCTV cameras, one dynamic message sign (DMS), and fiber optic cable along Port Boulevard (SR 886) to a location in the Port of Miami. The third segment of the project installed fiber optic cable along Biscayne Boulevard (US-1) from I-395 to Port Boulevard to ensure connectivity along the area. Port Boulevard connects the mainline traffic near the city's downtown area to the Port of Miami, which is one of the busiest ports in America. Known for its dual distinction of being the Cruise Capital of the World as well as for being the Cargo Gateway of the Americas, the Port of Miami is a billion-dollar contributor to the South Florida economy and is directly responsible for 176,000 direct and indirect jobs. Ensuring that port traffic moves smoothly and motorist are informed of travel conditions as they enter and exit the port is essential to the livelihood of our community.

Along SR 826—one of the most-heavily traveled roadways in Miami Dade County—various ITS devices were installed from NW 25th Street to the Interstate 75 interchange. Although the roadway was already instrumented with ITS technologies, the project served to supplement several areas on the corridor by migrating four existing CCTV cameras from operating on a wireless communications system and integrating them with the ITS fiber optic backbone. Additionally, 37 MVDS units, six CCTV cameras, and three DMSs were installed along the project limits in the north and southbound direction of the highway.

Expanding and enhancing the ITS backbone along these important South Florida highways marks a significant milestone for the District Six ITS Program. This \$7.5 million project, which took less than two years to complete, is allowing FDOT to provide motorists with a better, more effective traffic management system in the region. It is also enhancing the public's awareness of the ITS Program by featuring full-color SunGuide® logo plaques on all the newly-installed DMS structures.

This article was provided by Javier Rodriguez, FDOT District Six. For information, please contact Mr. Rodriguez at (305) 470-5341 or email to [Javier.Rodriguez2@dot.state.fl.us](mailto:Javier.Rodriguez2@dot.state.fl.us).

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# Construction Career Days Held in South Florida

## Two-Day Job Fair Alerts Students About Opportunities in Construction and Transportation

The 8th annual South Florida Construction Career Days (CCD), a two-day event that spotlights career and training opportunities in the construction and transportation industries, was hosted at the Bergeron Rodeo Grounds in Davie on October 27-28, 2009. CCD provides a forum for high school and career/training students in Broward, Miami-Dade, and Palm Beach Counties, to learn about opportunities in the highway and bridge construction fields. To date, over 11,000 students have participated in the South Florida CCD.

The students experienced over 30 hands-on learning labs presented by South Florida construction and transportation industry professionals. Lab subjects included asphalt mix design, concrete mix design, environmental engineering, computer-based bridge design, surveying, traffic management, rapid incident response, and work zone safety. In the CCD labs, students learned resume and job application preparation, construction education opportunities, and interviewing skills.

Florida's Turnpike Enterprise (FTE), which has been a participating agency for several years, coordinated an intelligent transportation systems (ITS) learning lab. It consisted of real-time, live access for students to use the Turnpike roadway traffic cameras and ITS devices, and a hands-on review of closed-circuit television (CCTV) cameras. Students were also able to activate Turnpike overhead electronic signs with safety messages as well as create their own Ethernet cable connector. District Four ITS personnel participated for the first time and displayed a Road Ranger truck. Staff spoke to the students about careers in incident management as well as safety on the road from both a worker's and driver's point of view. Additionally, I-595 Express, LLC participated by displaying a 70-ton heavy duty wrecker used in the Rapid Incident Scene Clearance (RISC) Program. Students learned about incident management through a debris spill simulation and a close-up inspection of the wrecker.

"Many professions have little to offer young people because students typically lack practical experience," said Peter Nissen, Florida Department of Transportation District Four Construction Engineer and CCD chairperson. "Our industry is just the opposite. We've got good-paying jobs available for those just starting in the field."

Event sponsors included the U.S. Department of Transportation Federal Highway Administration, Florida Transportation Builders' Association, Engineering Contractors Association, and Florida Department of Transportation. Exhibitors on-site were representing local construction contractors, engineering consultants, equipment dealers and suppliers, trade associations, government, and education sectors.

To learn how your organization can be a part of South Florida CDC, visit [www.ccdfl.com](http://www.ccdfl.com). For more information about each organization's participation, contact:

- Gaetano (Guy) Francese, District Four ITS Unit, at 954-847-2797 or [Gaetano.Francese@dot.state.fl.us](mailto:Gaetano.Francese@dot.state.fl.us)
- John Easterling, Florida's Turnpike Enterprise, at 954-975-4855 or [John.Easterling@dot.state.fl.us](mailto:John.Easterling@dot.state.fl.us)
- Catherine Werner, I-595 Express, LLC, at 954-297-2787 or [Catherine\\_Werner@royjorgensen.com](mailto:Catherine_Werner@royjorgensen.com)

This article was provided by Sarah Stanley, FDOT District Four. For information, please contact Ms. Stanley at (954) 847-2697 or email to [SStanley@smartsunguide.com](mailto:SStanley@smartsunguide.com).



Students participated in a debris spill simulation and learned about the RISC program.



Students talked to Road Rangers about safety and incident management.

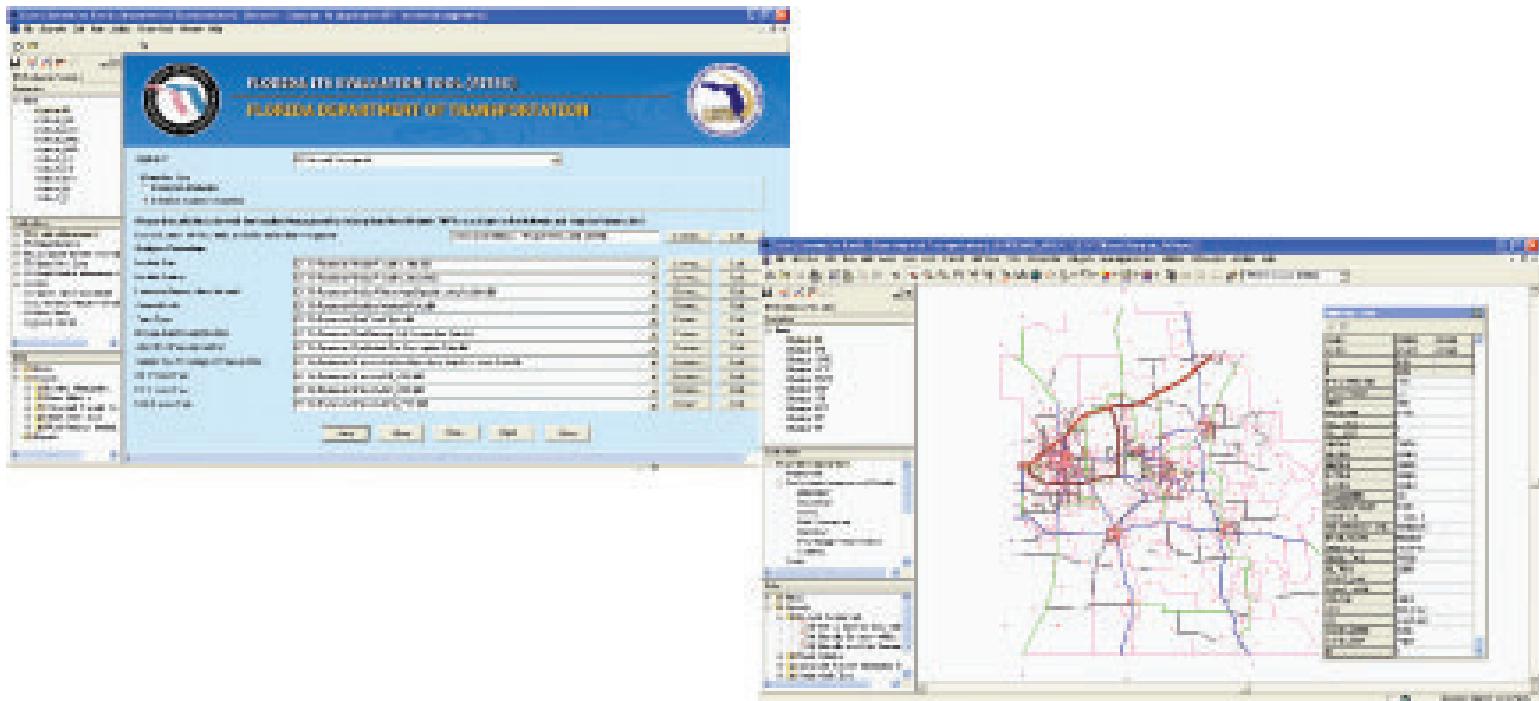
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# Introducing Florida's Intelligent Transportation Systems Evaluation Tool

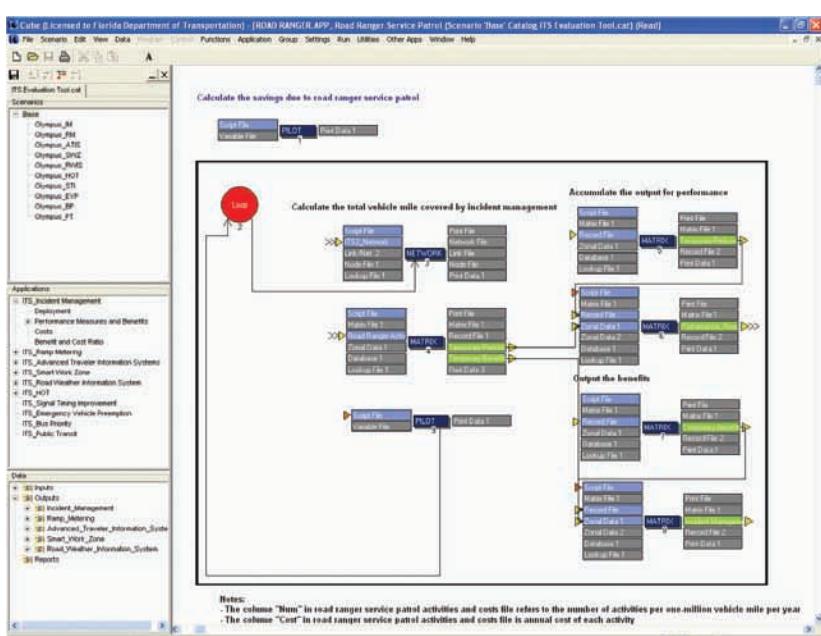
Intelligent transportation systems (ITS) planning requires the use of tools to assess the performance of ITS deployment alternatives relative to each other and to other types of transportation system improvement alternatives. In 2007, the Florida Department of Transportation (FDOT) initiated an 18-month research project to develop tools and procedures to perform sketch-planning evaluations of the costs and benefits of ITS alternatives within the Florida Standard Urban Transportation Model Structure (FSUTMS) / Cube software environment. The product of the research was Florida's Intelligent Transportation Systems Evaluation (FITSEVAL) tool.

This project used Cube script language to implement the evaluation tool procedures. Developing an ITS evaluation capability as part of the FSUTMS allows a powerful, user-friendly, and consistent evaluation of ITS deployment alternatives. Depending on the types of ITS deployments evaluated, the tool can produce various performance measures, including vehicle miles of travel (VMT); vehicle hours of travel (VHT), average speed, number of accidents, and emission.

The tool utilizes the user interface and modeling capabilities of the Cube software environment.



Examples of the FITSEVAL User Interface



Utilization of Cube Modeling Environment in the FITSEVAL Tool Development

FDOT conducted a workshop on FITSEVAL tool in Orlando on June 22-24, 2009, which was attended by metropolitan planning organizations (MPO), consulting agencies, and FDOT personnel. The workshop discussed the benefits of the tool and provided hands-on training over a three-day training period.

Agencies within and outside of Florida have shown significant interest in this software. Within Florida, Districts and MPOs in southeast, southwest, and central Florida are in discussions with the Central Office to determine the best approaches to integrate the FITSEVAL tool as part of their regional FSUTMS demand models so they can model ITS alternatives for use in short- and long-range transportation planning process. This tool is provided free of cost to Florida agencies; however, each region is required to customize the tool to fit their own needs. The tool customization requires support from a

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Performance Summary - Safety

Period	W/O ITS	W/ ITS	W/O ITS	W/ ITS	W/O ITS	W/ ITS	PDO
1	0.73	0.56	52.33	51.02	67.80	65.90	
2	1.20	0.92	97.00	94.53	129.14	125.52	
Total	1.92	1.48	149.34	145.55	196.94	191.42	

Performance Summary - Energy

Period	W/O ITS	W/ ITS
1	100759.68	59621.11
2	1187161.74	702462.57
Total	1287921.42	762083.68

Performance Summary - Environment

Period	CO Emission in Queue (Grams)	HC Emission in Queue (Grams)	NOx Emission in Queue (Grams)			
	W/O ITS	W/ ITS	W/O ITS	W/ ITS	W/O ITS	W/ ITS
1	16.63	9.84	3.02	1.78	1.06	0.63
2	194.34	115.00	35.23	20.85	12.35	7.31
Total	210.98	124.84	38.25	22.63	13.41	7.93

Performance Summary - Road Ranger

Period	Activity Number	
	W/O ITS	W/ ITS
1	0.00	3.80
2	0.00	6.25
Total	0.00	10.05

#### *Report Produced by the FITSEVAL Tool*

consulting agency or the tool's developers, Florida International University (FIU). FDOT and MPOs are assessing the effort required for integrating FITSEVAL as part of their demand models and are trying to identify funds for this effort.

FDOT Central Office Systems Planning and the project team have presented and discussed this tool with the Virginia Department of Transportation, along with an MPO in New Mexico and the Federal Highway Administration's Washington, DC office. These outside agencies have shown significant interest in this tool as well.

This project exemplifies FDOT's commitment to conduct "applied research" that would immediately benefit FDOT after completion of the research product. It is anticipated that more agencies within Florida will recognize the benefits of FITSEVAL and use it in the near future. This tool will also support agencies in better capturing the ITS benefits and costs while reviewing deployment alternatives.

This article was provided by Mohammed A. Hadi, Ph.D., PE, Florida International University, Vidya Mysore, FDOT; and Arun Krishnamurthy, FDOT Traffic Engineering and Operations Office. For information, please contact Mr. Krishnamurthy at (850) 410-5615 or email to Arun.Krishnamurthy@dot.state.fl.us.com.

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# FDOT Transitions Portable MOT Devices to APL

In partnership with the Florida Department of Transportation (FDOT) Product Evaluation section, the FDOT Traffic Engineering Research Lab (TERL) has embarked on an effort to transition electronic devices meeting *FDOT Standard Specifications 102 and 990-3* from the Qualified Products List (QPL) to the Approved Product List (APL). These devices are typically used for maintenance of traffic (MOT) during construction/maintenance projects or incident management activities and consist of:

- Portable arrow boards,
- Portable changeable (variable) message signs,
- Portable highway advisory radio,
- Portable radar speed display units,
- Portable regulatory signs, and
- Warning lights.

The scope of the transition effort constitutes 20 vendors with a total of approximately 135 devices.

Some of the manufacturers have both portable and permanent products and the specifications for portable and permanent devices are similar. This is expected to yield efficiencies due to:

- Manufacturers of both portable and permanent products only need to go through one qualification (or requalification) process leading to time savings for both the manufacturers' submittal and FDOT review.
- Since the device specifications are similar, synergies are gained during product evaluation resulting in shorter review time for FDOT and shorter turn-around time for manufacturers.

The transition will occur over a two-year period beginning January 4, 2010. During this period, the APL certification number and/or the QPL number shall be permanently affixed to the product (both are preferred).

Vendors of the effected products shall follow the standard FDOT APL approval process: [http://www.dot.state.fl.us/trafficoperations/Traf\\_Sys/terl/apl2.shtm](http://www.dot.state.fl.us/trafficoperations/Traf_Sys/terl/apl2.shtm). This is a three-step process; vendors currently on the QPL are allowed to go directly to Step 2: Vendor Qualification.

The vendor qualification step must be completed by December 31, 2010. To ensure that FDOT and the vendor have enough time to complete the qualification process, vendors should complete and submit the Quality Assurance Evaluation Survey by March 31, 2010. The portable MOT products that are currently listed on the QPL will be listed on the APL until December 31, 2010. After this date, all products supplied by manufacturers that are not qualified will be removed from both the APL and the QPL.

After vendors complete the second step of the APL process, Step 3 must be completed:

**APL Listing = Vendor Qualification + Device Evaluation**

By January 1, 2012, approved products that have not successfully completed the standard APL approval process will be removed from the APL and the QPL.





Due to the timing of the update to Standard Index 600, the transition tasks are delayed by six months for the warning light product category. The tasks and processes for implementation of the warning light category on the APL are the same, just lagging by six months.

The TERL looks forward to the synergies that the transition of these products will enable, and we appreciate the support of our customers during this transition period.

This article was provided by Trey Tillander, FDOT Traffic Engineering and Operations Office. For information, please contact Mr. Tillander at (850) 410-5617 / 921-7361 or email to [Trey.Tillander@dot.state.fl.us.com](mailto:Trey.Tillander@dot.state.fl.us.com).

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## Teamwork Solves Silver Alert

On December 22, an alert transportation management center (TMC) operator and Road Rangers service patrol resolved a Silver Alert issued from Hernando County, Florida. The SMART SunGuide® TMC Operator, Robert Meisinger, spotted a disabled vehicle on the shoulder of I-75/Alligator Alley southbound at milepost 30 in Broward County just before 4:00 p.m. FDOT Road Ranger #407, Richard Roberts, was dispatched and arrived soon thereafter, identified the vehicle, and provided the motorist with a gallon of gas to get on his way. Moments later, the Florida Department of Law Enforcement (FDLE) issued a Silver Alert with the same Michigan license plate. TMC Operator Meisinger was entering this data into the SunGuide computer and immediately realized it was the same tag number.

Road Ranger Roberts was then called on the radio, but the car had already left the scene. Roberts began searching as Florida Highway Patrol and local police were notified. Electronic message signs throughout south Florida had the Silver Alert message displayed. While police looked on the ground, Meisinger was checking the closed-circuit television camera network along I-75 and spotted a disabled vehicle on the shoulder at Miramar Parkway just after 5:00 p.m. as Road Ranger Roberts was pulling up to the scene. Roberts then confirmed it was the same vehicle with Michigan tags.

FHP was dispatched to the scene and is currently investigating. No further details are available about the missing man or circumstances.

This article was provided by Dee McTague, FDOT District Four. For information, please contact Ms. McTague at (954) 847-2790 or email to [Dee.McTague@smartsunguide.com](mailto:Dee.McTague@smartsunguide.com).

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## ITS Florida Presents Awards

During its Awards Dinner and Annual Meeting, held on December 8, 2009, ITS Florida recognized individuals/ organizations for their outstanding achievements.

### Certificates of Outstanding Achievement

#### Randy Pierce, Florida Department of Transportation (FDOT)

**Telecommunications Program Management**, was recognized for his involvement in launching Florida's WiFi® pilot project—an asset not only to the FDOT's Intelligent Transportation Systems (ITS) Program, but also to Florida's traveling public.

Mr. Pierce managed this project from contract negotiations through implementation and oversaw the installation of "Wi-Fi hot spots" at Florida's four welcome centers and the Turkey Lake Turnpike Service Plaza. These hot spots permit travelers to access the internet and check their email from their personal computers.



Several challenges needed to be overcome in order to bring internet connectivity to the traveling public. High among these challenges was establishing internet connectivity to rural FDOT traveler locations. The use of state-of-the-art satellite communication services made this connectivity possible. This effort will help the FDOT develop the knowledge to deploy a statewide network of Wi-Fi hot spots at other rest areas and service plazas at a later date.

Along the way, an additional feature was added to this project—a mobile WiFi unit. The FDOT has launched this newest WiFi hot spot, integrated into an FDOT trailer. This trailer can be moved to various rest areas to analyze whether WiFi service should be provided at that site. This analysis will save money by identifying the most appropriate candidate sites for future expansion of the WiFi system.

In addition to its use as a mobile WiFi hot spot, the FDOT included some pilot project features in the trailer to enhance its functionality—a mobile weather station and a camera system allowing remote events monitoring. Additional potential uses for the trailer are continuing to be identified. During the recent spring flooding at the Suwannee River, although integration of the trailer was not yet complete, the FDOT considered using it to view the status of the I-10 bridge over the river.

Mr. Pierce has brought a new means of communication to Florida's traveling public, along with an enhanced mobile incident management tool for use by the FDOT.

The **FDOT District Four ITS Unit** was recognized for the Interagency Video and Event Data Distribution System "iVEDDS." In February 2008, in response to user feedback, FDOT released iVEDDS, a substantially revised Web-based solution for their partnering agencies that integrated SMART Viewer and the Inter-Agency Video Distribution System (iVDS) into a single Web address and secure login. iVEDDS distributes live-motion, closed-circuit television (CCTV) camera video feeds from District Four to inter-agency partners (and other authorized users), using existing Internet infrastructure. This tool provides streaming video from all active freeway



CCTV cameras in Broward County to emergency response agencies, such as 911 centers; police, fire and ambulance stations; transportation management centers; airports; and transit authorities who benefit from these live images before or during an incident along the freeways. There are 42 public agency users representing 13 different partner agencies.

iVEDDS addresses the need for FDOT's regional emergency response agencies to view real-time, freeway camera streaming video in order to provide quicker response. It also affords them the availability to dispatch proper crews to the scene earlier compared to waiting for on-scene communications. Additionally, iVEDDS furthers ITS deployment by sharing the benefits of all the equipment in place with more than one agency.

District Four is not only accomplishing goals set in the Public Outreach Plan and Five Year Strategic Plan for their ITS Unit and TMC, but is also fostering relationships with regional public agencies that could benefit the entire FDOT.

## ITS Champion Award

This award is presented to an individual who has made significant contributions to the cause of ITS in Florida.

**Doug Conkey, Clay County Commissioner and Chairman of North Florida Transportation Planning Organization (TPO)**, was recognized by ITS Florida with the ITS Champion Award for his tireless efforts related to the advancement of intelligent transportation systems in Northeast Florida.

North Florida TPO has made a significant investment in, and remarkable progress towards, developing a fully integrated interstate and arterial system that can be controlled from a single remote location and monitored for incident management by local governments, FDOT, and the Florida Highway Patrol. The TPO has begun programming funds to construct a regional transportation management center.



The North Florida TPO has made use of ITS and technology to improve the operation of major arterials in the four county region it serves a critical component of its transportation planning strategy and has integrated ITS into its overall planning program. By doing so, the TPO is championing the ITS cause and setting an example that can be followed by other metropolitan planning organizations and regions in Florida. Mr. Conkey was instrumental in this accomplishment.

## ITS Professional of the Year

The ITS Professional of the Year award recognizes a person who has been actively involved in an ITS project within the past year and who contributed significantly to the ITS community in so doing.

**Gene Glotzbach, FDOT ITS Management/Deployment**, was the recipient of this award for his involvement in launching Florida's next generation statewide 511 Traveler Information System, which significantly impacted the FDOT's ITS Program.

Mr. Glotzbach has been the administrator for the ITS general consulting contract since 2001. This contract provides support to the ITS Program; in the past year, along with the statewide 511 Traveler Information System, Mr. Glotzbach has managed or supported such successful projects as:



- Ten-Year ITS Cost Feasible Plan, the statewide funding mechanism of approximately \$883 million for ITS deployments between 2002 and 2019, including the SunGuide® Software, the Traffic Engineering Research Lab (TERL) ITS lab, commercial vehicle operations, and incident management, to name a few
- License plate readers/probe data collection using global positioning systems-based technology, which enables travel time posting to dynamic message signs—a key to the expansion of ITS deployments on rural roadways
- Arterial ITS Plan, initial phase concentrating on arterial advanced traffic management systems deployment and the benefits of signal retiming
- ITS specifications development and maintenance, ensuring device interoperability and interchangeability with other equipment
- TERL with quality assurance and support of the ITS lab to test ITS equipment operability using the SunGuide® Software

With the recent launch of the new, bilingual statewide 511 Traveler Information System, Mr. Glotzbach has significantly contributed to ITS in the state of Florida. Mr. Glotzbach has been the FDOT project manager for this “next generation” 511 system—a multi-million dollar project—from its inception.

The next generation statewide 511 Traveler Information System replaced five regional 511 systems and allows travelers to call 511 anywhere in the state and hear the same voice and call menu options. Along with the calling feature, the new system Web site replaced the regional Web sites providing Florida with detailed traffic and travel information, including camera views and links to airports, seaports, and transit agencies.

Florida's new 511 phone and Web system gives real-time traffic reports on Florida interstate highways; toll roads, including Florida's Turnpike, Miami-Dade Expressway Authority roads, and Orlando-Orange County Expressway Authority roads; and other major metropolitan roadways. The statewide system provides information on roadway conditions, such as commuter travel times, construction, lane closures, crashes, congestion, and severe weather affecting traffic. Travelers have access to traffic, transit, travel times, airports, and seaports, or they can request information for a specific roadway, city, or county. This system is also updated with public safety alerts, including AMBER, Silver, and Law Enforcement Officer (LEO) alerts.

## Organization Member of the Year

The Organization Member of the Year award recognizes an ITS program, project, or other accomplishment of significant benefit to the transportation industry and to the traveling public. The recipient can be any public- or private-sector member of ITS Florida. The primary criterion for award consideration is that the work provides improved transportation for Floridians.

The FDOT District Six ITS Office received this award for Phase 1 A of the Interstate 95 Ramp Signaling System, implemented in February 2009 in Miami-Dade County. It is the first system of its kind in the state of Florida utilizing ITS technologies, such as roadway detectors and CCTV cameras to meter the rate of traffic entering the I-95 mainline from the adjacent city streets. The system is reducing the problem of ‘bottlenecking’ caused by merging traffic, which leads to congestion and reduced safety conditions for all motorists along the highway. Ramp signals regulate the rate that vehicles are allowed to enter the mainline from the ramps based on the space available on the mainline which improves mobility and regulates traffic flow.



The ramp signals have served to improve mobility and increase the flow of traffic on the mainline along the project limits of the 95 Express. Travel speeds have increased from 38 to 43 miles per hour on the general purpose lanes during the typically congested evening rush-hour period. This increase in speeds has saved motorists more than \$1 million in travel time delays since implementation, with values projected to increase as additional ramp signals are activated along the I-95 corridor.

## ITS Florida Honor Roll

The ITS Florida Honor Roll recognizes individuals who have made a significant contribution to ITS in the state of Florida. This year, Bill Wilshire, FDOT District Seven, ITS Program Manager, is being honored for his dedication and perseverance in making Florida's transportation system one of the finest in the nation.

Mr. Wilshire is well known in the Florida ITS community and is an ITS advocate and champion. He served as the District Seven ITS Program Manager since 2002, and retired on December 24, 2009, after serving over 40 years in traffic operations in both Florida and West Virginia.



During his tenure, Bill oversaw the development and deployment of the Tampa Bay Freeway Management System, the Tampa Bay SunGuide® Center and the 511 regional system in the Tampa Bay area.

For more information on ITS Florida, please check the ITS Florida Web site at [www.itsflorida.org](http://www.itsflorida.org) or contact Sandy Beck, Chapter Administrator, at [itsflorida@itsflorida.org](mailto:itsflorida@itsflorida.org). If you wish to contribute an article to the *SunGuide Disseminator* on behalf of ITS Florida, please email Mary Hamill at [MaryKHamill@global-5.com](mailto:MaryKHamill@global-5.com).

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## Editorial Corner—What is the CMVRB?

Many people don't realize that, as the Incident Management and Commercial Vehicle Operations Program Manager within the Traffic Engineering and Operations Office, one of my responsibilities is to hold the seat of Chairman of the Commercial Motor Vehicle Review Board (CMVRB). If you are scratching your head and wondering what the CMVRB is, you are not alone. I have had to answer this question a lot since I assumed this seat.

Whenever an officer of the Florida Department of Transportation's (FDOT) Office of Motor Carrier Compliance issues a citation for a weight or safety violation to a commercial motor vehicle, Florida Statute 316.545 provides a means for a hearing—thus the CMVRB.

The CMVRB is comprised of the FDOT Secretary, the Commissioner of Agriculture, and the Executive Director of the Department of Highway Safety and Motor Vehicles, or their authorized representatives. All of these seats are currently held by authorized representatives. The CMVRB holds hearings one day-a-month, in different cities throughout the state.

As stated earlier there are two kinds of citations—a weight citation and a safety citation. A weight citation could be a vehicle that is just over the allowed weight, overweight on an axle, or has an expired apportioned tag which drops the vehicle's weight to a lower class.

You may remember several years ago, seeing a semi-truck or a Greyhound bus with up to 20 tags on the rear of the vehicle. This was because they needed a tag for every state that the vehicle operated in so that the states could collect taxes. Several years ago the International Registration Plan (IRP) was formulated. The IRP is a reciprocal agreement which serves to promote and encourage the fullest possible use of the highway system by authorizing the proportional registration of commercial motor vehicles and the recognition of registrations in other states and Canadian provinces. The purpose of the IRP is to allow an owner or operator to purchase only one license plate which registers the vehicle in all member jurisdictions in which they will be operating, or the apportioned tag. This is why you don't see all those tags on vehicles anymore.

The other type of citation reviewed by the board is for a safety violation. A safety violation can be for an uncovered load, over-height, over-width, improper permit, no department of transportation numbers, etc. There are many, many, different safety violations.

Whenever a commercial motor vehicle owner or operator receives a weight or safety citation, they have two options. The first option is to pay the citation in, full waiving their right to a hearing in front of the review board. The second option is that they can request a hearing in front of the review board—comparable to protesting a traffic citation in front of a judge or hearing officer. They are allowed 20 days to request this hearing, but the fine must be paid in full at the time of the request. The fine must be paid because without this process, there would be hundreds and hundreds of cases to be heard every month. Any person aggrieved by the imposition of penalties may apply to the review board for full relief, partial relief, or no relief of the penalty.

Full relief means that the board finds that the citation could have been issued in error and the entire fine is returned to the owner or operator. Partial relief means that there are extenuating circumstances that warrant a portion of the fine to be returned to the owner or operator. No relief means that the board finds that a total violation occurred and no portion of the fine is returned.

Commercial vehicles are a common sight on Florida's roadways. According to the FDOT Intermodal Systems Development, Systems Planning Office, approximately 78 percent of all shipments by value move by truck (Strategic Intermodal System – Keeping Florida's Economy Growing, April 2005). It only makes sense to regulate commercial motor vehicle weight and safety violations; making Florida's roadways safer for all motorists, along with controlling damage to our roadways and bridges.

This editorial was provided by Paul Clark, FDOT Traffic Engineering and Operations Office. For further information, please contact Mr. Clark at (850) 410-5607 or email to [Paul.Clark@dot.state.fl.us](mailto:Paul.Clark@dot.state.fl.us).



## Inside the TERL

The Florida Department of Transportation (FDOT) has a goal to assure that only a safe and uniform traffic control system and ITS are implemented in the state of Florida. The Traffic Engineering Research Lab (TERL) plays a part in obtaining this goal by satisfying Florida Statute 316.0745 - Uniform Signals & Devices. Below is a look Inside the TERL at activities that help accomplish our goal.

The primary mission of the TERL is to maintain an Approved Product List (APL) of devices that have been tested and verified to meet FDOT requirements. Establishing and maintaining the APL encompasses a broad variety of activities. These activities include:

- The review of manufacturer quality assurance/quality control (QA/QC) programs, comprehensive product evaluation and testing,
- The initial development and continuous improvement of specifications,
- Maintenance and technical operations of the systems used for testing (including the design, installation, and operation of a small-scale transportation management center [TMC]) as well as the installation and integration of field devices around the TERL facility and various remote testing locations.

The primary goal of these efforts is to ensure that products sold and deployed on transportation projects in Florida are safe and reliable, are of good quality, and perform as required.

### Notable activities during the past month included:

- Evaluation of the full-size, walk-in, 18-inch character dynamic message sign (DMS) manufactured by Ledstar was completed which makes it the third DMS certified and listed on the FDOT's APL.
- Evaluation of the 12-inch character arterial DMS manufactured by Daktronics is ongoing. If approved, the Daktronics sign will be the first 12-inch arterial certified and listed on the FDOT's APL.
- Evaluation and approval of the first intelligent transportation systems (ITS) transient voltage surge suppressor was completed (Cooper Crouse-Hinds MTL [formally Atlantic Scientific] ZoneDefender PRO).
- Construction of the TERL's new test intersection, which began on September 25, 2009, is ongoing. Construction is estimated to be complete during the first quarter 2010.



- One new manufacturer, Vaisala, became a qualified vendor; however, no product from Vaisala has been submitted for addition to APL. One new manufacturer, Alpha Technologies, has submitted for vendor qualification.
- Renovation of the TERL's "large equipment" testing facility was completed in October. This facility will be used to conduct testing on various devices, such as controller cabinet assemblies, etc. The facility also includes a light-testing "tunnel" that will be used to test the intensity and color of equipment, such as traffic signals and electronic message signs.

The TERL welcomes and encourages any comments and feedback regarding products listed on the APL. Is there a product you would like to have placed on the APL? Are you a maintaining agency in Florida that would like to sponsor a project to evaluate a new product; would you like to share your experiences with a product (good or bad) with us? If so, we want to hear from you.

This article was provided by Jeff Morgan, FDOT Traffic Engineering and Operations Office. For more information, please contact Mr. Morgan at (850) 921-7354 or email [Jeffrey.Morgan@dot.state.fl.us](mailto:Jeffrey.Morgan@dot.state.fl.us).

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## Announcements

### District Six Enhances Road Ranger Vehicle Fleet

The Florida Department of Transportation District Six Office is proud to announce the upcoming addition of two new specialized vehicle types to our Road Ranger Service Patrol Fleet. As part of the new Road Ranger contract, which begins in January 2010, seven flatbed tow trucks and one support unit van will support operations along our limited-access roadways, including Interstates 75, 95, 195, and 395 as well as State Road 826. This addition marks the first time District Six will incorporate these vehicle types into a service patrol fleet. They are expected to enhance the incident management program in Miami-Dade County. Flatbed tow trucks will expedite the removal of vehicles blocking travel lanes to provide quicker, more efficient clearance times; while the support unit van will ensure that all fleet vehicles are supplied with the necessary equipment at all times. This new contract will also add four new pick-up trucks to enhance our motorist assistance services, bringing the total vehicle count to 22.

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### Get Ready

The ITS America's 20th Annual Meeting & Exposition – Connecting Communities through Smart Transportation Solutions will be held on May 3-5, 2010, at the George R. Brown Convention Center in Houston, Texas. The 20th Annual Meeting & Exposition will focus on core issues that relate to connecting communities through smart transportation solutions.

Mark the date on your calendar. More information is available at [http://www.itsa.org/annualmeeting/c80/News\\_and\\_Events/Calendar/Annual\\_Meeting\\_and\\_Exposition.html](http://www.itsa.org/annualmeeting/c80/News_and_Events/Calendar/Annual_Meeting_and_Exposition.html).

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### Save These Dates for Transpo 2010

Transpo 2010 will be held on December 12-15, 2010 at the Sawgrass Marriott in Ponte Vedra Beach. More information on participating in this event can be found at <http://itstranspo.org/>.

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## The National Award for Innovative Practice in Metropolitan Transportation Planning

The North Florida Transportation Planning Organization (TPO) was the recipient of the Association of Metropolitan Planning Organization's (AMPO) National Award for Innovative Practice in Metropolitan Transportation Planning, presented at the AMPO Annual Conference held in Savannah, Georgia, on October 27-30. The award was for the North Florida TPO's Traffic Incident Management Handbook and Safety Video Series which focuses on incident management training for responders.

The North Florida TPO was instrumental in launching the North Florida Intelligent Transportation Systems (ITS) Coalition, which has more than 60 members. Members include counties, municipalities, highway patrol, local police departments, fire and rescue personnel, and more. The North Florida TPO was tasked with creating common guidelines, training, and reference materials for all of the responder agencies which was the basis for the handbook and safety video series development. The key training points are based on national traffic incident management standards, so these products are useful to other MPOs and other responder agencies across the United States.

## FDOT Traffic Engineering and Operations Mission and Vision Statements



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