



SUNGUIDE™ DISSEMINATOR

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Variable Speed Limits Aim to Relieve I-4 Congestion

Drivers on Interstate 4 will encounter the latest in traffic management technology starting September 15. A 10-mile stretch of the highway is now equipped with variable speed limit signs which are designed to ease traffic flow and manage congested areas of the road by adjusting speed limits to match traffic volume, weather and driving conditions.

Variable speed limit signs installed in both directions along I-4 between Maitland Boulevard and Orange Blossom Trail begin functioning in time for Monday's rush hour. Custom software will analyze information gathered from roadside sensors and traffic cameras and will suggest lowering speeds in congested areas. Operators at Central Florida's Regional Traffic Management Center (RTMC) will then have the option to adjust speed limits along segments of the road, helping vehicles get through rush hour and accident scenes at a smoother, continuous rate.

"I know it sounds a little backwards for drivers to slow down in order to get through traffic faster, but it really works," said Noranne Downs, Florida Department of Transportation (FDOT) District Five Secretary. "Congestion usually results in an 'accordion effect' where everyone is constantly stopping and speeding up, wasting gas and making accidents more likely. Variable speed limits will slow down the traffic leading into congestion, preventing sudden stops and allowing people to pass through the area at a steadier and safer pace—a smarter pace."



The *SunGuide Disseminator* is a publication of: Florida Department of Transportation Traffic Engineering and Operations Office 605 Suwannee Street, MS 36 Tallahassee, Florida 32399-0450 (850) 410-5600 <http://www.dot.state.fl.us>

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Based on roadway conditions, FDOT will use variable speed limit signs to lower speeds in 5 mph increments by as much as 20 mph below the normal speed limit. Drivers could see speed limits as low as 30 mph in some areas of I-4 when congestion is heavy. When speed limits are adjusted and displayed on variable speed limit signs, they become the posted speed limit for that area of roadway and are subject to enforcement by Florida Highway Patrol and local law enforcement officers.

Variable speed limits are yet another tool for helping manage I-4 congestion. FDOT already uses overhead message signs and the free 511 traffic information service to alert drivers to changing roadway conditions. The 511 service will also help inform callers of variable speed limits.

“We’re excited that variable speed limits are coming to I-4,” said Jennifer Heller, Intelligent Transportation Systems Operations Manager. “Anything that will help manage traffic is always welcome and we’re proud to help spread the word to callers informing them of this exciting new change.” Callers to 511 asking for information about I-4 in the variable speed limit zone will be informed of the change through a quick five to ten second message as a reminder of variable speed limits.

“Keeping cars from rushing into a congested area will do wonders,” said Rick Morrow, FDOT District Five Traffic Operations Engineer. “Imagine

I-4 at rush hour as a funnel. If you pour a cup of rice all at once through the funnel you’ll get just a trickle coming out, if anything at all. But if you pour the rice at a slow, even pace you get a steady stream moving right through.”

Speed limit adjustments will be made primarily during weekday rush hour or in response to temporary lane closures due to accidents or weather, but the system is designed so that RTMC operators can change posted speed limits as soon as the need arises.

“Traffic sensors placed every half-mile along I-4 read how many cars are traveling on a certain part of the road and how fast they are going,” Morrow said. “Traffic management software analyzes sensor data and makes recommendations on adjusting speeds. Operators then review traffic camera feeds, reports from Road Rangers and the FHP, and can change the signs electronically. The response time to traffic slowdowns will be within seconds.”

Similar variable speed limit signs are being used in New Jersey, Virginia, Missouri, and Washington, as well as several European countries, to great effect in easing traffic congestion along major highways. Downs predicts the only hurdle Orlando drivers will have to overcome in dealing with the signs is getting used to their existence. “The signs won’t help traffic if drivers ignore

them,” she said. “It might take some time for people to remember to check and follow these variable speed limits, but once it’s in drivers’ minds, we know it’ll make a great impact.”

Though the success of this system depends primarily on how closely drivers pay attention to and obey variable speed limits during heavy congestion, Downs is optimistic Central Floridians will embrace Variable Speed Limits. “Once people get used to it, I think they will love it,” she said. “Faster travel times, fewer accidents, better gas mileage and less sitting still in traffic. What’s not to like?”

For more information regarding variable speed limits on I-4 visit www.trans4mation.org.

This article was provided by Rick Morrow, FDOT District 5 and Derek Hudson, Global-5. For more information, please contact Mr. Morrow at (386) 943-5309 or email Rick.Morrow@dot.state.fl.us.

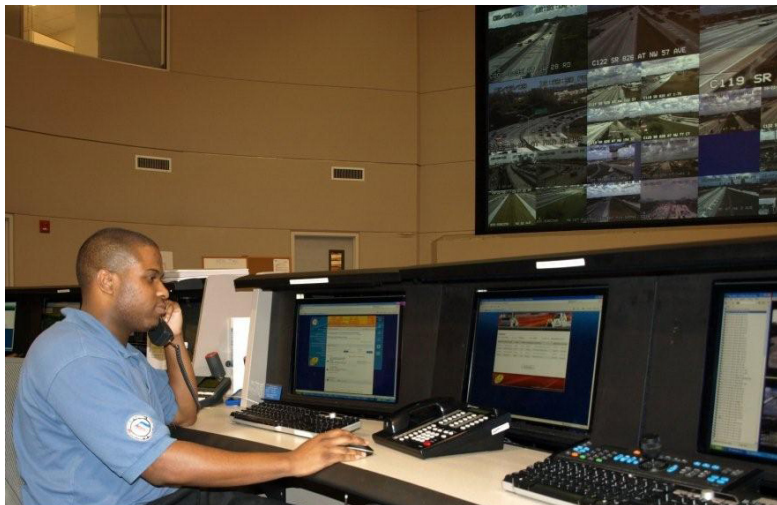
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FDOT District 6 Launches Road Ranger Driver’s Information System

With more than 50 drivers, 20 vehicles, and two contracts to administer, the Florida Department of Transportation’s (FDOT) District 6 transportation management center (TMC) operates Road Ranger Service Patrol units in one of the largest metropolitan areas in the nation. Tracking contract compliance records and performance evaluation measures, and logging schedules are part of the daily functions of the TMC. Aiming to improve management and oversight of Road Ranger contracts, the FDOT District 6 TMC recently implemented software to automate contract related tasks to improve efficiency between the FDOT and Road Ranger contractors.



The Road Ranger Driver’s Information System (RRDIS) is a Web-based application that serves as a records management and retrieval system accessible to authorized users. Accessible from the TMC’s intranet site, the interactive software enables users to access critical information directly from their workstations.



With nine functional modules, the contract information that was once stored in bulky binders is now readily accessible to authorized users through this automated system. FDOT’s managers are automatically notified of new potential drivers for approval as well as follow-up documentation. Control room operators can also view a contractor’s daily schedule as soon as it is posted. Additionally, the application stores limited Road Ranger vehicle information, Road Ranger crash history, and beat management information. Contractors can upload a driver’s schedule up to three days in advance. Managers and administrators are able to generate reports, manage contractors, and send notification alerts to various users, including: contractors and District and Central Office staffs. There are four user

types (administrator, manager, operator, and contractor), all having access to functions that are specific to their role in the process—with the administrator having access to all nine modules.

RRDIS eliminates the reliance on paperwork. The data field entry requirements of the application do not allow users to submit partial information. Incomplete driver's schedules are automatically rejected, promoting accuracy and efficiency at all times. The report generator function allows for enhanced performance evaluation of contractor-submitted documents by operators and managers. Managers are able to generate incident history reports, view vehicle and personnel status updates, and enforce contract compliance. Automating these tasks has enhanced contract management functions while minimizing administrative tasks.

This program was designed by FDOT District 6 and developed out of the FDOT's partnership with Florida International University's (FIU) Lehman Center for Transportation Research. The application's design and general functional modules allows management staff from other Districts to use RRDIS as well. The software's easily adaptive nature allows for seamless implementation for Districts with service patrol units and similar contracts. Users are able to modify the system to an agency's particular needs and situation.

This article was provided by Javier Rodriguez, FDOT District 6. For more information, please contact Mr. Rodriguez at (305) 470-5341 or email Javier.Rodriguez2@dot.state.fl.us.

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Maintenance of Traffic for Incident Responders

The Florida Department of Transportation (FDOT) and the University of South Florida's Center for Urban Transportation Research (CUTR) joined forces to develop a FDOT Maintenance of Traffic (MOT) course for first responders (Road Ranger, highway patrol, local police and sheriffs, fire-rescue and emergency medical personnel, and tow operators). This was undertaken in an attempt to share each group's knowledge in incident management and responder safety, and to provide a safer work zone for all. Additionally, this training will give all responders some insights into how they affect secondary crashes and congestion on the highways. After CUTR developed the core program; law enforcement, fire-rescue, asset maintenance groups, towing companies, and emergency medical service (EMS) groups met three times at the University of South Florida to finalize the product.

Training materials were evaluated and updated after each session. Once the core training program was developed, a pilot training session was conducted with law enforcement, fire-rescue, asset maintenance, and EMS to receive feedback on the course. This group's feedback was also incorporated into the course curriculum.

Since the first training session was only attended by the Florida State Fire College and one fire representative, a decision was made to have another session in Ocala with the Fire College and other fire representatives. This session will be specifically targeted toward fire and rescue personnel. The Central Office Incident Management Section is currently in the process of planning this session and it is hoped to finalize the course by the end of the year.

Once this course is completed and approved by all first responder agencies, we believe we will have a training course that will greatly reduce the number of injuries and fatalities to first responders in Florida. In addition, this training will go a long way toward harmonizing all agencies' incident management training and promoting an understanding of each agency's duties and responsibilities and show how their actions will affect the safety of all responders and the traveling public.

This article was provided by Mike Akridge, FDOT Traffic Engineering and Operations Office. For more information, please contact Mr. Akridge at (850) 410-5607 or email Michael.Akridge@dot.state.fl.us.

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Inside the TERL

The FDOT has a goal to assure that only a safe and uniform ITS and traffic control system is 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.

Product Evaluation

Signalized Intersection and ITS Products

As of August 31, 2008, 91 applications were submitted for listing on the FDOT's Approved Product List (APL). Out of these applications, 60 were approved for product evaluation. Out of the 60 approved applications, 30 products have been received for evaluation. There have been 17 product approvals, 9 product failures, and 4 product evaluations are still under evaluation. The remaining products have not been received by the TERL and are awaiting first time submittal or re-submittal due to problems.

Approved products can be viewed at the following Web pages:

Signalized Intersection products - <http://www3.dot.state.fl.us/trafficcontrolproducts/>

ITS products - http://www.dot.state.fl.us/TrafficOperations/Traf_Sys/ITS%20APL/TemporaryITSAPL.shtm

Product Specifications

There are currently four product specification in the development stage and five planned for the near future.

APL Vendor Quality Assurance System Evaluation

A manufacturer is required to be qualified before a device can be evaluated for listing on the APL. Three manufacturers were qualified in August 2008. There are currently a total of 85 qualified manufacturers, of which 33 have recently been re-qualified. Re-qualification is required every four years. There are currently four manufacturers under investigation for problems found in the field.

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.

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ITS Florida—Participating in the 15th World Congress on ITS

An impressive list of ITS Florida members are participating in the 15th World Congress on ITS on November 16–20, in New York City. A number of members are serving as speakers and exhibitors at the conference. One member is sponsoring a student paper contest and providing integrated technology demonstrations.

The ITS Florida members featured as speakers include:

- **Adam Moser**, Senior ITS Engineer, & **Kenneth Jacobs**, Traffic Signal Operations Manager, Pinellas County Public Works – The session is “Adaptive Traffic Signal Control” and the topic is “RT-TRACS Adaptive Signal Operations, Maintenance and Lessons Learned.”
- **Ken Vorce**, Regional Director, VANUS – Presentation of study findings on the cost benefit feasibility of deploying ITS technologies to mitigate severe crash history on the 75 mile Alligator Alley segment of I-75.
- **Frank Deasy**, Program Manager, Telvent Farradyne Inc. – The topic is “Florida’s Intelligent Transportation Systems Wide-Area Network.”
- **Dr. Robert Edelstein**, Vice President, DMJM Harris | AECOM – The session is “Procurement of ITS Systems” and the topic is “The Procurement of ITS Operations Services.”
- **Bill Cook**, Atlantic Scientific Corporation – The topic is “ITS Camera Deployments – System Design for Survival.”
- **George Gilhooley**, Vice President, HNTB Corporation – The topic is “VII Infrastructure for Less Than You Think.”
- **Stephen Bahler**, HNTB Corporation – The topic is “Inspection of Florida’s Largest ITS Design Build Project.”
- **Tim Garret**, Associate Vice President, HNTB Corporation – The topic is “Tampa Bay SunGuide: The System Manager Approach to Project Implementation.”
- **George Gilhooley**, Vice President, HNTB Corporation – The topic is “More than Just Travel Times from 511.”
- **Dr. Mohammed Hadi**, Florida International University – The topic is “Effect of Pavement Marking Contrast on the Performance of Vision-Based Lane Departure Warning Systems.”
- **Dale Cody**, Senior Vice President, Metric Engineering – The topic is “Improved Quantification of the Reduced Incident Delay Benefits Associated with ITS.”
- **Chris Mentzer**, Southwest Research Institute – The topic is “Vision Processing Techniques for Lane Detection and their Fusion for Increased System Robustness.”
- **Ryan Lamm**, Section Manager, Southwest Research Institute – The topic is “Using Autonomous Ground Vehicle Technology to Improve the Safety and Mobility of the Motorway.”
- **Michael Brown**, Principal Engineer, Southwest Research Institute – The topic is “Application of the 4D/RCS Architecture within the Southwest Safe Transport Initiative.”

- **Paul Avery**, Research Engineer, Southwest Research Institute – The topic is “Cooperative Autonomy within Intelligent Transportation Systems.”
- **Purser Sturgeon**, Research Analyst, Southwest Research Institute– The topic is “Maintaining Device Anonymity While Disseminating Information in a 3-Dimensional Plane.”
- **George McWilliams**, Southwest Research Institute – The topic is “Autonomous Vehicle Navigation for Robust On-Road Driving.”
- **Josh Johnson**, Section Manager, Southwest Research Institute – The topic is “Integrated Corridor Management Concepts for a Medium Sized Urban Area – Lessons Learned from San Antonio.”
- **Harry Grothues**, Senior Program Manager, Southwest Research Institute – The topic is “Successful Application of Systems Engineering for Complex Statewide ITS Deployments.”
- **Dr. Robert Heller**, Staff Scientist, Southwest Research Institute– The topic is “Advanced Traffic Management Managed Lanes Implementation.”
- **Steve Dellenback**, Director, Southwest Research Institute facilitates a Forum Showcase on “Data, Data, Everywhere: Time to Stop and Think About How Data, VII, and Operations Fit Together”
- **Ryan Lamm**, Section Manager, Southwest Research Institute – Special session dealing with “Vehicle Automation.”

ITS Florida members exhibiting in the conference include:

- Atlantic Scientific Corporation
- Atlas Traffic Management Systems
- DMJM Harris/AECOM
- Florida Department of Transportation
- HNTB Corporation
- PBS&J
- Southwest Research Institute
- Telvent Farradyne, Inc.
- TransCore
- ITS Florida

Southwest Research Institute (SwRI) is sponsoring the Student Essay Contest to stimulate the minds of tomorrow’s engineers. The two topics are: “Vehicles of the Future” and “What Will the Traffic Management Center of the Future Look Like?”

SwRI will also have several integrated technology demonstrations showcased on the 11th Avenue Theater, the Vehicle Infrastructure Integration (VII) Test Beds, and in the VII Transportation Management Center of the Future. SwRI will be demonstrating an autonomous vehicle on 11th Avenue each day of the conference as part of its \$5 million Southwest Safe Transport Initiative.

For more information on the ITS World Congress, please visit the Web site at <http://www.itsworldcongress.org/>.

For more information on ITS Florida, please check the ITS Florida Web site at www.itsflorida.org or contact Sandy Beck, Chapter Administrator, at 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.

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Editorial Corner—Continuing the Legacy...

As Chair of the Change Management Board (CMB), the last two years have been rewarding to me (Steve Corbin, FDOT District 4). The challenge of the Chair position is one of balancing many different needs and staying focused in moving forward for the benefit of the CMB's membership. The first Chair, Gene Glotzbach, set the bar in the establishment of the position requirements and made sure, through his continued involvement over my two year term, that continued growth would be maintained—*Continuing the Legacy*.

Leadership comes in many different forms—by a single individual, an informal group, or a formal group, either by election or by some form of volunteering. For the most part, the CMB contains all three types of these groups; and since the Board's inception, the membership has been very stable. The importance of this statement has been critical to the successes that have been achieved up to this point in time. It is my belief that the Board will continue to hold fast in its membership and the mindset that has been fostered will also hold fast.

What has changed over the last five years has been the level of involvement that the members have made as they mature in the transportation management arena. Early on, participation was constant; however, the level of active involvement was passive based on many factors. With that said, my term started at a very opportune time—the growth of the transportation management centers (TMC) throughout the state and this need drove a deeper involvement in active participation in the CMB. More leaders have been born! With this increased energy and focus, the surge in productivity has taken off and our membership has grown. I would like to believe that my role as Chair had some small part in both.

A brief account of what has been accomplished over the last two years includes:

- Five SunGuide™ Software releases
- Miami-Dade Expressway Authority joined the CMB
- The Traffic Engineering Research Laboratory became fully operational and provides independent verification and validation for the software releases
- 511 Data Fusion Subsystem was integrated into the SunGuide Software
- ITS architectures were updated to include the 95 Express project
- Managed Lanes Tolling was developed in the SunGuide Software and interfaced with the Florida's Turnpike Enterprise tolling collections software

As my term as Chair has come to an end, I have taken a few moments to reflect on the experiences I have gained; and I will relish them for the rest of my life. I must say, some have been amazing and some, let me say, have been very unique! What I do know and will feel very comfortable with is what I have done, what my predecessor had started, and what I hope my successor continues to do during his term: Continuing the Legacy. I hope that continued growth in the CMB, both in membership and products, exceeds the past two years of my term. I know it will based on numerous factors—the biggest and most valuable one being that new leaders in our community have been born and they will *Continue the Legacy!*

This editorial was provided by Steve Corbin, FDOT District 4. For more information, please contact Mr. Corbin at (954) 847-2791 or email Steven.Corbin@dot.state.fl.us.



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Announcements

Visit Florida at the 15th World Congress on ITS

FDOT is participating as an exhibitor at the 15th World Congress on ITS in New York City, on November 16-20, 2008. Stop by to see the demonstration. FDOT will be at Booth 1300 for a *little bit of Florida in the Big Apple!*

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FDOT Traffic Engineering and Operations Mission and Vision Statements



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