

ANNUAL REPORT
Fiscal Year 2024–2025

Our
PEOPLE,



Our
JOURNEY



FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT SIX
Transportation Systems Management and Operations

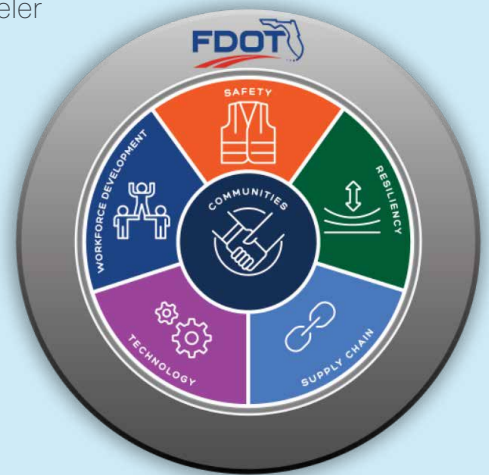


A MESSAGE FROM THE **DISTRICT SIX SECRETARY**

Throughout my career at the Florida Department of Transportation (FDOT) District Six, I have witnessed many successes that have benefited the motoring public and the movement of goods and services throughout the southeast Florida region. All of these successes have one thing in common, the dedicated people who work tirelessly on our projects and initiatives. From major infrastructure construction projects to traffic signal retiming analyses to guardrail repair to planning studies, it is FDOT's staff that make all this possible. This includes the Transportation Systems Management and Operations (TSM&O) Office and the SunGuide Transportation Management Center (STMC). TSM&O is unique as it touches all areas of FDOT. TSM&O ensures that transportation technologies are not an afterthought but rather incorporated into planning, design, and construction efforts. The staff at the STMC diligently provide traffic and incident management support 24 hours a day, 7 days a week for Miami-Dade and Monroe Counties.

The goals aspired by our staff are embraced by the FDOT Compass. FDOT adopted the Compass as a commitment to its customers. The staff at the TSM&O Office and the STMC have embraced these pillars.

- ▶ **Communities** – The TSM&O Office and its STMC provide vital traveler information that benefit all communities throughout the region.
- ▶ **Safety** – Deployment of incident management resources and quick clearance at crashes helps to open lanes from crashes as soon as possible.
- ▶ **Resiliency** – The STMC has continued providing its services through hurricanes, pandemics, and technological disruptions.
- ▶ **Supply Chain** – Active traffic management conducted by the STMC helps to maintain the flow of commercial goods and services throughout the region.
- ▶ **Technology** – The technology deployed by the TSM&O Office has yielded both short term and long term benefits.
- ▶ **Workforce Development** – The TSM&O office creates jobs and supports indirect employment through the STMC, Road Ranger safety service patrol, and the regional Traffic Incident Management (TIM) teams.



The most visible resource to our customers is our incident management team including the Road Ranger safety service patrol. These dedicated people provide much needed motorist assistance services for stranded motorists in the presence of active freeway traffic. Along with our Incident Response Vehicle (IRV) operators, the incident management team provided over 38,000 assists during Fiscal Year (FY) 2024-2025 (July 1, 2024 through June 30, 2025). Our incident management team plays a critical role in keeping lanes open and traffic moving. Roadway clearance time averaged 32.8 minutes, representing a 34.5% reduction over the 2005 baseline of 50 minutes.

Our TIM teams continued to be active this year. We support two TIM teams in Miami-Dade County and Monroe County. The TIM team meetings are used to share lessons learned, changes in incident management procedures, information on new and on-going construction projects, and about upcoming special events. The overall goal is making incident response more efficient and safer not only for the responders but also for those in need of their service. These meetings also foster important interagency coordination with local, county, and state law enforcement agencies; incident responders; and emergency services providers.

FY 2024-2025 was another eventful and successful year with the completion of several projects. The Wrong Way Vehicle Detection System (WWVDS) Deployment completed several projects bringing the total operational WWVDS to 20 freeway off-ramps. Ultimately, there will be 95 off-ramps in Miami-Dade County with WWVDS. Operations of the connected vehicle project in Monroe County continued to utilize its roadside units (RSUs) to transmit data to and from vehicles equipped with compatible onboard units (OBUs) and a public facing mobile application. The system is currently being evaluated by Florida International University and the University of Florida with the final report expected next fiscal year.

STMC staff continued its coordination efforts for special events. Miami-Dade County continues to be a desired destination for high profile sporting events, international conferences, and other entertainment events. Monroe County attracts tourists to the Florida Keys and the many outdoor activities and festivals. All these events can generate a significant increase in traffic affecting mobility throughout the region. The STMC provides on-site staff for many of these events at venues like Hard Rock Stadium and the Homestead-Miami Speedway. Along with sharing camera videos and traffic event information, STMC staff provides travel time information to the event coordination team. This information is critical to help manage traffic to and from the venue. All of these efforts will be tested with the 2026 World Cup in Miami. Seven of the World Cup games including the bronze final match will be in Miami.

Our TSM&O community outreach staff also assisted with Crash Responder Safety Week (CRSW). CRSW is a national effort to bring awareness to those first responders who keep us safe along the roadways. Road Rangers, IRV, FHP, local law enforcement, fire rescue, and other first responders are brave individuals working to clear our roadways quickly while keeping motorists safe. I encourage you to visit the [Road Ranger of the Month](#) on [sunguide.info](#) to learn more about this team.

In the coming year, we are excited for the new projects and services that will facilitate increased safety and mobility as we continue to provide traffic management and data dissemination to the community. I am confident that the staff at the TSM&O Office and the STMC will continue to provide this much needed service to our community. I invite you to read on and learn more about the TSM&O Office and the people who keep it running.

Daniel Iglesias, P.E.
District Six Secretary of the
Florida Department of Transportation



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INTRODUCTION

The theme for this year’s annual report is *Our People, Our Journey*. Over the last 20 years, the District Six TSM&O Office and its STMC have completed some remarkable projects which continue to benefit the South Florida region and overall transportation mobility. As we continue our journey to provide exceptional transportation services, we recognize that it is our dedicated people who envision, plan, implement, operate, and maintain our program. The STMC and the intelligent transportation systems (ITS) infrastructure provide critical data and situational awareness throughout the region, yet many motorists do not realize the work going on behind the scenes to provide these services. For example, for each crash on the roadway, there is a TMC Operator working in the STMC that can see the crash on the highway using one of our many cameras and then contacts a Road Ranger to assist. That TMC Operator is contacting other agencies, posting messages on our dynamic message

signs (DMS), and providing alerts to FL511. There is IT and maintenance staff that are helping to keep that DMS working and ensuring the communication network can connect to that DMS. That is just a few of the many functions performed by the TSM&O Office and the staff working at the STMC 24 hours a day, 7 days a week.

It is the people that work at the TSM&O Office who make the STMC one of the best Transportation Management Centers in the country. Some of the many accomplishments include the following.

- ▶ First managed lanes corridor in Florida
- ▶ First deployment of ramp signals in Florida
- ▶ First connected vehicle project in District Six
- ▶ Development of the Statewide Express Lanes Software (SELS)

The staff at the STMC cannot do it alone. It is a team effort throughout the South Florida region



FDOT District Six TSM&O Staff at FIU Symposium

FLORIDA DEPARTMENT OF TRANSPORTATION TSM&O



Our Mission

Identify, prioritize, develop, implement, operate, maintain, and update TSM&O strategies and measure their effectiveness for improved safety and mobility.



Our Vision

TSM&O will increase the delivery rate of fatality-free and congestion-free transportation systems supporting the FDOT vision and Florida Transportation Plan goals.

with our partner agencies and stakeholders that contribute to the overall transportation network. Partners such as FDOT District Four, Greater Miami Expressway Agency (GMX), Florida's Turnpike, PortMiami Tunnel, Miami-Dade County, Monroe County, and the City of Miami Beach collaborate to make the area better for the motoring public.

This fiscal year showcased several projects and initiatives that epitomize what the TSM&O Office and its STMC have been striving for over the years. The TSM&O Office has started investigating artificial intelligence (AI) with pilot projects that will help produce reports, plan and manage traffic from special events, and make decisions with incident management resources. Embracing new technologies helps keep the STMC resilient and efficient. Wrong-way vehicle detection systems (WWVDS) continued to be deployed along off-ramps in Miami-Dade County. The Keys COAST connected vehicle pilot project in Monroe County is demonstrating ways to enhance data collection and information dissemination.

This FDOT District Six TSM&O Annual Report aligns with the program's five primary functional areas listed below.

- ▶ **ITS Deployments** – ITS field devices provide the necessary data for STMC Operations. The TSM&O Office manages planning, design, and procurement of ITS equipment, including cameras, DMS, vehicle detectors, arterial systems, and communications.

- ▶ **STMC Operations** – The STMC provides the central location and clearinghouse for data collection and dissemination. It is the command center for managing traffic incidents and provides proactive operations through express lanes, ramp signaling, arterial operations, and other active traffic management strategies.

- ▶ **Incident Management** – The STMC dispatches Road Rangers and other incident management resources to safely and quickly clear lane-blocking events and assist motorists. An important part of the program is coordination with first responders to identify, develop, and implement solutions to improve incident management.

- ▶ **Information Technology (IT)/ITS Maintenance** – IT/ITS staff maintains the STMC IT system and ITS field devices and provides software support to ensure system availability and stability.

- ▶ **Traveler Information** – This essential system provides real-time traveler information through various sources such as internet, smartphone applications, and social media to keep the motoring public informed.

This is the 20th edition of District Six's TSM&O Annual Report which provides informative details about the TSM&O program and the STMC. We are very proud of our staff's accomplishments over the many years. The TSM&O Office and the STMC would not get far without the contributions from its staff.

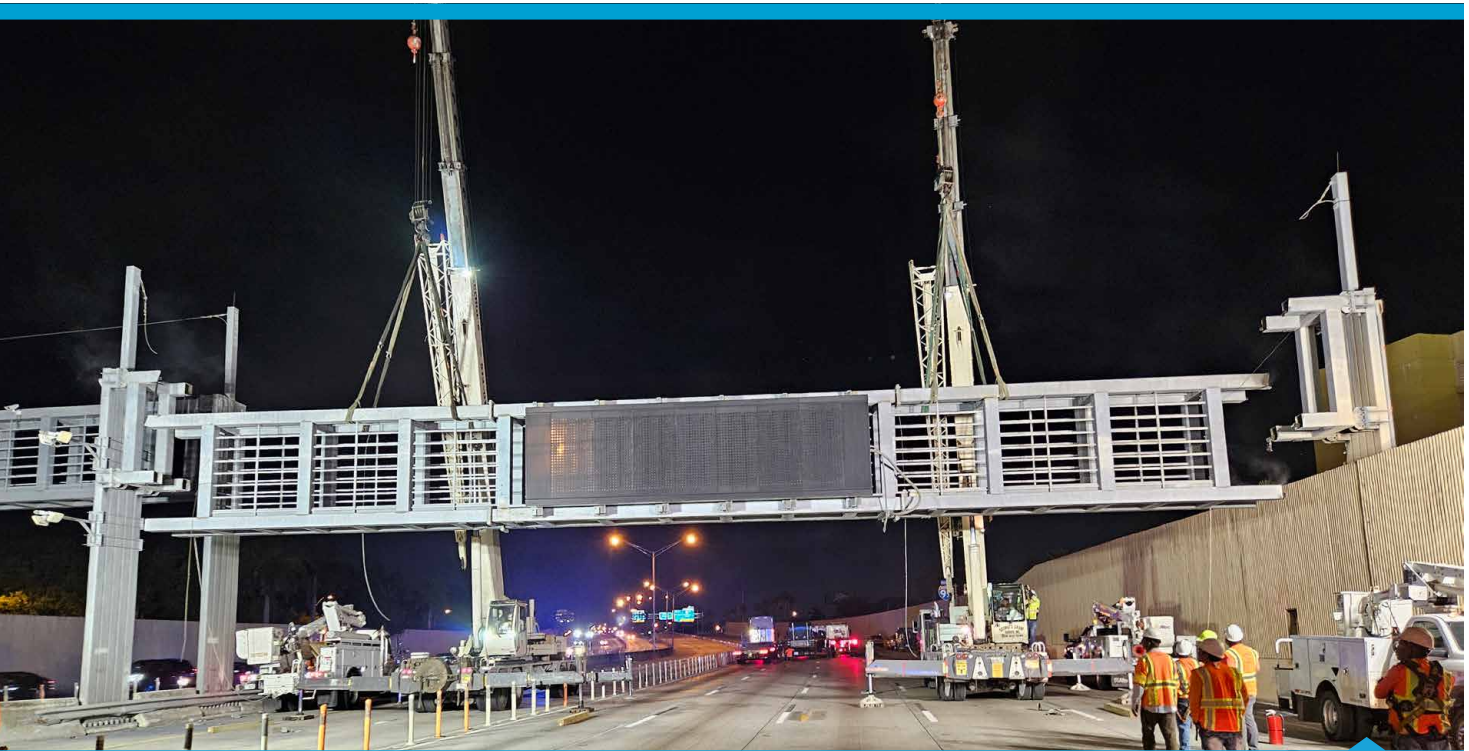


ITS DEPLOYMENTS

The people that support the TSM&O Office includes staff who plan, design, construct, operate, and maintain projects that improve or expand the ITS infrastructure. ITS deployment over the last 10 years has typically been embedded in large roadway construction projects. This creates a challenge for roadway contractors to ensure they have the expertise to install and test ITS devices. The Construction Engineering and Inspection (CEI) staff also need qualified professionals to ensure the proper installation and operation of the ITS portion of these projects. System testing is done with cooperation from the STMC. The STMC staff also configure new equipment into SunGuide, the Advanced Traffic Management System (ATMS) used by FDOT. Once the project has been final accepted, the STMC staff begin to

use these devices in their day-to-day operation. The ITS Maintenance support then begins the process for maintaining the equipment by conducting scheduled preventive maintenance and repairs when equipment malfunctions or is damaged. A summary of FDOT District Six TSM&O projects in progress or completed during FY 2024–2025 follows.

I-395/S.R. 836/I-95 Design-Build Project
– The I-395/S.R. 836/I-95 design-build project continued during FY 2024–2025. This project began in January 2019 and is expected to be completed in 2029. It is reshaping this important interchange including much of S.R. 836 to the west and I-395 to the east. ITS and incident management improvements are included with this complex project. The signature bridge and the planned community



DMS Replacement Along I-95

area below the elevated roadway will provide a bright spot for downtown Miami. Several cameras became operational and are being used by the STMC. Additional ITS devices will be added as the new infrastructure continues to take shape. For more information, visit the [project website](#).

Golden Glades Interchange (GGI)

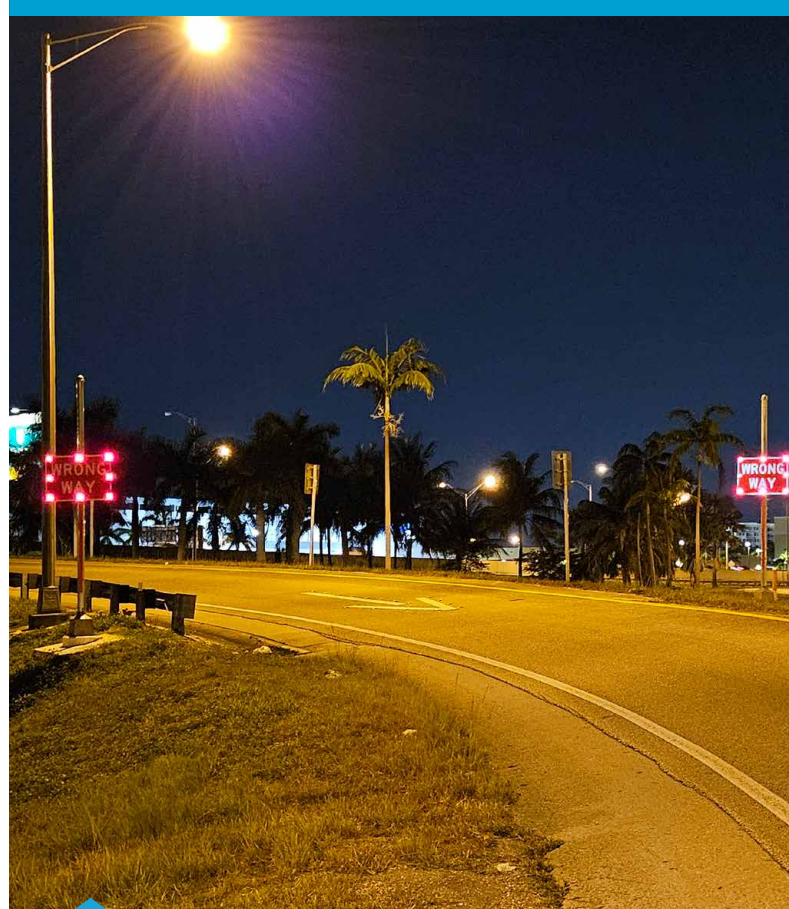
Enhancement Project – The GGI Project began in March 2024. The GGI is another important interchange where I-95, S.R. 826, Florida’s Turnpike, and U.S. 441 converge. This project includes more than 10 miles of roadway, bridges, and ramps to enhance regional mobility and reduce travel times. The GGI Project will enhance and expand ITS devices, provide additional WWVDS, and make significant changes to 95 Express. Project completion is expected in Spring 2029. Visit the [project website](#) for more information.

Districtwide ITS Replacement Project (Miami-Dade and Monroe Counties)

– The TSM&O Office continued its ITS replacement projects this year. One project is replacing several DMS, sign structures, and replacing backup generators. This project is expected to be complete in early FY 2025-2026. Another project is replacing generators at four communication hub buildings and installing security cameras at two hub buildings. This project is also expected to be completed in FY 2025-2026. The most recent project started in June 2025 with replacement of several cameras and DMS. This project is expected to be complete in 2027.

S.R. 826 Southbound Capacity Improvement Project

– This project began in April 2022 and is modifying southbound S.R. 826 between NW 103rd Street and I-75. The main objective of this project is to increase capacity for the general purpose lanes and modify the flyover at NW 103rd Street to allow roadway widening. The project also adds three WWVDS and enhances the ITS devices in the area to accommodate the new roadway configuration. This project is expected to be complete in the fall of 2025.



Testing WWVDS Flashing LED Signs

Wrong Way Vehicle Detection System Projects

– Three new WWVDS along I-95 near the Rickenbacker Causeway were completed this fiscal year. This brings the total number of operational WWVDS to 20. The Phase 2 WWVDS project is in construction and expected to be completed in the spring of 2026. This project will add 25 more WWVDS. Ultimately there will be a total of 95 WWVDS installed along off-ramps throughout Miami-Dade County.

The following table illustrates the increase in deployed ITS devices from 2004 to 2025.

ITS DEVICE	2004	2025
Cameras	69	507
DMS	22	198
Detectors	205	581
Ramp Signals	0	41*
WWVDS	0	20

* 19 ramp signals along S.R. 826 are not yet operational



STMC OPERATIONS

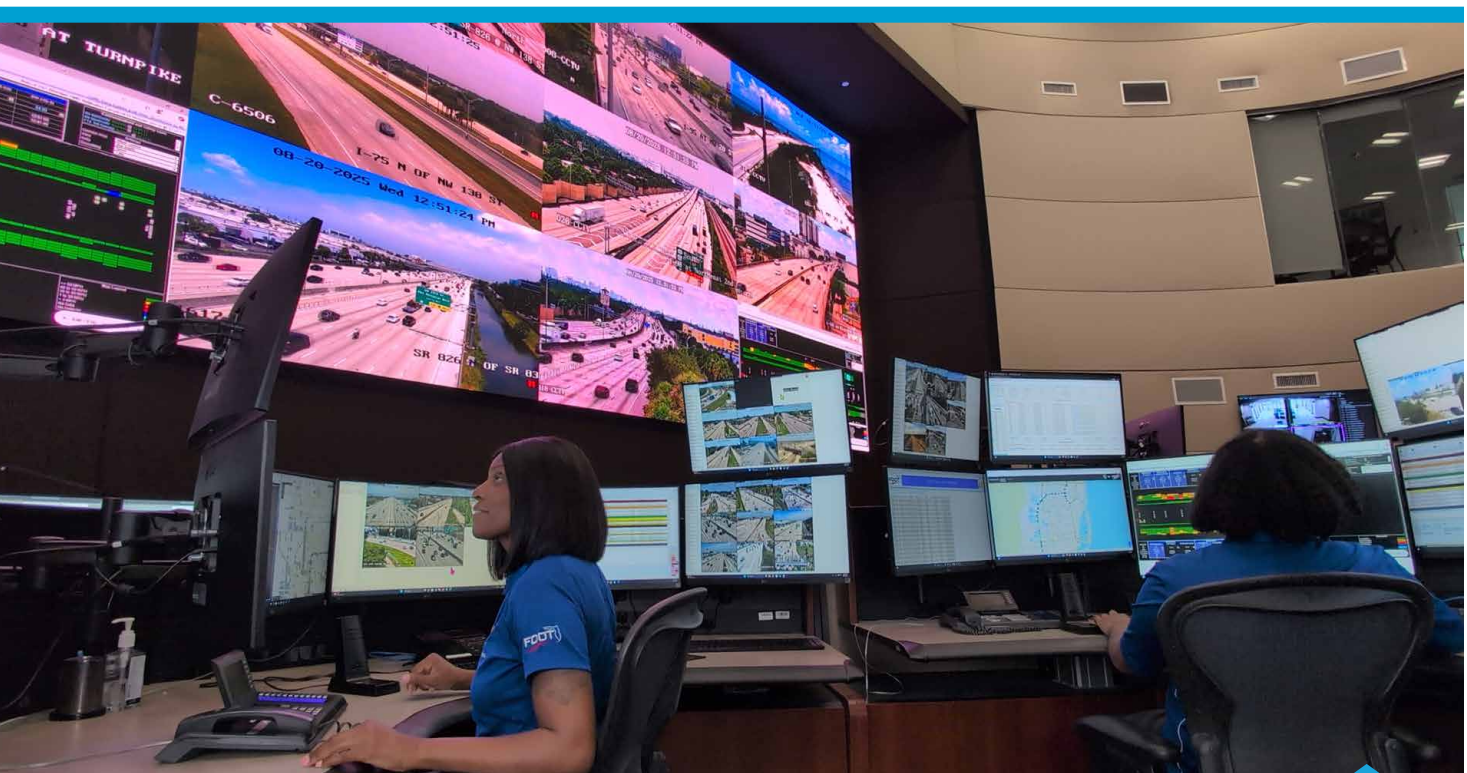
The staff that work in the STMC control room have been providing 24/7 service for more than 20 years. This has remained consistent despite challenges from large roadway and bridge construction projects, special events, changes in technology, complex crashes, and expansion of the overall network. This staff is able to adapt with these challenges and continue to provide this vital service for the motoring public. STMC Operations covers both the freeways in Miami-Dade County and arterial management primarily in Monroe County.

FREEWAY OPERATIONS

Freeway operations mainly covers the highways in Miami-Dade County including I-95, I-75, S.R. 826, I-395, MacArthur Causeway, and I-195 plus the managed lane corridors of 95 Express, Palmetto Express, and 75 Express. Freeway operations has been the backbone of the STMC operation relying on the outdoor fiber optic cable system, ITS devices, and communication hub buildings to receive data

at the STMC. There are many hands that help keep freeway operations running including the TMC Operators, the IT team, and the ITS Maintenance team.

Video Wall – The new Direct View LED technology video wall installed in June 2024 has been a significant upgrade. The team is now working on enhanced capabilities to receive streaming video from first responders and to share camera feeds using virtual video walls.



STMC Operations Control Room

95 Express – The STMC completed its 16th year operating 95 Express. This includes 15 miles from S.R. 112 to Sheridan Street in the northbound direction and 13.5 miles from Ives Dairy Road to S.R. 112 in the southbound direction. Significant coordination has been occurring with District Four as the 95 Express expansion into Palm Beach County is nearing completion. The focus is making sure the customer experience along 95 Express is seamless between the districts. The adjacent portion of that project, Phase 3C, is expected to be completed in 2026. Construction continues on the I-395/S.R. 836/I-95 design-build project at the southern end of 95 Express. The Golden Glades Interchange Enhancement project began construction in March 2024 and will have significant impacts on 95 Express.

Palmetto Express and 75 Express – The S.R. 826 Southbound Capacity Improvement Project began construction in April 2022 and is expected to be completed in the fall of 2025. This project is modifying S.R. 826 and Palmetto Express between NW 103rd Street and I-75. This project will continue to have an operational impact on how Palmetto Express is managed until its completion.

Ramp Signaling Operations – Ramp signals along I-95 moved into their 15th year of operation and continue to help manage traffic along the corridor. There are 22 ramp signals along both directions of I-95 from NW 62nd Street to Ives Dairy Road. The system improves operations along I-95 by regulating the flow of vehicles entering the roadway during peak periods of travel. STMC operators can also activate the ramp signaling system in the case of congestion during non-peak periods or to assist during an incident or special event.

S.R. 826 has 19 ramp signals at on-ramps from NW 25th Street to NW 154th Street that were installed as part of the Palmetto Express project. These ramp signals are not yet operational. With the anticipated completion of the S.R. 826 Southbound Capacity Improvement Project, the STMC is currently coordinating for the future use of the ramp signals.



Traffic Signal Along U.S. 1/Overseas Highway

ARTERIAL OPERATIONS

The STMC has staff that manage its Arterial Operations. Arterial operations primarily covers U.S. 1/Overseas Highway in Monroe County but does include some arterials in Miami-Dade County such as Okeechobee Road, Krome Avenue, and portions of U.S. 1. In 2018, the TSM&O Office assumed operation and maintenance of all traffic signals and other traffic control devices in Monroe County north of the City of Key West. The TSM&O Office implemented an advanced traffic control system that would fit the needs of this small traffic signal network spread out over more than 100 miles. This became the Monroe County Traffic Signal System (MCTSS). The system grew in 2020 with the addition of the traffic signals in the City of Key West. The MCTSS was able to handle this expansion making it easier for staff to monitor traffic signal operations and to make traffic signal timing adjustments as needed to improve traffic flow.

Monroe County Traffic Signal System (MCTSS)

– One of the key aspects of the MCTSS is that staff can provide a reliable traffic signal system for the motoring public. Prior to the MCTSS, the traffic signals were operated and maintained by a few different agencies with varying types of traffic control equipment. Staff at the TSM&O saw the opportunity to provide a superior traffic user experience while making the system hardened to power outages and easier to maintain. The result is a system that is more reliable and less susceptible to significant downtime.



Express Lanes Supervisor

The Arterial Operations staff continues to utilize elements from the Keys Connecting Overseas to Advance Safe Travel (Keys COAST) project. This was a connected vehicle project completed in 2024 which provides the capability to receive detailed traffic data from roadside units (RSUs) deployed at every signalized intersection. In turn, the RSUs can communicate with vehicles equipped with an onboard unit (OBU) to provide signal phasing and timing (SPaT) data and traveler information messages. The system can also provide this information using a mobile application. Florida International University and the University of Florida are continuing to evaluate this connected vehicle project to determine its benefits. The evaluation is expected to be completed in 2026.

The results of the effort and coordination for the MCTSS can be demonstrated in the continued reliability of the system. During FY 2024–2025, the traffic signals in the MCTSS were available 99.8% of the time, traffic signal controllers were available 99.9% of the time, and traffic detection was available 99.2% of the time.

Traffic Signal Retiming – The District Six TSM&O Office has an active traffic signal

retiming program covering Miami-Dade and Monroe Counties. It identifies and prioritizes candidate arterial segments, performs traffic data collection, and develops new signal timing plans. The goal of the program is to make sure that the arterial signal timing plans are updated for the ever-changing regional traffic patterns. During FY 2024–2025, the TSM&O Office completed the retiming for 191 traffic signals in Miami-Dade County and 90 traffic signals along state roads in the City of Miami Beach.

Arterial Traffic Diversion Routes – The TSM&O Office is completing an effort with Miami-Dade County Traffic Signals and Signs Division for arterial traffic diversion routes. These are arterials that could be used as a diversion route due to an event along the freeway. Special traffic signal timing plans were developed to allow diversion traffic and normal arterial traffic to flow.

Traffic Signal Maintenance and Compensation Agreement (TSMCA) – It does take dedicated staff to make sure that the approximately 1,400 traffic signals on state roads in Miami-Dade County are being properly maintained. FDOT District Six is responsible

for the traffic signals on its state roads but works with the county through the TSMCA. The TSMCA is a mutual agreement between FDOT and Miami-Dade County to compensate the county for operating and maintaining the traffic signals on state roads. These traffic signals are operated by the county's traffic signal system and maintained with the county's resources.

SOFTWARE ENHANCEMENTS

The software engineers at the STMC have a knack for taking the ideas given to them and turning those ideas into efficient and productive software solutions. It is one of the hallmarks of the TSM&O Office to strive for innovation and efficiency improvements. The software development team continued enhancing many of the Operations Task Manager (OTM) modules. Enhancements to the Purchase Tracker allowed improved productivity. The Purchase Tracker improves the process for organizing and producing purchase requests for various equipment, software, and other services needed at the STMC and in the field. Staff continues to support other districts with the Statewide Express Lanes Software (SELS) while helping to test the next generation of managed lanes software (Next Gen SELS). Phase 1 Next Gen SELS was deployed in District Two for static and time-of-day tolling. The STMC software team is now focusing on testing the variable tolling functionality of Next Gen SELS.

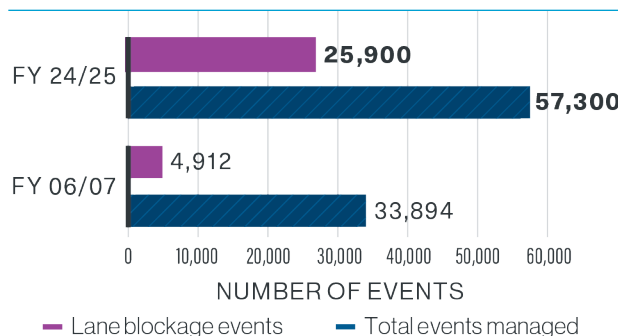


FIGURE 1. FDOT District Six Events Managed

PERFORMANCE MEASURES

In December 2007, District Six set targets for key operational performance measures that have the greatest impact on the public. During FY 2024–2025, STMC Operations staff continued to exceed those targets, thanks to quality control procedures and dedicated staff who provide continual guidance and training to operators with assistance from OTM.

Figure 1 shows the number of events during FY 2024–2025 compared to the baseline FY 2006–2007. In that time frame, there has been a 70% increase in overall traffic events and a 430% increase in lane blockage events. STMC operators managed 57,300 total events and 25,900 lane-blocking events during FY 2024–2025. It is interesting to note that the number of total events stayed consistent from the previous fiscal year but the lane blockage events increased by 12%.

The following table summarizes performance measures from FY 2020–2021 through FY 2024–2025.

PERFORMANCE MEASURES	FY 20-21 AVERAGE	FY 21-22 AVERAGE	FY 22-23 AVERAGE	FY 23-24 AVERAGE	FY 24-25 AVERAGE	TARGET
Dispatch Road Rangers (GPL)	00:00:29	00:00:32	00:00:31	00:00:27	00:00:30	≤00:02:00
Dispatch Road Rangers (EL)	00:00:24	00:00:25	00:00:27	00:00:22	00:00:22	≤00:00:60
Time to Confirm an Event (GPL)	00:01:02	00:00:58	00:01:04	00:01:09	00:01:25	≤00:02:00
Time to Confirm an Event (EL)	00:00:17	00:00:21	00:00:21	00:00:31	00:00:35	≤00:01:00
Time to Post DMS (GPL)	00:01:37	00:01:43	00:01:23	00:01:19	00:01:24	≤00:03:00
Time to Post DMS (EL)	00:01:02	00:01:06	00:01:04	00:01:13	00:01:07	≤00:01:30
Notify Other Agencies (GPL)	00:01:41	00:01:49	00:01:32	00:01:33	00:01:34	≤00:07:00
Notify Other Agencies (EL)	00:01:14	00:01:20	00:01:18	00:01:23	00:01:20	≤00:04:00

DMS = Dynamic Message Sign; EL = Express Lane; GPL = General Purpose Lane; LB = Lane-Blocking; NLB = Non-Lane-Blocking

INCIDENT MANAGEMENT

Our incident management staff is the public face of FDOT for many motorists. These are the brave people whose office is the roadway. When they are helping a stranded motorist or assisting at a serious crash, the incident management staff does this adjacent to traffic. They are usually the first to arrive on scene. They assess the situation and set up maintenance of traffic at incident scenes. This dedicated team not only wants to help motorists but also to keep the entire incident management team safe. Procedures and protocols have been established to allow for backup responders to help set up traffic control and give advance warning to upstream freeway traffic about a downstream incident. The incident management staff are the unsung heroes of FDOT and its TSM&O Office. District Six has three types of incident management resources.

- ▶ **Road Rangers** – FDOT’s safety service patrol is called the Road Rangers. There are currently 55 vehicles in the fleet operating three shifts per day for 24 hours a day, 7 days a week coverage.
- ▶ **Incident Response Vehicles (IRV)** – The IRV program and its IRV Operators serve as specialized safety service patrol and incident commanders at complex crashes.
- ▶ **Rapid Incident Scene Clearance (RISC)** – The RISC program helps to quickly open travel lanes from complex crashes typically involving heavy vehicles and spilled loads.

All three components of the incident management program work with each other and with other agencies such as the Florida Highway Patrol, local law enforcement, local fire rescue, and the District Six asset maintenance contractors to help clear incidents from the roadway as quickly and safely as possible. The



Road Ranger Contract Manager Presents at Road Ranger Workshop

IRV program was added for the opening of 95 Express in 2008 and expanded for the opening of 75 Express and Palmetto Express in 2018. Between the Road Rangers, IRV, and service patrols from active construction projects, there is an incident management fleet of over 70 vehicles.

District Six prides itself on hosting two TIM Teams. One TIM team is for Miami-Dade County and the other for Monroe County. The District Six TSM&O Office helps to maintain coordination between its Road Rangers, IRV, and RISC resources through the TIM teams. These teams allow incident management stakeholders to network and share lessons learned. Incident responder safety and safe,

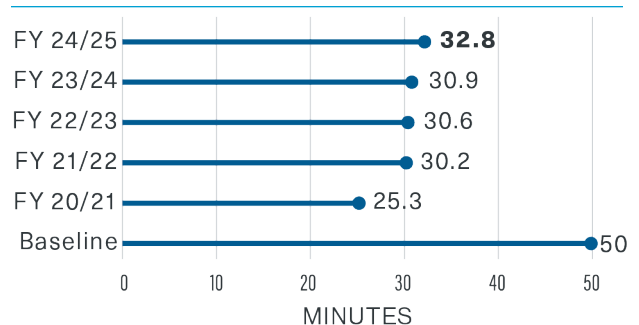


FIGURE 2. Average Annual Roadway Clearance Duration



Road Rangers Along S.R. 826

quick clearance is the primary goal. This is represented by our average roadway clearance time of 32.8 minutes (see Figure 2), which is a 34.4% reduction since the benchmark of 50 minutes in 2005. The reduction in time that incident management resources are on the roadway results in a reduced chance for a related secondary incident.

TIM – The TIM team meetings are an opportunity for many agencies to share information and get to know each other. The TIM teams in Miami-Dade and Monroe Counties create an incident management network of first responders including law enforcement, fire rescue, towing companies, recovery companies, and regional construction projects. The TIM Team meetings inform attendees on what is happening not only with FDOT but with the regional transportation partners. The District Six TSM&O Office maintained its annual schedule of two joint regional meetings with District Four and the Florida’s Turnpike, two meetings in Monroe County, a 95 Corridor meeting, and a Palmetto Corridor meeting. The intent of the 95 and Palmetto Corridor meetings was to create a smaller forum-style meeting to focus on the unique traffic concerns along these corridors and related parts of Miami-Dade County.

Road Rangers – Road Rangers have been the first sign of help that stranded motorists have seen for more than 20 years. Safety has become increasingly important for Road Rangers and other first responders. District Six completed the installation of rear red and white strobe lights for the incident management

fleet. The combination of flashing red and white lights get the attention of motorists. Feedback from first responders indicate that motorists are noticing the new lights and can be seen slowing down or moving over. District Six continued to help promote the changes to the state’s Move Over Law by participating in a joint press conference with FDOT and FHP.

Road Rangers provide incident response and motorist assistance along I-95, I-75, S.R. 826, I-195, I-395, the MacArthur Causeway, and all express corridors.

In 2013, the TSM&O Office added a heavy-duty wrecker to the Road Ranger program to quickly relocate disabled heavy vehicles such as buses, transit vehicles, and box trucks rather than waiting for a third party. Figure 3 shows the heavy-duty wrecker activity and average clearance times.



FIGURE 3. Incidents Responded To by Heavy-Duty Wrecker With Clearance Times in Minutes

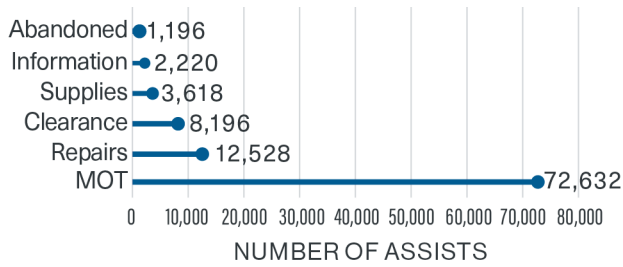


FIGURE 4. Road Ranger Assists

Figure 4 shows more than 90% of Road Ranger assists are for maintenance of traffic (MOT), repair, or clearance services (includes tows, car pushes, and motorist transports). Road Rangers responded to over 59,000 activations covering the 57,300 traffic events. Multiple Road Rangers can be activated for a single traffic event. A single traffic event can have multiple assists.



IRV Operator

Incident Response Vehicles – District Six’s IRV program continued operation with seven active IRV trucks covering 95 Express, Palmetto Express, and 75 Express. IRV operators responded to 319 events and provided 1,583 assists during FY 2024–2025.

IRV operators, along with FHP, Road Rangers, and other responders, all contributed to keeping 95 Express open and available for use 95.9% of the time and Palmetto Express/75 Express open for use 96.2% of the time during the fiscal year.

RISC Updates – RISC is an incentive-based program for the rapid removal of the more complex, longer duration incidents that occur along District Six roadways such as overturned tractor trailers or large debris spills. RISC supports Florida’s Open Roads Policy. RISC contractors must respond with all required vehicles within 60 minutes and clear the travel lanes within 90 minutes from notice to proceed to receive the incentive.

The RISC coverage area includes all major freeways, Krome Avenue, and Okeechobee Road. New RISC contracts were established this fiscal year. District Six now has four qualified vendors to respond to these events. The coverage for Krome Avenue was extended south about 13.5 miles from SW 88th Street to SW 296th Street. During FY 2024–2025, the average RISC response time was 57 minutes, while the average RISC travel lane clearance time was 45 minutes. RISC was used 25 times during the fiscal year. The following table summarizes historical RISC response times by fiscal year.

RISC Performance during FY 2024-2025 compared to previous fiscal years.

RISC PERFORMANCE	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	TARGET
Activation Time	20 m	28 m	28 m	32 m	29 m	--
Response Time	59 m	56 m	58 m	53 m	57 m	60 m
Travel Lane Clearance Time	71 m	50 m	57 m	66 m	45 m	90 m
Total Incident Clearance Time	162 m	151 m	168 m	164 m	180 m	--
Total RISC Events	41	19	26	10	25	--

IT/ITS MAINTENANCE

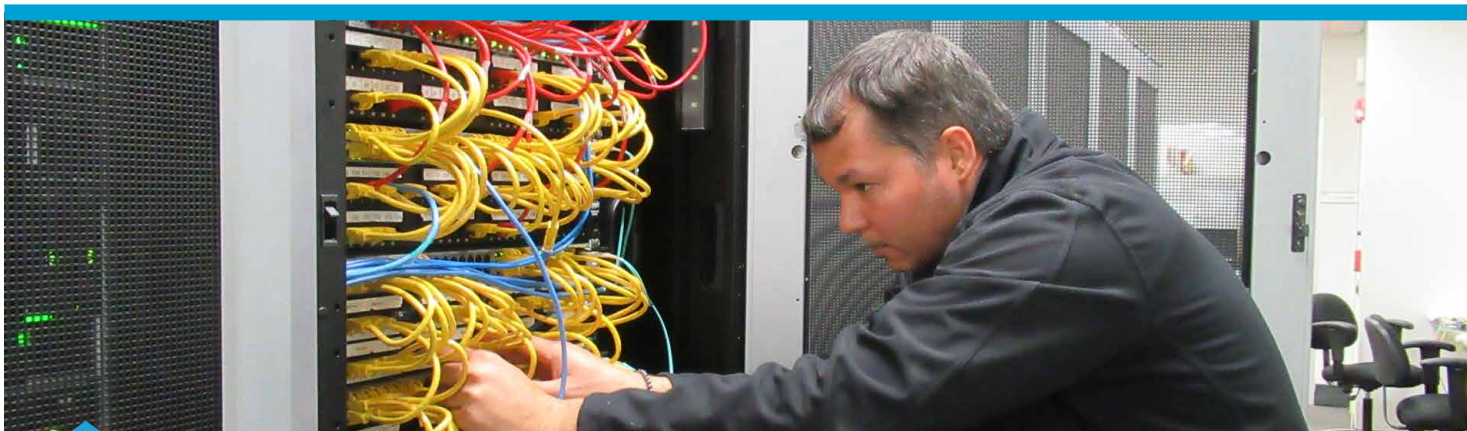
The IT/ITS Maintenance staff also plays a critical role at the STMC. The IT/ITS Maintenance team works tirelessly to keep everything working seamlessly at the STMC and in the field. However, when there are failures or network issues, this team springs into action to avoid any lengthy downtime. Without this highly trained staff, none of the services described earlier would be possible. The IT team is responsible for the computer equipment and peripherals including the communication network at the STMC out to the field communication hub buildings. The IT team also has staff to locate underground power and fiber optic cable to prevent damage from third parties. The ITS Maintenance team is responsible for the field devices from the field communication hub buildings to each field device. Through their efforts, the Operations team can continue to receive data and alerts from the field and provide travel information to the motoring public.

IT staff completed installation of the latest SunGuide software version 9.0. This update provided may new features including new functionality for wrong way driver alerts. The

staff also worked on configuring the RSUs in Monroe County from the Keys COAST project into a health monitoring system. The RSUs were also connected to FDOT's Vehicle-to-Everything Data Exchange Platform (V2X DEP). The IT team replaced all the workstations and monitors in the control room to keep Operations running at optimal performance.

The ITS Maintenance team makes sure that the field equipment and the network system are working properly with minimal downtime. During FY 2024–2025, the ITS Maintenance team managed more than 1,900 critical trouble tickets and more than 2,620 tickets overall, which includes field equipment maintenance by contractors on active construction projects.

The ITS Maintenance team also conducts special projects to improve and enhance the ITS infrastructure. Some of the special projects completed this fiscal year included replacing backup air conditioner units for communication hub buildings, replacing over 45 cameras that had reached the end-of-life, removal of old fiber optic cable along S.R. 826, junction box upgrades along I-95, and fiber optic drop replacements along I-75.



IT Technician Checks Network Connections

The following table shows the availability of key IT/ITS system components during FY 2024–2025 compared to previous fiscal years.

Availability of key IT/ITS system components during FY 2024-2025 compared to previous fiscal years

SUBSYSTEM	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Cameras	96.2%	97.2%	96.6%	92.4%	94.9%
DMS	97.8%	97.9%	97.4%	97.6%	98.3%
Vehicle Detectors	95.6%	97.2%	96.6%	93.0%	90.3%
Video Wall	99.8%	100%	100%	99.9%	100%
SunGuide	100%	100%	98.7%	100%	99.9%
OTM	99.8%	99.9%	100%	99.9%	98.6%

Utility Infrastructure Location Services – The utility locate team helps keep the outside underground power and communication infrastructure unharmed from third parties. The locates team is notified of potential conflicts through Florida’s Sunshine 811 service. Damage to the fiber optic cable or the power cables could have a significant adverse impact on field device availability. District Six also shares fiber optic cable with other partner agencies, hence a fiber cut can impact a much larger area. The team locates and marks the underground ITS infrastructure before digging or construction begins. During this fiscal year, 26,228 Sunshine 811 tickets were received, an increase of 13% from the previous fiscal year. Of the tickets received, 10,073 tickets were located in the field, an increase of 27.5% from the previous fiscal year. Figure 5 shows the number of locates over the last five fiscal years.

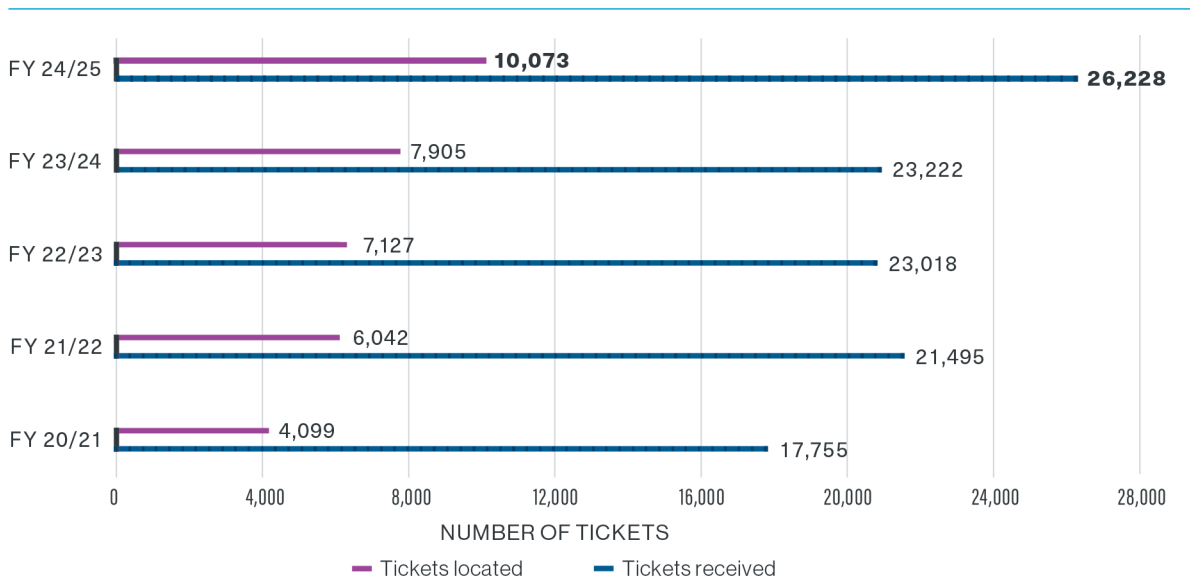
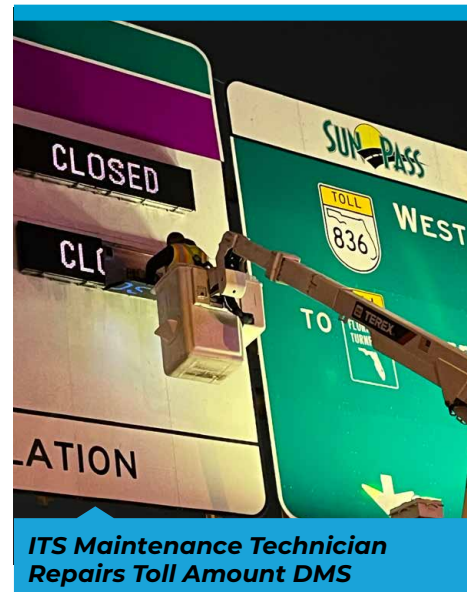


FIGURE 5. **Locate Ticket Summary**

TRAVELER INFORMATION

One of the critical functions at the STMC is to get information out to the traveling public in a timely manner. This is accomplished through messages on the DMS, alerts on the FL511 advanced traffic information system, social media, and information provided to mobile navigation applications. This is becoming increasingly important for special events. There are many special events that occur at Hard Rock Stadium and other areas throughout the district that generate many attendees and can produce traffic congestion. Timely information to motorists allow them to make decisions that may affect their travel route and ultimately their travel time. This will become very important in 2026 with the College Football Championship, the F1 Miami Grand Prix, and the FIFA World Cup. The World Cup will test the transportation network in Miami-Dade County since seven games will be at the stadium generating significant international fan interest.

In March and May 2025, two brush fires completely shut down U.S. 1 along the 18-mile stretch in Miami-Dade County intermittently for up to 10 hours. Card Sound Road, an alternate road for U.S. 1, was also shut down. These are the only roadways providing access to Monroe County and the Florida Keys. Staff at the STMC coordinated with Miami-Dade Fire Rescue, Florida Highway Patrol, the Monroe County Sheriff's Office, and

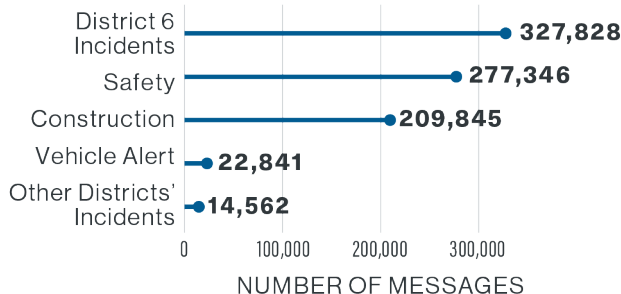


FIGURE 6. Posted DMS Messages by Type

the District Six Emergency Operations Center to share real-time traffic camera feeds and issue live updates. STMC Operators posted information on the dynamic message signs and published alerts through FL511. Operators were also able to provide awareness for the safety of fire crews with specialized messaging.

During FY 2024–2025, more than 850,000 messages were displayed on District Six DMS, with most messages for District Six incidents and safety messages. Figure 6 summarizes the types of DMS messages displayed this fiscal year.

District Six publishes real-time traffic event information on [FL511's](#) website and smartphone application. FL511 also gathers traffic event information, camera images, and DMS messaging from all FDOT districts. Figure 7 summarizes the FL511 published information this fiscal year.

During FY 2024–2025, District Six published over 79,000 traffic event updates to FL511.

District Six's TSM&O website, [sunguide.info](#), provides the same FL511 interface to allow motorists to view live feeds of the TSM&O Office's cameras in Miami-Dade and Monroe Counties. The website provides access to the TSM&O Office's services, newsflashes, publications, and newsletters.

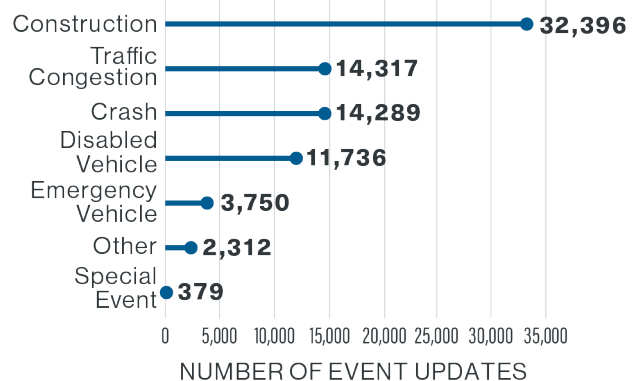


FIGURE 7. FL 511 Published Traffic Information by Event Type

PUBLIC OUTREACH

It is one thing for the TSM&O Office to provide the technical analysis and actions related to new initiatives, significant crash events, or special events but it is the Public Information (PI) and Community Outreach staff that can translate that analysis into useful messaging for the public. It is extremely important that the PI staff provide this information over multiple platforms such as social media.

PI staff hosted several tours at the STMC for the following groups:

- ▶ District Six PLEMO
- ▶ Miami-Dade Citizen's Transportation Advisory Committee
- ▶ FDOT Professional Engineer Trainees
- ▶ Swedish Bridge Delegation
- ▶ FDOT New Employees
- ▶ District Six Occupational Safety and Health Office
- ▶ Florida State Legislative Staff
- ▶ Hialeah Gardens High School STEM
- ▶ FDOT District Four TSM&O Office
- ▶ Miami-Dade County Public Schools Shadow Day
- ▶ American Association of State Highway and Transportation Officials



FDOT TSM&O Staff Participates in Career Day



IRV Operator Meets with New FDOT Employees

The PI staff helped coordinate several outreach and events to provide awareness on several initiatives by FDOT District Six. Media events covered the following topics:

- ▶ Move Over Law Press Conference
- ▶ Crash Responder Safety Week
- ▶ Rickenbacker Causeway Construction Update
- ▶ FIU TSM&O Symposium
- ▶ School Career Day
- ▶ District Six Modal Development Office Expo

The annual FDOT/FHP Move Over Law press conference was well attended by local media. This year's press conference introduced the expansion of the law requiring drivers to move over or slow down for all stopped vehicles. The press conference allows the media to hear directly from first responders providing a reality check to the dangers they encounter along our roadways every day.

The STMC participated in Crash Responder Safety Week (CRSW) during the week of November 18 through 24, 2024. CRSW is an initiative from the FHWA to increase awareness about responder safety. The theme was "Responders Ahead! Reduce Your Speed As You Proceed." District Six participated by posting several video testimonials from our Road Ranger and IRV teams along with DMS messages on various social media platforms.



BENEFITS TO THE PUBLIC

The efforts by staff at the TSM&O Office and its STMC have resulted in a positive impact to the South Florida region. These efforts do come at a price with capital improvement construction projects and the operations and maintenance to keep the system running and managed. FY 2024-2025 showed an increase in both vehicle and truck operating costs over prior years which puts a premium on vehicle delay. Traveler information efforts also contributes by providing proactive information using dynamic message signs, FL511, navigation applications, and connected vehicle applications to give motorists the choice to decide another route or alter their travel pattern.

The TSM&O Office continues to invest in its infrastructure and staff to keep its state-of-the-art traffic management system functioning. Planned construction projects, annual equipment replacement projects, and in-house projects keep the field device deployment refreshed based on equipment end-of-life dates.

Ongoing repairs and preventive maintenance ensure the overall availability of the system. Keeping incident management resources such as Road Rangers, IRV, and RISC on the road provides benefits in reducing motorists' delay by providing quick clearance of lane-blocking events.

The FDOT District Six TSM&O Office's budget for FY 2024–2025 included operating, maintenance, and capital improvement costs for its freeway and arterial operations. TSM&O strategies are typically price competitive when compared to the capital costs for road and bridge construction projects. The capital cost of ITS technologies and TSM&O strategies can be 5% to 10% of an infrastructure project.

The incident management program provides the largest impact on the relationship between travel delay and lane-blocking traffic incidents. When delays associated with incidents are reduced, motorists and commercial vehicles save time. The time



FDOT District Six TSM&O Staff



Annual Road Ranger Workshop

saving translates directly to a dollar amount when user costs of vehicles are taken into consideration. As shown in the benefits table below, the incident management program's contribution to the reduction in delay due to incidents translates into savings of \$4.3 billion.

95 Express and the ramp signaling system also contributed to the reduction of delays during peak hours, translating into savings of \$34.6 million. This estimate was calculated using widely accepted statistical methods for estimating the cost implications of traffic delays. The estimate only includes time saved by motorists; it does not address road user cost savings.

When comparing the total estimated benefits of the TSM&O program during FY 2024–2025 to the total annual operating expenses and capital investments (annualized over 10 years at 7%), the TSM&O program yields \$47.85 in economic benefit for every dollar spent (benefit-cost ratio of 47.85:1).

Fiscal Year 2024–2025 Costs

ITS Operations	\$11,171,135
ITS Maintenance*	\$8,731,201
Road Rangers	\$11,062,122
RISC	\$74,500
FDOT Cost Center Operating Budget	\$3,327,504
Other (Consultants, FTE, FHP, FIU)**	\$38,475,999
<i>Total Annual Operating Costs</i>	<i>\$72,842,461</i>
<i>Total Annualized Capital Costs</i>	<i>\$17,174,973</i>
Total Annual Costs	\$90,017,434

Fiscal Year 2024–2025 Benefits

Incident Management	\$4,273,121,539
Express Lanes / Ramp Signals	\$34,586,358
Total Benefits	\$4,307,707,897

*Includes Express Lanes ITS Maintenance, and Express Lane Marker Repair

**Includes Florida's Turnpike Enterprise operational costs for express lanes in Miami-Dade County (District Six)

Figure 8 shows the benefit-cost ratio for FY 2024–2025 and previous years.

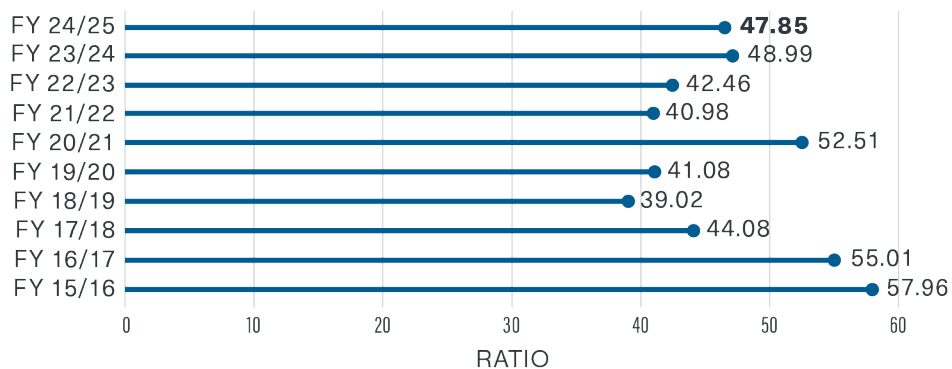


FIGURE 8. Benefit-Cost Ratio

A LOOK AHEAD

Over the years, the TSM&O Office has demonstrated its commitment to providing traffic management throughout the region by adapting to changes in the transportation landscape and advancing projects that take advantage of current technology. However, it is the staff that operate and maintain the system that has contributed to its success. The TSM&O Office plans for the future by evaluating needs and initiatives, prioritizing projects, and forecasting investments. The following projects are in progress or planned for FY 2025–2026.

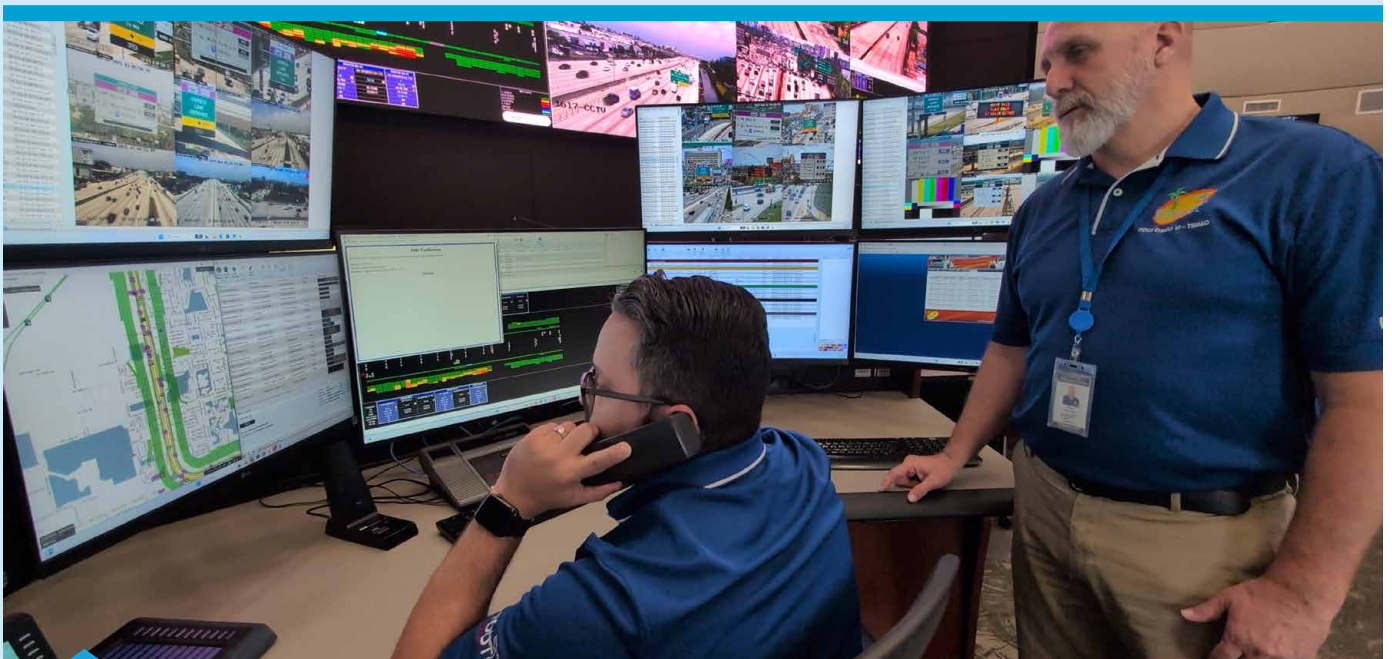
U.S. 27/S.R. 25/Okeechobee Road Projects

– The second segment of this multi-segment project (east of NW 107 Avenue to east of NW 116 Way) is expected to be completed in early 2026. This project adds fiber optic cable, cameras and detectors to the ITS infrastructure. This series of five projects will bring needed roadway and traffic signal improvements to this corridor. The overall project extends through the S.R. 826 interchange and is expected to be completed in 2036.

Express Lanes Projects – Regional express lane projects will continue to focus on improvements and expansion of the existing system. The Palmetto Express southbound

capacity improvement project is estimated to be completed in fall of 2025. The TSM&O Office will be getting plans ready to reinstate tolls and to begin operating 19 ramp signals. The 95 Express Phase 3 project in District Four will be reaching completion at the beginning of 2026. The project extends 95 Express from the Miami-Dade/Broward County line into Palm Beach County. Toll operations will be a coordinated effort between District Six, District Four, and the Florida's Turnpike.

AI Pilot Projects – The TSM&O Office ventures into new territory by starting several artificial intelligence (AI) pilot projects. Efforts are underway utilizing AI to streamline specialized



TMC Manager Oversees Operations

reporting for various key performance indicators (KPIs). Another project is using AI to prepare for and monitor special events. The AI model will present several dashboards and maps showing a real-time snapshot of traffic along routes heading to and from Hard Rock Stadium. These dashboards will include traffic key performance indicators including travel time and speed. Predictive KPIs for the next 15, 30, and 45 minutes will raise awareness to possible traffic concerns. A third project is providing information from data scarce areas. A fourth project is using AI to analyze past traffic data along with real-time data to determine effectiveness of the incident management program and to help with decisions on where to stage incident management resources, modifications to Road Ranger beats, and adjustments to the overall fleet.

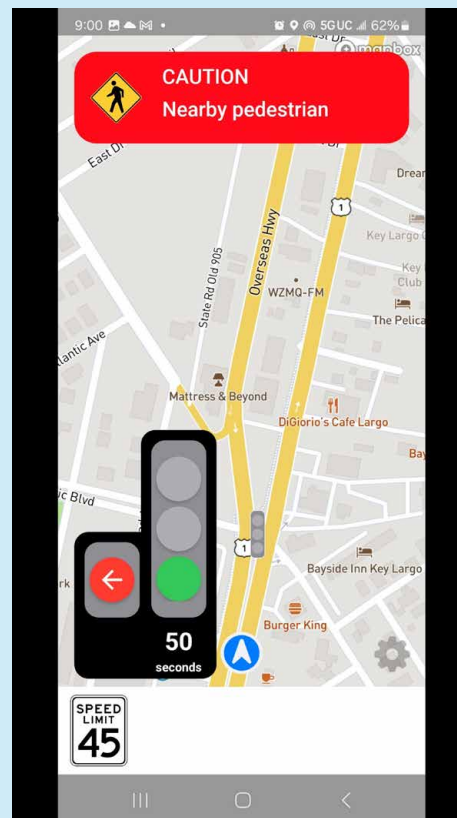
Connected Vehicles – District Six will continue enhancing the connected vehicle project deployed along U.S. 1 in Monroe County. Florida International University and University of Florida are conducting a before and after study. STMC staff will continue working with the system manufacturer to configure user messages such as traveler information, traveler advisory, and personal safety messages.

ITS Device Replacement Project – The next ITS Device Replacement Project is slated to start in the summer of 2026. This project will replace five freeway DMS along S.R. 826 and I-75, one 95 Express DMS, four arterial DMS, and a communication hub building generator.

Districtwide Traffic Signal Retiming – The TSM&O Office will continue its next round of traffic signal retiming focusing on state roads in Miami-Dade County. A total of 296 traffic signals are planned to be retimed in Miami-Dade County next fiscal year.

Wrong Way Driving Countermeasures – District Six will continue WWVDS countermeasures deployment with the construction of the Phase 2 project. This project covers 25 off-ramps and is expected

Connected Vehicle Mobile App for U.S. 1 in Monroe County



to be complete in the spring of 2026. The Phase 3 project covers 15 off-ramps along I-95, I-75, and S.R. 826 is starting construction with completion expected in January 2027. Phase 4 will install 20 WWVDS and is currently in the development phase.

S.R. 997/Krome Avenue TSM&O Infrastructure Deployment – The next TSM&O project will be along Krome Avenue which is expected to start construction in FY 2029-2030. Krome Avenue is designated as a Strategic Intermodal System Corridor, a Statewide Arterial Management Program Priority Corridor, and an emergency evacuation route. This project is currently in the planning stages and will span over 34 miles from Campbell Drive to Okeechobee Road. The goal is to improve safety and mobility along the corridor by deploying a fiber optic backbone, cameras, arterial DMS, and other TSM&O strategies.



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