



# TIM Traffic Incident Management

# RESPONDER

Volume 3, Issue 2

June 2022



**FDOT Traffic Incident Management (TIM) Managers Face-to-Face Meeting**  
**District Three - TIM Meetings on Emergency Response to EV Fire Incidents**  
**District Six - V21 Project Improves Travel Conditions in Miami-Dade County**





# TIM Team & Working Group

## MEETINGS & WEBINARS

DATE	DISTRICT/COUNTY	LOCATION	EST TIME
June 08, 2022	Alachua-Bradford TIM Team Meeting	GoTo Meeting	10 am - 11:30 am
July 12, 2022	Heartland TIM Team Meeting	GoTo Meeting	1 pm - 2:30 pm
July 13, 2022	Monroe TIM Meeting	FDOT District 6, Marathon Office Conference Room	10 am - 12 pm
July 14, 2022	Polk TIM Team Meeting	GoTo Meeting	10 am - 12 pm
July 19, 2022	First Coast TIM Team Meeting	GoTo Meeting	10 am - 12 pm
August 09, 2022	Pinellas County TIM Team Meeting	FDOT District 7 Pinellas Maintenance Office 5211 Ulmerton Road, Clearwater, FL 33670	10 am - 12 pm
August 09, 2022	Sarasota-Manatee TIM Team Meeting	Manatee County Public Safety Center 2101 47th Terrace East 2101, Bradenton, FL 34203	1:30 pm - 3 pm
August 10, 2022	Alachua-Bradford TIM Team Meeting	GoTo Meeting	10 am - 11:30 am
August 16, 2022	Miami Dade TIM Team - Palmetto Corridor	City of Hialeah PD Training Room	1:30 pm - 3:30 pm
August 23, 2022	Hillsborough County TIM Team Meeting	FDOT District 7 Tampa Bay SunGuide Center 11201 N. McKinley Drive, Tampa, FL 33612	11 am - 12 pm
August 23, 2022	Traffic Incident Management Meeting - Turnpike	Pompano, MP 65 - Auditorium A & B	10 am - 12 pm
August 25, 2022	Traffic Incident Management Meeting - Turnpike	Turkey Lake, MP 263 - Auditorium A & B	10:30 am - 12 pm
September 20, 2022	First Coast TIM Team Meeting	GoTo Meeting	10 am - 12 pm
October 04, 2022	Miami-Dade/Broward TIM Team	FDOT District 6 Auditorium	1:30 pm - 3:30 pm
October 04, 2022	Heartland TIM Team Meeting	GoTo Meeting	1 pm - 2:30 pm
October 11, 2022	Sarasota-Manatee TIM Team Meeting	Manatee County Public Safety Center 2101 47th Terrace East 2101, Bradenton, FL 34203	1:30 pm - 3 pm
October 12, 2022	Alachua-Bradford TIM Team Meeting	GoTo Meeting	10 am - 11:30 am
October 13, 2022	Polk TIM Team Meeting	GoTo Meeting	10 am - 12 pm
October 19, 2022	Monroe TIM Meeting	Monroe County Sheriff Office Aviation Hanger	10 AM - 12 PM
November 08, 2022	Pinellas County TIM Team Meeting	FDOT District 7 Pinellas Maintenance Office 5211 Ulmerton Road, Clearwater, FL 33670	10 am - 12 pm
November 15, 2022	First Coast TIM Team Meeting	GoTo Meeting	10 am - 12 pm
November 15, 2022	Traffic Incident Management Meeting - Turnpike	Pompano, MP 65 - Auditorium A & B	10 am - 12 pm
November 17, 2022	Traffic Incident Management Meeting - Turnpike	Turkey Lake, MP 263 Auditorium A & B	10:30 am - 12:00 pm
November 22, 2022	Hillsborough County TIM Team Meeting	FDOT District 7 Tampa Bay SunGuide Center 11201 N. McKinley Drive, Tampa, FL 33612	10 am - 12 pm
December 14, 2022	Alachua-Bradford TIM Team Meeting	GoTo Meeting	10 am - 11:30 am



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# TIM Program Manager Update

Greetings Traffic Incident Management (TIM) professionals. Welcome to the second edition of the Florida TIM Responder, Florida's Statewide TIM Program newsletter, for the 2022 calendar year. The newsletter aims to provide you with relevant and timely information that will collectively help us advance the TIM state of practice throughout Florida. It is also expected that the TIM Responder newsletter will increase awareness of TIM and promote its benefits. The newsletter will focus primarily on the current state of the practice, articles from peers and partner first responder agencies, technology updates, national TIM updates, upcoming events, and awards/recognition.

The Florida Department of Transportation (FDOT) continues to advance the statewide [TIM Strategic Plan](#) adopted in January 2019. At its core, the Strategic Plan is designed to set priorities, focus energy and resources, strengthen operations, and ensure that stakeholders and TIM Program partners are working toward common goals supporting Florida's Open Roads Policy. The FDOT Central Office has been working on developing recommendations to improve the safety of responders while assisting and avoiding future struck-by incidents. A meeting of the FDOT TIM Program Managers was held at SunTrax facility, Lakeland, Florida on March 29-31. FDOT District TIM staff attended the meeting and added their insights to make this program better.

The following issue of the TIM Responder focuses on some great articles received from our District teams. One highlights the use of connected vehicle technology on the Incident Response Vehicle (IRV) in District 6, while another talks about the extinguishing of EV fires by the first responders. Some of the other articles in this issue focus on road ranger safety and a survey result on the road ranger safety improvements. This edition also highlights the performance measures for the third quarter of FY 2021/22 based on TIM training, Road Ranger assists, Rapid Incident Scene Clearance (RISC), and recognizes selected Road Rangers for their continued efforts in keeping Florida's highways safe.

In closing, it warrants emphasizing that a multiagency, multi-disciplined team effort is critical to the success of TIM. As such, we always value your input and would like to extend an open invitation to you to send us TIM Responder newsletter ideas and comments as well as articles and announcements that you'd like to share.

Thank you for your steadfast commitment to the TIM Program for the State of Florida. Together, we have responded to the needs of motorists while making every effort to create a safer working environment for our responder community. The team has risen to the challenge and continues to provide excellent service. Thank you for all that you do and please continue to be safe.

Shawn Kinney  
Traffic Incident Management

## Vision...

*To increase the delivery rate of fatality-free and congestion-free transportation systems supporting the FDOT vision and Florida Transportation Plan goals.*

## Mission...

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



LED flare beneath cone illuminates the working zone of the road rangers (Photo: District 7)

# A Comprehensive Approach to Road Ranger Safety

Grady Carrick

*Florida Road Rangers have proven to be an invaluable resource, assisting nearly 462,000 motorists and other responders at roadway incidents annually. Traffic incident management (TIM) is dangerous work, and according to data from the Responder Safety Institute, 2021 was among the highest on record for struck-by vehicle deaths among police, fire, Emergency Medical Service (EMS), transportation, and towing professions. Since their inception in 1999, there have been five Road Ranger operators killed in struck by vehicle incidents.*

Examining crash report statistics from 2014 through June of 2021, there were 229 crashes involving Road Rangers who were assisting at incident scenes. Crashes were fairly evenly split between urban and rural freeway segments, and peak periods were well-represented, along with times around shift changes (5 am and 11 pm). Lighting conditions are evenly split between daytime and nighttime, and while only 15 percent happen during rain, 1 in 4 occur on wet roadways. The majority of Road Rangers struck at incidents involve just their vehicle and not the operator. When the operator is involved, they are either sitting in their vehicle or struck as a pedestrian. Sixty percent of Road Ranger vehicles struck were in travel lanes as opposed to the shoulder, and 68 percent were struck in the rear.

Statistics show that Road Ranger vehicles and operators work in a very dangerous environment. The Florida DOT sought to examine every aspect of Road Ranger safety and in early 2022, they initiated a comprehensive look at safety that involved the training, vehicles, equipment, and procedures used by Road Rangers.

The vast majority of traffic crashes are attributed to some type of human error. There is a realization that reducing crashes, deaths, and injuries must mitigate those inevitable mistakes that people make. The safe system approach aims to eliminate fatal and serious injuries by accommodating human mistakes and keeping injury impacts tolerable. Unlike typical safety “treatments”, the safe system engages safety on many levels, and that redundancy offsets failures in any one area. Safety is proactive, and responsibility is shared among all road users.

District champions are leading the statewide examination of approaches to improve safety for Road Rangers. The approaches align with the safe system elements like safe road users, safe vehicles, safe roads, safe speeds, and post-crash care.

## SAFE ROAD USERS

Driver compliance with Florida's "move over" law is viewed as the most important aspect of road user behavior that can impact Ranger Safety. Fortunately, Florida agencies have robust public education and enforcement programs. FDOT will continue to partner with Florida Highway Safety and Motor Vehicles (FLHSMV) and law enforcement to promote "move over".

Under the idea that responder safety is a shared responsibility, making sure that responders like road rangers are up to the challenge is also important. A new tactical training module for Road Rangers is being developed to ensure that they understand important steps associated with everyday duties like vehicle positioning, approaching motorists, deploying traffic control devices, and operating around open lanes of traffic. The tactical module will be complemented by a new annual refresher that will combine the tactical training with important points from the National TIM Responder Training Program.

## SAFE VEHICLES

Safe vehicles start with the visibility and conspicuity of the Road Ranger. To be seen is to be avoided, and a new FDOT Research Office project is evaluating the effectiveness of vehicle colors and markings. A separate effort is looking to improve the solid amber top lights by adding rear-facing red and/or white lights to make Road Rangers more recognizable as response vehicles. The central office is evaluating vehicle lighting color and use for potential modifications.

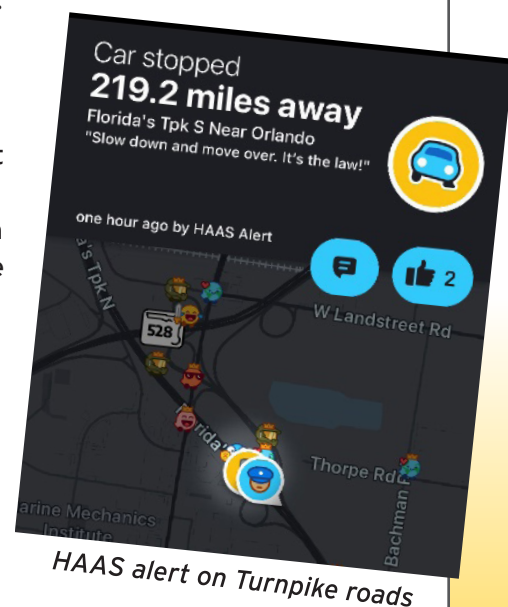
The foundation of scene safety in TIM is the protective vehicle block. Truck-mounted crash attenuators (TMA) serve to harden the target, lessening vehicle damage and providing a safer impact for persons in both vehicles. In District 4, 26k pound stake body trucks with arrow boards and truck-mounted crash attenuators are being tested in conjunction with Road Rangers to augment the fleet on higher-speed roadways. While the chassis of the typical Road Ranger truck cannot support a TMA, the idea of a separate blocking vehicle is intriguing.

Connected vehicles hold the promise of increasing the visibility of response vehicles on the roads by displaying a message using on-board units (OBU) that are common in many newer vehicles today. Mapping and navigation devices can alert drivers to the presence of responders ahead.

## SAFE ROADS

Temporary traffic control devices that emit light or sequentially light to direct drivers are another way that the road environment is made safer. When those devices become "smart", they can communicate with mapping and navigation companies to alert drivers to lane closures or road hazards. Florida's Turnpike and District 4 are testing temporary traffic control devices with these capabilities. Sequential flares enhance nighttime traffic control and provide warning, guidance, and direction to approaching motorists.

Driver alert systems are similar to OBU, but they are not limited to just vehicle systems. Driver alerts can originate from Road Ranger Automatic Vehicle Location (AVL) units, SunGuide Software, or 3<sup>rd</sup> party transponders. Alerts from all of these sources can publish to FL511, 3<sup>rd</sup> party mapping providers, and roadway Dynamic Message Sign (DMS). Current AVL solutions as well as 3<sup>rd</sup> party alert systems are being tested in multiple districts and the Florida Turnpike.



## A Comprehensive Approach to Road Ranger Safety, continued from page 5

Emergency stopping areas are not a new roadway design feature, but they are gaining renewed attention in Florida. Some locations like I-75 exit ramps in District 1 have paved pull-off areas where crash vehicles and disabled vehicles can be removed from the mainline roadway. The refuge areas provide a safer environment for responders and motorists involved.

DMS with graphical messages is being considered as a way to better communicate with motorists. Incident ahead and move over messages might have a greater impact with color and or graphics. Whether electronic or visual, alerts form a type of advanced warning that benefits drivers and responders alike. Communicating with drivers who approach incidents and roadside responders like Road Rangers is an important element in helping them safely navigate the temporary conditions ahead.

### SAFE SPEEDS

Having drivers reduce speed as they approach roadway incidents is an important part of responder safety. Advanced warning is key to driver awareness of conditions ahead and the suite of tools to warn drivers includes DMS, traveler information systems, and visual cues from responders on the scene.

Florida's move over law is one of the few in the nation that has a slow down component that is an absolute speed limit, 20 mph below the posted speed. An absolute limit is more enforceable and promotes safe driving.

### POST-CRASH CARE

In all types of safe system applications, TIM and prompt emergency medical care is the final component. TIM and Road Ranger Procedures are important parts of Road Ranger safety and the newly developed incident workflow and uniform response guidelines (URG) will ensure that Road Rangers have a good understanding of their duties. The revised Road Ranger Procedure, workflow, and URG are currently being created with input from the districts.

Debris removal is one of the most hazardous activities that can be undertaken by Road Rangers. New systems enable operators to remotely lower a front scoop which is mounted to the front bumper of the Road Ranger truck and push debris out of travel lanes. A recent demonstration for statewide TIM Program Managers showed the effectiveness of the tool and efforts are underway to pilot test the devices in Florida.

While the MUTCD describes temporary traffic control (TTC) zone design, there are no illustrated examples for traffic incitement management areas. Consideration is being given to including the new Standard Plan Index series for the FDOT Design Manual and Standard Plans. These designs would provide real-world examples of TTC for Road Rangers at shoulder incidents, lane closures, ramp closures, and other common scenarios. The examples would consider the emergency nature of the TTC and the reduced time, planning, and equipment available.

Responders are vulnerable road users and their deaths and injuries are unacceptable. The comprehensive approach to Road Ranger safety is ongoing and this article was meant to describe some of the things being considered to help improve safety.

# FDOT Traffic Incident Management (TIM) Managers Face-to-Face Meeting

Shawn Kinney, Road Ranger Program Manager, FDOT, Rakesh Sharma, HNTB and Samia Rubaiat, HNTB

Florida Department of Transportation (FDOT) Central Office organized Statewide TIM Meeting at SunTrax facility in Lakeland, FL on March 29-31, 2022. After COVID, this was the first time that TIM program managers and members met and had a TIM-related face-to-face discussion. About thirty TIM members from Districts and Turnpike attended this meeting.



Meeting attendees at SunTrax facility

During the meeting, several key TIM topics such as Road Ranger funding, SharePoint site overview, Road Ranger scope of service, RISC funding, instant dispatch tow, QAR process, TIM dashboard, etc. were discussed. There was a detailed discussion on the Road Ranger safety initiative. The FDOT Central Office presented the safety improvement efforts on Road Ranger vehicle visibility, operator visibility, vehicle hardening, use of different equipment (automated debris removal, truck-mounted attenuator, etc.), advanced warning alert, emergency stopping site design, and incident temporary traffic control design. Districts shared information and lessons learned from their pilot projects and initiatives.

On the second day of the meeting, vendor demonstrations of the debris removal system, trailer-mounted attenuator, and motorist alert systems were organized. TIM team had the opportunity to have the first-hand experience of using this equipment and having a discussion with the vendors. SunTrax facility tour was organized on the third day of the meeting.

The knowledge-sharing discussion made the meeting a successful one. FDOT Central Office hopes to continue organizing this meeting in the upcoming years.



Debris removal system demonstrations










Trailer-mounted attenuator

For more information, please contact contact Shawn Kinney at [Shawn.Kinney@dot.state.fl.us](mailto:Shawn.Kinney@dot.state.fl.us).

# PERFORMANCE MEASURES

Since the implementation of the program, 13,565 incident responders have received training in the state of Florida (as of April 11, 2022). That number represents roughly 34% of the responders in operational roles that are supporting traffic incident response operations. During the third quarter of FY 2021/2022, about 191 responders received the training.

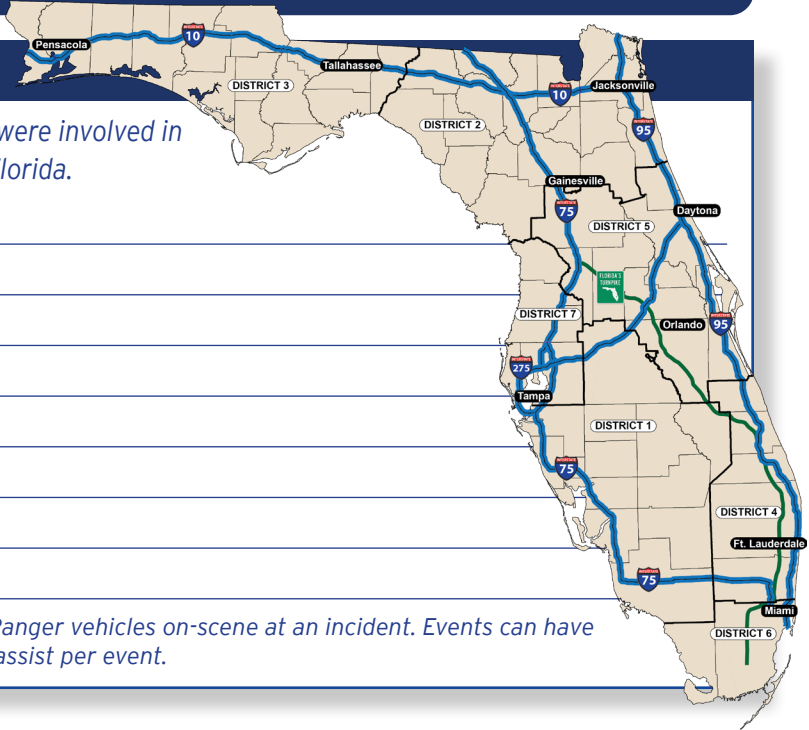
## Responders Trained

TIM TRAINING RECEIVED BY:	LEO	FIRE	EMS	TOW	FDOT	OTHER	QTR TOTAL
							
1ST QUARTER	19	105	29	46	12	17	228
2ND QUARTER	20	65	26	28	192	62	393
3RD QUARTER	17	36	39	17	46	36	191
4TH QUARTER	-	-	-	-	-	-	-
FYTD	56	206	94	91	250	115	812

## Road Ranger Assists by District

During the third quarter of FY 2021/2022, Road Rangers were involved in 130,548 events providing assistance to the motorists of Florida.

District One	10,531
District Two	11,291
District Three	3,792
District Four	17,485
District Five	20,379
District Six	8,966
District Seven	10,594
Florida's Turnpike	25,594



Note: An event is defined as the arrival of one or more Road Ranger vehicles on-scene at an incident. Events can have multiple assists, and each Road Ranger will have at least one assist per event.

## Road Ranger Assist Data

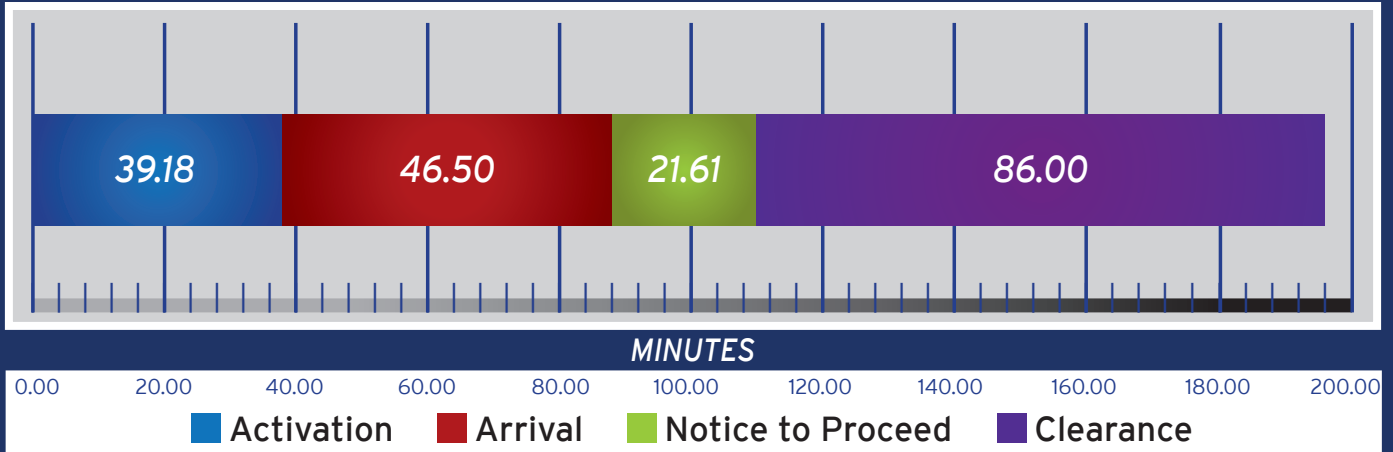
	HIGHEST ACTIVITY TOTALS		LOWEST ACTIVITY TOTALS	
	SOURCE	TOTAL	SOURCE	TOTAL
ASSISTS BY NOTIFIER	ROAD RANGER	59,300	MOTORIST	24
ASSISTS BY EVENT TYPE	DISABLED VEHICLE	68,344	PEDESTRIAN	252
ARRIVALS BY DAY OF WEEK	MONDAY	2,170	TUESDAY	1,849
ARRIVALS BY TIMEFRAME	3:00 pm - 6:00 pm	2,887	3:00 am - 6:00 am	568



## Rapid Incident Scene Clearance

During the third quarter of FY 2021/2022 (January 2022 to March 2022), seven Districts and FTE activated the RISC Program 104 times with approximately \$261,100 in bonus-incentive payments made to vendors.

### First Quarter Statewide Average RISC Incident Duration



## 2022 National Responder Safety Update

Responder Safety Statistics

(<https://www.respondersafety.com/news/struck-by-incidents/yearly-fatality-reports/>)

**23 Responders Killed in Struck-By Incidents** (as of May 5, 2022)

### Law Enforcement (10)

- 4 Traffic Stops/LE Activity
- 1 Debris Removal
- 2 Directing Traffic
- 1 Disabled Vehicle
- 2 Stop-Sticks

### Towing (6)

- 4 Assisting Disabled Vehicles
- 2 Crash Scene

### Fire and EMS (3)

- 2 Crossover Entry
- 4 Assisting Crash Scenes

### Road Service Technician (1)

- 1 Assisting Disabled Vehicle

# District 3 TIM Meetings on Emergency Response to EV Fire Incidents

Amy DiRusso, TSM&O Program Engineer, FDOT-District 3, David Roark, Arterial Operations Manager, FDOT-District 3, Rakesh Sharma, HNTB, and Samia Rubaiat, HNTB

*With the proliferation of electric vehicles (EV) adoption rate, the incident rate involving EVs is also on the rise. EV fire is now considered one of the NextGen TIM challenges. The experience of incident responders handling EV fire incidents is quite different from non-EV fire incidents, as extinguishing EV fire requires unique techniques and additional resources. The Florida Department of Transportation (FDOT) District 3 conducted quarterly TIM meetings with Chipley, Tallahassee, Milton, and Pensacola TIM teams in April 2022. FDOT District 3 Arterial Operations Manager, David Roark, focused on sharing knowledge of EV fire TIM response during these meetings and invited a guest speaker, Frank Stokes of Hazard Control Technologies, who demonstrated and discussed an effective EV fire encapsulating agent, F-500.*



Figure: EV fire incident scene on I-75 in Florida

Since Florida ranked second in the nation in EV sales, FDOT is focusing on infrastructure and incident response planning. EV market adoption is projected from 10% (conservative) up to 35% (aggressive) by 2040. With the increase in EV implementation, first responders are also handling the challenges of the increased number of EV incidents. The power source of EV, in most cases Lithium (Li)-Ion battery, is located underneath the passenger compartment. Damage in Li-ion batteries may begin a chemical reaction in individual cells,

## District 3 TIM Meetings on Emergency Response to EV Fire Incidents, continued from page 10

known as “thermal runaway”, generating substantial heat and pressure. Heat and pressure generated from the reactions in the damaged cell can lead to combustion. Excessive pressure allows the byproducts of the chemical reaction to escape the battery cell and reacts with other chemicals and water vapor, forming toxic byproducts. Stranded energy within the battery cells may cause reignition of the battery cells within hours to days after the initial fire.

The common extinguishing agents are water, CO<sub>2</sub>, dry chemical, fire blanket, etc. From several EV fire extinguishing experiences, the responders are recommended to have a supply of a large amount of water (around 2,600 gallons) to cool the battery. The responders should also be prepared for the reignition of the battery cells. It may take hours to days to reignite. Due to the potential of reignition, the damaged vehicles should not be stored in or within 50 ft of any vehicle or structure.

EV fire imposes electrical, thermal, and chemical risks on the responders. The first responders need to assume the high voltage and high temperature and be very careful of handling cables, traction batteries, and vehicle structure. The responders must use Personal Protective Equipment (PPE) and Self-Contained Breathing Apparatus (SCBA) since the byproducts of the chemical reaction can be toxic. It is highly recommended to use the existing openings to apply an extinguishing agent into the battery casing rather than trying to cut/ pierce the structure/ battery cell for better reach to the heating area. After extinguishing the fire, the EV should be transported on a flatbed or another way ensuring that the wheels are off the ground.



*Figure: Damaged vehicle after extinguishing the fire*

The guest speaker, Frank Stokes, introduced TIM teams to an eco-friendly and innovative fire extinguishing agent known as F-500 Encapsulating Agent (F-500 EA). This water-additive agent is fluorine-free, non-corrosive, and biodegradable. Rapid cooling offers less time, less water, less runoff, less property damage, less injury, and less hazardous cleanup. Clemson University conducted research and found that the byproducts of F-500 EA are 98.6% less toxic than compounds released from untreated fires. The reignition of the vehicle is highly unlikely after applying F-500 EA to the battery cells.

This timely initiative by FDOT District 3 will contribute to preparing the first responders to handle EV fire incidents with better knowledge, preparation, and resources in the upcoming days.

*For more information, please contact David Roark by email at [David.Roark@dot.state.fl.us](mailto:David.Roark@dot.state.fl.us).*

# ROAD RANGER SAFETY

By Sheryl Bradley, D5 ICM Project Manager

*In 2021, District 5's Road Ranger struck-by incidents rose by a whopping 110%. We were very fortunate that none of our struck-by incidents involved serious injury or fatality in 2021, but that has not always been the case. Statewide, we have had serious injuries and loss of life in the line of duty.*

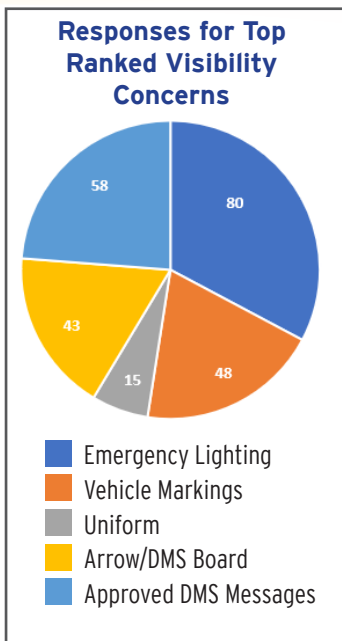
As part of a larger-scale initiative out of Central Office, District 5 surveyed Road Rangers from three Districts and one of the tolling agencies, to gain insight into the challenges and safety concerns they face on a daily basis. The boots-on-the-ground information was enlightening.

**In a short turnaround, we received a 67% response rate, with 110 out of 164 Road Ranger Service Patrol (RRSP) operators participating in the survey. More than half of the respondents had served in the capacity of a Road Ranger for 1-5 years. Below are some insights gleaned from the survey:**

- » 31% felt they needed more training more specific to emergency response/short-term TTC. Comments included that the Intermediate Maintenance of Traffic (MOT) training is too construction-oriented and did not relate to their needs. Others noted that the training should balance the risk of exposure to the need for MOT deployment. The example given was a quick stop to provide fuel, where a Road Ranger spends more time exposed to traffic while deploying cones than they do provide the service.
- » 54% felt new hire training (length and content) could be improved upon by a standardized statewide training. They wanted more time in a truck with a trainer and less online training.
- » The overwhelming majority (70%) believed they have sufficient continuing education but would like more training on vehicle relocation (push, pull, drag), more or better CPR/First Aid training, and annual or bi-annual refresher courses.

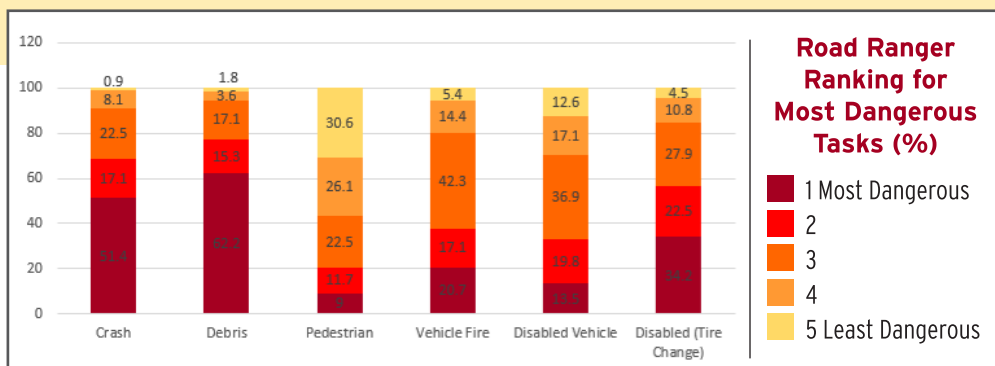
**Some of the most enlightening information came with questions about recommended safety improvements.**

- » 50% made comments or requests for better safety equipment including improved lighting (addition of red lights, sidelights, undercarriage lighting, directional lightbars, etc.) and air horns or sirens. Some asked for relatively low-cost additions such as better flashlights, personal lighting (helmet lights, lighted vests, etc.), front jump boxes with extended cables to maintain sufficient buffer distances between them and the vehicles they're working on, and a preference for DMS message boards over arrow boards.



- » Piggybacking on the previous question, 56% felt their visibility as a Road Ranger could be improved. Again, improved lighting was referenced, along with a more official appearance (removal or minimization of sponsorship logos), uniformity of trucks across all districts, and an increased presence on the roadway with extended hours and more trucks to increase visibility/awareness of the Road Ranger program. Some operators who utilize tow trucks also noted the decreased rear space for markings and noted that the benefit of a tow truck did not outweigh the risk of minimized visibility.
- » Road Rangers were asked to identify their greatest concerns with regard to conspicuity/visibility. The responses are reflected in the graph (left):
- » 84% of the respondents did not feel they are respected by the motoring public, noting a need for more "Move Over" enforcement, removal or minimization of sponsorship logos as they're commonly mistaken for roadside assistance, and more outreach/education on the Road Rangers and their role/function in incident management. Some recommendations included paid media such as billboards and commercials, along with participation in outreach events, and outreach specifically to other responders.

### And what did Road Rangers identify as the most dangerous task they perform on a daily basis?



In an open comment section, Road Rangers provided additional insight into safety needs, including the following:

- » 8-10' shoulders in construction zones
- » A balanced approach to hiring with consideration of the mechanical needs and emergency response experience
- » Additional cones on their trucks and more units on the roadway for backup in key locations with consideration of roadway characteristics such as the number of lanes and sightline issues
- » Improved interoperability and overall communications between Road Rangers and the Regional Traffic Management Center (RTMC), as well as other responders

District 5 was enlightened through this process and greatly appreciated the well-thought-out and constructive input provided by our Road Ranger partners. We identified several low-cost items that we can accommodate via sponsorship funds with the goal of overall safety enhancements from the program. The District has also determined that this type of survey should be an annual process to give our boots-on-the-ground partners a voice in the program and their own individual safety.

# Road HEROES

Recently two District One Road Rangers received Certificates of Achievements from Tom Arsenault, the District One Road Ranger Program Manager.

## District One - Bob Green



Road Ranger Robert Green recently celebrated his 16<sup>th</sup> year as a Road Ranger. Earlier this past April, Bob Green turned 87 years young. He is a full-time Road Ranger and works on I-75, Beat 109 in Charlotte County. Upon receipt of his Certificate, Bob said that he was happy to be out there helping people and has no plans for retirement. Above or Below, we see Bob Green helping a stranded motorist, "Another happy customer says Bob".



## District One - Jon Cruz

At approximately 2:39 AM, on April 12, 2022, Road Ranger Jon Cruz was working on Alligator Alley on I-75. He arrived at a rollover crash involving a van pulling a cargo trailer. He was the first emergency personnel on the scene. He immediately advised TMC of entrapment and requested Fire Rescue and FHP as soon as possible. While Fire-Rescue and FHP were still en route, Jon shut down the highway for safety. Also, he proceeded to help the motorist get out of his vehicle within just a few minutes. He acted swiftly and remained calm. Jon was the right person, at the right place, at the right time! (The vehicle rolled over in the travel lanes). Amazingly, there were no injuries involving the passengers and the motorist was treated at the scene with non-life-threatening injuries.

# V2I Project Improves Travel Conditions in Miami-Dade County

*A third-party evaluation report revealed that District Six's Vehicle to Infrastructure (V2I) pilot project for incident management may have been a contributing factor in reducing travel speeds around active incident scenes in Miami-Dade County.*



The pilot project was launched in 2020 and installed connected vehicle technology on the existing fleet of Incident Response Vehicles (IRV) to link them with traffic navigation applications like Waze. This V2I technology connects a transmitter to the IRV's arrow board. When the arrow board is activated, the transmitter sends a signal to the traffic navigation application. Drivers approaching an IRV-

managed scene receive a traffic alert with detailed incident information such as event location relative to their current location on the highway, a timestamp of the event, and a prompt to slow down or move over a lane. This notification is delivered directly to a user's mobile phone and can be received by voice prompt to ensure driver safety.

The evaluation was conducted by Florida International University (FIU) and showed that average travel speeds were reduced by approximately 5.5 mph both upstream and downstream of incidents responded by IRVs. Average travel speeds upstream of crashes were reduced by 9.5 mph and average travel speeds upstream of level-3 incidents were reduced by 11.8 mph.

The pilot project was conducted on the highways managed by the IRV fleet which include Interstate 75, 75 Express, Interstate 95, 95 Express, State Road 826, and Palmetto Express. It was initiated to mitigate the hazardous work conditions incident responders face every day. District Six conducted industrywide research for additional strategies to further ensure scene safety. They procured the technology and developed a detailed action plan that covered implementation, operation, and post-launch evaluation.

The pilot project has been operating for more than a year and the evaluation results show great promise for potential expansion. It shows how V2I strategies are connecting motorists with existing infrastructure to help them make more informed decisions. The additional layer of traveler information is another tool in the traffic management toolbox that can improve driver behavior on our roads. Its continued use may work to increase awareness about the Move Over Law and help save lives. This project is an example of the District's commitment to FDOT's mission of improving safety, enhancing mobility, and inspiring innovation through its work.

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