



CENTRAL FLORIDA TSM&O CONSORTIUM MEETING SUMMARY

Meeting Date: April 13, 2023 (Thursday)

Time: 10:00 AM – 12:00 PM

Subject: TSM&O Consortium Meeting

Meeting Location: Teleconference

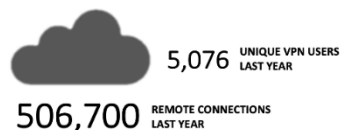
I. OVERVIEW

The purpose of this recurring meeting is to provide an opportunity for District Five FDOT staff and local/regional agency partners to collaborate on the state of the TSM&O Program and ongoing efforts in Central Florida. Jeremy Dilmore gave a short introduction and outlined the meeting agenda.

II. ORANGE COUNTY CYBERSECURITY

Peter Miller, Chief Security Officer for Orange County, presented on a variety of cybersecurity threats and vulnerabilities and the County’s cybersecurity efforts to prevent unauthorized access to their devices and systems.

- In 2022, there were 103 million malicious emails blocked
- On average, there are nearly 327,000 intrusion attempts PER DAY from 62 different countries
- There were 46 million firewall threats blocked in 2022
- Hackers are seeking public safety information
- Most recently, hackers attempted a Distributed Denial-of-Service (DDOS) attack on the County
- Some humor: A hacker attempted to break into Court System to obtain data that would have otherwise been made freely available under Sunshine Law
- *InformationIsBeautiful* is a website that tracks data breaches
 - Activity and size have dramatically increased since the first AOL breach in 2004
- *HavelBeenPwned* is a website that allows you to determine if your info has been hacked or compromised
 - Tells you how many breaches an email has been a part of
- Average American has over 24 accounts online
- Darkweb program is available for a cost; it allows you to see all computers in a city that are



“open”

- Can see the perspective of open cameras and industrial control systems
- The Orange County Traffic Engineering Division has been a great partner with the Cybersecurity team
- 7 Steps to Cybsecurity
 1. Test yourself out
 - Conduct regular vulnerability assessments and penetration testing
 2. Design with cyber in mind
 - Implementing network segmentation to prevent lateral movement of cyber threats between business and traffic networks
 3. Update, update, update
 - Regularly updating and patching traffic engineering network devices and applications
 4. Accessing your network
 - Using remote access technology to secure traffic engineering network access
 5. Network Access Control (NAC)
 - Deploying NAC systems to limit unauthorized access to traffic engineering networks
 - Practice Zero Trust – something on the networks touches and talks only to the bare minimum of devices/systems to perform its tasks
 6. Scan, scan, scan
 - Expand vulnerability monitoring with active scanning technologies to find missed released patches and vulnerabilities
 - Orange County has a Security Operation Center in the same vein as a Traffic Operations Center
 7. Backup
 - Backup your systems to ensure they can be restored quickly and correctly
- Orange County is putting together a Cybersecurity White Paper in traffic engineering

- **Discussion:**
 - Nabil – where is cybersecurity now in regards to protecting AVs?
 - Peter – the first thing is the mentality; making sure the vendor doesn't cut corners or reduce time to review code et al
 - Cybersecurity team should work closely with traffic engineering staff to ensure the programs and systems they want to purchase fall in line with an agency's cybersecurity standards
 - Nabil – it seems like we're still a long way from getting to a safe operation
 - Prasad Chittaluru – is there reference material available that you would point us to?
 - We should have that white paper available soon; will also share the slides
 - Jeremy – we did see in Orange County's procurement documents some great language to help with cybersecurity aspects. The District has borrowed some of the language for our own procurement.
 - Peter – one big success is having a close relationship with the procurement

department; everything has a security component. We have security protocols in place to help with 3rd party equipment/software

III. CFMPOA REGIONAL PROJECTS – UPDATE

Eric Hill (MetroPlan Orlando) gave a brief update on the progress of developing a *TSMO Regional Project* for the CFMPOA.

- Current definition – impacts 2 contiguous cities/counties
 - This weights MetroPlan Orlando considerably; Eric and team wanted to adjust the definition to make it more fair for other MPO/TPO areas
 - Asked MPO directors and staff to test what we put together; helped identify some challenges
 - In order for us to rank projects, need a fair amount of information
 - This information is hard to find given we’re using the PPL/LOPP, which are high-level planning documents
 - Fair share issue – MetroPlan Orlando has a much larger list of TSMO projects than other MPO/TPOs
 - New definition will be modeled after TRIP
 - Removes reference to cities which reduces MetroPlan Orlando’s advantage and levels the playing field a bit
 - Also considering using ICMS support as an additional option
 - One thing to consider is some standard widening projects would further support the ICMS diversion routes
 - MetroPlan Orlando has a dollar cap on “TSMO project”; beyond that cap it is redefined as a capacity project
 - Countywide – want to make this an option as well but want to be mindful of gaming the system
 - One proposal is to bundle a number of similar projects that would contribute a regional TSMO improvement/project
 - Project Refinement – looking to add value to a project that would improve buy-in and support
- Discussion:
 - Eric requested support from the TSMO Consortium group
 - Katie – noticed your concern with using Countywide description; District has been using “Countywide” to help with the ITS architecture
 - Eric – roadway digital infrastructure seems like it would be a regional TSMO project
 - No dissent from the group on the adjusted approach to TSMO Regional Project

IV. DRONEUP DELIVERY SYSTEM

David Williams briefly discussed the partnership between Walmart and DroneUp to provide drone delivery service at 37 participating Walmart stores in the country, including 2 in Clermont, Lake County.

- 37 stores from Arizona, Arkansas, Florida, North Carolina, Texas, Utah, and Virginia
 - 9 stores in Florida, including 2 in Clermont
- Requirements of the DroneUp program for potential customers:
 - \$3.99 delivery fee
 - Packages must weigh 10lbs or less; more than 10,000 eligible items (including eggs)
 - Customer must live within 1 mile of the store
- Deliveries are made via 80' cable lowered from drone, and can take as little 30 minutes
- DroneUp deliveries powered by a team of certified pilots operating within FAA guidelines
- DroneUp deliveries must respect boundaries of sensitive areas, including schools, power plants, airports, and prisons
- As Walmart expands drone coverage, they want to expand offerings to local businesses
- **Discussion:**
 - Eric Hill – whenever I present about TSMO, the drone delivery service and advanced air mobility are always questions I get asked about. My response is always that's under FAA jurisdiction
 - Katie King – may be worth discussing how D5 ICM Operations is using drones
 - David to add at next meeting
 - Alissa Torres – Drone delivery as described by David is the subject of Senate Bill 1068 and House Bill 1071. May want to keep an eye on those bills



V. TRAINING UPDATE

Katie King briefly discussed Regional Working Group to provide additional technical training and understanding for TSMO Consortium stakeholders.

- We are considering rebooting the Regional Working Group meeting on alternating months from the Consortium. Does anyone have any suggestions for topics?
- Basic Network Training, Advanced Network Training
- Another one that might be helpful is we had CORNING come out one time to discuss fiber splicing. Might try to get them to give that presentation again.
- Will be hosting a Miovision training soon
- Statewide Smart Signal Dashboard (INRIX)
 - Katie sent out email about this effort recently
 - Jeremy – have heard from a lot of Districts that the INRIX data is very useful for planning purposes; MPOs please reach out

VI. TSMCA AND SIMPL UPDATE

Jeremy Dilmore briefly discussed the Traffic Signal Maintenance and Compensation Agreement (TSMCA) update and the Signal Inspection of Maintenance Program with Locals (SIMPL) from the Department.

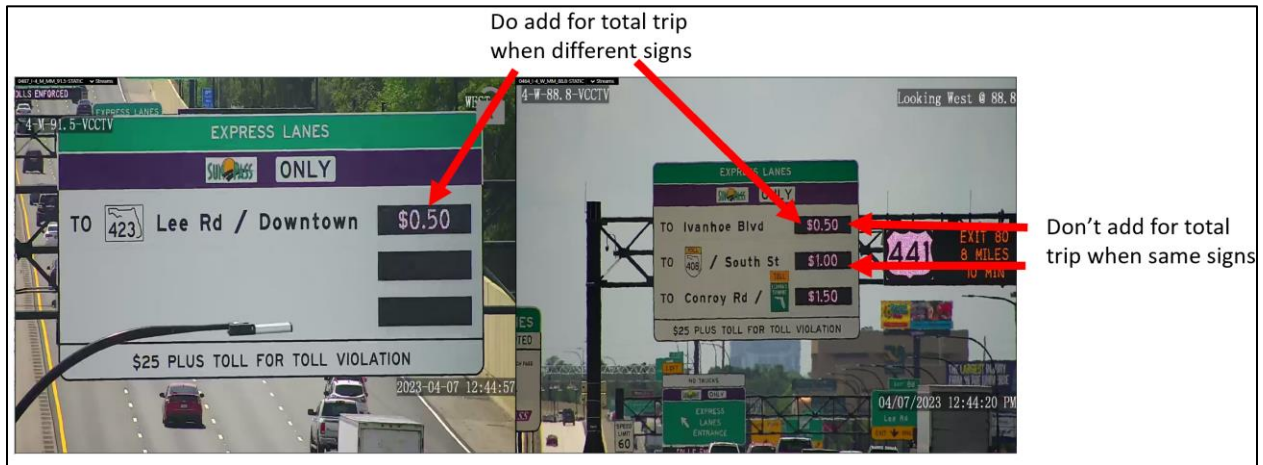
- TSMCA was last amended in June 2016; the Department is finalizing the next TSMCA amendment
- Central Office has reached out to maintaining agencies, including the Florida Association of County Engineers and Road Superintendents (FACERS), to ensure the amendment meets the goals for local agencies and the Department
- Major Updates in TSMCA Amendment
 - Updated paragraph #1 (restructuring paragraph and adding new devices)
 - Updated paragraph #31 (detection device malfunctions)
 - Repairs remain at 90-day threshold
 - Requires plan documenting how Maintaining Agencies will reestablish connection if repairs are expected to take longer than 30 days
 - Updated Exhibit A with new devices
 - Updated Exhibit B with new devices and rates
 - Updated Exhibit C with new guidelines for Third Party Damage Reimbursement
 - Companion TSMCA manual released
- SIMPL
 - Program from Central Office
 - Inspect traffic signals to verify compliance with TSMCA
 - 10% of urban signals and 5% of rural signals
 - District is hoping to use this to identify strain poles that need to be added to list for repairs/replacement

VII. I-4 EXPRESS CHANGING MODES

Jeremy Dilmore gave a brief update on the I-4 Express Lanes.

- Changing tolling modes
 - Why? To maintain high reliability on express lanes
 - When? When volumes rise; no official date yet
 - Where? Only the segments that experience higher traffic
 - Who? Done by District operators from RTMC
 - How?
 - Measured with detectors (MVDS), converted to density
 - Uses SELS software for 15-minute updates
 - Confirmed by Operator (price is reasonable and implemented correctly)
- Will never adjust toll pricing based on general use lane volumes
- Public will always get the best available (lowest) price when using the toll lanes
- Public Involvement
 - FDOT staff will be bringing this information to participating agencies to get support when discussing with elected and public officials
 - Your Agency
 - The Department will be coming to visit soon to spread the word and alleviate any concerns
 - Need support in messaging to your leadership
 - The Public
 - Reading the signs

- Making individual decisions
- Public will always get the best available (lowest) price when using the toll lanes
 - Prices increase we hold the old price until all cars pass through
 - Price drops we immediately drop it
- Points of confusion



- Why multiple signs for a trip
 - Limit of 3 destinations per sign (1 more than guide signs per MUTCD)
 - More than 3 destinations in system; requires multiple signs
 - Signed so last egress of a group of trips slips back to GULs
 - Allows driver to make decisions a group at a time
- Pricing
 - Volumes on General Use Lanes NOT considered
 - Concessionaire is NOT pricing
 - Concessionaire is NOT tied to pricing
 - FDOT gets revenue to support future Work Program
 - Revenue is NOT a consideration in making decision
 - Reliability is the objective
 - Revenue is a byproduct
 - Higher prices do NOT mean more value/travel-time savings
 - Higher prices indicate more cars in express lane, approaching congestion

VIII. CURRENT INITIATIVES

Jeremy Dilmore briefly provided an update on the current work efforts throughout District Five.

- **ITS Architecture Change Request** – New maintenance cycle; deadline for Change Request Forms is June 30th.
 - ITS Architecture Lunch & Learn on May 25th
- **TAPs-LA Grant Program** is accepting applications
 - Max award - \$500,000 per project; 2 to 4 projects awarded per FY
 - Requesting applications be submitted by end of May in time for new FY

- **CV Update**
 - Emergency Vehicle Preemption – ongoing coordination with fire departments
 - On-board Unit (OBU) Testing – testing with STROZ system this Friday
- **Smart Signals**
 - Internal guidance document created to train our signal staff on Smart Signal design
 - If locals are seeing gaps with their technicians being able to maintain the signals, they are asked to let District staff know
- **Signal Design** – D5 established new internal process for Signal Operating Plans
 - Seen a fair amount of issues with SOPs
 - After 60% plans, will hold internal meeting to review SOPs
 - Designers (FDOT or consultant staff)
 - Traffic Ops staff
 - Do locals want us to discuss anything else during these meetings?
- **PedSafe II** – design ongoing; mobile demonstration and public outreach trailer in development
 - Eric Hill – where will this be deployed?
 - US 441 Orange Blossom Trail
 - SR 50 where we had our initial Phase 1
 - Hoping this gets more education out to the public about what the region is trying to do (near heavy ped areas so they can see the work; elementary/middle/high school to encourage interest; public/elected officials)
- **AV Shuttle** – electrical charging upgrades amendment fully executed; working on permit process to start construction
- **Kiosks at UCF** – Kiosks are deployed and functioning on UCF campus with multimodal trip generation software
- **Smart Work Zone** – Advanced Smart Work Zone Information (AWZI) trailers; trailers will be deployed on the ongoing I-4 @ Sand Lake Rd interchange design-build project, beginning in May
- **Event Management** – verification cameras deployed at most locations in Daytona Beach area; fully brought into SunGuide; received WOWZA license to bring into Blank Out Sign software
- **I-75 CCTV camera improvements** – TPAS verification cameras for I-75 embedded DMS are in construction

IX. NEXT MEETING

- June 1, 2022

X. ATTACHMENTS

- **A – Presentation Slides**
- **B – Meeting agenda**

END OF SUMMARY

This summary was prepared by David Williams and is provided as a summary (not verbatim) for use by the Consortium Members. The comments do not reflect FDOT's concurrence. Please review and send comments via e-mail to dwilliams@vhb.com so the meeting summary can be finalized.

Welcome to the TSM&O Consortium Meeting April 13, 2023



Meeting Agenda

1. Welcome
2. Orange County Cybersecurity
3. CFMPOA Regional Projects – Update
4. DroneUp Delivery System
5. Training – Update
6. TSMCA and SIMPL – Update
7. I-4 Express Lanes – Update
8. Current Initiatives

Orange County Cybersecurity

Peter Miller, Orange County

Central Florida MPO Alliance Project List of Prioritized Projects



Background



- Central Florida MPO Alliance List of Prioritized Projects (LOPP)
- Definition of Regional TSMO project
- Methodology for ranking (Rubric)
- Amendment to definition

CFMPOA LOPP



- FDOT Transportation Regional Incentive Program (TRIP)
- Strategic Intermodal System (SIS)
- Trails
- Transit
- *TSMO*
- *Planning Studies*

Network (definition)



- Regional TSMO project impacts two contiguous cities/counties
- Set of integrated strategies to optimize the performance of operations on existing/new infrastructure
- Serves regional transportation needs such as access to and from the area outside the region

Rubric*



- Transportation Efficiency and Multimodal Systems
- Economic Development and Cost Efficiency
- Equity and Livability
- Safety
- Environment and Resiliency

**Developed by Gannet Fleming*

Test



- M/TPO Directors and Staff
- Data/information needs
- TMSO only
- Fair share

Model definition after TRIP



- Eligibility
 - Two or more contiguous MPOs
 - One or more MPOs and one or more contiguous counties that are not members of a MPO
 - A multi-county regional transportation authority created by or pursuant to law
 - Two or more contiguous counties that are not members of a MPO
 - MPOs comprised of three or more counties

Criteria



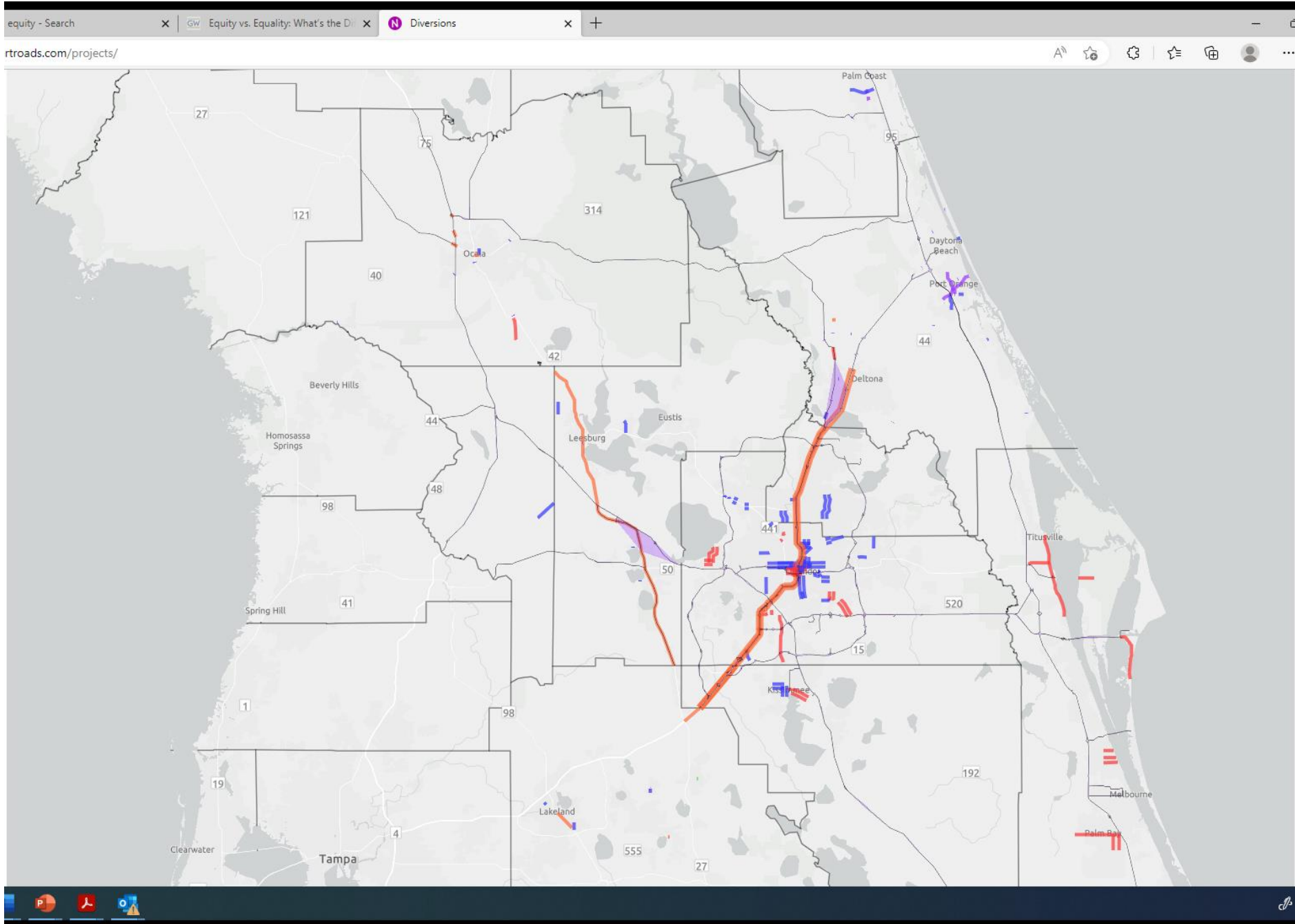
- TRIP
 - Be consistent with the SIS¹
 - Provide connectivity to the SIS²
 - SIS: Corridors, hubs or connectors
- *Integrated Corridor Management System (ICMS)*
- *Countywide*
- GIS

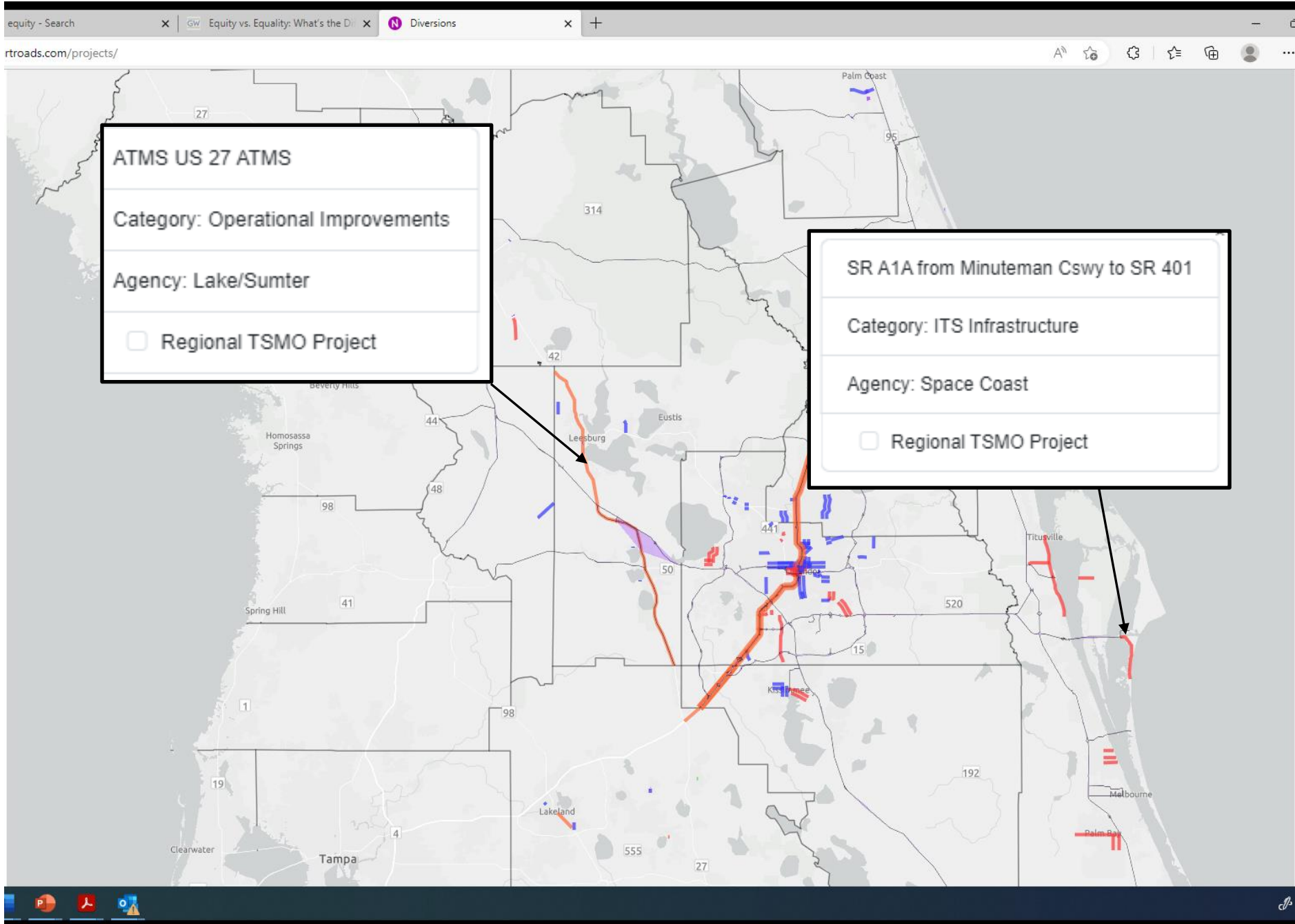
**Unranked, ¹ Minimum ² Priority*

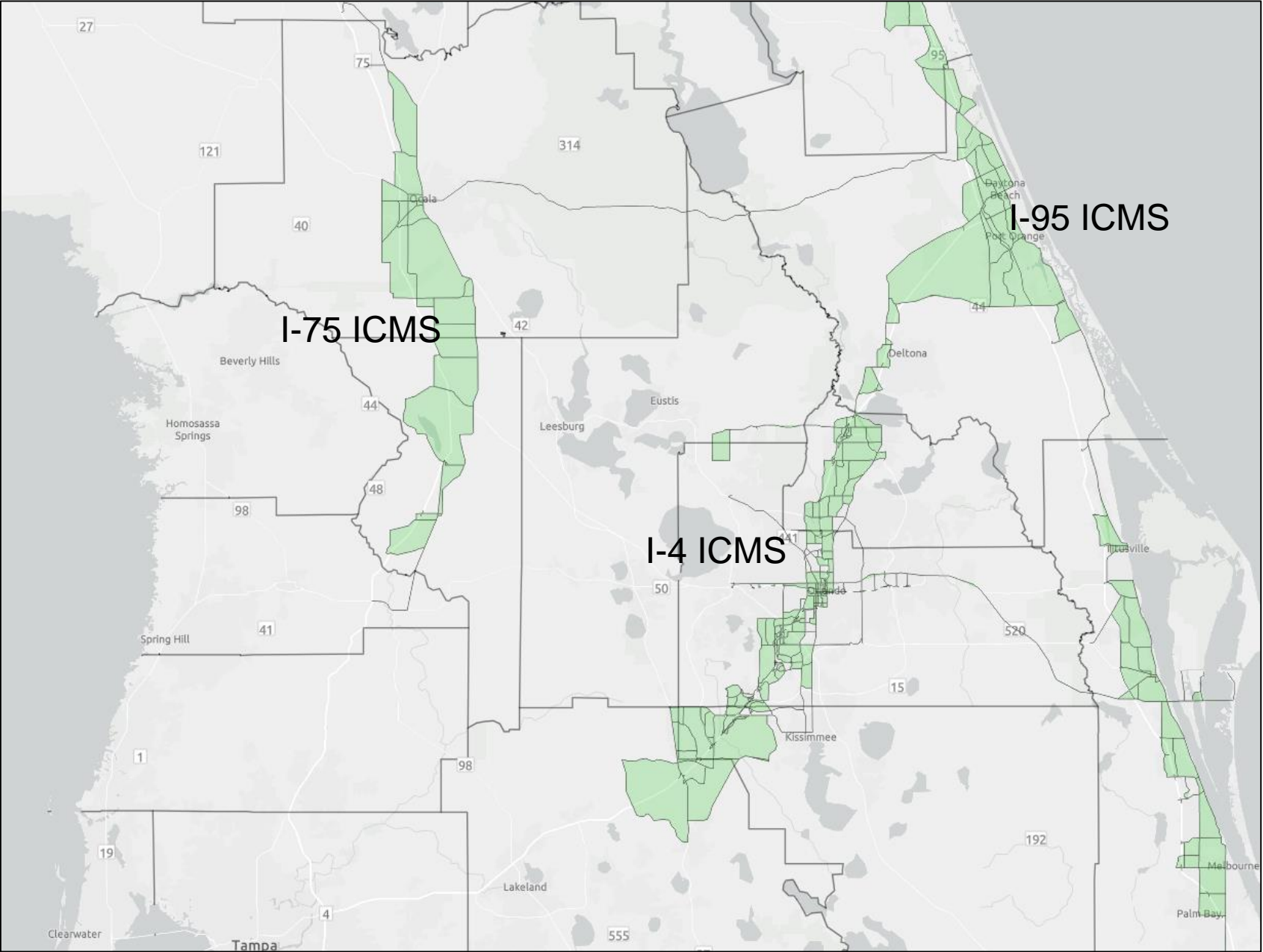
TSMO LOPP



Source	L/S	O/M	Polk	R2C	Metroplan	Space
LOPP	18	13	0	43	81	14
SIS	7	5	0	6	1	2
Routes/ connectors	US 27 US 75	US 27 SR 301 SR 40 US 75	I - 4 US 17 US 27 SR 60 CR 44	I - 4 US 17 US 92 US 95 SR 100	I - 4 US 17 SR 46 SR 423 SR 426	SR 401 SR 404 SR 405 SR 508







I-75 ICMS

I-4 ICMS

I-95 ICMS

Project refinement



- Transportation Efficiency and Multimodal Systems
- Economic Development and Cost Efficiency
- Equity and Livability
- Safety
- Environment and Resiliency

Next Steps



- Review with each M/TPO
- Consider bundling
- Complete map
- Apply Rubric to refine projects

Thank You

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Walmart / DroneUp Delivery System

David Williams, VHB

DroneUp Delivery with Walmart

- Walmart partnered with DroneUp for a drone delivery service
 - 37 stores participating
 - Arizona
 - Arkansas
 - Florida
 - North Carolina
 - Texas
 - Utah
 - Virginia



DroneUp Delivery with Walmart

- Walmart partnered with DroneUp for a drone delivery service
 - 9 stores in Florida
 - Clermont (near US 27/SR 50)
 - Clermont (near US 27/US 192)
 - Winter Haven
 - Tampa
 - Brandon
 - Valrico
 - New Port Richey
 - Seffner
 - Riverview



DroneUp Delivery with Walmart

- Walmart partnered with DroneUp for a drone delivery service
 - \$3.99 delivery fee
 - Packages must weigh 10lbs or less
 - More than 10,000 eligible items (incl. eggs)
 - Lowered and released via 80' cable
 - Customer must live within 1 mile of participating store
 - Deliveries can take as little as 30 minutes
 - DroneUp deliveries powered by a team of certified pilots operating within FAA guidelines

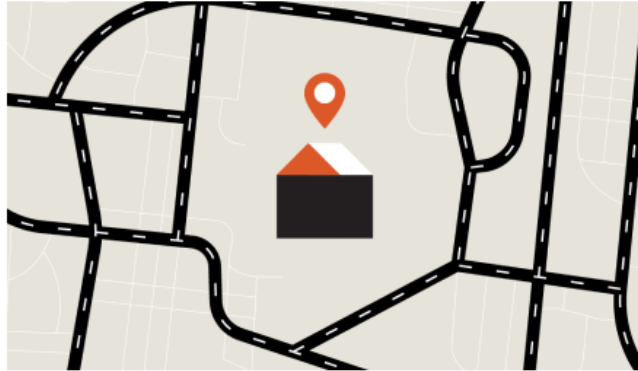


DroneUp Delivery with Walmart

- Walmart partnered with DroneUp for a drone delivery service
 - Orders accepted on DroneUp Delivery website 8am-8pm local time
 - DroneUp software enables them to avoid flying over sensitive areas
 - As Walmart expands drone coverage, they want to expand offerings to local businesses

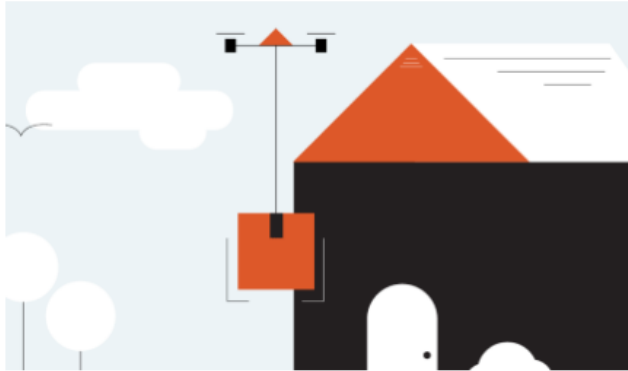


DroneUp Delivery with Walmart



Verify your Location

Are we flying in your neighborhood? DroneUp's Hub Flight Engineers deliver within one mile of your Walmart location. If we're not in your neighborhood yet, check back, we will be.



Get Ready For Delivery

DroneUp's crew will assess your property. We evaluate the delivery site and place the package in the safest location for both you and the drone. Make sure your yard is free of obstructions and loose debris.

We'll send you text messages to let you know we are on the way, and assure your family (and Fido) are cleared for package landing. You're welcome to watch the exciting delivery but from a safe distance of 10 feet.



Here Comes Your Package

Our DroneUp hub flight engineers program our aircraft to lower the package from way up high, 80'! With sensors and very strong cables, packages up to 10 pounds are gently delivered, and then the aircraft glides up and away. Delivery services may be temporarily unavailable if strong winds or other inclement weather is in your area, and we'll resume service as soon as conditions improve.

Regional Working Group Training Series Reboot

- Basic Network Training
- Advanced Network Training
- Miovision (Equipment and ATSPM Platform)
- INRIX
- **What else would be helpful?**

Active (1047)
Brevard County (116)
FDOT (36)
Marion County (14)
Ocala (0)
Orange County (297)
Orlando (165)
Osceola County (63)
Seminole County (348)
Volusia County (8)

Statewide Smart Signal Dashboard (INRIX)



- Data Use Agreement needed
 - 1 per agency once we have it you can just list who from your agency wants an account.
 - Have received – Osceola County, Orange County, Sumter County to date.
- Training we will reach out to Inrix once we have confirmation from Edith the accounts are created.
- Please send Agreements and Requested user accounts to Katie. I'm setting up a tracking for Tricia on who we need accounts for.



TSMCA and SIMPL Update

Jeremy Dilmore, FDOT District Five

Traffic Signal Maintenance & Compensation Agreement

- Last amended in June 2016
- Central Office finalizing next TSMCA agreement
 - A track changes document will be provided to Maintaining Agencies
- Major Updates
 - Updated paragraph #1
 - Added new devices
 - Updated paragraph #31 (detection device malfunctions)
 - Updated Exhibit A with new devices
 - Updated Exhibit B with new devices and rates
 - Updated Exhibit C with new guidelines
 - Companion TSMCA Manual released



TSMCA – Paragraph 1 Update

~~1. The term "Traffic Signals and Devices" is defined as follows: all traffic signals, interconnected and monitored traffic signals ("IMTS") (defined as signals that are interconnected with telecommunications and are monitored at a central location), traffic signal systems (defined as central computer, cameras, message signs, communications devices, interconnect / network, vehicle, bicycle & pedestrian detection devices, traffic signal hardware and software, preemption devices, and uninterruptible power supplies ("UPS")), control devices (defined as intersection control beacons, traffic warning beacons, illuminated street name signs, pedestrian flashing beacons (i.e., school zone flashing beacons, pedestrian crossing beacons, and Rectangular Rapid Flashing Beacons)), blank-out signs, travel time detectors, emergency/fire department signals, speed activated warning displays, and other types of traffic signals and devices specifically identified within Exhibit A, which are located on the State Highway System within the jurisdictional boundaries of the Maintaining Agency.~~

~~The Maintaining Agency shall be responsible for the maintenance and continuous operation of Traffic Signals and Devices ("Project"). The Maintaining Agency shall be responsible for the payment of electricity and electrical charges incurred in connection with operation of Traffic Signals and Devices upon completion of installation of each of the Traffic Signals and Devices.~~

1. The Maintaining Agency shall be responsible for the "Project," defined as the maintenance and continuous operation of the following, located on the State Highway System:
- Traffic signals ("TS"),
 - Interconnected and monitored traffic signals ("IMTS") - defined as signals that are interconnected with telecommunications and are monitored at a central location,
 - Traffic signal systems - defined as central computer; traffic monitoring cameras ("TrMC"; must fulfill District purpose and need and be accessible from Department's Video Aggregation System); arterial dynamic message signs ("ADMS"); communications devices; interconnect / network; vehicle, bicycle & pedestrian detection devices [including passive pedestrian detection ("PPD") and accessible pedestrian detection]; traffic signal hardware and software; preemption devices; probe data detection system ("PDDS"); and uninterruptible power supplies ("UPS"),
 - Control devices - defined as intersection control beacons ("ICB"), traffic warning beacons ("TWB"; including LED highlighted signs), illuminated street name signs ("ISNS"), and pedestrian flashing beacons ("PFB"; i.e., school zone flashing beacons, pedestrian crossing beacons, and Rectangular Rapid Flashing Beacons),
 - Emergency/fire department signals ("FDS"),
 - Speed activated warning displays ("SAWD"; including curve warning feedback signs),
 - Blank out signs ("BOS"; including Lane Control Signs),
 - Pedestrian hybrid beacons ("PHB"),
 - Connected Automated Vehicle Devices ("CAVD"; i.e., roadside units and roadside equipment), and
 - In-roadway warning lights ("IRWL") system (specific to mid-block crossing and unsignalized intersection applications, as defined in the FDOT Traffic Engineering Manual)

All traffic signals and control devices mentioned in the above paragraph 1.a-j are referred to in this Agreement as "Traffic Signals and Devices". The Maintaining Agency shall be responsible for the payment of electricity and electrical charges incurred in connection with operations of such Traffic Signals and Devices upon final acceptance by the Department of the installation of each signal or device.

TSMCA – Paragraph 31 (Detection Devices) Update

- Repairs remain at 90-day threshold, with suggested goal of 30 days
- If repairs expected to take more than 30 days, MA shall provide a plan documenting how they plan to reestablish connection before day 90

31. The Department shall monitor the performance of the Maintaining Agency in the fulfillment of its responsibilities under the Agreement. The Maintaining Agency shall submit an annual Report prior to July 15 of each year detailing the following:

- a. All detection device malfunctions: Detection devices include, without limitation, all vehicle presence detectors and all pedestrian/bicycle detectors. Traffic devices supported by detection devices ("TDSDD") include, without limitation, traffic signals, PHBs, and warning devices. Repairs to all vehicle presence detectors shall be made within ninety (90) days with a goal of thirty (30) days if feasible. Repairs to all pedestrian/bicycle detectors shall be made within seventy-two (72) hours of discovery. If repair to vehicle presence detection device is expected to progress beyond thirty (30) days, by the 31st day, the Maintaining Agency shall have a plan available to reestablish detection prior to day 90. The Maintaining Agency shall ensure that 90% of all TDSDD on the State Highway System are operating without detection failures. Discovery and repair dates for each malfunctioning detection device shall be logged in the annual report. If the repairs cannot be performed within the stipulated time, the Maintaining Agency shall document the reason(s) why in the annual report. If more than 10% of the TDSDD are experiencing detection failure(s) by the end of the stipulated time, unless a longer period is approved by the Department due to extraordinary circumstances, each of these TDSDD may only be compensated at 90% of the unit compensation rate stated in Exhibit B for each day (i.e., the annual unit compensation rate is reduced by 1/3650 daily) that more than 10% of the TDSDD are experiencing detection failure(s).

TSMCA – Exhibit A Updated

- Adjusted based on new devices introduced in paragraph 1

Traffic Signals (TS)	Traffic Signal - Interconnected & monitored (IMTS)	Intersection Control Beacon (ICB)	Pedestrian Flashing Beacon (PFB)	Emergency Fire Dept. Signal (FDS)	Speed Activated Warning Display (SAWD) or Blank Out Sign (BOS)	<u>Illuminated Street Name Signs (ISNS)</u>	<u>Blank Out Signs (BOS)</u>	Traffic Warning Beacon (TWB)	<u>Travel Time Detector Probe Data Detection System (PDDS)</u>	Uninterruptible Power Supplies (UPS)	<u>Connected Automated Vehicle Devices (CAVD)</u>	<u>Pedestrian Hybrid Beacon (PHB)</u>	<u>Arterial Dynamic Message Sign (ADMS)</u>	<u>Passive Pedestrian Detection (PPD)</u>	<u>Traffic Monitoring Camera (TMC)</u>	<u>In-Roadway Warning Lights (IRWL)</u>	Compensation Amount (using Unit Rates from Exhibit B)
Total Lump Sum Amount*																	

TSMCA – Exhibit B Updated

Unit Compensation Rates per Intersection on the State Highway System

FY	Traffic Signals (TS)	Traffic Signal - Interconnected & monitored (IMTS)	Intersection Control Beacon (ICB)	Pedestrian Flashing Beacon (PFB)	Emergency Fire Dept. Signal (FDS)	Speed Activated Warning Display (SAWD) or Blank Out Sign (BOS)	Traffic Warning Beacon (TWB)	Travel Time Detector	Uninterruptible Power Supplies (UPS)
2014-15*	\$ 2,951		\$738	\$295	\$738	\$148	\$148		
2015-16	3,040		760	608	1,064	304	304		
2016-17	3,131	4,500	783	626	1,096	313	313	100	100
2017-18	Based on the Consumer Price Index (CPI), the 2016-17 compensation amounts will be revised upwards.								
2018-19	Based on the CPI, the 2017-18 compensation amounts will be revised upwards.								
2019-20	Based on the CPI, the 2018-19 compensation amounts will be revised upwards.								

- Adjusted based on new devices introduced in paragraph 1
- **CO just released the anticipated rates through FY28 (next page)**

Unit Compensation Rates per Unit on the State Highway System

FY	Traffic Signals (TS) <i>Intersection</i>	Traffic Signal - Interconnected & monitored (IMTS) <i>Intersection</i>	Intersection Control Beacon (ICB) <i>Intersection</i>	Pedestrian Flashing Beacon (PFB) <i>System</i>	Emergency Fire Dept. Signal (FDS) <i>System</i>	Speed Activated Warning Display (SAWD) <i>System</i>	Illuminated Street Name Signs (ISNS) <i>Intersection</i>	Blank Out Sign (BOS) <i>Device</i>	Traffic Warning Beacon (TWB) <i>System</i>	Probe Data Detection System (PDDS) <i>Device</i>	Uninterruptible Power Supply (UPS) <i>Device</i>	Connected Automated Vehicle Devices (CAVD) <i>Device</i>	Pedestrian Hybrid Beacon (PHB) <i>System</i>	Arterial Dynamic Message Sign (ADMS) <i>Device</i>	Passive Pedestrian Detection (PPD) <i>System</i>	Traffic Monitoring Camera (TrMC) <i>Device</i>	In-Roadway Warning Lights (IRWL) <i>System</i>
2021-22	\$ 3,573	\$ 5,134	\$ 896	\$ 717	\$ 1,252	\$ 360		\$ 360	\$ 360	\$ 115	\$ 115	\$ 514					
22-23	\$3,670	\$5,273	\$921	\$737	\$1,286	\$370		\$370	\$370	\$119	\$119	\$527					
23-24	\$ 3,910	\$ 5,558	\$ 947	\$ 758	\$ 1,323	\$ 381	\$ 391	\$ 419	\$ 381	\$ 123	\$ 123	\$542	\$ 2,645	\$ 2,027	\$ 1,644	\$ 688	\$ 658
2024-25	Based on the Consumer Price Index (CPI), the compensation amounts will be revised.																
2025-26	Based on the CPI, the compensation amounts will be revised.																

TSMCA – Exhibit B Updated

FY	Traffic Signals (TS)	Traffic Signal - Interconnected & monitored (IMTS)	Intersection Control Beacon (ICB)	Pedestrian Flashing Beacon (PFB)	Emergency Fire Dept. Signal (FDS)	Speed Activated Warning Display (SAWD)	Illuminated Street Name Signs (ISNS)	Blank Out Sign (BOS)	Traffic Warning Beacon (TWB)	Probe Data Detection System (PDDS)	Uninterruptible Power Supplies (UPS)	Connected Automated Vehicle Devices (CAVD)	Pedestrian Hybrid Beacon (PHB)	Arterial Dynamic Message Sign (ADMS)	Passive Pedestrian Detection (PPD)	Traffic Monitoring Camera (TrMC)	In-Roadway Warning Lights (IRWL)	CPI (%)
2022-23	\$3,670	\$5,273	\$921	\$737	\$1,286	\$370			\$370	\$119	\$119	\$527						
2023-24	\$3,910	\$5,558	\$947	\$758	\$1,323	\$381	\$391	\$419	\$381	\$123	\$123	\$542	\$2,645	\$2,027	\$1,644	\$688	\$658	2.80%
2024-25	\$4,024	\$5,720	\$975	\$780	\$1,362	\$393	\$403	\$432	\$393	\$127	\$127	\$558	\$2,722	\$2,086	\$1,692	\$708	\$678	2.90%
2025-26	\$4,145	\$5,892	\$1,005	\$804	\$1,403	\$405	\$416	\$445	\$405	\$131	\$131	\$575	\$2,804	\$2,149	\$1,743	\$730	\$699	3.00%
2026-27	\$4,274	\$6,075	\$1,037	\$829	\$1,447	\$418	\$429	\$459	\$418	\$136	\$136	\$593	\$2,891	\$2,216	\$1,798	\$753	\$721	3.10%
2027-28	\$4,411	\$6,270	\$1,071	\$856	\$1,494	\$432	\$443	\$474	\$432	\$141	\$141	\$612	\$2,984	\$2,287	\$1,856	\$778	\$745	3.20%

TSMCA – Exhibit C Updated

- References the recently published TSMCA Manual (750-010-022)
- Force Majeure events must be documented, with detailed inspection reports, within 12 weeks of end of event
- Governor-declared emergencies are handled outside the TSMCA through a combination of Federal/State emergency mechanisms

TSMCA Manual

750-010-022-g
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Effective: March 31, 2023
Office: Traffic Engineering and
Operations
Topic No.: 750-010-022-g

TRAFFIC SIGNAL MAINTENANCE AND COMPENSATION AGREEMENT MANUAL

Chapter 1: Agreement Procedure

PURPOSE

To ensure proper maintenance and operation of traffic signals and devices on the State Highway System and to compensate the Maintaining Agency, as defined herein, for this work.

To establish the format and requirements for the execution of a *Traffic Signal Maintenance and Compensation Agreement* with a Maintaining Agency.

AUTHORITY

Sections 20.23, 334.044, 334.048(3) and 335.055, Florida Statutes (F.S.)

SCOPE

The offices affected by this procedure are the State Traffic Engineering and Operations Office, Office of Maintenance, District Maintenance Offices, Office of Inspector General, District Traffic Operations Offices, Office of Work Program and Budget, District Work Program Offices, District Financial Services Offices, Office of General Counsel and Office of Comptroller.

DEFINITIONS

MAINTAINING AGENCY – A local government jurisdiction that accepts the maintenance and operation of traffic signals and devices on the State Highway System within their jurisdiction as outlined in the *Traffic Signal Maintenance and Compensation Agreement, Form No. 750-010-22*.

TRAFFIC SIGNAL MAINTENANCE AND COMPENSATION AGREEMENT, FORM NO.

750-010-022-g
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Chapter 2: Damage Reimbursement

PURPOSE:

To establish a process for handling reimbursement requests from local agencies to recover cost to repair or replace property damage pursuant to the Traffic Signal Maintenance and Compensation Agreement (“TSMCA”) Form 750-010-22, dated 04/23, and the preparation of claims documentation needed by the Florida Department of Transportation (“FDOT” or “Department”), to recover against at-fault parties and their insurers, along with reimbursement for Force Majeure events.

AUTHORITY:

Sections 20.23, 334.044, 334.048(3), 335.055, and 335.10(3), Florida Statutes (F.S.)

SCOPE:

This process affects the Traffic Engineering and Operations Office that is responsible for repair or replacement of the damaged Traffic Signals and Devices listed under the TSMCA Form 750-010-22, dated 04/23, and the associated Maintaining Agencies. This process also affects the Office of the General Counsel (“OGC”) as the office responsible for the recovery and collection of monies paid by the Department to the local agencies for the repair or replacement of the damaged property.

Definitions

CC	Carbon Copy
CEI	Construction Engineering and Inspection
CFM	Contract Funds Management
CO	Central Office
DTOE	District Traffic Operations Engineer
FDOT	Florida Department of Transportation
FPID	Florida Project ID Number
F.S.	Florida Statute
IMTS	Interconnected and Monitored Traffic Signals
ITS	Intelligent Transportation System
OGC	Office of the General Counsel
TSM&O	Transportation Systems Management and Operations
TSMCA	Traffic Signal Maintenance and Compensation Agreement

District: An office of the Department responsible for operation and maintenance of State Highway System (“SHS”) within the district boundaries.

District Traffic Operations: The office within each district delegated responsibilities for



SIMPL Program

Jeremy Dilmore, FDOT District Five

SIMPL Program – FDOT

Program from Central Office

- Approximately \$300,000 in funding to District Five for Fiscal Year 2023/24
- Inspect traffic signals to verify compliance with TSMCA
 - 10% of urban signals
 - 5% of rural signals
- Will use CEI contract to perform inspections

District Goal

- We want to work with you
- We know staffing is hard right now
- We **WILL NOT** beat up on short-staffed agencies, working diligently
- We will document existing conditions

SIMPL Program – FDOT

How can we maximize this to support our local partners who have limited staffing/resources?

Our take

- Decision Makers need to know existing condition
- Especially Structural Issues that FDOT needs to address

District Five Ask

- Provide us with a list of signals to examine
 - Suggestion: Strain poles in disrepair
 - Any other ideas or focus areas that highlight a need



I-4 Express Changing Modes

Jeremy Dilmore, FDOT District Five

I-4 Ultimate

- Changing tolling modes
 - Why? – Maintain high reliability on express lanes
 - When? – When volumes rise; no date yet
 - Where? – Only the segments that experience higher traffic
 - Who? – Done by District operators from RTMC
 - How?
 - Measured with detectors (MVDS), converted to density
 - Uses SELS software for 15 minute updates
 - Confirmed by Operator (price is reasonable and implemented correctly)

Public Involvement

- Your agency
 - Will be coming to visit soon
 - Need your support in messaging to your leadership
- The public
 - Reading the signs
 - Making individual decisions
 - When prices change public gets **better price**
 - Prices increase we hold the old price until all cars pass through
 - Price drops we immediately drop it

Points of Confusion

Do add for total trip
when different signs



Don't add for total
trip when same signs

Pricing

- Volumes on GUL **not** considered
 - Only Express Volume
- Concessionaire is **not** pricing
 - FDOT/RTMC is pricing
- Concessionaire pay is **not** tied to pricing
 - FDOT gets revenue to support future Work Program
- Revenue is **not** a consideration in making decision
 - Reliability is the objective
 - Revenue is a byproduct
- Higher prices do **not** mean more value/travel time savings
 - Higher prices indicate more cars in express lane, approaching congestion

Why Multiple Signs for a Trip?

- Limit of 3 destinations per sign
 - Note 1 more than guide signs per MUTCD
- More than 3 destinations in system
- Requires multiple signs
- Signed so last egress of a group to trips slips back GULs
- Allows driver to make decisions a group at a time

Current Initiatives

Current Initiatives

- ITS Architecture Change Request – New Maintenance Cycle
 - Deadline for Change Request Forms – June 30, 2023
 - ITS Architecture Lunch & Learn – May 25, 2023 (12pm)
- TAPs-LA Grant Program accepting applications
 - Max Award – \$500,000 per project
 - 2 to 4 projects awarded per FY
 - Eligibility – Municipality, County, Transit, Port Authority
 - Submit applications by end of May (in time for new FY)

Current Initiatives

- CV Update – EVP
 - Ongoing coordination with Fire Department
- OBU Testing
 - Testing with STROZ system this Friday

Current Initiatives

- Smart Signals

- Internal guidance document created to train our signal staff on Smart Signal design
- If you are seeing gaps with your technicians being able to maintain the signals, please let us know

- Signal Design

- D5 established new internal process for Signal Operating Plans

Current Initiatives

- I-75 CCTV Camera Improvements
 - TPAS verification cameras for I-75 embedded DMS are in construction
- PedSafe II
 - Design ongoing; mobile demonstration and public outreach trailer in development
- AV Shuttle
 - Electrical charging upgrades amendment fully executed
 - Working on permit process to start construction
- Kiosks at UCF
 - Kiosks are deployed and functioning on UCF campus with multi-modal trip generation software

Current Initiatives

- Smart Work Zone
 - Purchased 5 Advanced Smart Work Zone Information (AWZI) trailers
 - Trailers will be deployed on the ongoing I-4 @ Sand Lake interchange DB project, beginning in May
 - Department is developing other applications and assemblies
- Event Management
 - Verification cameras deployed at most locations in Daytona Beach area
 - The few remaining cameras will be deployed this month
 - Fully brought into SunGuide; received WOWZA license to bring into Blankout Sign software.
 - Fully integrated in time for next major races in August

THANK YOU!

Next Consortium – June 8, 2023



TSM&O Consortium Meeting

MEETING AGENDA

Teleconference or
FDOT District 5 RTMC (4975 Wilson Rd, Sanford, FL 32771)

April 13, 2023

10:00 AM-12:00 PM

- 1) WELCOME
- 2) ORANGE COUNTY CYBERSECURITY
 - Peter Miller, Orange County
- 3) CFMPOA REGIONAL PROJECTS – UPDATE
 - Eric Hill, MetroPlan Orlando
- 4) *DRONEUP* DELIVERY SYSTEM
 - David Williams, VHB
- 5) TRAINING UPDATE
 - Katie King, Metric Engineering
- 6) TSMCA AND SIMPL UPDATE
 - Jeremy Dilmore, District Five TSM&O
- 7) I-4 EXPRESS LANES – UPDATE
 - Jeremy Dilmore, District Five TSM&O
- 8) CURRENT INITIATIVES
 - Jeremy Dilmore, District Five TSM&O