Member Updates on Key Accomplishments

Members We Will Be Hearing From Today

1. Michigan DOT
2. Alabama DOT
3. California DOT
4. Maryland DOT
5. Minnesota DOT

Michigan Department of Transportation

Suzette Peplinski
Region Traffic Safety & Operations Engineer
Michigan Dept. of Transportation
PeplinskiS@michigan.gov

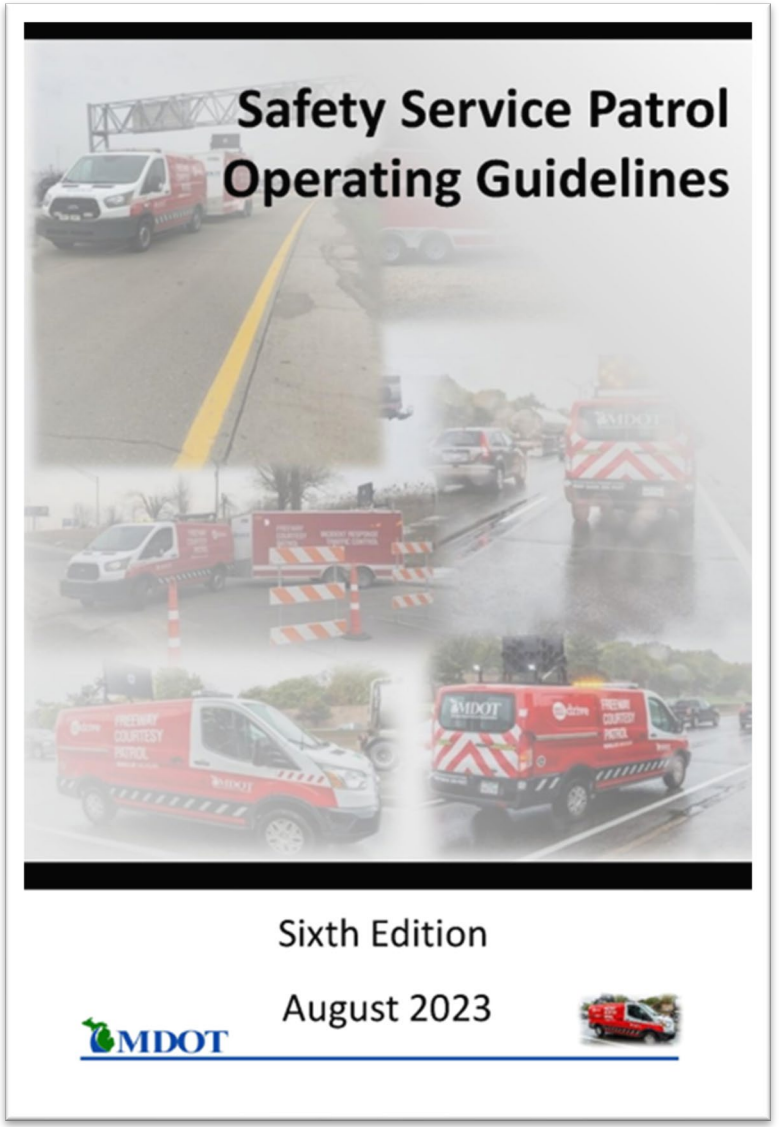
Michigan Department of Transportation: Key Issue

- Safety Service Patrol – rebranding and expansion
  - Existing Freeway Courtesy Patrol operations in Detroit and Ann Arbor.
  - Issues addressed: Rebranding, updating, and expansion to other cities.
  - Actions pursued: Transitioning name from Freeway Courtesy Patrol to Safety Service Patrol to be more in line with the services provided and the national terminology.
  - Updated Operating Guidelines
  - Added three routes in Grand Rapids and two routes in Lansing.
  - Each area contracted separately. Currently all have the same vendor.
  - Lessons learned: People love SSP!

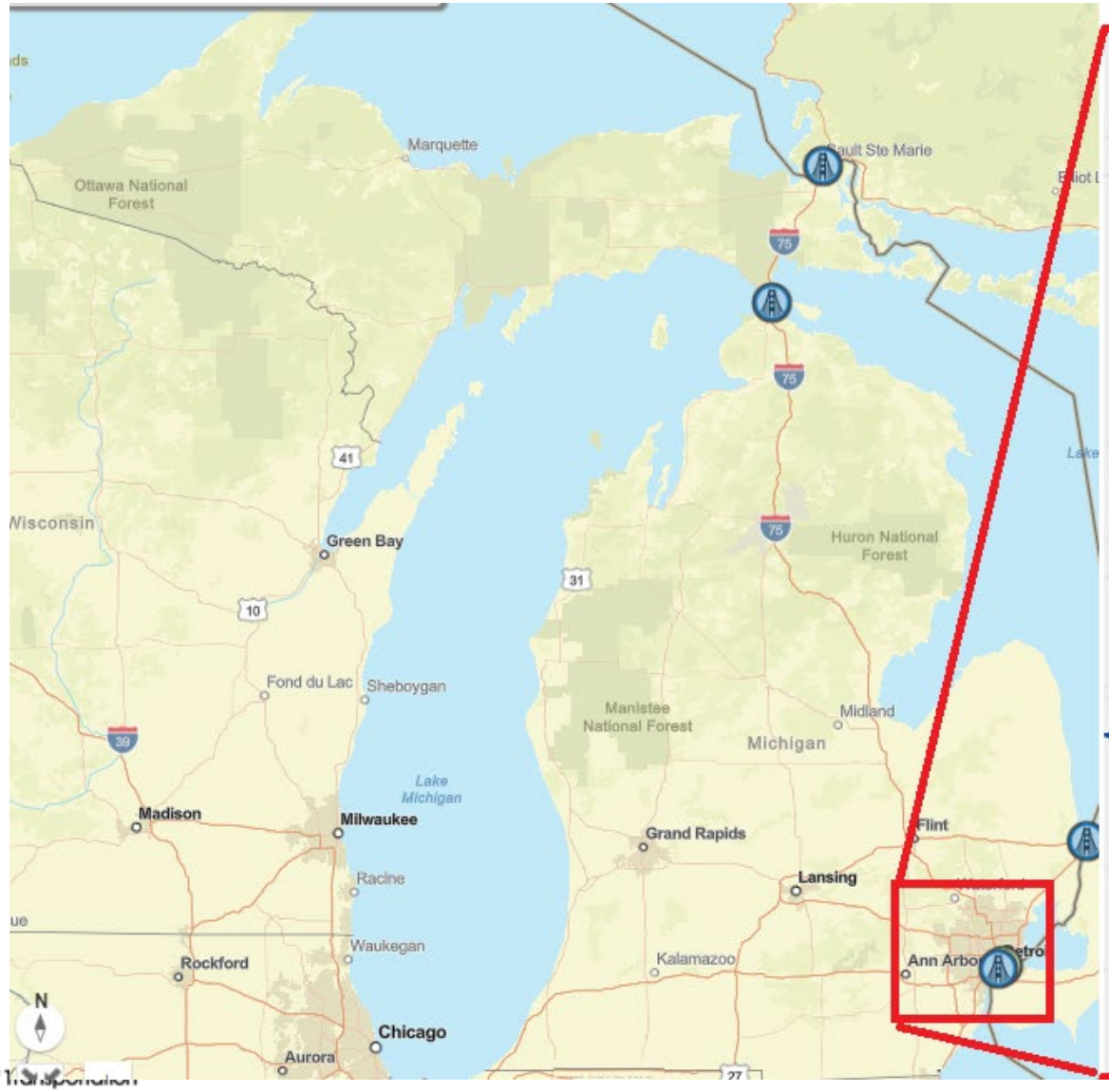
  - SSP announcement in Grand Region:

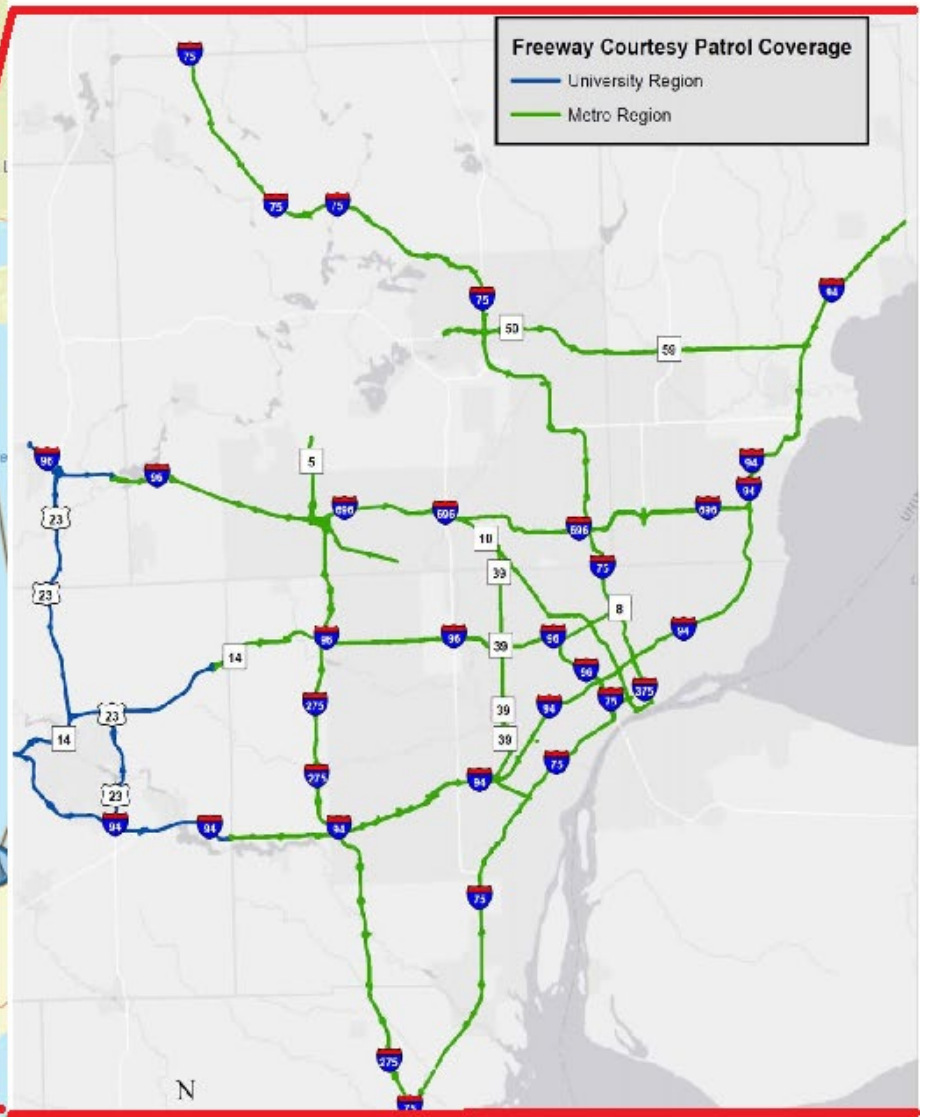
    https://youtu.be/0xFgU2ByCX4 (worth your 3 minutes to watch!)

Michigan Department of Transportation: Safety Service Patrol

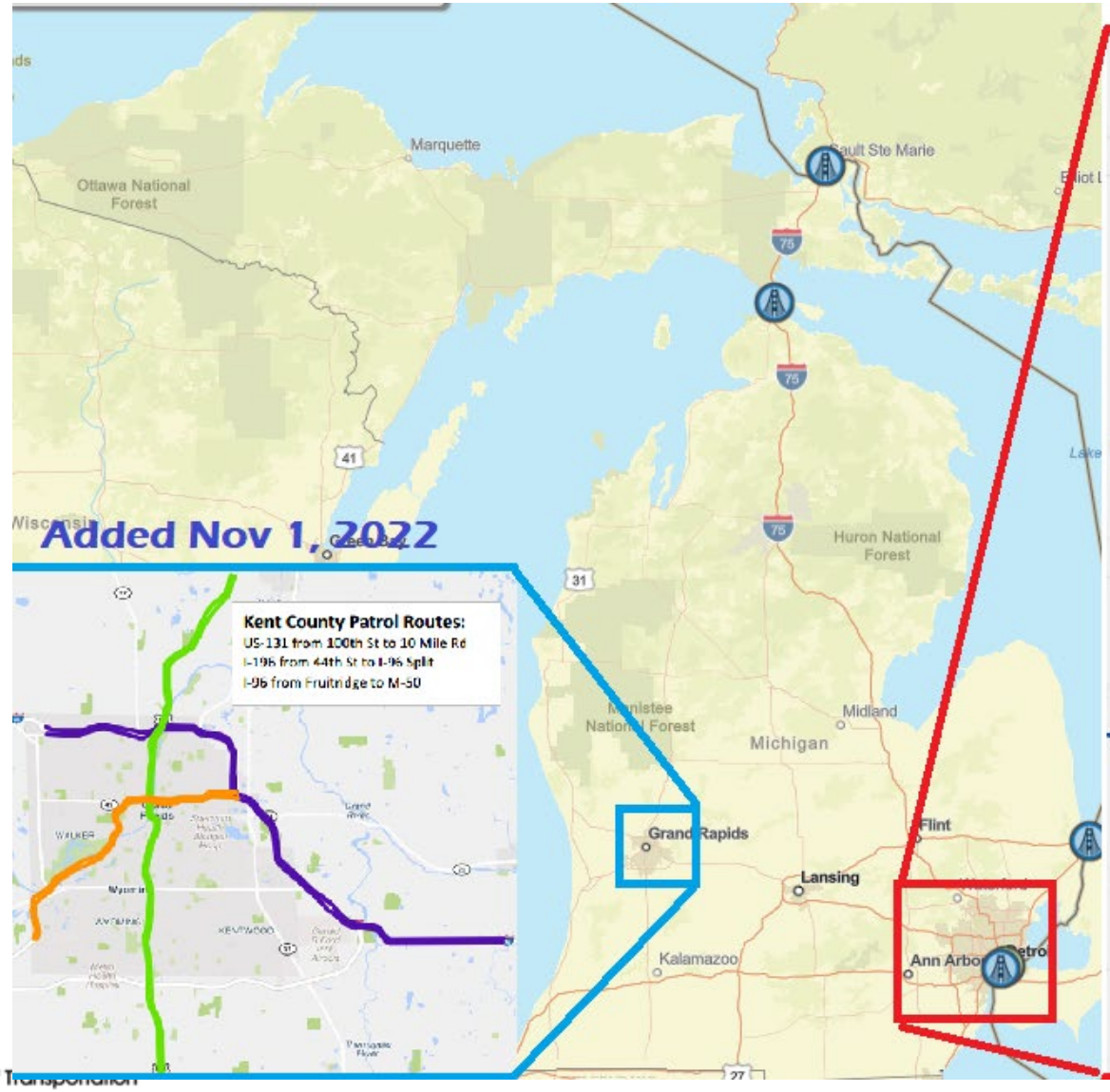


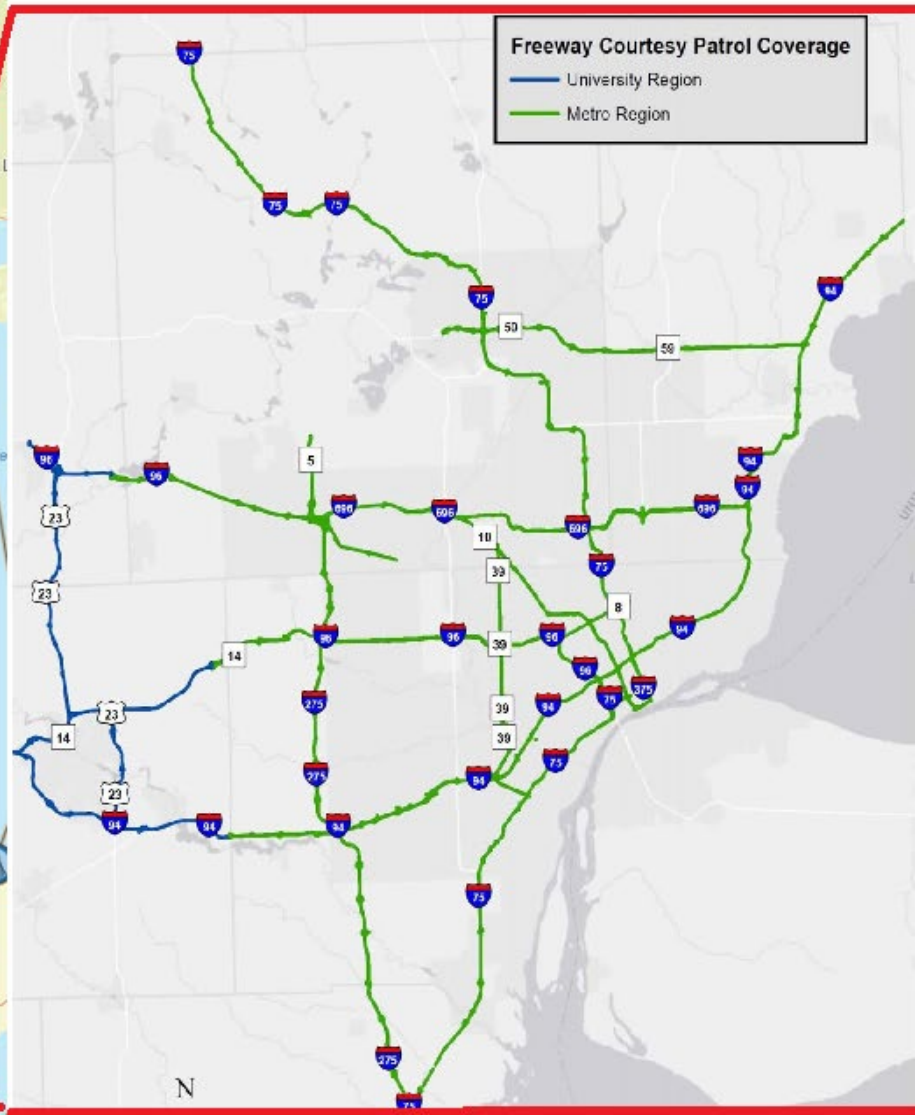
Michigan Department of Transportation: Safety Service Patrol





Michigan Department of Transportation: Safety Service Patrol





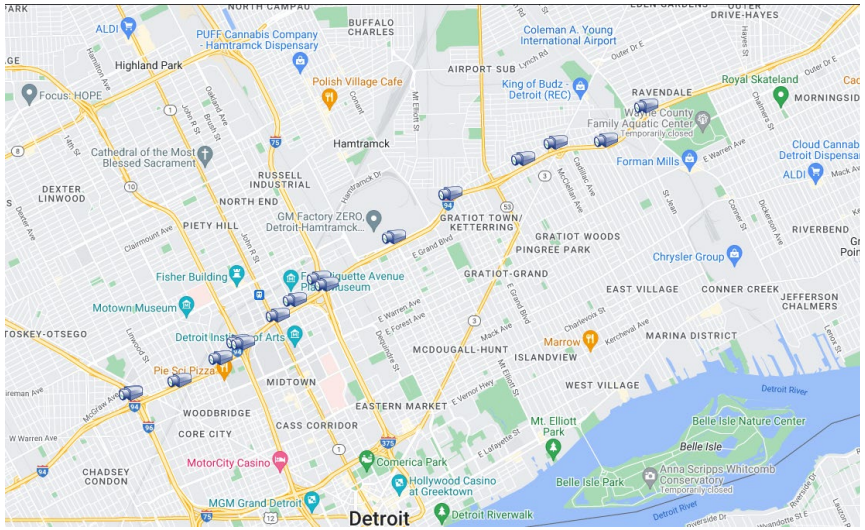
Michigan Department of Transportation: Safety Service Patrol

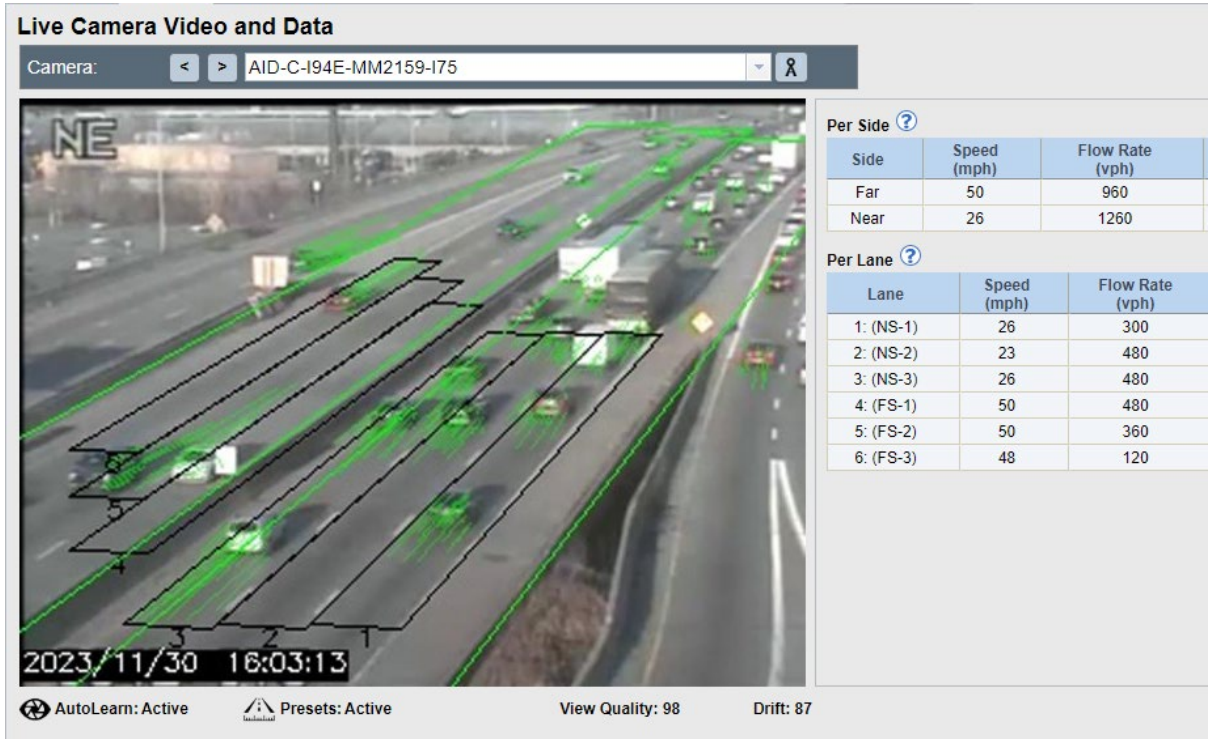
Michigan Department of Transportation: Key Accomplishments

- NextGen ATMS – under contract and underway - Currently working on Build 2 of 5
- Michigan Statewide ITS Architecture update almost complete
- Queue warning corridor system – construction contract awarded
- Automated Incident Detection (AID) pilot on I-94 <see slide>
- CAV Corridor – currently in NEPA/Environmental study phase <see slides>
- Design of first EV charging roadway – design in process for US-12. First ¼ mile segment installed on 14th Street (as of 11/28/23) <see slide>

TrafficVision Automated Incident Detection

- Cloud-based service that uses 18 existing CCTV cameras along I-94 in Detroit to automatically detect slow-downs, stopped traffic, and incidents.
- The AID system has several benefits, including:
  - Faster incident detection and response times
  - Reduced traffic congestion and delays
  - Improved safety for motorists and workers
  - Increased efficiency for transportation agencies





Michigan DOT CAV Corridor - Project Background

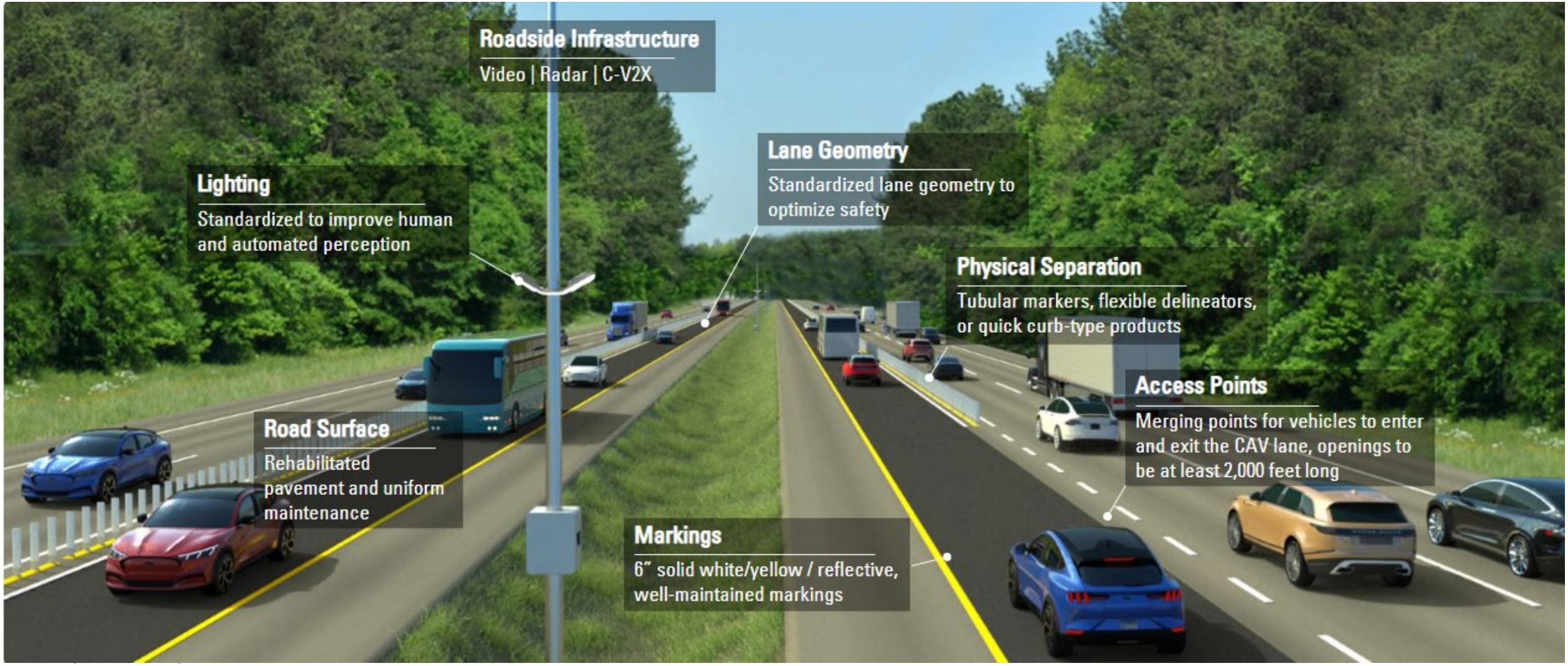
- The CAV corridor would provide physical and digital infrastructure to create an express lane that simplifies operations for vehicles by providing them with near-real time information.
- I-94 is a major mobility corridor connecting Ann Arbor and Detroit.
- Lead the way for the rest of U.S. on the future of highways, accelerate the benefits and output of the automotive industry's next generation of vehicles, improve safety, and reduce congestion and emissions.

Opportunities

- Safety
- Reduce traffic delays
- Connectivity and improving mobility
- Use of right of way

Michigan DOT - CAVNUE Corridor

Detroit to Ann Arbor Connected Vehicle Corridor



Michigan Dept. of Transportation

- Contact:

Suzette Peplinski

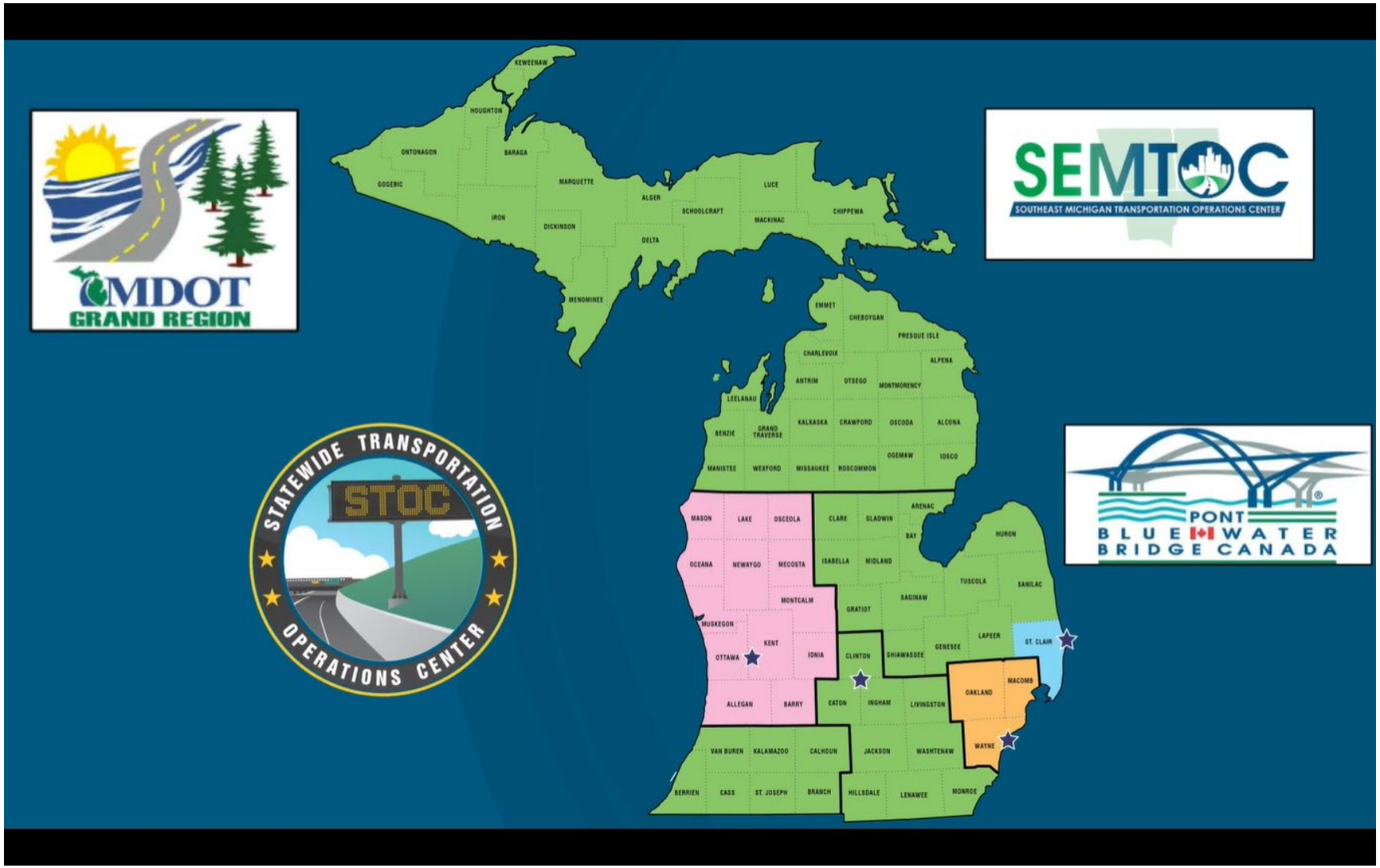
Grand Region Traffic Safety &

Operations Engineer

MDOT – West Michigan TOC

PeplinskiS@Michigan.gov

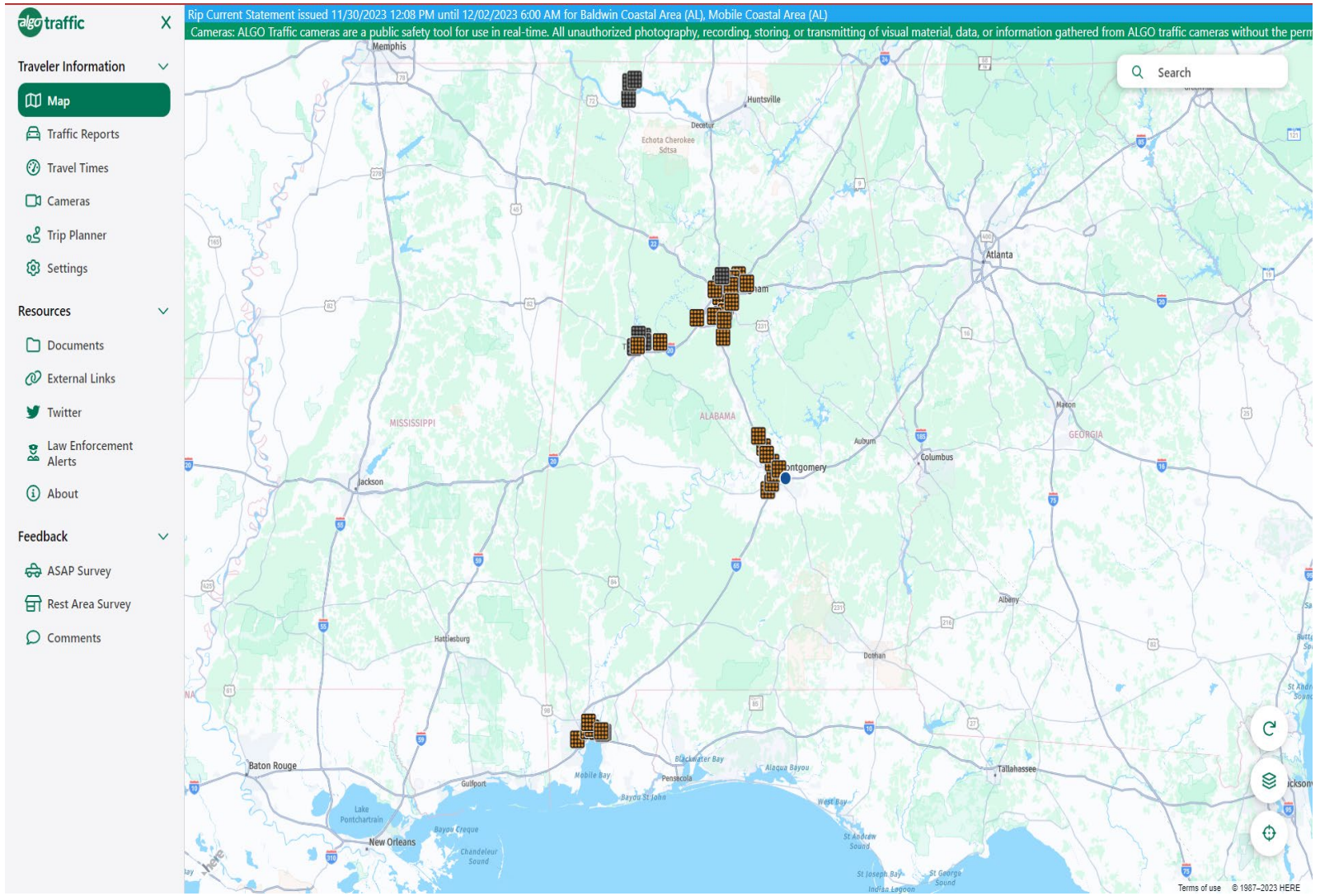
- More info:
  - WWW.MICHIGAN.GOV/ITS



Alabama Department of Transportation

Bryson Moultry
Transportation Systems Performance Manager
Alabama DOT
moultryb@dot.state.al.us

ALDOT: Challenges of Incident Management

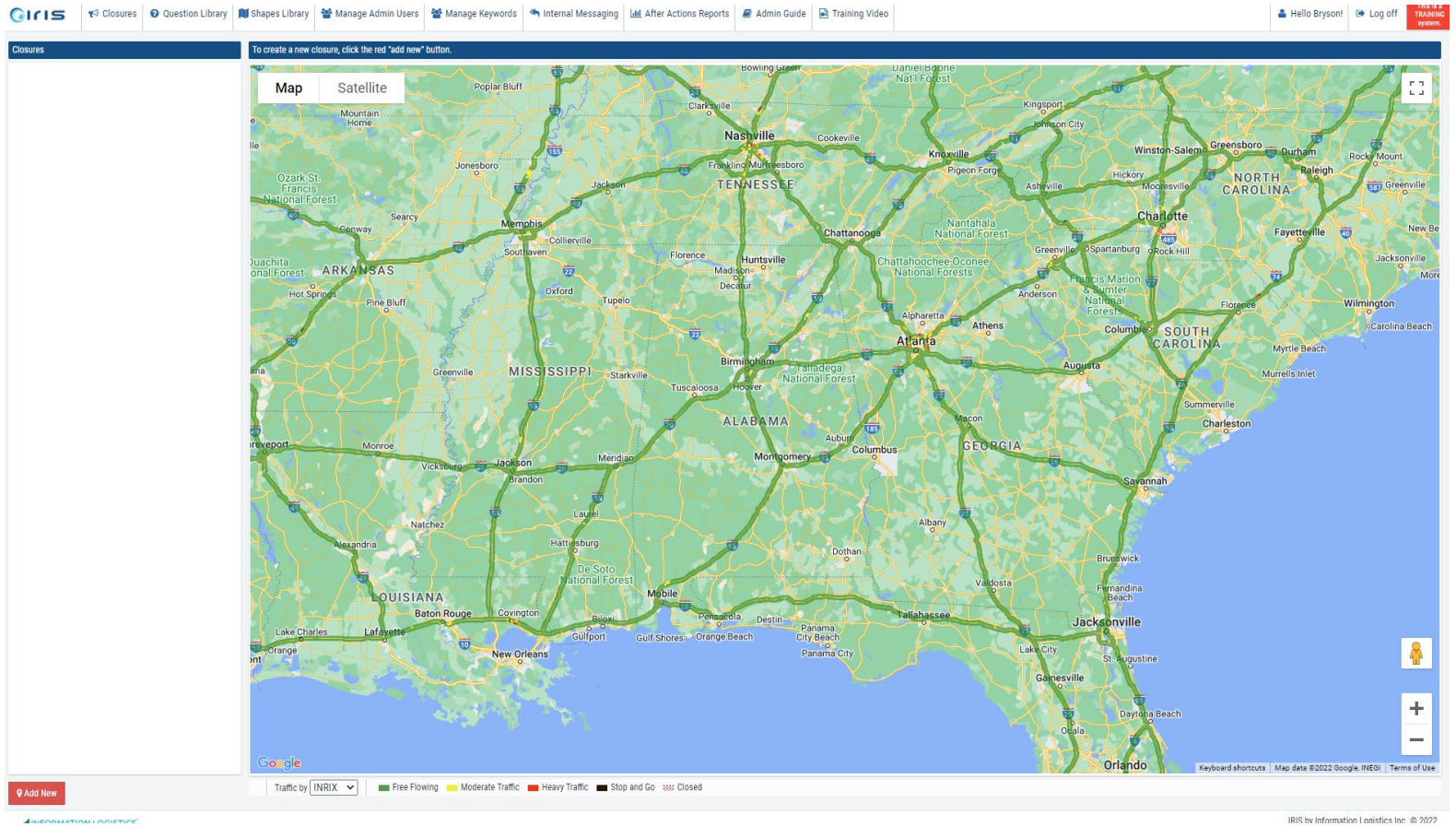


Delivering real-time updates to the travelers outside of traditional DMS and ALGO Traffic Platform during full lane closure events.

DMS Statewide: 53 Message Boards covering 185 miles of Interstate.

Total Interstate Miles: **1000**

ALDOT: ALDOT Alert

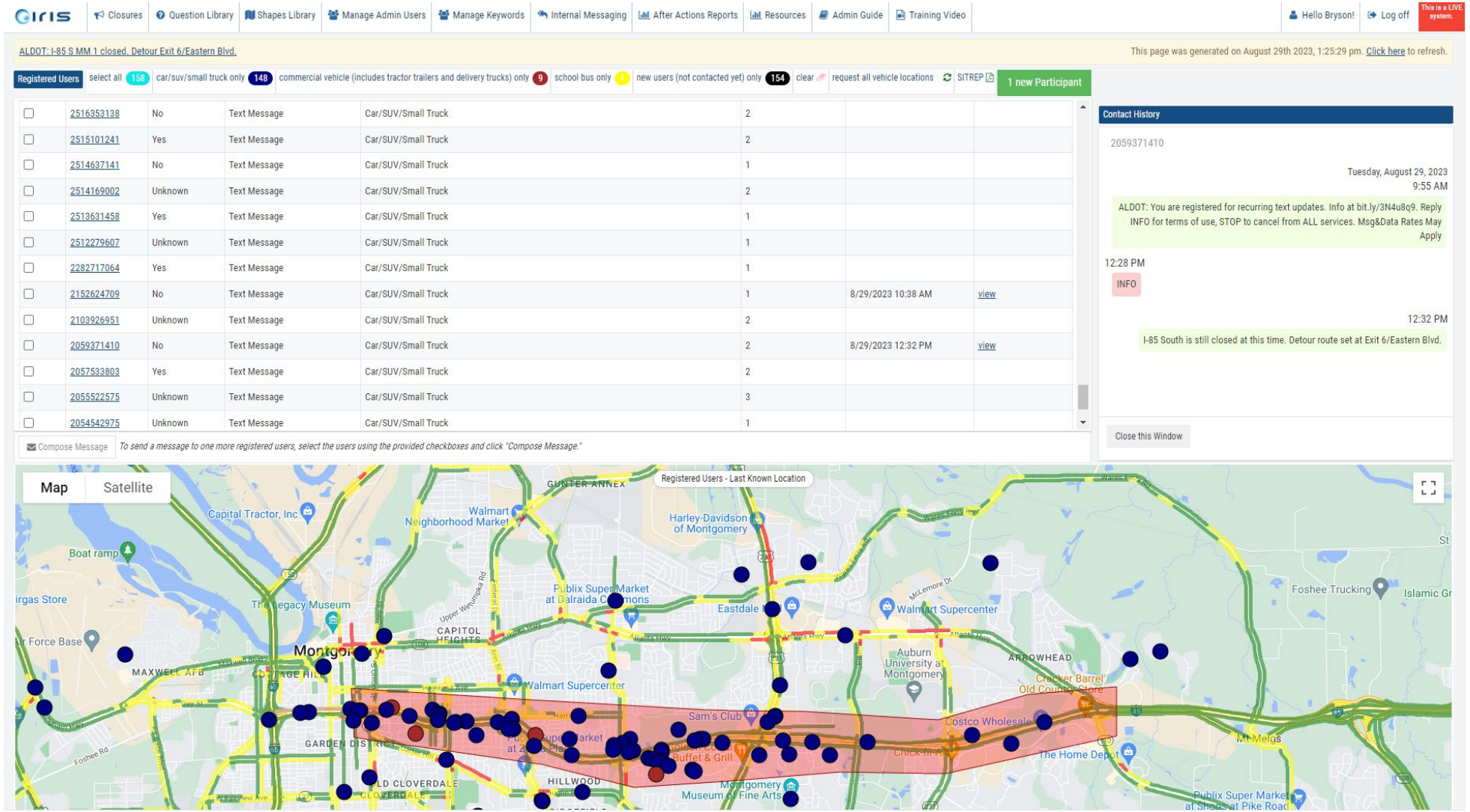


ALDOT ALERT is a Highway Emergency Link Platform that provides ALDOT the ability to push Wireless Emergency Alert (WEA) messages to trapped motorist within a geofenced area.

ALDOT: Results

- Initiated 13 lane closure events since August.
- Have effectively notified trapped motorist in a closure event and deliver detour routes to travelers approaching these closures thus aiding in clearing the queue for possible secondary crashes.

ALDOT: Utilizing 2-Way Communications



☐	2516353138	No	Text Message	Car/SUV/Small Truck	2		
☐	2515101241	Yes	Text Message	Car/SUV/Small Truck	2		
☐	2514637141	No	Text Message	Car/SUV/Small Truck	1		
☐	2514169002	Unknown	Text Message	Car/SUV/Small Truck	2		
☐	2513631458	Yes	Text Message	Car/SUV/Small Truck	1		
☐	2512279607	Unknown	Text Message	Car/SUV/Small Truck	1		
☐	2282717064	Yes	Text Message	Car/SUV/Small Truck	1		
☐	2152624709	No	Text Message	Car/SUV/Small Truck	1	8/29/2023 10:38 AM	view
☐	2103926951	Unknown	Text Message	Car/SUV/Small Truck	2		
☐	2059371410	No	Text Message	Car/SUV/Small Truck	2	8/29/2023 12:32 PM	view
☐	2057533803	Yes	Text Message	Car/SUV/Small Truck	2		
☐	2055522575	Unknown	Text Message	Car/SUV/Small Truck	3		
☐	2054542975	Unknown	Text Message	Car/SUV/Small Truck	1		

ALDOT: After Action Reports

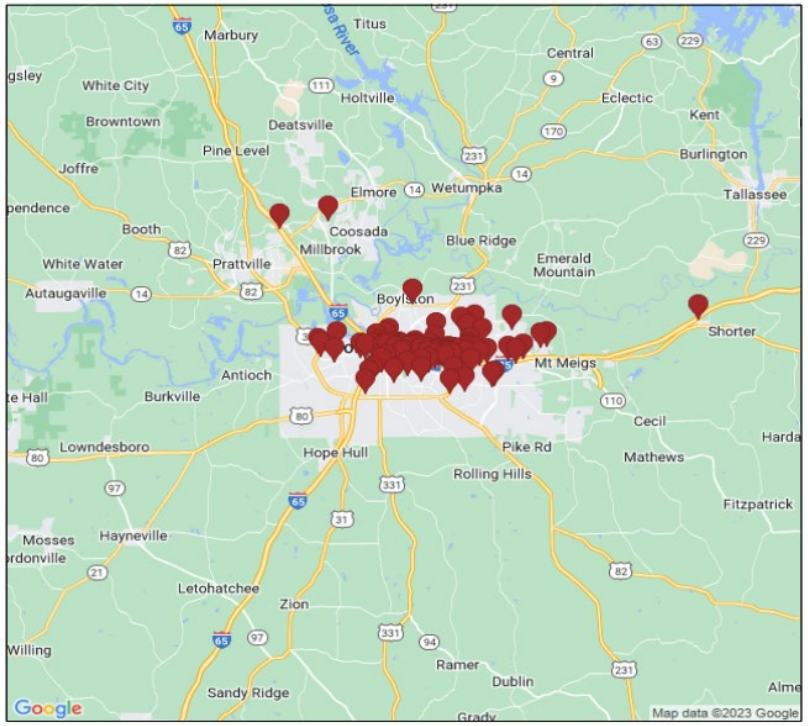
IRIS™ Emergency 2-Way Communications Incident Report

Incident No: 2023829814 **Incident Date:** 8/29/2023 9:23 AM

Created By: Kaitlyn Barron **Closed By:** Kaitlyn Barron **Closed Date:** 8/29/2023 2:37 PM

ALDOT: I-85 S MM 1 closed. Detour Exit 1/ Union Str.

Major crash on I-85 south at MM 1 all lanes are closed. Detour route at Exit 1/ Union Str. onto South East Street then back to I-85 South. Please use caution when traveling through this area.



Participant Information:

Participants: 176

First Registrant: 8/29/2023 9:30 AM

Last Registrant: 8/29/2023 2:36 PM

Contact Method: Text - 174 Phone - 2

Participant Self-Reported Demographics:

Ad-Hoc Questions Summary	
Question	**Summary**
What type of vehicle are you in?	165 participants answered: Car/SUV/Small Truck, 10 participants answered: Commercial Vehicle (includes Tractor Trailers and Delivery Trucks), 1 participant answered: School Bus
How many occupants are in your vehicle, including yourself?	109 participants answered: 1, 48 participants answered: 2, 6 participants answered: 4, 1 participant answered: 6, 1 participant answered: 20, 10 participants answered: 3, 1 participant answered: 12

Notifications Sent:

Standard Messages: 3

Safety Messages: 0

Date / Time	Message	Sent By	Sent To
8/29/2023 11:37:55 AM	I-85 South is currently closed at Exit 6/ Eastern Blvd. Detour route is in place at Exit 6 until further notice.	Kaitlyn Barron	Single Participant
8/29/2023 11:38:28 AM	I-85 South is currently closed at Exit 6/ Eastern Blvd. Detour route is in place at Exit 6 until further notice.	Kaitlyn Barron	Multiple Participants
8/29/2023 1:32:02 PM	I-85 South is still closed at this time. Detour route set at Exit 6/Eastern Blvd.	Kaitlyn Barron	Single Participant
8/29/2023 2:37:07 PM	Operations are back to normal. You are opted out of services for this closure.	Kaitlyn Barron	Multiple Participants

Messages Texted Back:

Message	
8/29/2023 9:32:38 AM	This is John Farrell from ILOG monitoring for support
8/29/2023 10:05:01 AM	Stop
8/29/2023 10:05:16 AM	Stop
8/29/2023 10:05:32 AM	Stop
8/29/2023 10:11:43 AM	Info

Report Generated: 11/28/2023 3:39:17 PM **Page** 2 of 3

ALDOT Key Issue

- ALDOT Alert
  - Challenge: Delivering real-time updates to our travelers outside of traditional DMS and ALGO Traffic Platform during full lane closure events.
  - Action pursued: Procured HELP Software – ALDOT Alert
  - Results: Notify trapped motorists and divert upstream travelers from a road closure by providing them with real time updates to their phones via text.
  - Lessons learned: Internal communications between our TMC personnel and State EMA saw improvements through training exercises to prepare for live events.
  - Additional information: algotraffic.com

The Alabama Department of Transportation

- Questions??
- Contact to obtain additional information:
  - Bryson Moultry, PE
  - Transportation Systems Performance Manager
  - ALDOT – Central Office
  - moultryb@dot.state.al.us

California Department of Transportation

Sharon Ly
Traffic Management Center (TMC) Facilities Support
California Department of Transportation
Sharon.ly@dot.ca.gov

California Department of Transportation: Key Issue #1

- Traffic Management Center (TMC) Inventory Tracking

  - **Challenges:** Streamline the decision-making process for identification prioritization, implantation, and tracking of different TMCs, but also to identify what is needed at each TMC.
  - **Issues addressed:** Delays in needed maintenance, repairs, and replacements result in deferred maintenance that can cause a degradation or lapse in TMC functionality and increase future costs.
  - **Proposed Action pursued:** Assigned each district to prepare a draft, line-item list of their TMCs current facility-related inventory of needs

California Department of Transportation: Key Issue #1

- Traffic Management Center (TMC) Inventory Tracking
  - **Results:** 12 districts have prepared their first ION draft; HQ is currently reviewing and returning comments to districts to update/refine
  - **Lessons learned:** First time execution of a large-scale document and information gathering entails an abundance of patience and follow-up from our HQ team. Timelines were adjusted due to longer than expected information retrieval time.
  - **Additional information:** The Inventory of Needs (ION) document is proposed to be a living document; to be updated annually. In the final stages, we hope to input this data into a user-friendly database for accessibility and viewing.

California Department of Transportation: List of Key Accomplishments

- Created working group (consisting of 1 or 2 staff from each district)
- Created & distributed ION excel template & OneDrive folder
- Held working group meetings
  - Discussed work efforts/action items
  - Q&A
- Draft IONs received from all 12 districts TMCs
- Reviewed and compiled districts' first ION line-item drafts
- Updated timeline has been discussed and is acknowledged by our HQ team and the district TMC teams.

California Department of Transportation: ION Main Needs Categories

- **Structure**
  - Foundations, super structure, slabs and floors, and pavement adjacent to and constructed as part pf the facility; i.e. sidewalks, parking lots, access roads
- **Exterior**
  - Exterior coatings and sealants, windows, paint and doors
- **Roof**
  - Roof coverings, roof openings, gutters, and flashing
- **HVAC**
  - Heat, ventilating and air conditioning systems including controls; may include exhaust fans, or other mechanical equipment associated with indoor air quality
- **Electrical System**
  - Electrical service and distribution, lighting, communication systems, security and fire protection wiring and controls
- **Plumbing**
  - Water, sewer and fire protection piping, including bathroom fixtures
- **Sustainability Elements**
  - Electrical vehicle plug-in stations, LED lighting, solar panels
- **Interior Finishes**
  - All interior finishes on walls, ceilings, floor, and stairways
- **Consoles**
  - Workstations, etc.
- **Software/Databases**

California Department of Transportation Example

- ION – Example of Itemized List

Category	Item	Description	Quantity	Est. Cost (each)	Date Last Replaced	Life Expectancy
HVAC	Air	Chillers	2	$ 339,000.00	2023-2024	25 years
HVAC	Air	Air Handlers	5	$ 137,000.00	1-2023,3- 2020, 2- 1992	25 years
HVAC	Air	HVAC Parts		$ 10,000.00		
HVAC	Air	Lieberts A/C Units	4	$ 65,000.00	2- 2020, 2- 2000	10-15 years
HVAC	Air	Filters- Liebert		$ 75.00	Quarterly	
HVAC	Ventilation	Merv rating filters		$ 30.00	-	
HVAC	Air	Various Frequency Drive - VFDs	10	$ 800.00		5-10 yr
HVAC	Air	V-bank Filter	20	$ 100.00	-	
HVAC	Air	Pre-Filters	20	$ 40.00	-	
HVAC	Air	A/C units- stand alone	4	$ 41,000.00		
HVAC	Air	HEPA Filters		$ 10,000.00		
Alternative Power		Generators	2	$ 1,000,000.00	1996	50 years
Alternative Power		Batteries (12V) for Generator	8	$ 125.00	2022	4-5 years
Alternative Power		Switchgear	1	$ 50,000.00	1996	20 years
HVAC	Heat	Boilers	2	$ 60,000.00	2005	10-15 years
Electrical_System	Lighting	Parking lot lamps/ Lighting				
Electrical_System	Service/distribution	Lieberts -Electrical	7	$ 65,000.00	1996; 2 replaced 2018	10-15 years

California Department of Transportation

- Questions??
- Contact to obtain additional information:
  - Sharon Ly
  - TMC Facilities Support
  - Caltrans – Traffic Operations
  - Sharon.ly@dot.ca.gov

California Department of Transportation

Jose Jimenez
HQ TMC Operations Support Engineer
California Department of Transportation
hq.tim.support@dot.ca.gov

California Department of Transportation: Caltrans Key Issue #2

Energy Efficiency in stand-alone TMCs

- **Challenge:** Identify and investigate energy efficiency improvements with stand-alone TMCs. (CA has 12 TMCs, 5 of which are stand-alone buildings)
- **Issues being addressed:**
  - Reduce energy consumption and save money on utilities.
  - Reduce greenhouse gases (solar panels, water heaters, etc.).
  - Reducing future maintenance costs through energy savings.
- **Action pursued:**
  - An audit was conducted identifying energy efficiency improvements for Caltrans D7, D11 & D12. (3 of the 5 stand-alone TMCs in CA)
  - The audit looked at various improvements, like the addition of solar panels and replacement of systems with newer energy-efficient ones.

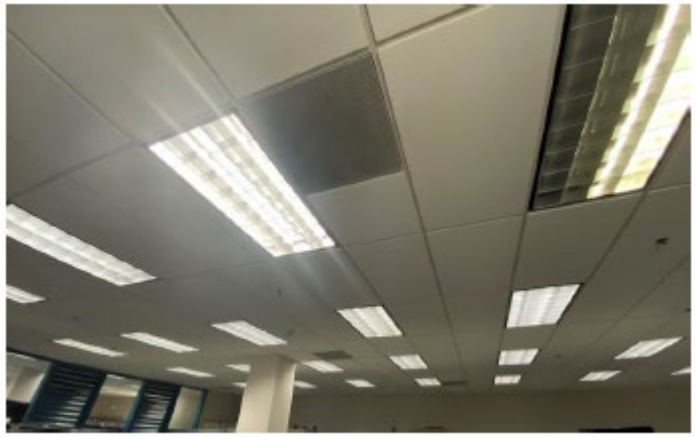
California Department of Transportation: Caltrans Key Issue #2

- **Results:**
  - Projected combined utility savings of three investigated sites (D7, D11, D12) equates to over $300,000 annually based on the audit report.*
  - Savings can be used to replace old appliances (e.g., HVAC) with energy-efficient ones.
  - Less maintenance cost.
- **Lessons learned:**
  - Identified improvements that provide higher energy savings for the cost.
  - Utility savings can be used for future maintenance costs.
    - Either on other building maintenance projects or the replaced systems costs'.
  - Don't delay these improvements; this may result in higher energy costs.

* Audit report conducted and provided by Alternative Energy Systems Consulting, Inc. (AESC) and Willdan Group

California Department of Transportation:

- **Additional information:**



Typical parabolic lighting fixtures lighting

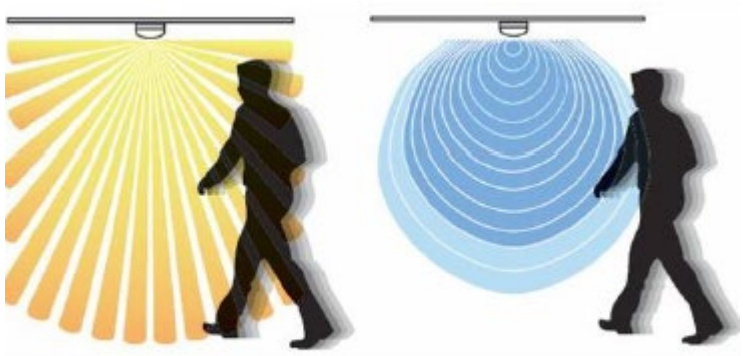


Diagram of passive infrared and ultrasonic sensor

Caltrans

- Questions??
- Contact to obtain additional information:
  - Jose Jimenez
  - HQ TMC Operations Support Engineer
  - Caltrans -Traffic Operations
  - hq.tim.support@dot.ca.gov

Maryland Department of Transportation

Rashad Rice
Chief – TMC Operations
MDOT SHA
RRice2@mdot.maryland.gov

Maryland DOT: Key Issue

Incident Emails and Modernization of ATMS

Our ATMS Release 27 was a major release that focused primarily on integrating the workflow of sending incident email notifications of major events to internal customers and external partners via an automated system. Also, in this release all of our maps in the ATMS received a technology upgrade along with a revamp of map controls and new, more modern icons.

All,

At this time 9206 and 9502 are on scene assisting Maryland State Police with a serious crash. This incident occurred on US 50 W past Exit 24 MD 70 Rowe Blvd in Anne Arundel County. Currently the two right lanes and acceleration lane are closed. This crash involves 2 SUVs and 1 passenger car. Two people are being transported and accident reconstruction is enroute. Pictures attached for situational awareness. There is no ETC

CCTV
US 50 AT Rowe Blvd
SG- 04124 (9206)
SG-02392 (9502)

Crash PD; AA Co US 50 W PAST EXIT 24A - MD 70 ROWE BLVD; 2 RT LNS/RT ACCEL LN CLOSED;2 Cars, 1 SUV /MG@SOC@17:34

Prior to this update, our operators would have to leave the ATMS (where almost all of their processes are handled), go into Outlook, type up, and send out incident emails to specific groups once certain thresholds are met. To make this process more efficient, our Systems Integrations Team has incorporated this feature into our ATMS. They also set out to create a more visually impactful presentation of major events targeted to mobile devices as well as ensure capture of messages for future reporting and accountability purposes.

Benefits and Features

The main features from the systems user perspective are:

- Remove the need to write a narrative describing the major event, reducing human error
- Information is pulled directly from the event
  - Event Name
  - Estimated Time to Clear
  - Vehicles involved
  - Load description
  - Lane diagram
  - Additional information entered by the operator.
  - Cameras associated to the event
  - Responders on Scene
  - Responders notified
- Allow for picture attachments from events
- If configured, can automatically select recipients based upon system rules and assigned area of responsibility.
- Each email will be marked Initial, Update # or Final automatically.

*It is still the Operators responsibility to decide *when* to send an Operations Email*

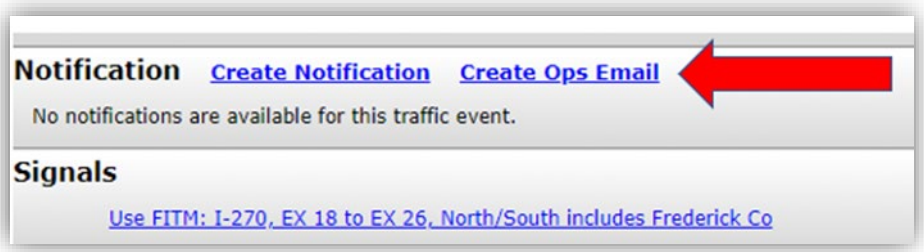
Benefits and Features

The main features from the end user (mobile) perspective are:

- Lane graphic instead of a narrative, reducing human error.
- Clickable link to Google Map with Traffic Layer
- Reduced vertical scrolling
- Links to public cameras
- Link to MView for non-public cameras

Workflow

A major event occurs, and the operator decides that it meets the requirements of TMC Operations SOP 3.2.11- “Incident Awareness Emails”. The Operator then clicks the “Create Ops Email” link in the Notification section of the event.



Workflow

A dialog box will appear where the operator has the ability to:

1. Accept the Generated Recipients (system selected). This box is unchecked for MDTA and checked for SHA by default.

2. Select notification groups. This is the expected way MDTA will use this feature. SHA users will not need to select any groups unless an updated SOP is published.

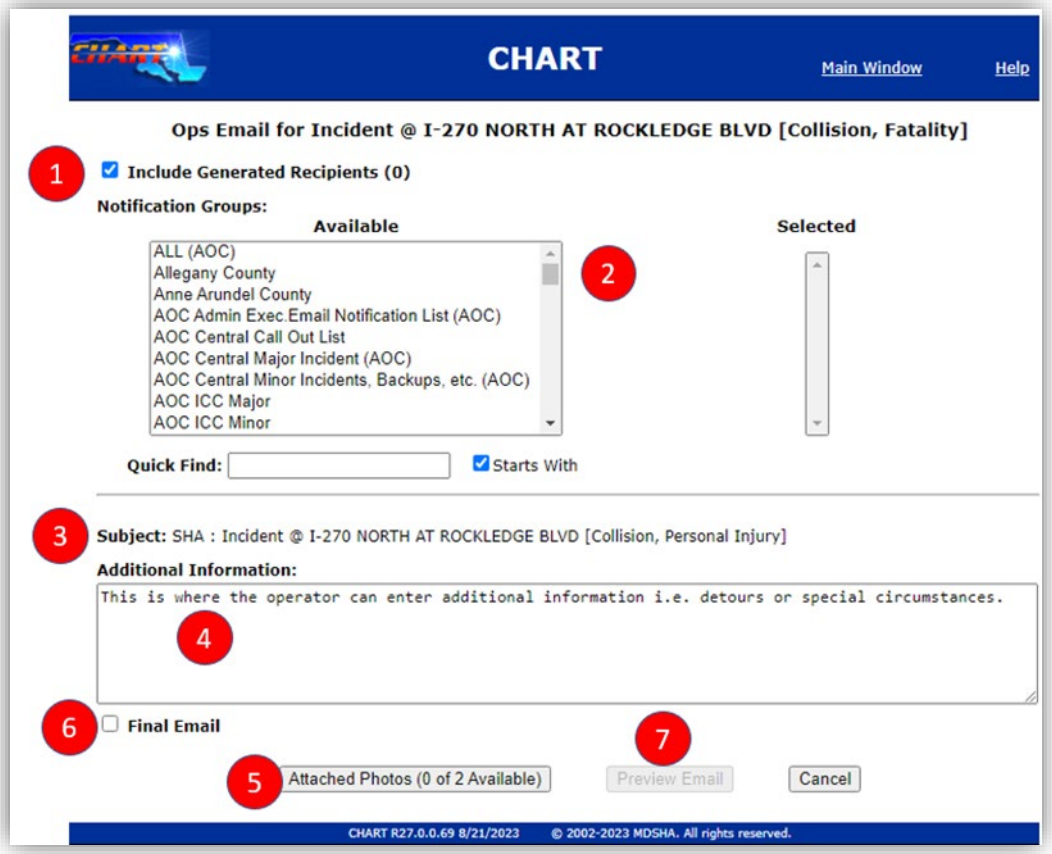
3. The subject line that will be included with the email is viewable. This is not directly editable. Changes to the incident name in the event will update this field.

4. The operator may include any Additional Text Information in this section i.e. detours.

5. Pictures that have been associated to the event may be added to the email.

6. Final check box. Each operations email will be marked as either Initial or with an Update number until the user checks the Final Email check box.

7. Preview button. The operator may not send the email until it has been reviewed.



Workflow

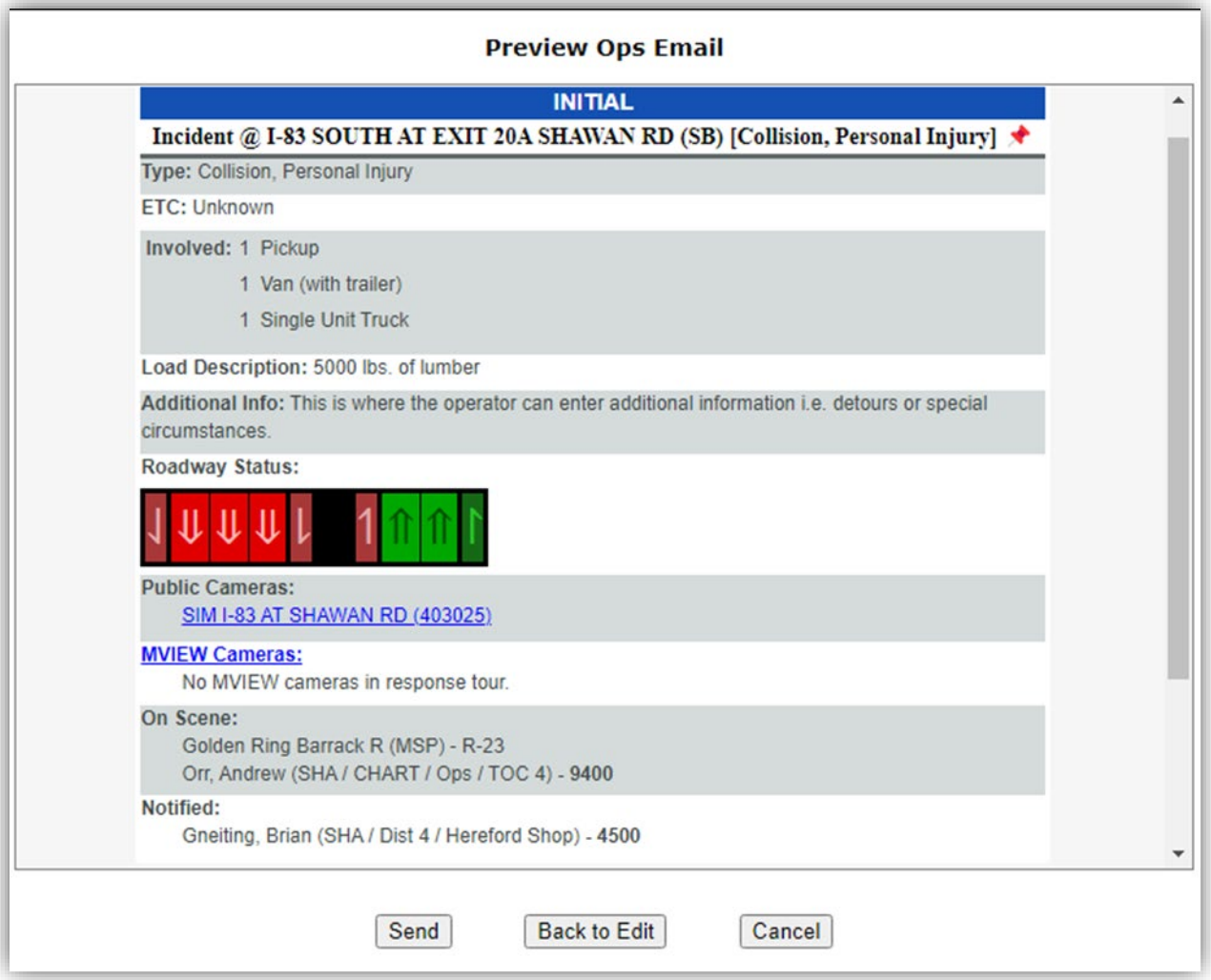
Upon clicking the “Preview Email” button, a dialog box will appear where the operator must review the contents.

Edits to the Additional Info section can be made by clicking the “Back to Edit” button.

Edits to any other field must be made clicking the “Cancel” button then updating the event.

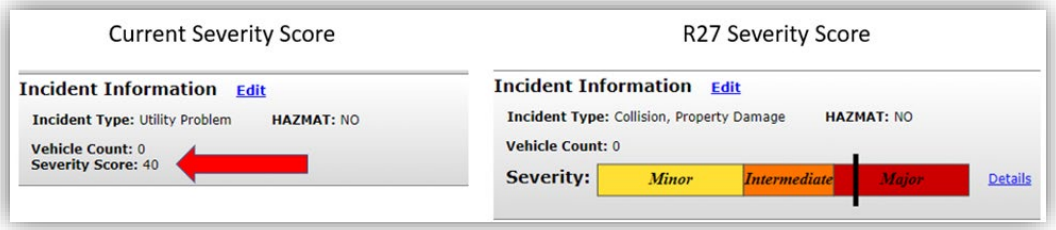
Clicking “Send” will sent the email to the MDOT Enterprise Email Servers for distribution.

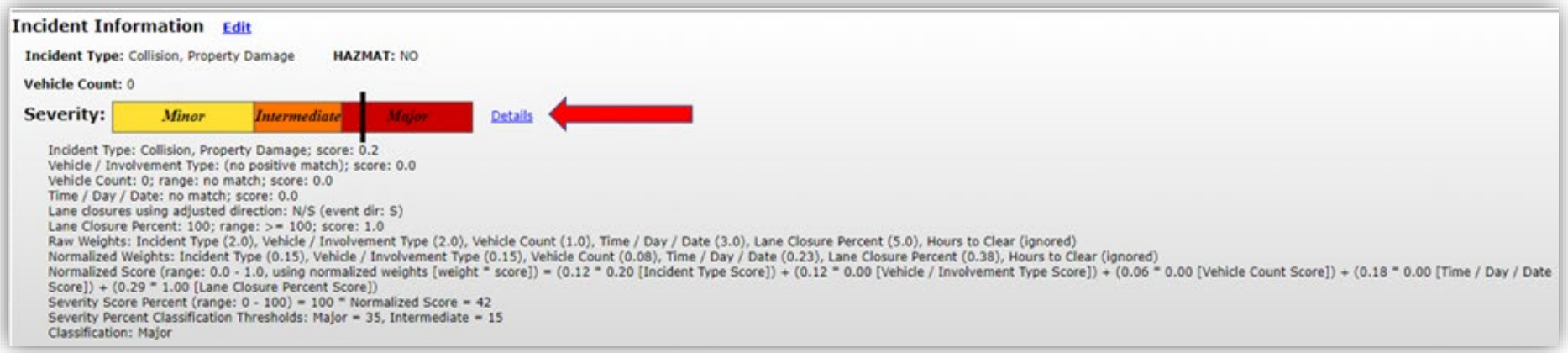
Workflow


Preview Ops Email
INITIAL
Incident @ I-83 SOUTH AT EXIT 20A SHAWAN RD (SB) [Collision, Personal Injury]
Type: Collision, Personal Injury
ETC: Unknown
Involved: 1 Pickup
1 Van (with trailer)
1 Single Unit Truck
Load Description: 5000 lbs. of lumber
Additional Info: This is where the operator can enter additional information i.e. detours or special circumstances.
Roadway Status:
Public Cameras:
SIM I-83 AT SHAWAN RD (403025)
MVIEW Cameras:
No MVIEW cameras in response tour.
On Scene:
Golden Ring Barrack R (MSP) - R-23
Orr, Andrew (SHA / CHART / Ops / TOC 4) - 9400
Notified:
Gneiting, Brian (SHA / Dist 4 / Hereford Shop) - 4500
Send
Back to Edit
Cancel

Additional Updates

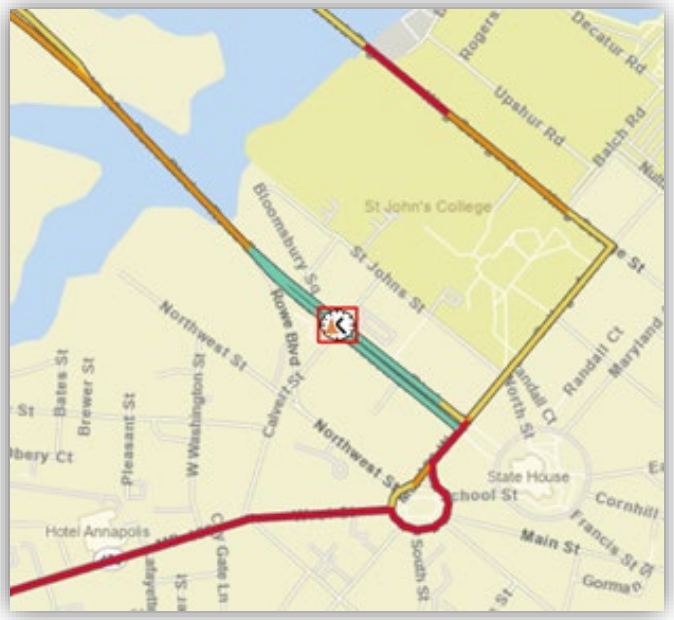
To continue progress with improving workflows in the ATMS and better align with standards, our severity score has been aligned with the event terminology used in the Manual of Uniform Traffic Control Devices (MUTCD) classifications for events section 6I.01. The severity score slider adjusts to conditions entered in the event and all scoring is adjustable by the system administrator





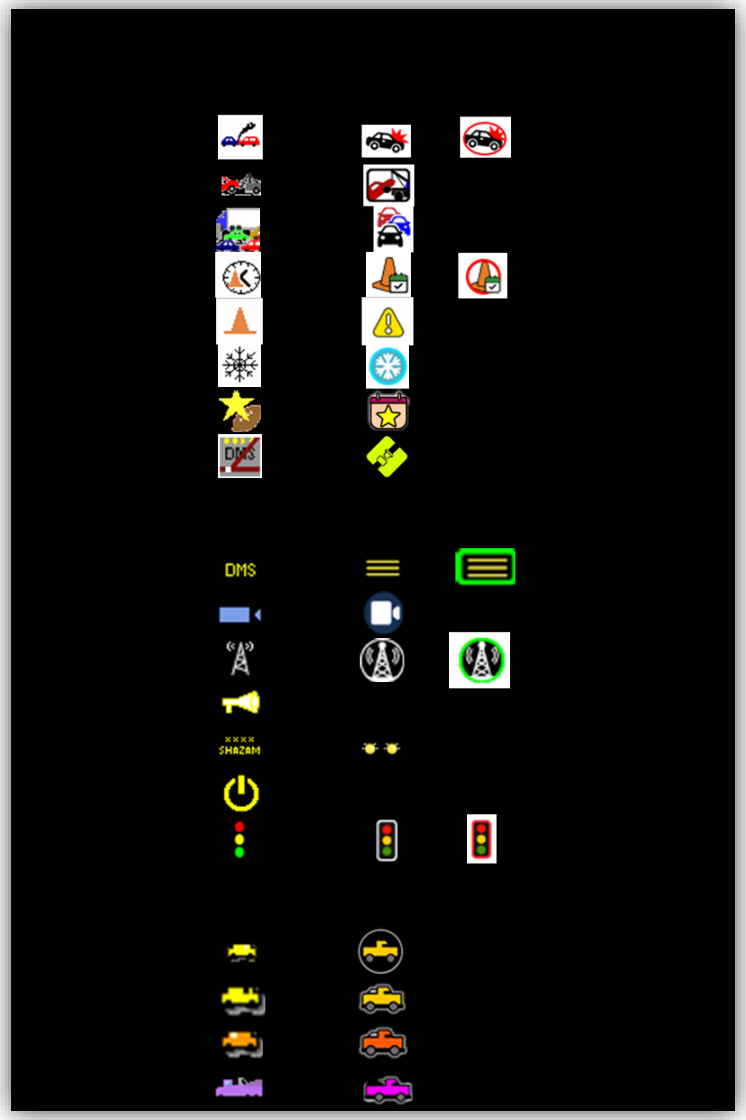
Additional Updates

The ESRI / HERE traffic layer is much more granular and inclusive than our previous traffic layer. This is an example in Annapolis.



Additional Updates

Icons have been updated to give our ATMS a more modern look.



Maryland DOT: List of Key Accomplishments

- Created a new Training & Certification Manager position

- Installed the new Motorola Vesta phone system at all 4 centers that integrates our telephones and radios

Questions???

Contact to obtain additional information

- Rashad Rice
- Chief – TMC Operations

- Office of Transportation Mobility & Operations

- RRice2@mdot.maryland.gov

Maryland DOT

Minnesota Department of Transportation

DEPARTMENT OF TRANSPORTATION

John McClellan
Freeway Operations Supervisor
MNDOT
john.mcclellan@state.mn.us

General

- Anniversaries celebrated: 30 years FIRST (SSP), 20 years RTMC, 20 years TIM training, 15 years CAD integration.
  - Updated TOCC agreement
- Freeway on-ramp gates
- IPAWS / WEA
  - Outside Metro, greater then 4 hours, during waking hours, Interstate & major state hwy.
- Desk lifter refurb project
  - Replaced lifters on 20 year furniture. $130k vs. $700k+ for new desks

Challenges

- IRIS – updating to web based – single developer
- Continuing evolution of video requests / recording of public feeds
  - Major events/fatals avail online within minutes
  - Confusion with public
  - Media
- Elements of Patrol wanting walls/separation in CAD
- Cameras?
  - With wipers, not domes. 3 video feeds.

MNDOT

Questions?

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MNDOT Freeway Operations Supervisor
John.mcclellan@state.mn.us