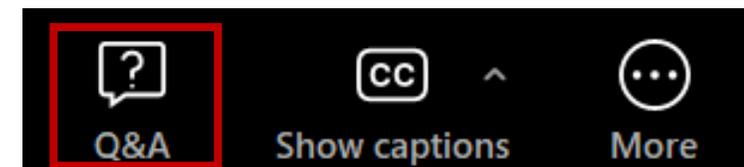


RITIS User Group

RITIS User Group Web Meeting
March 5, 2026

Welcome!

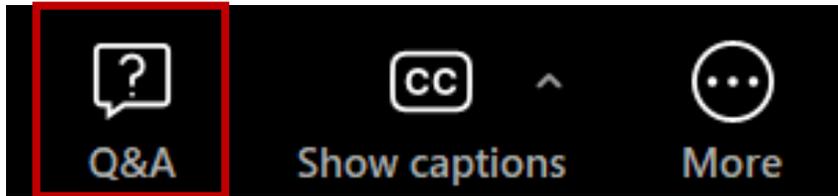
- We are using Zoom **Webinar**
- **AUDIO (Computer):** Use your computer speakers and microphone by clicking the “Join Audio” button at the bottom left of the screen. You will be muted.
- **Alternate Audio (Phone):** Call into the meeting by dialing the phone number based on your location (provided in the confirmation email) and enter the Meeting ID at the prompt. You will be muted.
- **This web meeting is being recorded.**
- **Questions** with the audio or web? Please contact Nicole directly via email (nforest@tetcoalition.org)
- Please use the **Q&A box** for questions to the presenters. The **Chatbox** is not available to participants.



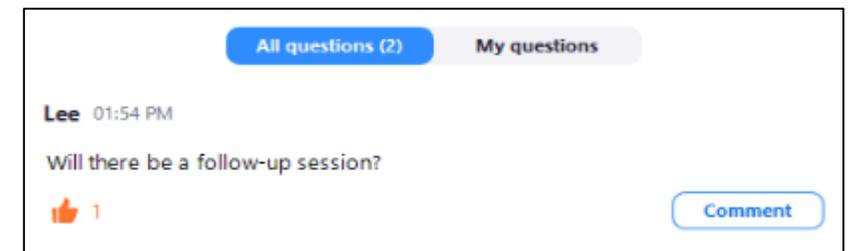
Asking Questions in the Q&A Box



- Click on the Q&A icon at the bottom of your screen



- The questions in the Q&A box will be monitored and answered at the end of each presentation or at the end of the meeting
- You can keep track of your questions in the “My Questions” tab in the Q&A box



Asking Questions Verbally



- Please raise your hand (*click on the hand icon at the bottom of the screen*) and a host will unmute you.



- Please give your name and agency before asking your question
- **Please mute yourself when you are finished speaking**



Welcome from the Coalition and upcoming RITIS Events!



Nicole Forest

The Eastern Transportation Coalition
TSMO Program Associate

Event	Date
RITIS User Group Web Meeting	June 4, 2026 1:30pm-3:00pm



Welcome & Introductions



Jesse Buerk

*Associate Director, Capital Programs & Project Development
DVRPC*

RITIS User Group Co-chair



Today's Meeting

Presentation	Presenter	Time
RITIS & Events Update Welcome & Introductions	Nicole Forest, The Eastern Transportation Coalition Jesse Buerk, RITIS User Group Co-chair	5 mins
Poll Questions	Jesse Buerk, RITIS User Group Co-chair	5 mins
What's New and Coming Soon	Michael Pack, Joe Strube, Charles Lattimer, & Greg Jordan, UMD CATT Lab	25 mins
PM3 Reporting Updates	Greg Jordan, UMD CATT Lab	5 mins
Agency Spotlight Presentations: 1. Work with RITIS Data – Ramp Metering 2. CMP Technical Report Story Map 3. Operations use-cases for Dashcam Images	1. William Morgan, GDOT 2. Ian Newman, MWCOG 3. Taran Hutchinson, MATOC	40 mins
User Feedback Session & Wrap Up	Michael Pack & Jesse Buerk	10 mins



Today's Speakers



Michael Pack
CATT Laboratory



Greg Jordan
CATT Laboratory



Joe Strube
CATT Laboratory



Charles Lattimer
CATT Laboratory



Taran Hutchinson
Facilitator

Metropolitan Area Transportation Operations Coordination



William Morgan
Transportation Specialist V (ITS)
Georgia Department of Transportation



Ian Newman
Program Manager, Travel Monitoring & Planning Assistance
Metropolitan Washington Council of Governments



Polls 1, 2, and 3

Poll 1: How often do you attend RITIS User Group Web Meetings?

- a) 1-2 times per year
- b) 3-4 times per year
- c) This is my first meeting

Poll 2: How do you use the data and visualization results from RITIS tools (choose one)?

- 1. We use results directly from RITIS to develop products (reports, maps, etc.)
- 2. We download the data and use our own agency's in-house tools to create tables and visuals for product development
- 3. We do a little bit of both

Poll 3: Who is your primary audience for sharing information that was developed from RITIS and PDA Suite (choose one)?

- 1. Peers
- 2. Management
- 3. Executive Leadership
- 4. Elected Officials
- 5. General Public





Demonstrations of Significant Work Updates

Michael Pack, Greg Jordan, & Charles Lattimer
Director

University of Maryland CATT Lab



Updates on Enhancement Group Voting

- Bob Frey with MassDOT chairing this group
- Pooled fund
- Voted on ~25 potential enhancements
- Voting finished last Friday
- Enhancement group meeting on March 12 to review the results

Enhancement Options for Consideration

1. Advanced Time Selection in PDA tools. This would allow users to select date ranges, but exclude specific dates (like holidays, sporting events, etc.)
2. Embedding & Publishing of Dashboards. This would give users the ability to publicly share (or embed into agency websites) any dashboard created in RITIS/PDA Suite.
3. XD or similar sub-segment bottleneck ranking (instead of just TMCs)
4. Trajectory-based Congestion Scans
5. Travel Time Contours in PDA
6. Travel Time Contours in TA
7. Wrong-way hotspot detection
8. 85th percentile spot speed tools
9. Speed & Travel Time Charts in Dashboards (PennDOT request)
10. Ranked Bottleneck Table Widget Enhancements
11. Ranked Bottleneck Table Comparison Widget Enhancements
12. Per Segment UDC
13. User Delay Cost measures using XD segments instead of TMCs
14. Incident Management ROI measurement tools in RITIS.
15. PM3 target setting support tools
16. Detour analytics for monitoring disruptions and routing in near-real time.
17. PDA Map Widgets in Dashboard
18. VSLs & DMS in Congestion Scans
19. Index "Hours of Delay" and other similar measures to a particular year to support comparisons against prior years (Submitted by Oregon DOT)
20. Enable custom naming of corridors in the real-time speed and travel time dashboard widgets in the PDA Suite.
21. Allow users to view and reload query parameter from prior PDA Queries
22. Visualize queues and related incident impact measures in the Event Query Tool
23. Index "Hours of Delay" and other similar measures to a particular year to support comparisons against prior years (Submitted by Oregon DOT)
24. Allow users to view and reload query parameter from prior PDA Queries



Work Zone Performance Report



WORK ZONE PERFORMANCE REPORT

Create reports detailing the impacts of work zones on speed, congestion, and delay

[Help](#) [History](#)

Key Features Include:

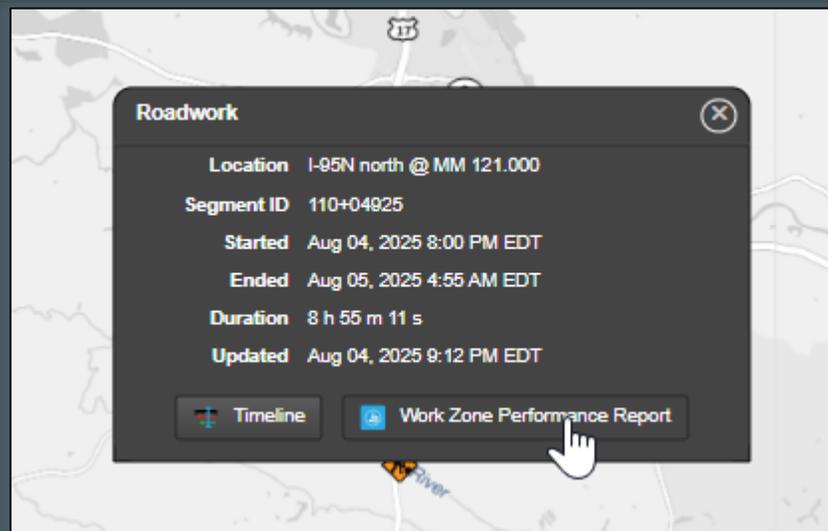
- Launchable from from anywhere in RITIS
- Configurable performance goals for congestion, speed, and delay.
- Work zone analysis for upstream and downstream segments.
- Weather and traffic incident data for assessing influence on work zone performance.
- A dynamic three-to-seven-page PDF ready for export and distribution.

Switch to Demo

Live Demo - details

- Demo URL
- <https://pda.ritis.org/suite/work-zone-performance-report/?uuid=403262a3-0def-4e3f-ace8-0bac5cec0d8f>
- Work Zone information:
- Aug 3-7, 2025
- Interstate 95 Northbound | Exit 118 (Thornburg) to Exit 126 (Spotsylvania)
 - Sunday – Thursday, 9 p.m.-4:30 a.m. Alternating lane closures between mile markers 121-126 for milling and paving mobile operation.
- <https://www.vdot.virginia.gov/news-events/news/fredericksburg-district/fredericksburg-district-weekly-traffic-alert-for-august-3---9-2025.php>

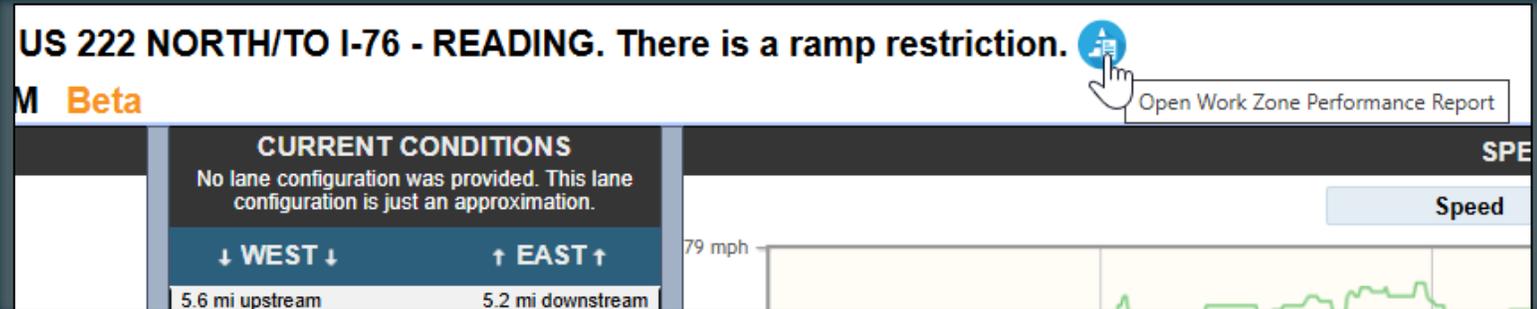
Launchable from anywhere in RITIS



A popup window titled "Roadwork" is overlaid on a map. The popup contains the following information:

- Location: I-95N north @ MM 121.000
- Segment ID: 110+04925
- Started: Aug 04, 2025 8:00 PM EDT
- Ended: Aug 05, 2025 4:55 AM EDT
- Duration: 8 h 55 m 11 s
- Updated: Aug 04, 2025 9:12 PM EDT

At the bottom of the popup, there are two buttons: "Timeline" and "Work Zone Performance Report". A hand cursor is pointing at the "Work Zone Performance Report" button.



US 222 NORTH/TO I-76 - READING. There is a ramp restriction.  [Open Work Zone Performance Report](#)

Beta

CURRENT CONDITIONS
No lane configuration was provided. This lane configuration is just an approximation.

↓ WEST ↓ ↑ EAST ↑

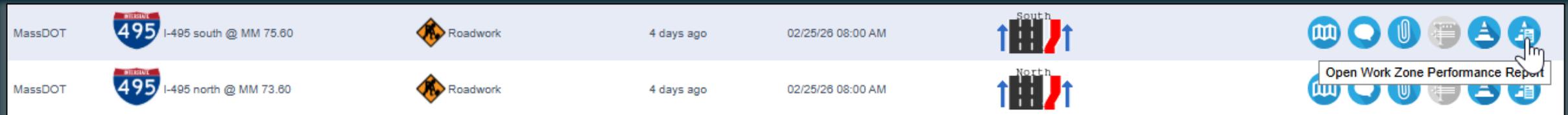
5.6 mi upstream 5.2 mi downstream

79 mph

SPEED

Speed

A speed graph showing a green line fluctuating between 70 and 80 mph.



MassDOT	 I-495 south @ MM 75.60	 Roadwork	4 days ago	02/25/26 08:00 AM		 Open Work Zone Performance Report
MassDOT	 I-495 north @ MM 73.60	 Roadwork	4 days ago	02/25/26 08:00 AM		 Open Work Zone Performance Report

Upstream and Downstream Segments

3. Select work zone location

The work zone location includes the contiguous segments on which the road work is occurring.



Roadwork @ I-95N north
@ MM 121.000

Segment ID:
110+04925

4. Select additional segments around the work zone's location

You may want to expand the area of analysis upstream or downstream of the work zone location to understand its full impact. This report will calculate performance metrics from both the work zone location and these additional segments.

Select from map Road

You can define the additional segments around your work zone by selecting one or more segments from the map.

X Clear All

Click here to start segment selection

Starting segment

Ending segment

Add Route

Your selected roads

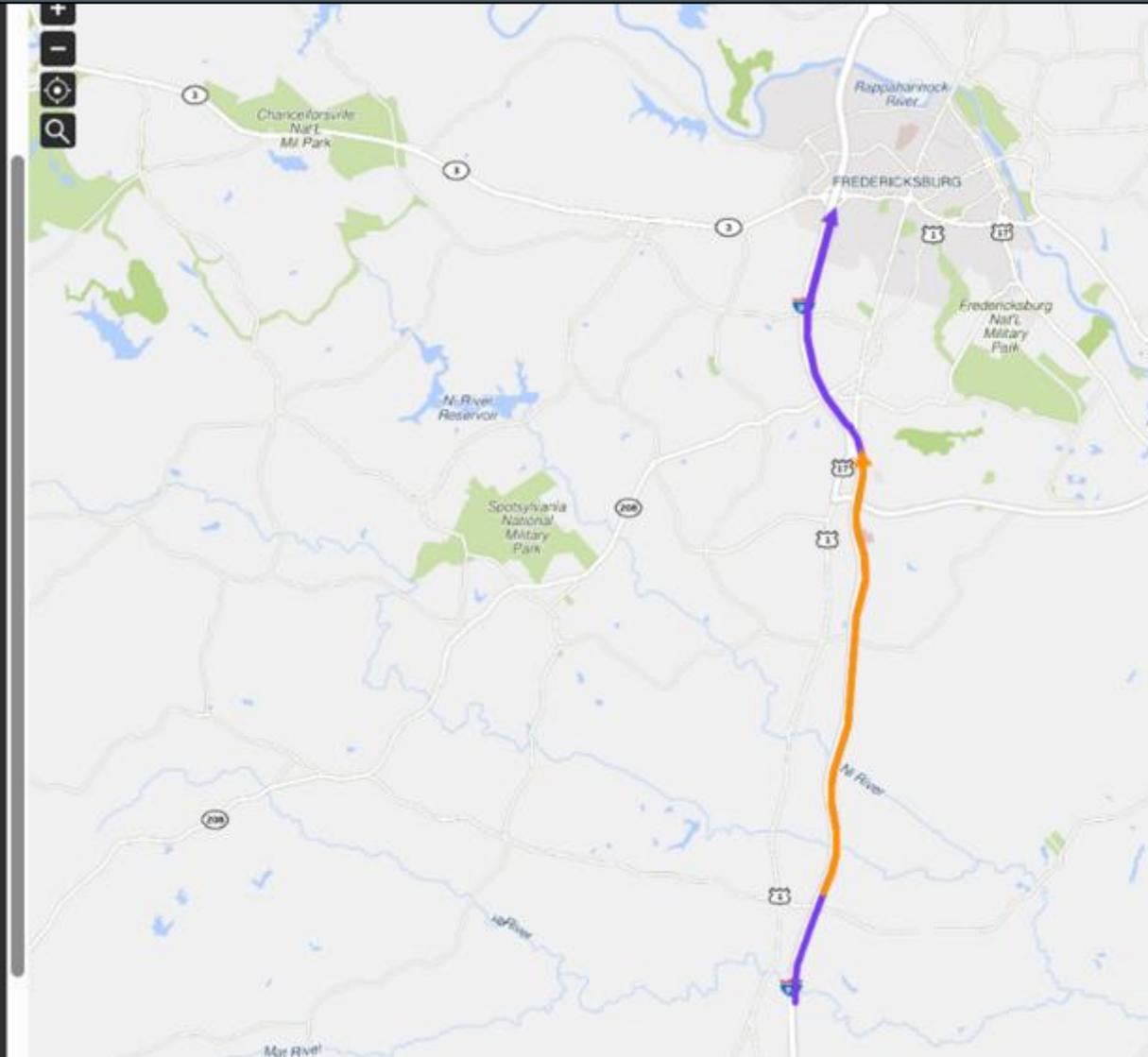
Remove all

I-95 Northbound to US-17 Northbound

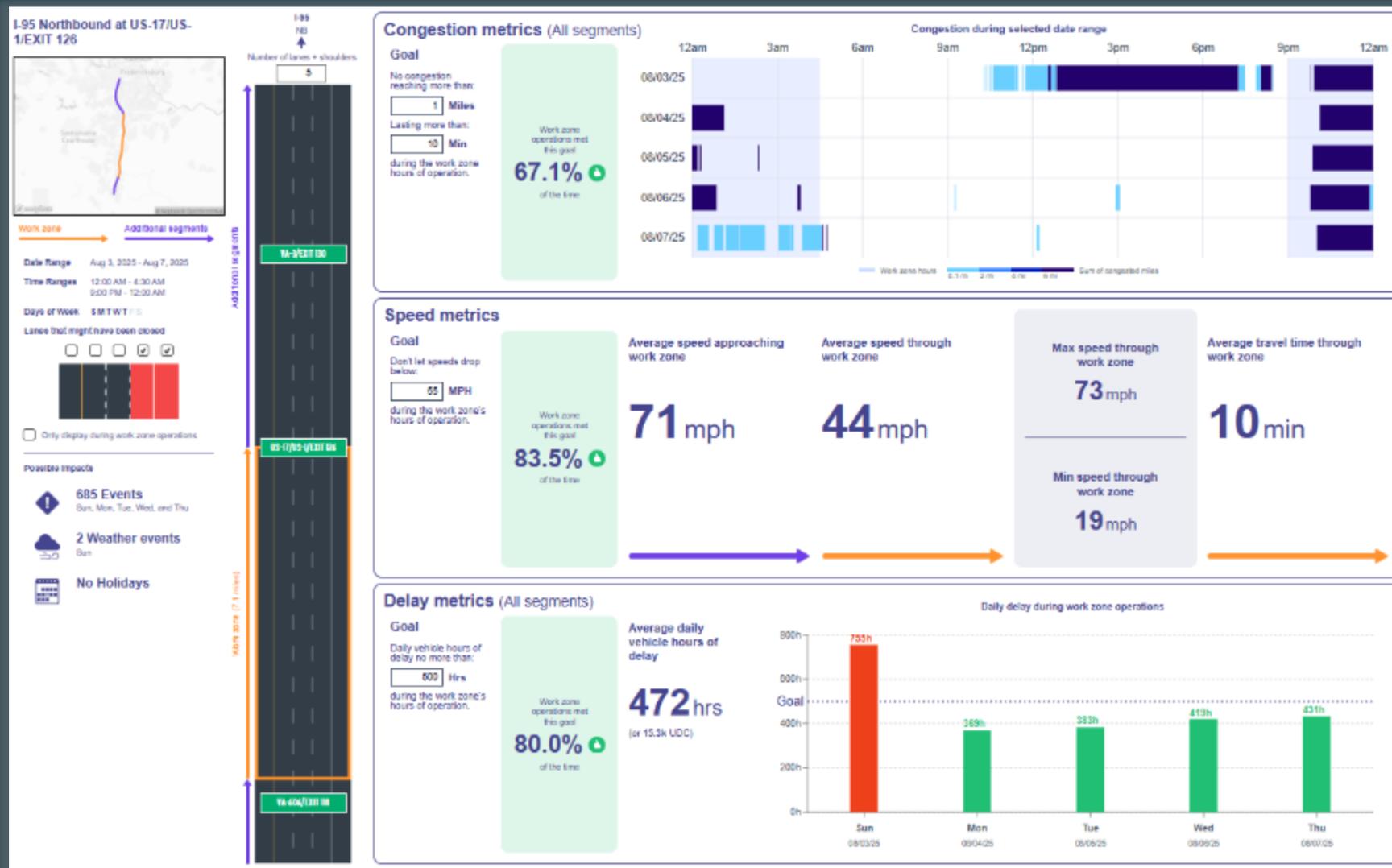
Intersections: 0
17 miles of roadway selected (0 TMC segments)

Segments from INRIX

[Report a problem with this road](#)



Configurable performance goals



Congestion metrics (All segments)



Goal

No more than a collective:

1 miles

of congestion

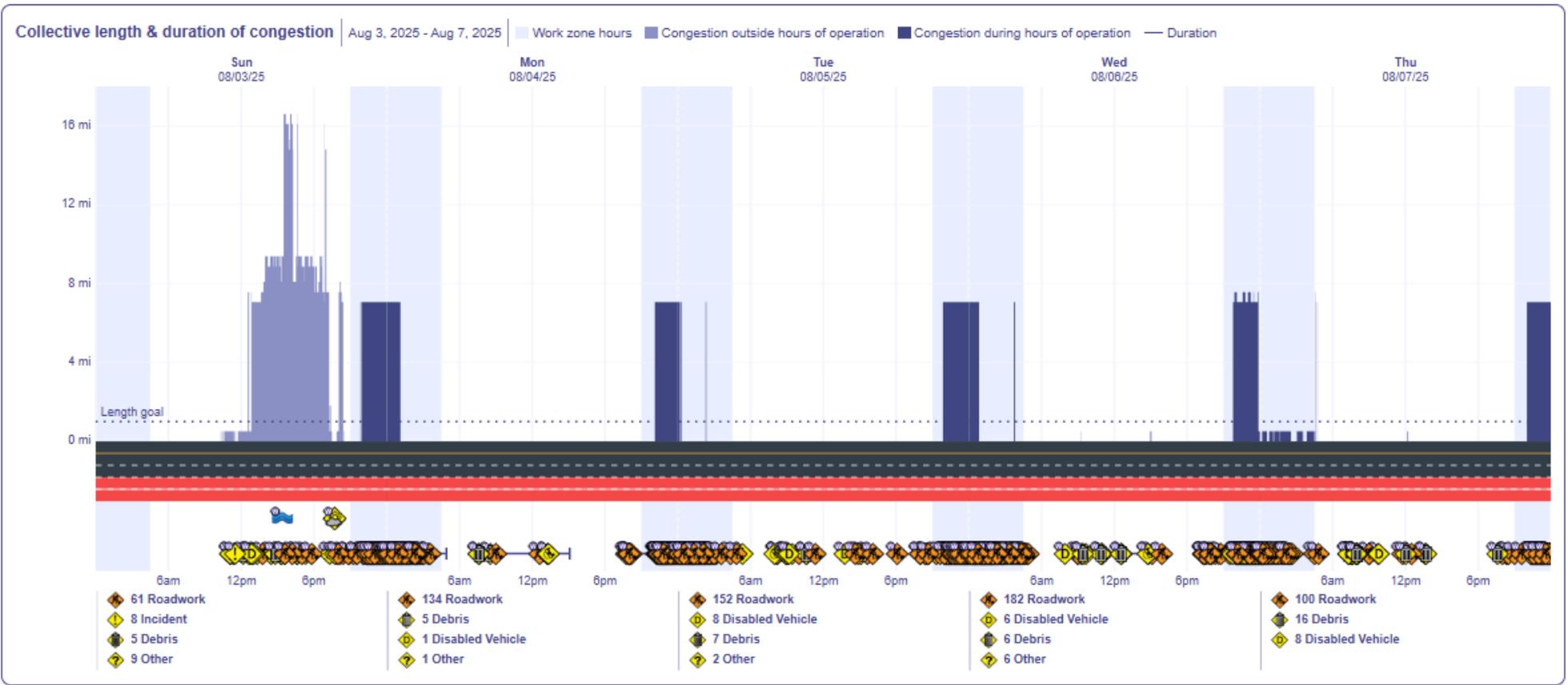
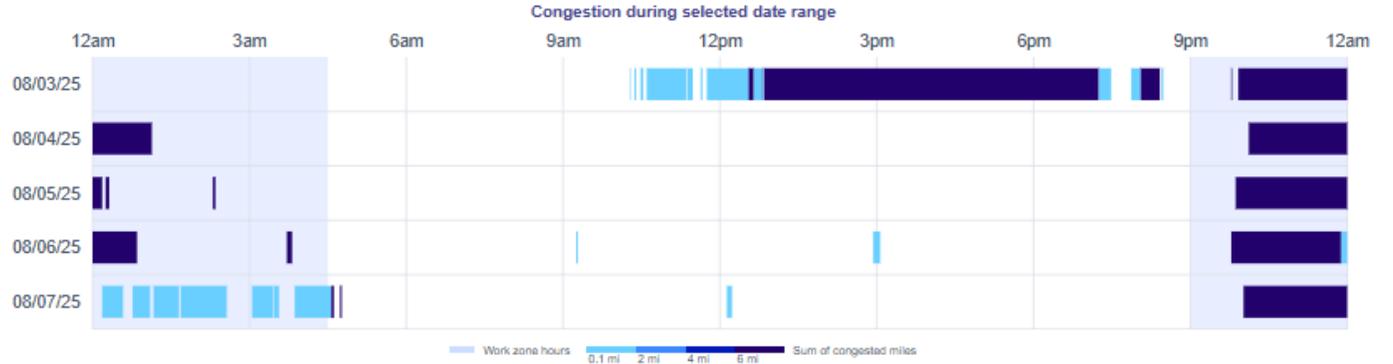
Lasting: > 10 mins

during the work zone hours of operation.

Work zone operations met this goal

67.1%

of the time



Speed metrics

Goal

Don't let speeds drop below:

55 mph

Lasting: 5 mins during the work zone's hours of operation.

Work zone operations met this goal **83.5%** of the time

Average speed approaching work zone

71 mph

Average speed through work zone

44 mph

Max speed through work zone

73 mph

Min speed through work zone

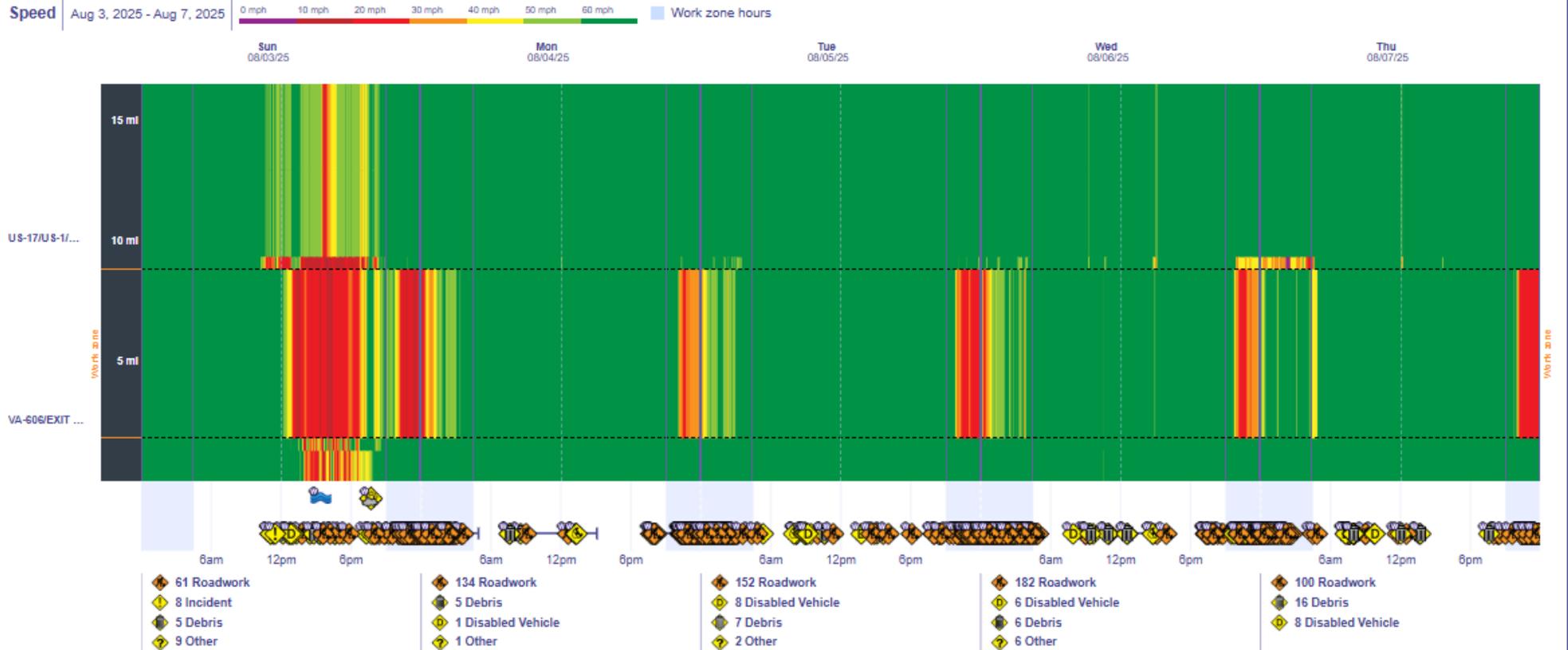
19 mph

Average travel time through work zone

10 min

Additional segments

Work zone (7.1 miles)



Delay metrics (All segments)

I-95 NB

Goal

Daily vehicle hours of delay no more than:

500 hrs

(or \$16.3k UDC)

during the work zone's hours of operation.

Work zone operations met this goal

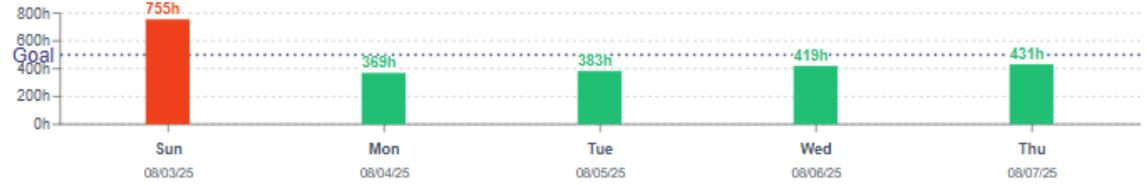
80.0% of the time

Average daily vehicle hours of delay

472 hrs

(or 15.3k UDC)

Daily delay during work zone operations



Additional segments

VA-3/EXIT 130

US-17/US-1/EXIT 126

Work zone (7.1 miles)

VA-506/EXIT 118

Vehicle hours of delay & user delay cost

Lowest hours/cost Highest hours/cost

	Work zone hours																								
	12am	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	
08/03/25 Sun	0 h	0 h	0 h	1 h	1 h	1 h	0 h	0 h	0 h	1 h	9 h	30 h	193 h	884 h	727 h	809 h	896 h	657 h	495 h	80 h	146 h	84 h	360 h	309 h	5.7K h
08/04/25 Mon	104 h	25 h	15 h	9 h	3 h	0 h	0 h	0 h	1 h	1 h	3 h	2 h	2 h	2 h	3 h	1 h	0 h	1 h	0 h	1 h	1 h	3 h	119 h	93 h	389 h
08/05/25 Tue	33 h	14 h	17 h	9 h	2 h	0 h	0 h	1 h	1 h	1 h	1 h	0 h	0 h	0 h	0 h	0 h	2 h	0 h	0 h	1 h	22 h	164 h	124 h	393 h	
08/06/25 Wed	89 h	17 h	11 h	21 h	12 h	0 h	1 h	2 h	4 h	7 h	11 h	2 h	1 h	1 h	12 h	2 h	4 h	2 h	1 h	1 h	1 h	35 h	172 h	90 h	479 h
08/07/25 Thu	15 h	9 h	7 h	9 h	38 h	0 h	0 h	0 h	0 h	0 h	1 h	3 h	0 h	2 h	3 h	3 h	4 h	3 h	0 h	1 h	3 h	14 h	199 h	159 h	473 h
VHD	222 h	65 h	50 h	49 h	55 h	2 h	2 h	4 h	6 h	10 h	25 h	38 h	196 h	889 h	745 h	815 h	905 h	665 h	496 h	83 h	152 h	158 h	1K h	774 h	7,419.4 hours
08/03/25 Sun	\$0	\$6.64	\$8.67	\$44.51	\$52.70	\$44.92	\$7.71	\$17.04	\$2.12	\$54.50	\$404.13	\$1.3K	\$8.4K	\$38.4K	\$31.9K	\$35.3K	\$39K	\$28.6K	\$21.7K	\$3.9K	\$6.4K	\$3.7K	\$16.3K	\$14.3K	\$249.2K
08/04/25 Mon	\$5.1K	\$1.3K	\$818.66	\$471.09	\$135.83	\$0	\$0	\$1.38	\$56.36	\$44.89	\$127.97	\$95.71	\$85.77	\$91.53	\$155.54	\$54.75	\$3.11	\$45.97	\$2.67	\$36.51	\$46.97	\$155.55	\$6.1K	\$4.9K	\$19.8K
08/05/25 Tue	\$1.8K	\$783.75	\$1K	\$559.30	\$137.56	\$7.54	\$0	\$45.74	\$48.93	\$46.34	\$45.38	\$41.29	\$0	\$0	\$0	\$0	\$111.04	\$0.29	\$0	\$56.32	\$1.1K	\$8.6K	\$6.9K	\$21.2K	
08/06/25 Wed	\$3.9K	\$974.56	\$663.86	\$1.3K	\$660.40	\$13.53	\$72.76	\$108.26	\$196.19	\$329.77	\$546.20	\$108.26	\$52.97	\$52.45	\$566.83	\$106.87	\$211.66	\$99.92	\$43.70	\$66.39	\$30.54	\$1.8K	\$9K	\$4.9K	\$25.7K
08/07/25 Thu	\$966.43	\$560.08	\$434.81	\$566.36	\$2.1K	\$25.56	\$0.33	\$0	\$0	\$0	\$61.68	\$135.80	\$13.95	\$71.90	\$136.86	\$136.38	\$195.90	\$117.57	\$0	\$38.91	\$135.07	\$669.65	\$10K	\$8.2K	\$24.5K
UDC	\$11.6K	\$3.6K	\$2.9K	\$2.9K	\$3.1K	\$90.95	\$80.80	\$172.42	\$303.61	\$475.50	\$1.2K	\$1.7K	\$8.5K	\$38.6K	\$32.4K	\$35.6K	\$39.4K	\$29K	\$21.8K	\$3.7K	\$6.7K	\$7.5K	\$50.1K	\$39K	\$340,452.65

Line chart comparison

I-95 Northbound at US-17/US-1/EXIT 126

Collective length & duration of congestion

- Aug 3, 2025 - Aug 7, 2025
- Aug 4, 2024 - Aug 8, 2024

Speed through work zone

- Aug 3, 2025 - Aug 7, 2025
- Aug 4, 2024 - Aug 8, 2024

Avg travel time delay

- Aug 3, 2025 - Aug 7, 2025
- Aug 4, 2024 - Aug 8, 2024

Air temperature

- Aug 3, 2025 - Aug 7, 2025
- Aug 4, 2024 - Aug 8, 2024

Precipitation rate

- Aug 3, 2025 - Aug 7, 2025
- Aug 4, 2024 - Aug 8, 2024

Possible Impacts

(Aug 3, 2025 - Aug 7, 2025)

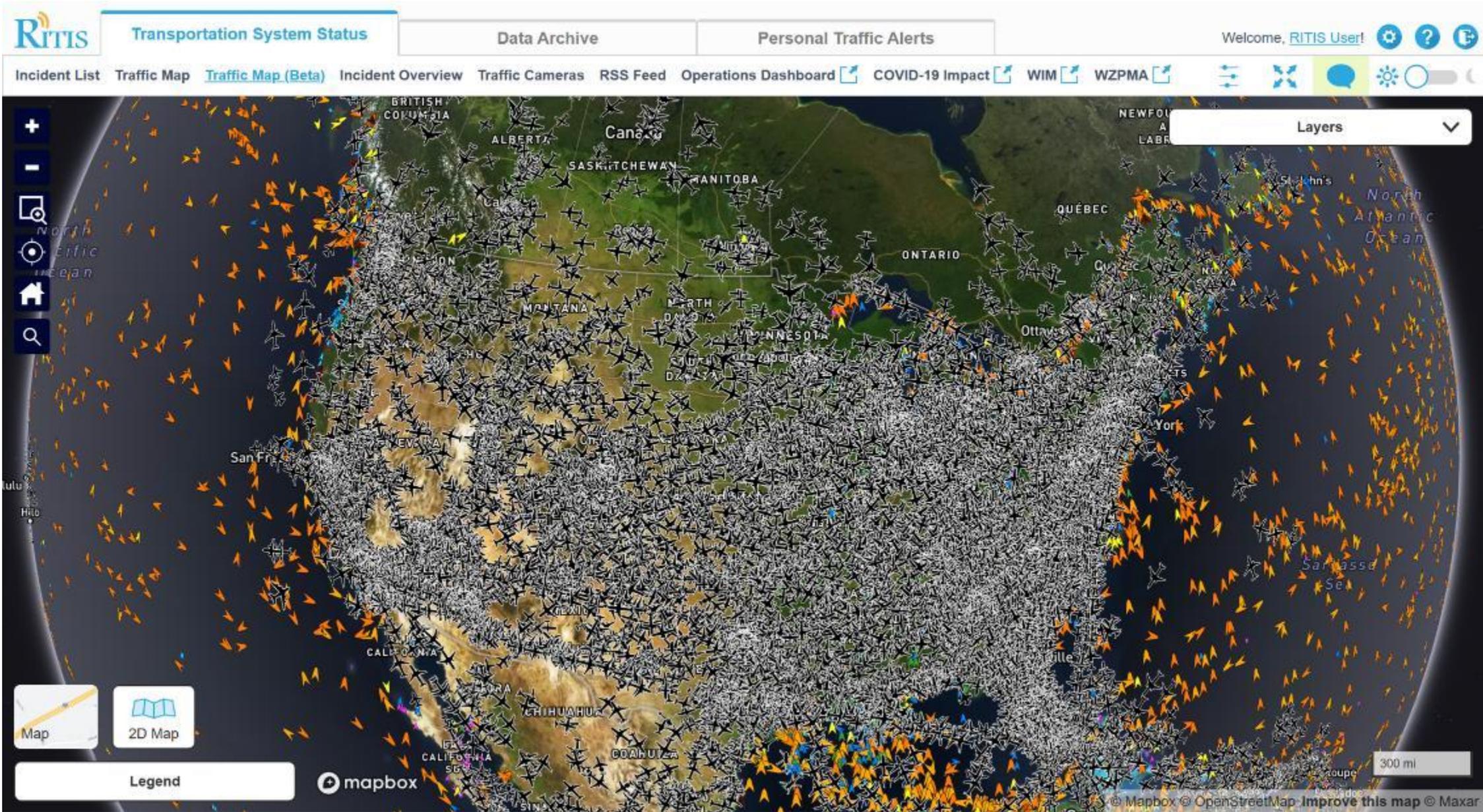
- Duration
- 629 Roadwork
- 39 Debris
- 26 Disabled Vehicle
- 23 Other



Want to Know More:

<https://help.ritis.org/hc/en-us/articles/43199213618587-Work-Zone-Performance-Report-Overview>

New Real-time Map (Beta) with improved performance



Probe Speed Pop-up Interactions



Weigh-in-Motion / Virtual Weigh Station Mapping & Analytics

The screenshot displays a web-based mapping and analytics interface. The background is a map showing the border between Ohio and Maryland. A data popup window is overlaid on the map, providing details for a specific Weigh-in-Motion (WIM) station.

MDOT WIM station (Close button)

895 BHT/I-895 SB OHDS

Direction: **Southbound** State: **Maryland**
Status: **Operational** Overheight Only

In the last 24 hours ⓘ

No. of vehicles:	No. of violations:	Violation rate:
58	58	1.00

[Go to Live Station](#) [Go to Analytics](#)

[< Prev \(1/10\)](#) [List](#) [Next \(3/10\) >](#)

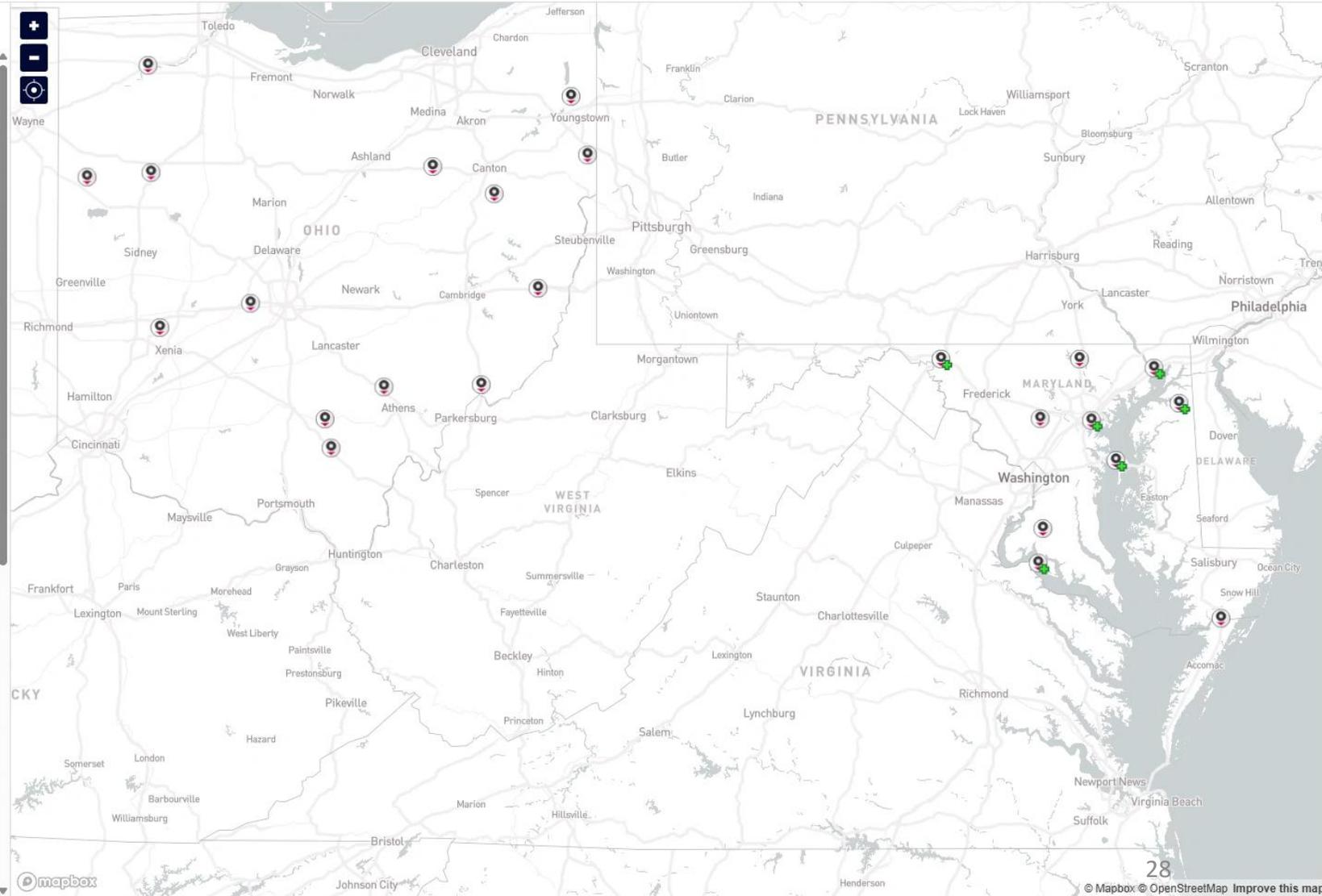
The interface includes a top navigation bar with tabs for 'Transportation System Status', 'Data Archive', 'Personal Traffic Alerts', and 'Administrative Tools'. A sidebar on the right contains a 'Layers' panel with various map overlays like 'Indiana and Dverts', 'Flight', 'Satellite', 'Traffic Camera', and 'Weather Alerts'. The map shows state boundaries and major cities like Columbus, Ohio, and Washington, Maryland.

Live WIM / VWS interface

Weigh station sites

All

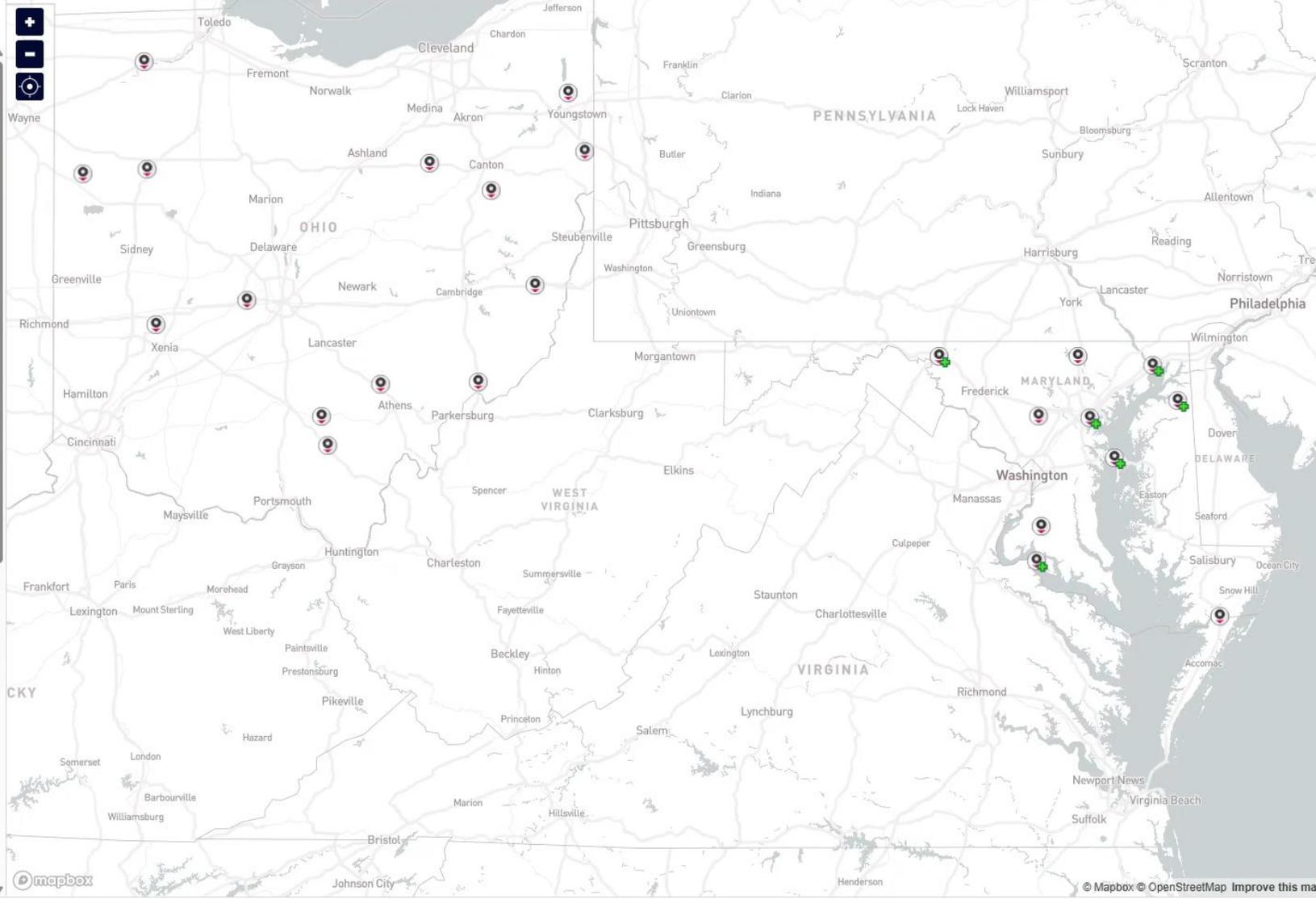
Status	Location	Direction	State		
○	MD-32 E @ Triadelphia Rd How. Co.	E	MD	Live station	Analytics
●	MD-213 S @ Sassafras River Kent Co.	S	MD	Live station	Analytics
●	MD-213 N @ Sassafras River Kent Co.	N	MD	Live station	Analytics
○	US-301 N @ Milepost 19 Charles Co.	N	MD	Live station	Analytics
●	US-50 E @ Whitehall Road AA Co.	E	MD	Live station	Analytics
○	US-50 W @ MD-8 Queen Annes Co.	W	MD	Live station	Analytics
●	US-40 E @ Lewis Ln Harford Co.	E	MD	Live station	Analytics
●	US-40 W @ Coudon Blvd Cecil Co.	W	MD	Live station	Analytics
●	I-83 N @ Middletown Road Balto. Co.	N	MD	Live station	Analytics
●	I-95 N @ Caton Ave Balto. City	N	MD	Live station	Analytics
●	I-95 S @ FMT Milepost 60.4 Balto. City	S	MD	Live station	Analytics
●	I-95 N @ Milepost 91.9 Cecil Co.	N	MD	Live station	Analytics
●	I-95 S @ Milepost 94.2 Cecil Co.	S	MD	Live station	Analytics
○	I-695 N @ Dock Road Balto. City	N	MD	Live station	Analytics
●	I-695 S @ Bear Creek Balto. Co.	S	MD	Live station	Analytics
●	I-895 N @ Milepost 6.3 Harbor Tunnel	N	MD	Live station	Analytics
●	I-895 S @ Fait Ave Harbor Tunnel	S	MD	Live station	Analytics
●	I-81 N @ Milepost 1.8 Wash Co	N	MD	Live station	Analytics
●	I-81 S @ Milepost 7.6 Wash Co.	S	MD	Live station	Analytics
●	MD-695 S Broening Hwy @ Balto Co.	S	MD	Live station	Analytics
●	US-13 N @ Tulls Corner Worcester Co.	N	MD	Live station	Analytics
●	US-301 N @ Harry Nice Bridge North Ki...	N	MD	Live station	Analytics
●	US-301 S @ Harry Nice Bridge South Ch...	S	MD	Live station	Analytics
○	US-50 (VINTON)	E/W	OH	Live station	Analytics
○	US-35 (JACKSON)	E/W	OH	Live station	Analytics



Archived WIM / VWS interface

Weigh station sites All

Status	Location	Direction	State		
○	MD-32 E @ Triadelphia Rd How. Co.	E	MD	Live station	Analytics
●	MD-213 S @ Sassafras River Kent Co.	S	MD	Live station	Analytics
●	MD-213 N @ Sassafras River Kent Co.	N	MD	Live station	Analytics
○	US-301 N @ Milepost 19 Charles Co.	N	MD	Live station	Analytics
●	US-50 E @ Whitehall Road AA Co.	E	MD	Live station	Analytics
○	US-50 W @ MD-8 Queen Annes Co.	W	MD	Live station	Analytics
●	US-40 E @ Lewis Ln Harford Co.	E	MD	Live station	Analytics
●	US-40 W @ Coudon Blvd Cecil Co.	W	MD	Live station	Analytics
●	I-83 N @ Middletown Road Balto. Co.	N	MD	Live station	Analytics
●	I-95 N @ Caton Ave Balto. City	N	MD	Live station	Analytics
●	I-95 S @ FMT Milepost 60.4 Balto. City	S	MD	Live station	Analytics
●	I-95 N @ Milepost 91.9 Cecil Co.	N	MD	Live station	Analytics
●	I-95 S @ Milepost 94.2 Cecil Co.	S	MD	Live station	Analytics
○	I-695 N @ Dock Road Balto. City	N	MD	Live station	Analytics
●	I-695 S @ Bear Creek Balto. Co.	S	MD	Live station	Analytics
●	I-895 N @ Milepost 6.3 Harbor Tunnel	N	MD	Live station	Analytics
●	I-895 S @ Fait Ave Harbor Tunnel	S	MD	Live station	Analytics
●	I-81 N @ Milepost 1.8 Wash Co	N	MD	Live station	Analytics
●	I-81 S @ Milepost 7.6 Wash Co.	S	MD	Live station	Analytics
●	MD-695 S Broening Hwy @ Balto Co.	S	MD	Live station	Analytics
●	US-13 N @ Tulls Corner Worcester Co.	N	MD	Live station	Analytics
●	US-301 N @ Harry Nice Bridge North Ch...	N	MD	Live station	Analytics
●	US-301 S @ Harry Nice Bridge South Ch...	S	MD	Live station	Analytics
○	US-50 (VINTON)	E/W	OH	Live station	Analytics
○	US-35 (JACKSON)	E/W	OH	Live station	Analytics



Media Attachments Interactions

Construction Work reported by INRIX
Barbour County, West Virginia

250 US-250-TRUCK both ways

Event: Construction Work
0 Responders on Scene
Started: Sep 17, 2025 3:18 AM
Last Update: Jan 29, 2026 4:00 PM

Event Details
Bridge closed due to bridge maintenance work on US-250-TRUCK Blue & Gray Expy both ways from Wabash Ave to US-119 Mansfield Dr.

Attachments:
3 images, 1 link

<https://ritis.org>

01/29/2026 4:10 PM 0 mins ago

Dangerous Slowdowns Added

The Event Query Tool allows you to query for events during a specific time range, for specific agencies, and within specific geographies. If you only want to look at specific event types, the option to query for any subset of event types is also available. After running your query you will get a number of different visualizations to explore the applicable events.

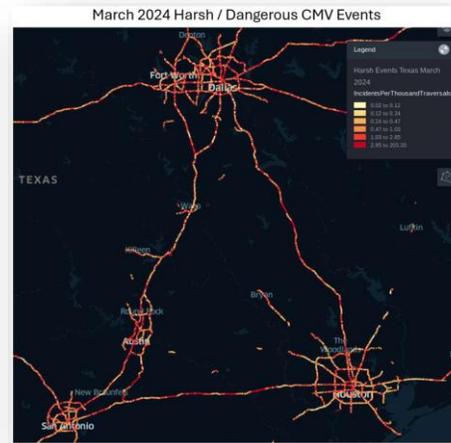
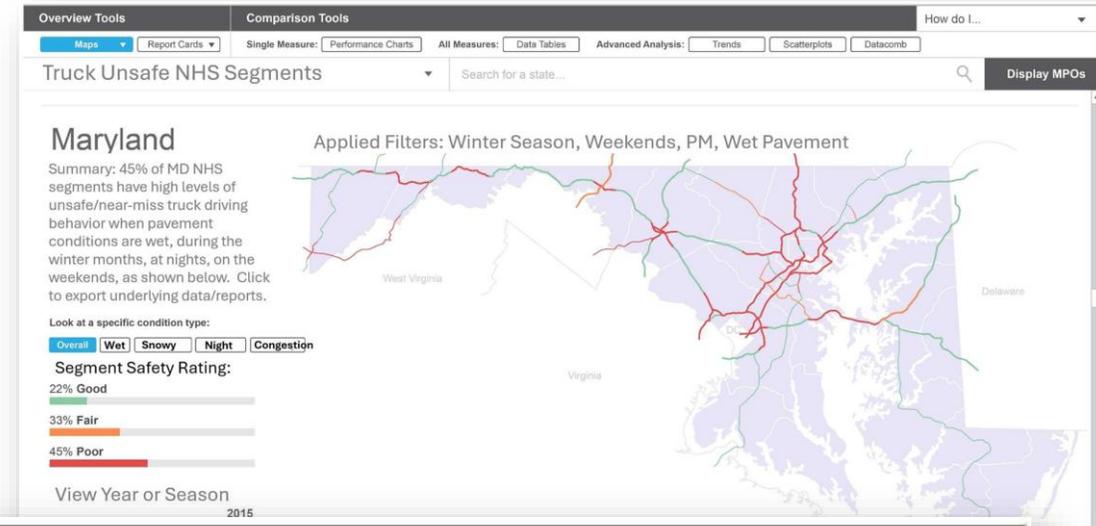
DATA SOURCES

Traffic Event Data Police Crash Data

- ▶ Arizona
- ▶ California
- ▶ Connecticut
- ▶ Delaware
- ▶ District of Columbia
- ▶ Florida
- ▶ Georgia
- ▶ Illinois
- ▶ Iowa
- ▶ Louisiana
- ▶ Maine
- ▼ Maryland
 - All Maryland Data Sources
 - Howard County CAD
 - INRIX Dangerous Slowdowns
 - MDOT CHART (Maryland DOT)
 - Prince George's County, Maryland (CAD Center)
 - Prince George's County, Maryland (TRIP Center)
 - Waze
 - WMATA (Washington Metropolitan Area Transit Authority)
- ▶ Massachusetts
- ▶ Michigan
- ▶ Minnesota
- ▶ Mississippi
- ▶ Missouri
- ▶ New Hampshire
- ▶ New Jersey
- ▶ New York
- ▶ North Carolina
- ▶ Ohio
- ▶ Oregon

FMCSA: High Priority for CMVs grant program

- “National COMPASS”
 - National Comprehensive Analytics Safety Suite
- National-level Commercial Vehicle Safety Suite focusing on
 - Truck Parking Analytics (blending of data from multiple vendors)
 - Truck Safety Events Analytics
 - Special studies related to safety in
 - Work Zones
 - Rural Areas

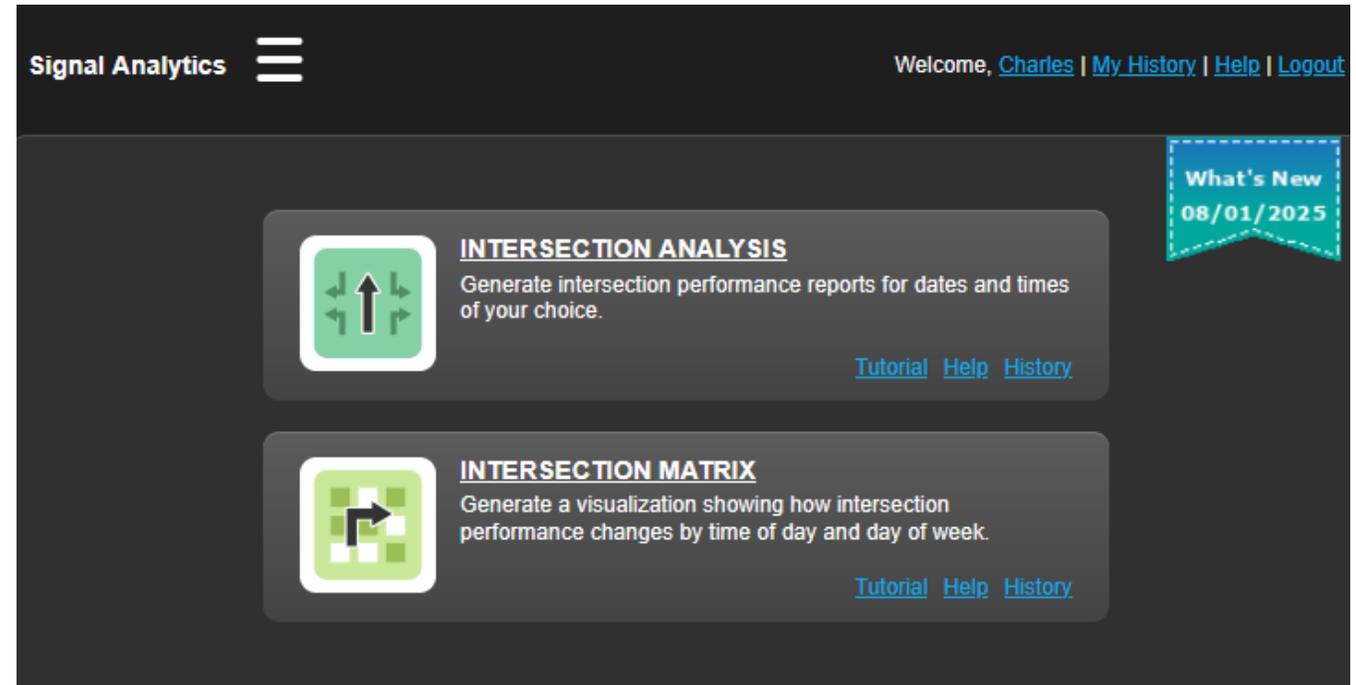


Signals

New Features, Significant Updates, &
a New Offering

Signal Analytics: new and coming soon

- **Recent enhancements**
 - Intersection Analysis presets
 - Performance enhancements
- **Coming soon**
 - Trend Charts
 - ATSPM Version 5.0



Recent enhancements Intersection Analysis: preset instructions

Check for low progression with the Most Stops on Busy Through Movements report

Purpose: If you're trying to achieve good progression, it's good to monitor the arrival or green performance of your busier movements. This report focuses on the busier movements and lets you see how they perform.

Building your query

Date range to analyze:

- Select at least the most recent two weeks of data
- Your results will give you most data to work with

Organizing your report

Columns to include:

- Block
- Intersection
- Approach
- Movement
- Vehicle Count - Total
- POD
- Approach Speed Avg

Tip: After you have set the report, such as "Most Stops", apply filters present from the report.

Exporting your results

You can use the "Save as CSV" action to export your on-screen data table to a CSV file for offline analysis.

What to look for

- Sort the table by POG, to see the lowest POG movements with POG below 100.
- How does the volume at the intersection look like an opportunity to improve?

Check for excessively high speeds with the Highest Speeds on Approach report

Purpose: Speeding, especially accelerating through yellow intervals, can be a safety concern. In areas with high approach speeds, it's important to confirm that you have a traffic or control signal decrease speed, and that can also be useful for crash patterns.

Building your query

Date range to analyze:

- Select at least the most recent two weeks of data
- Your results will give you most data to work with

Organizing your report

Columns to include:

- Block
- Intersection
- Approach
- Movement
- Vehicle Count - Total
- POD
- Approach Speed Avg

Tip: After you have set the report, such as "Highest Speeds", apply filters present from the report.

Exporting your results

You can use the "Save as CSV" action to export your on-screen data table to a CSV file for offline analysis.

What to look for

- Sort the table by Approach Speed: Avg (descending)
- Look for average approach speeds that exceed 15 mph
- Look at Approach Speed: Avg (descending)
- Inspect engineering at the yellow-red clear

Check for possible stuck detection or other overnight issues with the Longest Delays Late Night report

Purpose: During the middle of the night, we expect traffic flow to be light on the major approaches. Because of this, if the signal is running free and if detection is working properly, we expect all movements to be served frequently. If we see long delays, that could be a sign of stuck detection or could also be an opportunity to review the late night timing approach.

Building your query

Date range to analyze:

- Select at least the most recent two weeks of data
- Your results will give you the most data to work with

Days of Week: Weekdays Only

Time of day: 12:00 AM to 5:00 AM

Organizing your report data

Columns to include:

- Block
- Intersection
- Approach
- Movement
- Vehicle Count - Total
- Control Delay - Avg
- Control Delay 25%
- Control Delay 95%

Filters to include:

- Vehicle Count - Total > Greater than 5
- Movement - Contains left
- Movement - Contains through

Tip: After you have set the columns and filters to your liking, you can save these settings as a preset, such as "Longest Delays Late Night". Next time you run your report, you can apply this preset from the drop-down.

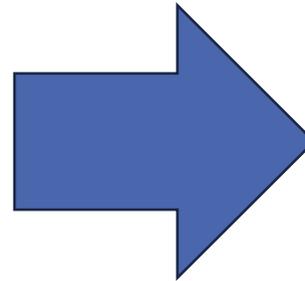
Exporting your results

You can use the "Save as ZIP (displayed data columns)" action to export your on-screen data table to a ZIP file for offline analysis.

What to look for

- Sort the table by Control Delay: Avg (descending)
- Look for control delay metrics above 45-60 seconds
- If you are engineering judgment, are there values unexpectedly high? If so, you may want to check the detection on these movements

Control Delay: Avg	Control Delay: 25%	Control Delay: 95%
107	58	188
152	52	204
91	51	204



Templates

This template gallery provides performance reporting examples you can download and use - with output from RITIS tools and your own content - to create professional, easy-to-understand reports. To get started, click on any of the report icons below to learn more about each type of report, how they were created and access a fully editable PowerPoint™ template file.

CORRIDOR PERFORMANCE REPORT

Create a report that describes the performance of a corridor over a selected time periods (quarterly, yearly) and compares that performance with previous periods.

MONTHLY CONGESTION REPORT

Create a monthly report that describes the performance of a roadway over the previous 12 months.

PROJECT ASSESSMENT REPORT

Create a report that describes the performance of a roadway or corridor before and after an operational or capital improvement project.

TOP 10 BOTTLENECKS REPORT

Create a report that summarizes the top 10 bottlenecks in your area.

AFTER ACTION REVIEW

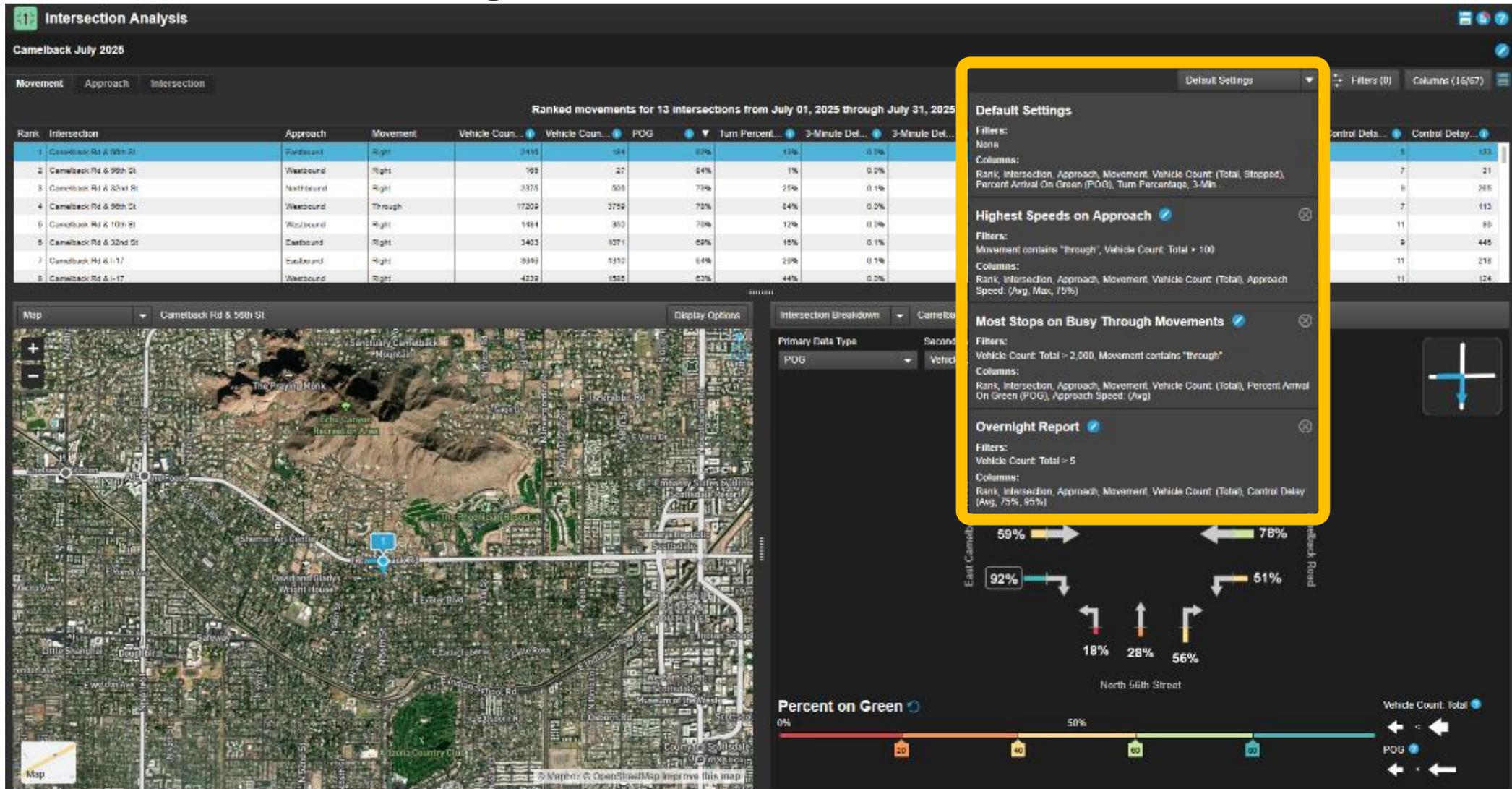
Create an after action review of a major incident.

HOLIDAY TRAVEL FORECAST

Create an infographic that predicts holiday travel conditions.

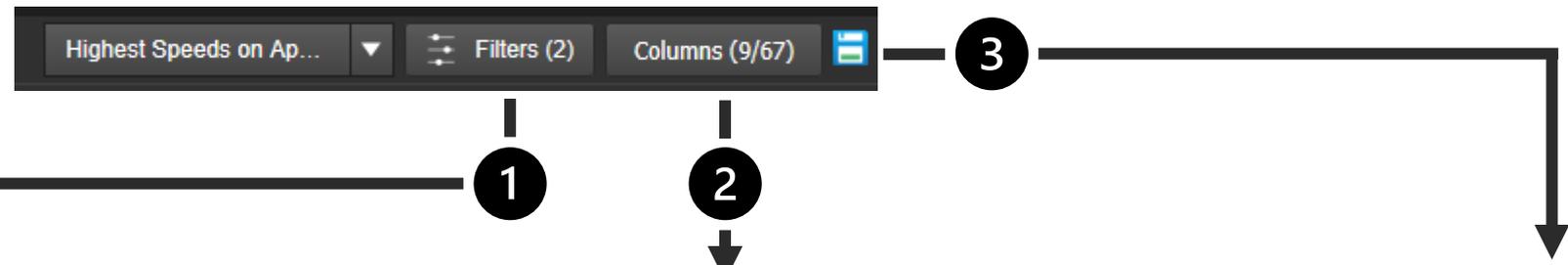
learn.ritis.org/reports

Intersection Analysis: Custom Presets

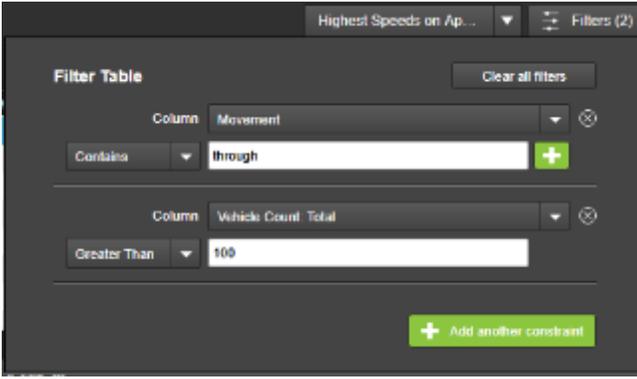


Intersection Analysis: Custom Presets

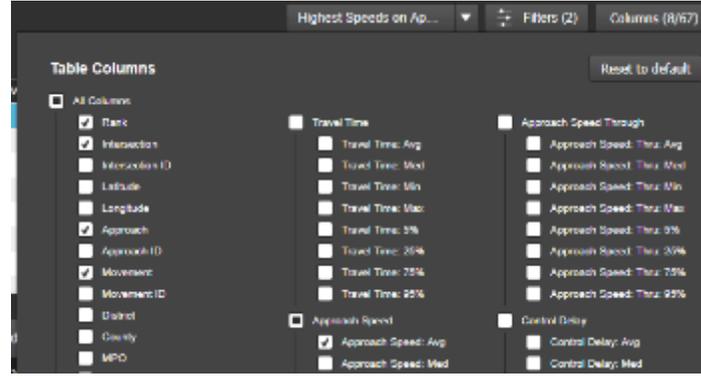
Note: all presets are user-created—here's how to build your own.



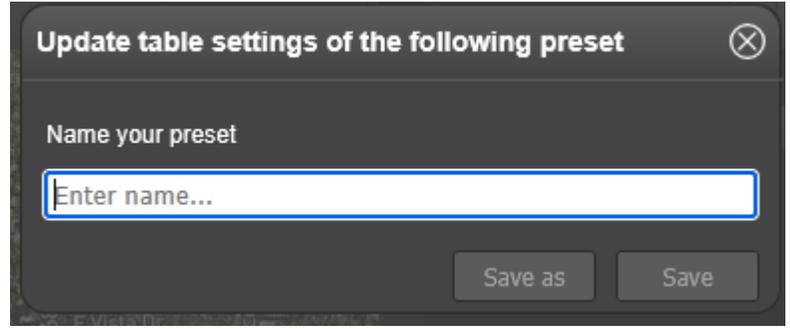
Step 1: Apply filters (optional)



Step 2: Choose columns



Step 3: Save preset

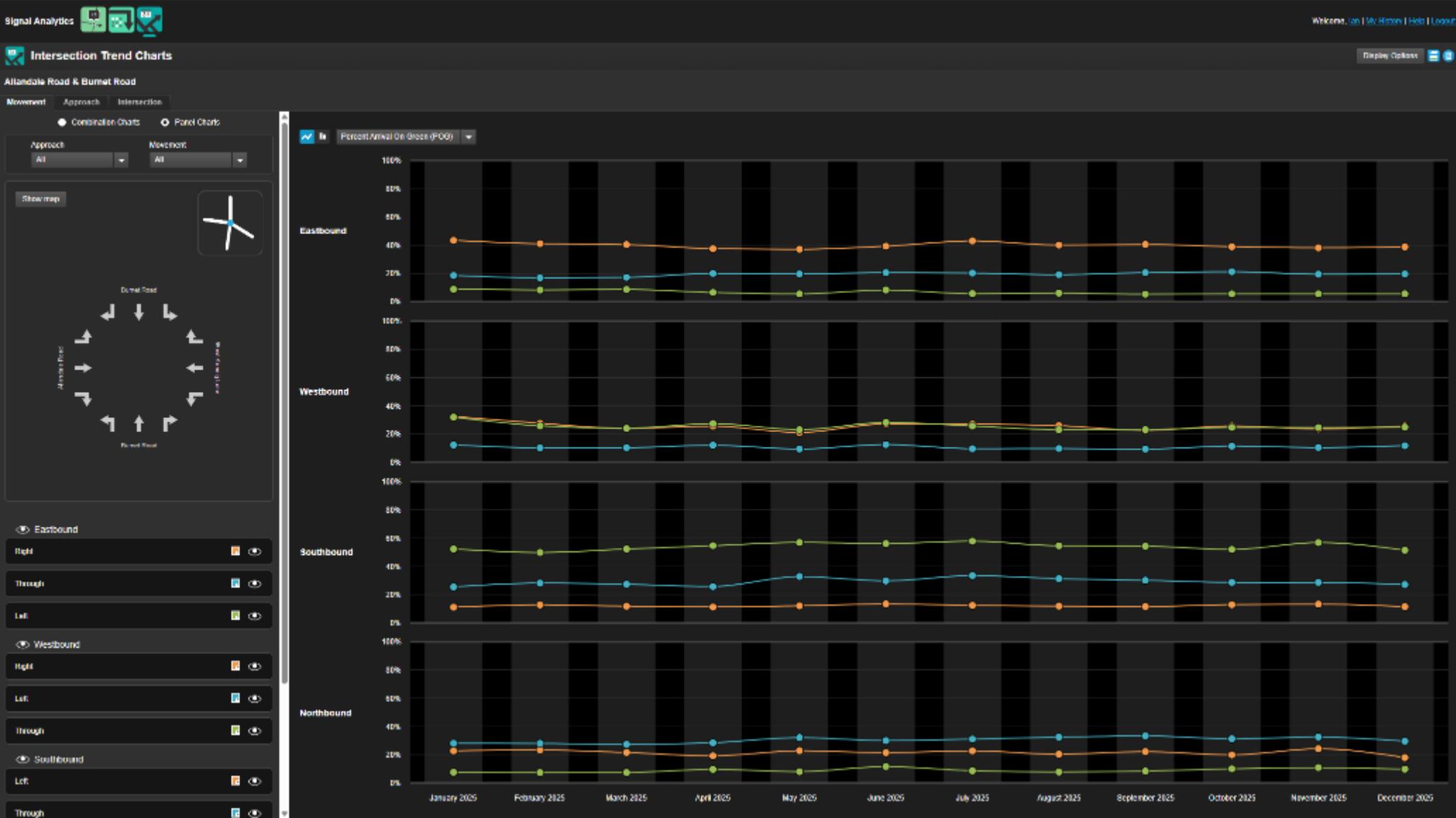


Recent enhancements

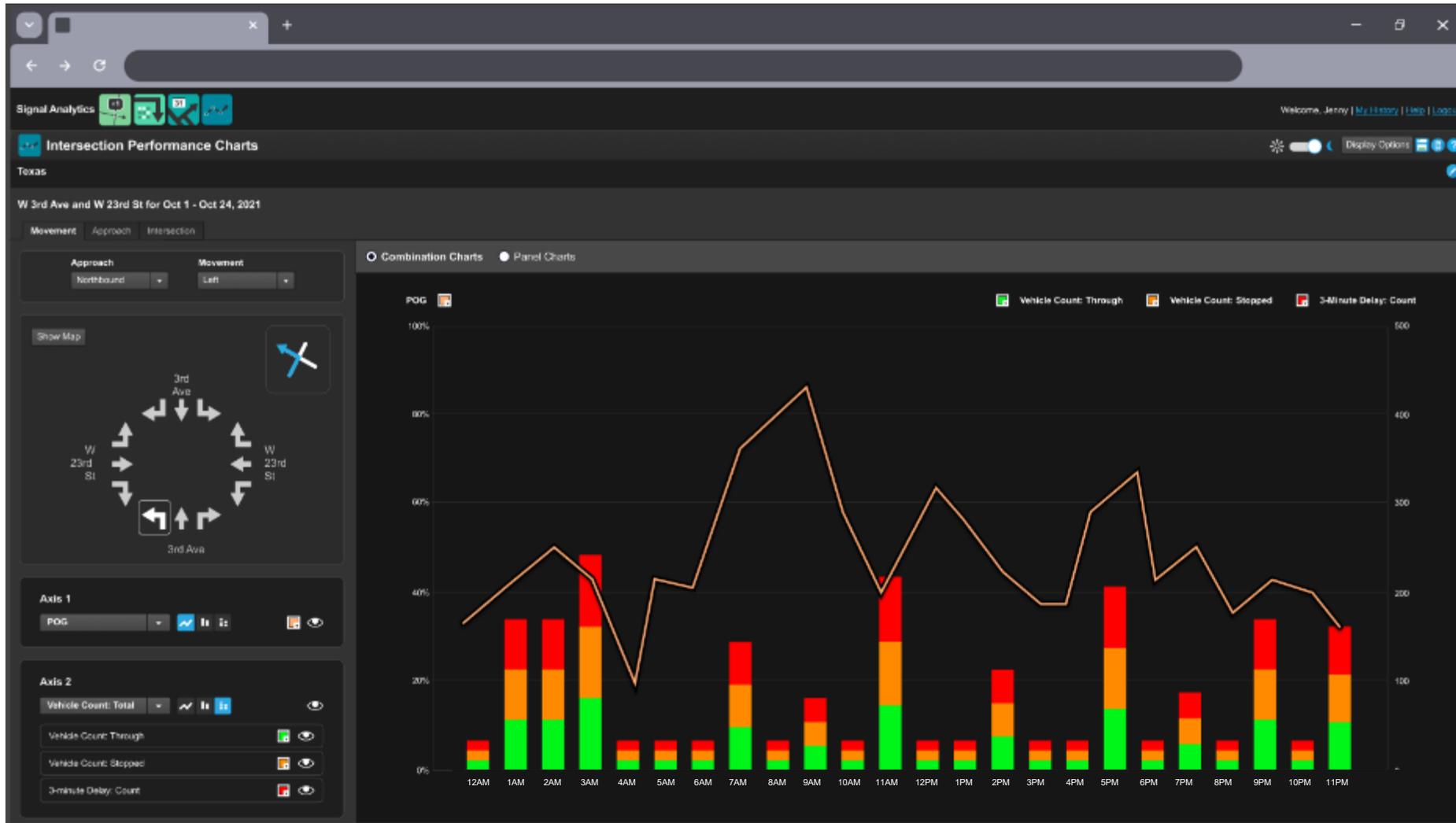
Performance improvements



On the way: Trend Charts



On the way: Intersection Performance Charts



New offering: ATSPM Version 5.0

Cloud-hosted ATSPM

- UDOT 5.0 software
- Data storage

Pulls high-resolution log files
from central, agency-specified
location

For Full RITIS customers

The screenshot displays the ATSPM web application interface. At the top, there is a navigation bar with tabs for "Transportation System Status", "Data Archive", "Personal Traffic Alerts", and "Administrative Tools". Below this, a secondary navigation bar lists various tools like "Event Query Tool", "Detector Tools", "Congestion Causes", etc. The main header shows the "ATSPM" logo and user information "Welcome, Charles Lattimer".

The main content area is titled "Performance Measures" and has two sub-tabs: "CHARTS" and "CONFIGURATION". The "CHARTS" tab is active, showing a map of a location. The location is set to "1485 - SR 436 @ Montgomery Rd". The map shows a street grid with a red pin at the specified location. A pop-up window over the pin reads "Location #1485 SR 436 & Montgomery Rd".

To the right of the map, there are two date pickers. The "Start" date is "Feb 17, 2026 @ 00:00" and the "End" date is "Feb 18, 2026 @ 00:00". Below these is a calendar for February 2026, with the 17th and 24th highlighted. There are also "SAME DAY" and "RESET" buttons.

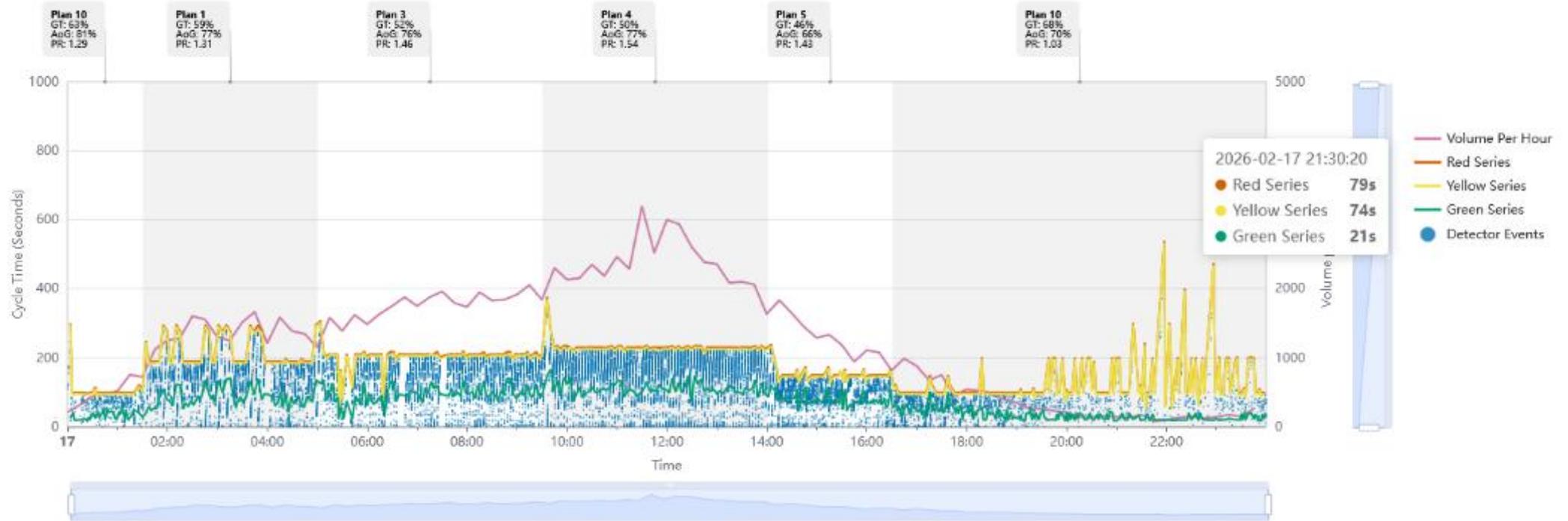
On the far right, there are configuration options. The "Measure" is set to "Purdue Coordination Diagram". Under "Options", the "Bin Size" is set to "15 min" and the "Y-Axis Max" is set to "150". An "APPLY" button is at the bottom right of this section.

New offering: ATSPM Version 5.0

Purdue Coordination Diagram #1485 - SR 436 & Montgomery Rd - WBT Ph2

Tue, February 17, 2026 at 00:00:00 - Wed, February 18, 2026 at 00:00:00

Arrivals on Green: 75%

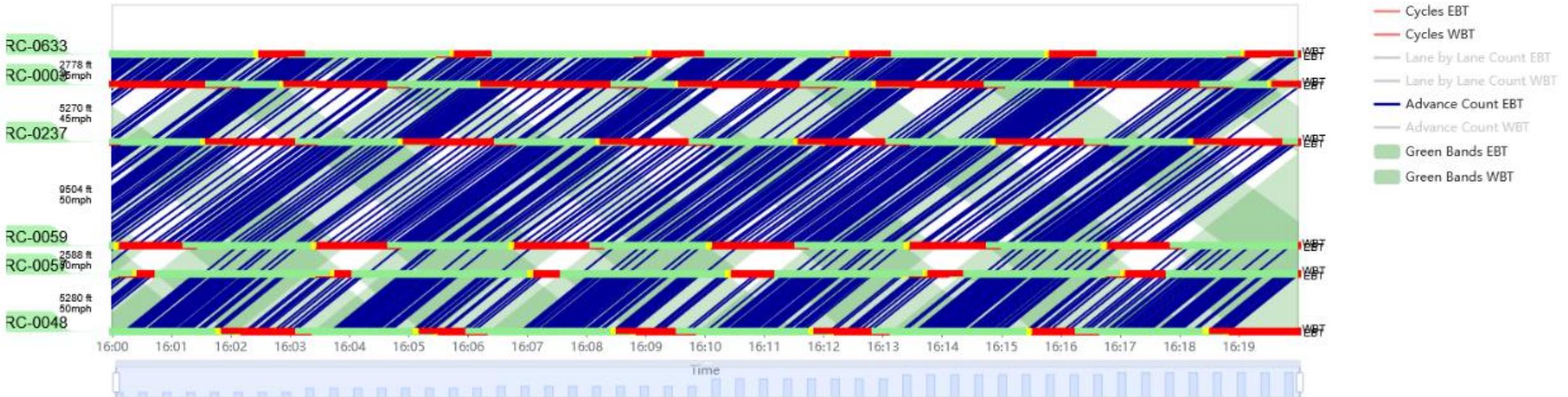


New offering: ATSPM Version 5.0

Time Space Diagram (Historic), Primary Phase - EBT Ph6 Opposing Phase - WBT Ph2

Mon, February 23, 2026 at 16:00:00 - Mon, February 23, 2026 at 16:20:00

Route data from #ORC-0048 - SR 50 & N CHICKASAW TRL to #ORC-0633 - SR 50 & Cricket Club



New offering: ATSPM Version 5.0

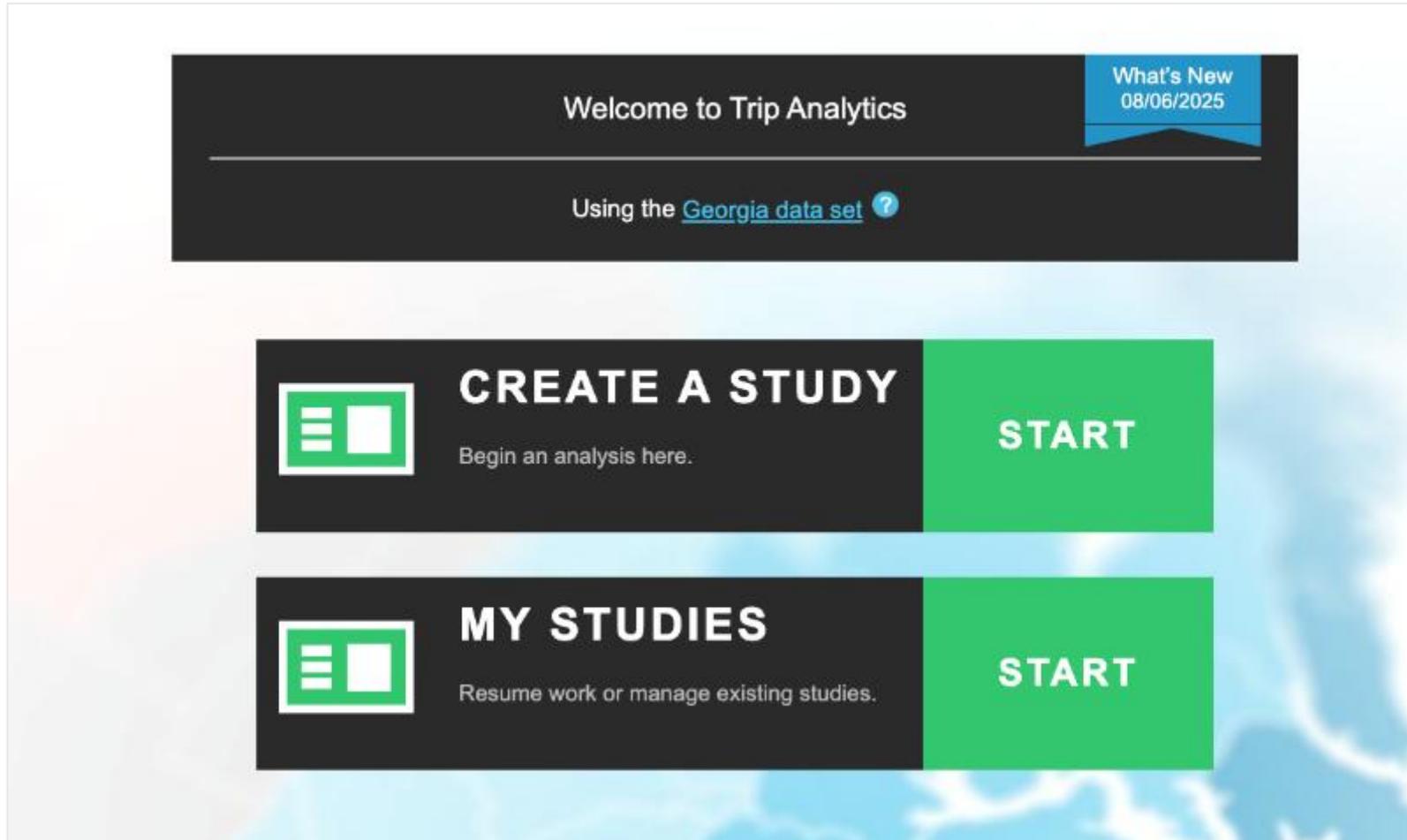
Approach Link Comparison

PCD Options	Link	Approaches		Upstream AOG			Downstream AOG			Total Link AOG			Delta
		Upstream	Downstream	Existing	Predicted	Change	Existing	Predicted	Change	Existing	Predicted	Change	
▼	1	5519 - ORC-0048 - SR 50 N CHICKASAW TRL	5578 - ORC-0057 - SR 50 CONSTANTINE ST	1181 (75%)	1181 (75%)		1194 (80%)	1194 (80%)		2375 (77%)	2375 (77%)		0
▼	2	5578 - ORC-0057 - SR 50 CONSTANTINE ST	5582 - ORC-0059 - SR 50 ECONLOCKHATCHEE TRL N	1323 (81%)	1383 (85%)		40 (98%)	41 (100%)		1363 (82%)	1424 (85%)		16
▼	3	5582 - ORC-0059 - SR 50 ECONLOCKHATCHEE TRL N	5833 - ORC-0237 - SR 50 ROUSE RD	156 (82%)	183 (96%)		929 (59%)	912 (57%)		1085 (61%)	1095 (62%)		15
▼	4	5833 - ORC-0237 - SR 50 ROUSE RD	5801 - ORC-0003 - SR 50 SR 434	1180 (70%)	1199 (71%)		584 (56%)	577 (56%)		1764 (65%)	1776 (66%)		2
▼	5	5801 - ORC-0003 - SR 50 SR 434	5302 - ORC-0633 - SR 50 Cricket Club	635 (50%)	749 (59%)		1584 (86%)	1534 (83%)		2219 (71%)	2283 (73%)		12

Trip Analytics

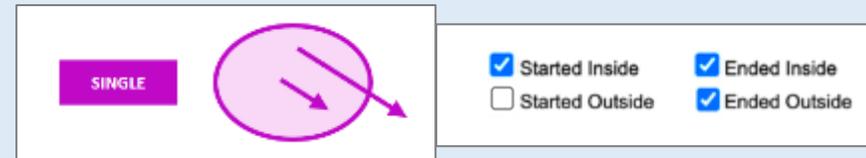
New Features & Significant Updates

Expanded spatial filtering in TRIP ANALYTICS

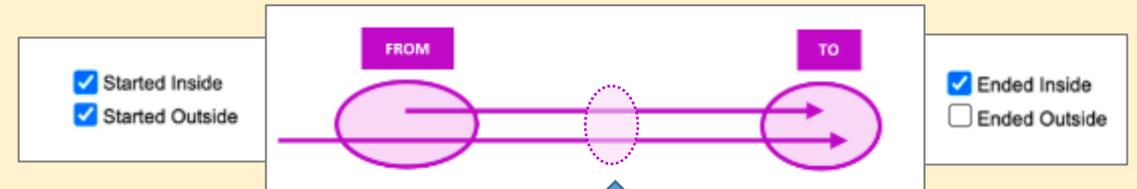


There will soon be four modes for Spatial Filtering:

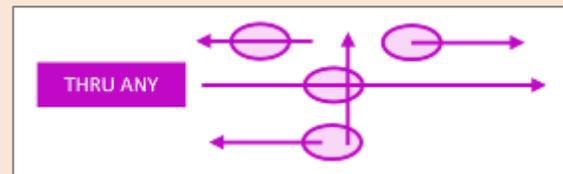
1. SINGLE mode



2. FROM / TO mode



3. ANY mode



4. ALL mode



ANY or **ALL** spatial filter sets can also be used as middle filter sets in **From/To** mode

From / To report example:

Trip Analytics

Single **From/To** Any All

Show labels on map

From

Started:
 Inside
 Outside

Filter 1 (Unfinished) Add filter

Through

Filter 2 Add filter Remove Through Filters

To

Ended:
 Inside
 Outside

Filter 3 (Unfinished) Add filter

Drag filters you want to exclude from the report here

Next

Set Temporal Filter(s)
Month: November 2025
Times of Day: 7:00 AM to 9:00 AM (Europe/Paris)
Days of Week: Tuesday, Wednesday, and Thursday

Trip Analytics

Logged in as gorden1@umt.edu My Profile Help Switch data set Logout

From

Find trips that: Started Inside Started Outside

Substrate
Homestead
Whitaker

Logic = Any Add filter

Middle

Find trips that went through:
 Any filter All filters

McKees Rock Br
W End Br
Veterans Br
31st St Br
40th St Br

Logic = Any Remove Middle Filters Add filter

To

Find trips that: Ended Inside Ended Outside

Rosa Taylor Townships

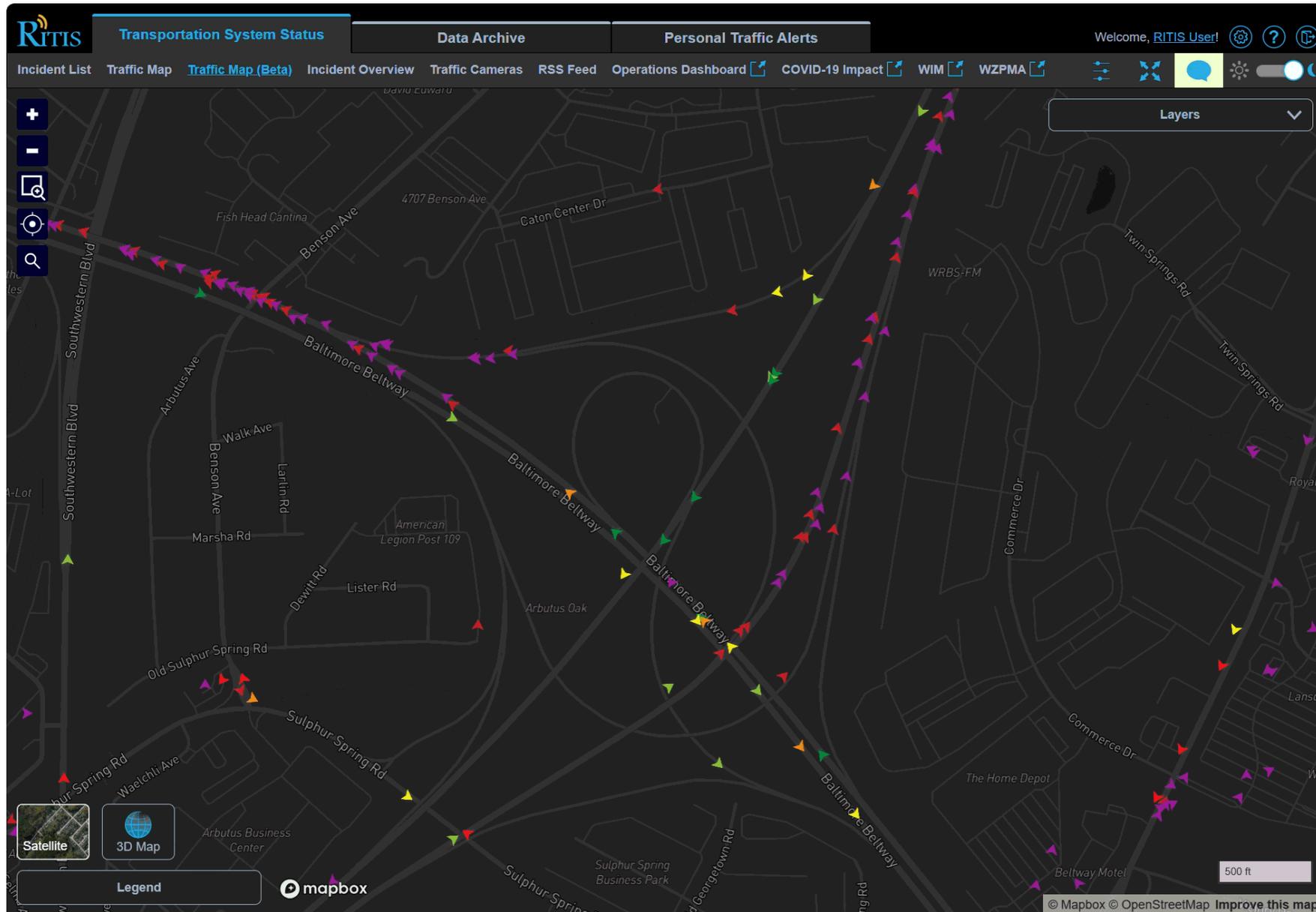
Add filter

Hold for later use

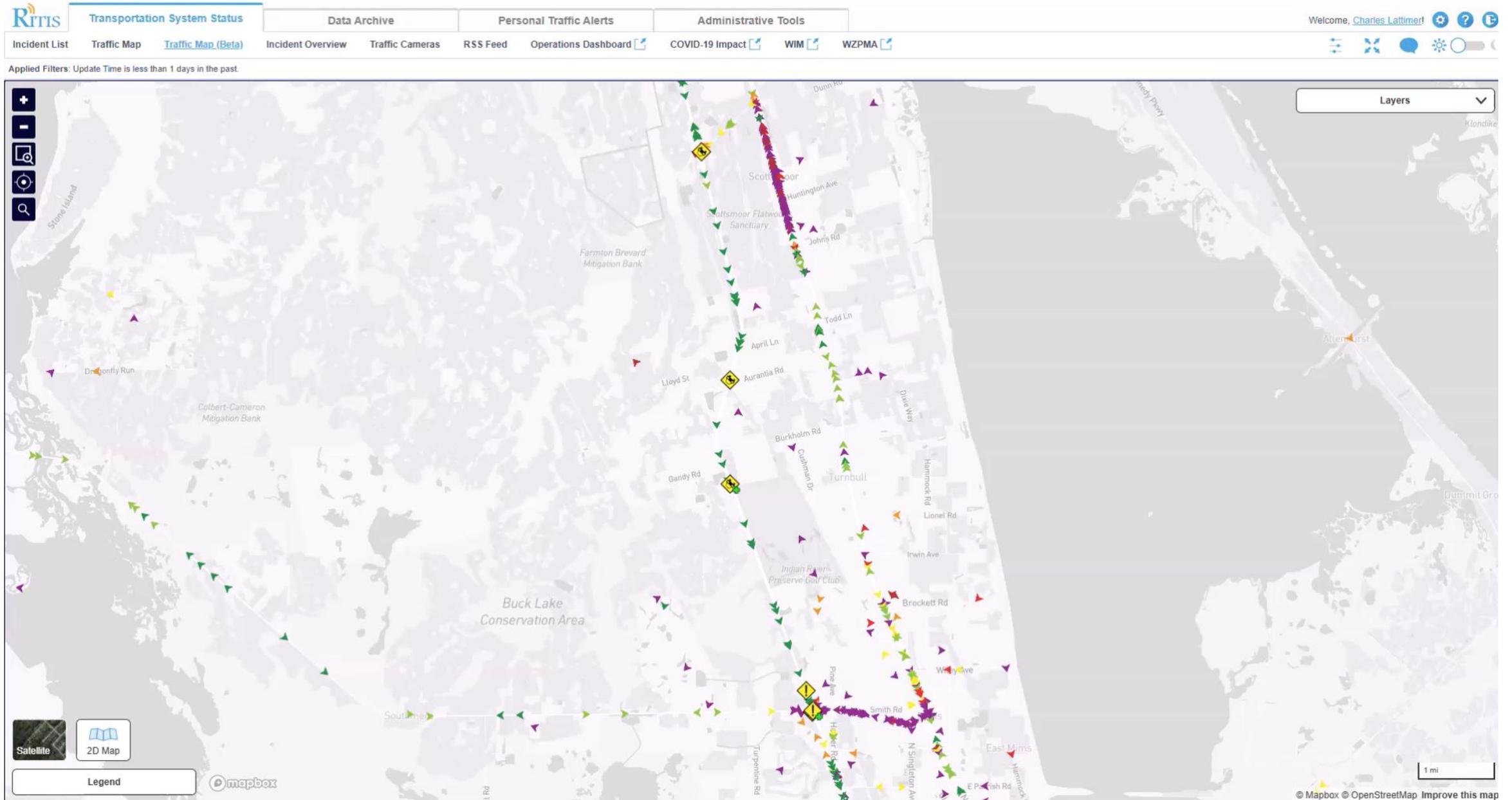
PA Turnpike at Cheswick Unassigned (excluded)
PA Turnpike at Monroeville Unassigned (excluded)

Real-time Vehicle Movements

Traffic Flow Added (for testing / eval)

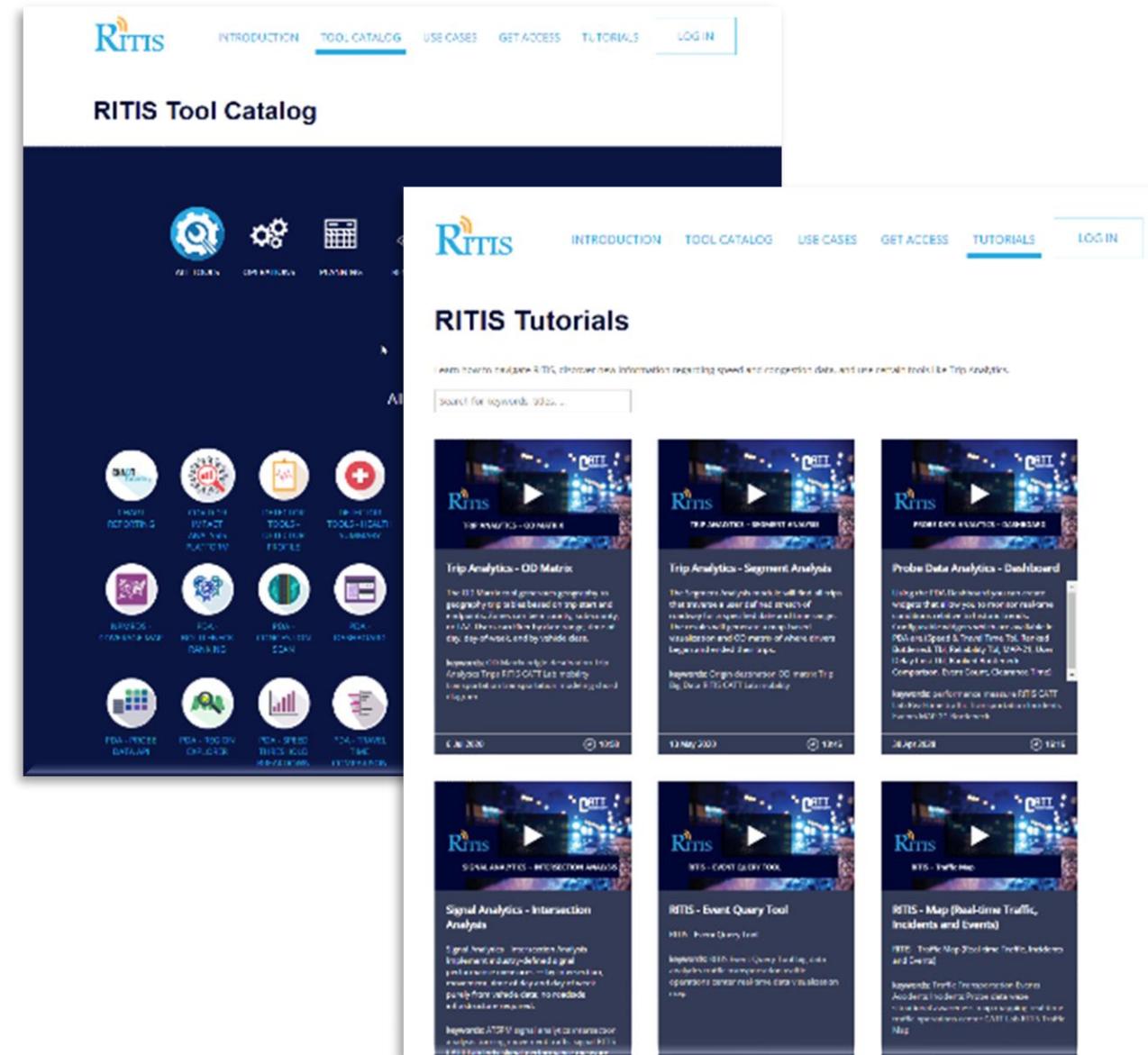


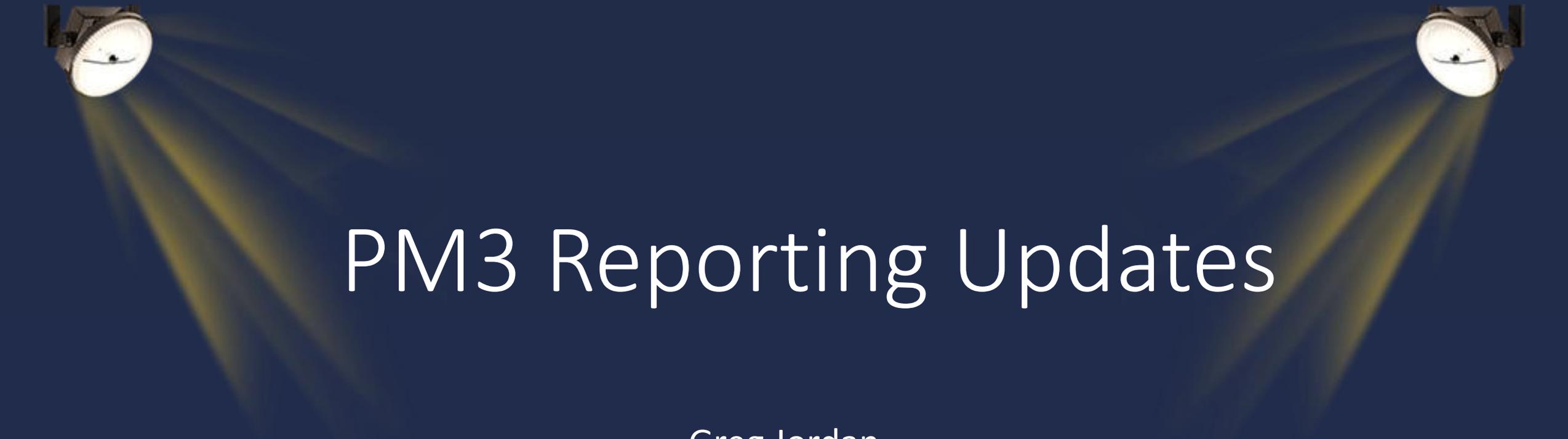
Real-time Crash Detour Behavior



RITIS Resources

- RITIS Reporting Templates Page
 - <https://ritis.org/tools>
- RITIS Tool Catalog
 - <https://learn.ritis.org/reports>
- RITIS Tutorials
 - <https://ritis.org/tutorials>
- RITIS Support: support@ritis.org





PM3 Reporting Updates

Greg Jordan
CATT Lab



Part 1: MAP-21 / PM3 reporting update



MAP-21

Create a dashboard widget to monitor states', MPOs', and Urbanized Areas' performances against the new MAP-21 ruling.

[Help](#)

 Our MAP-21 (PM3) tools fully incorporate USDOT guidance. [Go here](#) for notices, FAQ's, and the upcoming certification cycle.



PM3 reports for the 2025 data year are not yet certified, and therefore are not yet ready for final state review and submission to FHWA. Please click [HERE](#) for important information and additional guidance. (Updated February 26, 2026)

DON'T SHOW THIS MESSAGE AGAIN

1. Select geography:

- State
- MPAs
- UZAs

2. Select measures:

- Percent of the Person-Miles Traveled on the Interstate That Are Reliable (the Interstate Travel Time Reliability measure)
- Percent of the Person-Miles Traveled on the Non-Interstate NHS That Are Reliable (the Non-Interstate NHS Travel Time Reliability measure)
- Truck Travel Time Reliability Index (for interstate roads only)
- Annual Hours of Peak Hour Excessive Delay Per Capita 
[Provide and use your own volume data here](#)

3. Select one or more years:

2026

+ Add time period

4. Show data as:

- Graph
- Map

5. Name MAP-21 widgets

+ ADD WIDGET

<https://pda.ritis.org/suite/data-certification-schedule/>

PM3 Notices, Certification Schedule, and FAQs



Revised target certification date (update on February 26, 2026)

Our target certification date for the 2025 data year has been revised to April 15, 2026; the new due date for returning new posted speed limit tables is March 31, 2026.

Update as of February 10, 2026 (with the above revisions)

1. Our target certification date for the 2025 data year has been revised to **April 15, 2026** for all states that completed sending in required posted speed limits (or other optional data tables) on or before **March 31, 2026**. Any PM3 report that has a calculation timestamp before the certification declaration date should not be submitted as "Final" to the HPMS PM3 portal.

2. State coordinators have recently received directions from FHWA not to adopt revised UZA boundary definitions (based on 2020 census data) for calculation of those 2025 PHED metrics to be used for assessing progress toward the targets of the 2nd reporting period (2022-2025); but also that those new definitions must be incorporated in restated 2025 PHED calculations to be used to set targets for the 3rd reporting period (2026-2029). The CATT Lab has been in direct contact with FHWA's TPM office; has received all necessary tables (copies of those that were sent directly to the states); so for the ~40 state agencies using the RITIS MAP-21 Easy Button report, we are entirely taking care of these issues and all related tasks. When we report completion, the Easy Button PM3 reports will be in compliance with these directives; and agency staff will be able to produce MAP-21 reports in RITIS based on either the legacy (old) UZA definitions (for the years prior to and including 2025); or based on the new definitions (for 2025 (recomputed) and later years). The only action needed by agencies will be provision to the CATT Lab of posted speed limits for the needed highway segments (see next item).

3. State coordinators will soon be receiving emails from the CATT Lab with blank tables listing the highway segments for which posted speed limits (PSLs) need to be looked up, entered, and returned to intake@ritis.org. Please do so by the requested due date of March 31st, as that will help us meet our target internal certification declaration of April 15th for your state.

4. More information will be posted here as we get closer to the Lab's April 15th certification date.

5. Looking ahead, the PM3 "Easy Button" reports for the 2025 data year must be uploaded to FHWA by June 15, 2026. Beyond that, targets for the PM3 performance measures for the 3rd reporting period (2026-2029) will be due by Oct. 1, 2026.

PM3 FAQs

Key dates coming up:

Submit any missing posted speed limits – **March 31st**

Expected certification date – **April 15th**

FHWA / HPMS PM3 submission deadline -- **June 15th**

Remember:

- 1) Perform test submissions to FHWA portal beforehand;
- 2) Share any error or warning messages with support@ritis.org
- 3) Final version to upload after your certification date

FHWA notice re: handling PHED looking backward and forward

Looking backward:

2nd 4-year reporting period (2022-2025):

2021 (basis for new targets)

2022 – Year 1

2023 – Year 2

2024 – Year 3

2025 – Year 4 (expiring UZA definitions)

Looking forward:

3rd 4-year reporting period (2026-2029):

2025 (basis for new targets / new UZA definitions)

2026 – Year 1

2027 – Year 2

2028 – Year 3

2029 – Year 4

FHWA notice to all states re: calculating the excessive delay metric (PHED) looking backward and forward:

A	B	C	D	F	F	G	H	I	J
State	Stateld	Tmc	Routeld	BeginPoint	EndPoint	UrbanId	LegacyUrbanId	SPEED_LIMIT	PHED_for_2025TTM
Illinois	17	119+05547	001 10172 000000	2.379	9.281	99999	99999	70	
Illinois	17	119+08881	001 20063 000000	0.13	0.263	99998	99998	35	
Illinois	17	119+08888	001 20317 000000	8.46	13.33	99999	99999	55	
Illinois	17	119+08883	001 20063 000000	1.68	2.85	99998	99998	40	
Illinois	17	119+08887	001 20317 000000	2.411	8.46	99999	99999	55	
							99998	55	
							99999	55	
							99999	55	
							99998	40	
							99998	30	

Table 2 – Reporting Segment Criteria for PHED Metric Value Submission Expected in 2025 TTM

State	Reporting Segment Criteria
Alabama	(StateId = 1) AND (LegacyUrbanId = 7786 OR UrbanId = 7786)
Alaska	(StateId = 2) AND (LegacyUrbanId = 2305)
Arizona	(StateId = 4) AND (UrbanId IN (4549, 69184, 88732) OR (69184, 69192, 88732))
	5) AND (LegacyUrbanId = 56116 OR UrbanId = 56116)
	6) AND (UrbanId IN (2683, 4681, 19504, 31843, 41347, 47611, 51445, 60799, 66673, 75340, 77068, 78661, 78904, 79039, 79498, 85087, 87490, 90541, 90946) OR (2683, 4681, 19504, 31843, 41347, 50533, 51445, 57709, 73, 67140, 75340, 77068, 78661, 78904, 79039, 79282, 98, 85087, 87004, 87490, 90541))
	8) AND (LegacyUrbanId IN (23527, 30628) OR UrbanId IN (23527, 30628))
	9) AND (UrbanId IN (10162, 37243, 62407, 64135, 83926, 97291) OR

Urban ID Transition in 2025 Travel Time Metrics (TTM) Table

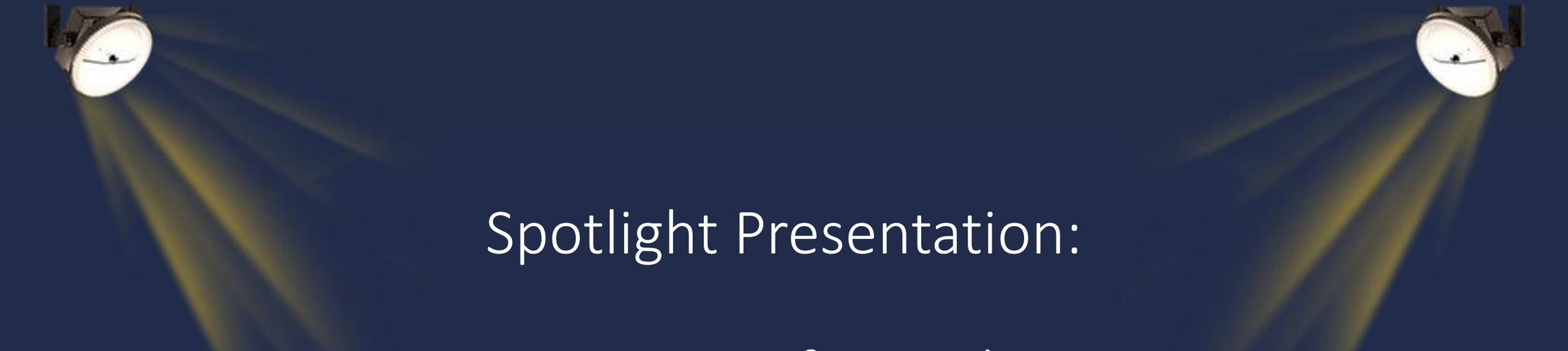
1. Background

The FHWA Division Offices and FHWA Office of Planning reviewed and approved state-adjusted 2020 Decennial Census **Urban Area boundaries** (geospatial polygon data) during 2024 and into March 2025.

For the 2024 Highway Performance Monitoring System (HPMS) data (submitted in 2025), State DOTs submitted **Urban ID Road Events records** that spatially coincided with the HEPP-approved adjusted urban area boundaries and complied with the 2020 Decennial Census Urban Area codes.

Consequently, those boundary updates and adjustments are expected to be reflected in the **Urban ID field values for reporting segments in the Travel Time Metrics (TTM) tables** to meet the requirements of [23 CFR 490.103\(b\)](#), [23 CFR 490.105\(e\)\(8\)\(ii\)](#) & (iii) and [23 CFR 490.105\(f\)\(5\)\(ii\)](#) & (iii), and [23 CFR 490.711\(f\)](#).

The 2025 National Performance Management Research Data Set (NPMRDS) provided Urban ID field values (in UrbanCode Field) for the 2025 TTM table (to be submitted in 2026); however, those values were derived from the state-submitted 2023 HPMS Urban ID Road Events data (submitted in



Spotlight Presentation:

Operations Use-cases for Dashcam Imagery

Taran Hutchinson

Facilitator

National Capital Region MATOC Program



Dashcam: Confirmation of infrastructure damage

Layers ▼

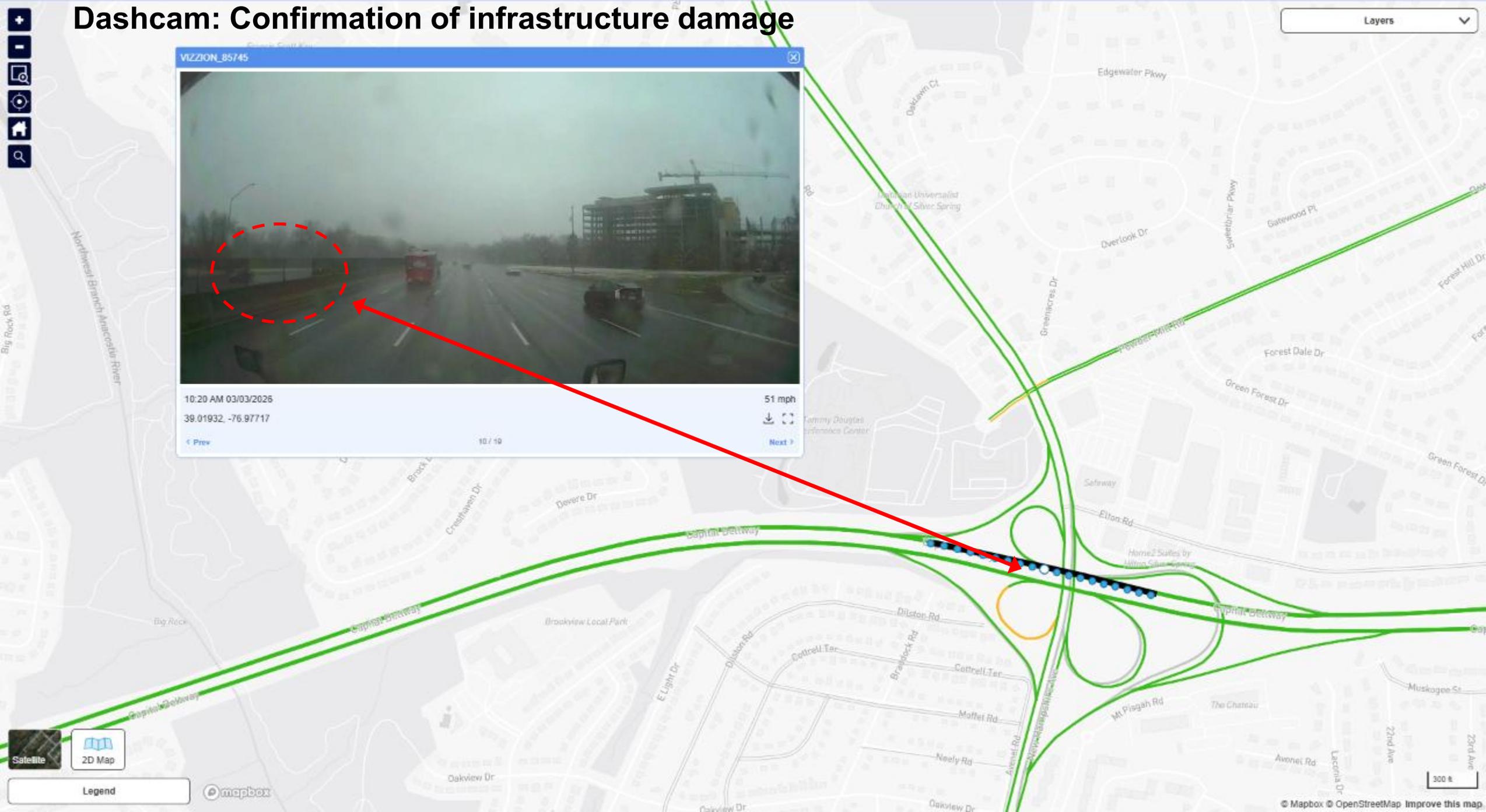
VIZZION_85745

10:20 AM 03/03/2026
38.01932, -76.97717

51 mph

10 / 19

Prev Next



Satellite 2D Map

Legend



Dashcam: Following up on repairs



Layers

VIZION_166747

1:13 PM 03/03/2026
39.03048, -76.94866

48 mph

< Prev 5 / 10 Next >



Dashcam: CCTV vs Vehicle POV

Collision reported by VDOT
Prince William County, Virginia

66 I-66W west @ MM 44.600

Event: Collision
4 Responders on Scene
Started: Nov 24, 2025 8:06 AM
Last Update: Nov 24, 2025 9:59 AM

Operator Notes
 Nov 24, 2025 8:08 AM
 SSP 966 and VSP are enroute to a TTL crash blocking the center lane, CMS posted.
 Nov 24, 2025 8:18 AM
 Per CCTV-0044 6, VSP on scene. Per Google Maps, Delays are minimal.

Nearby FITM Plans:
 I-66/BETWEEN RAMPS AT EXIT 47... I-66/BETWEEN EXIT 44 & EXIT 47...
 I-66/BETWEEN EXIT 44 & EXIT 47... I-66/BETWEEN CENTURY PARK D...

Probe Speed Data provided by INRIX

450243805 Re-center

XD Segment ID: 450243805

Length: 0.53 mi Free Flow Speed: 64 mph

Speed			Congestion		Travel Time
Current	Historical Avg.	Comparative	Current	Historical Avg.	
24 mph	61 mph	39%	38%	95%	1 min 19 sec

Graph: Nov 23, 2025 10:00 PM - Nov 24, 2025 10:06 AM

Legend: Low, Medium, High, Confidence score, Speed, Free flow speed, Historical avg. speed

11/24/2025 10:07 AM

Layers

- Future Events
- Live Incidents and Events
- Flights
- Maritime
- Traffic Flow
- Traffic Detectors
- Dynamic Message Signs
- Traffic Cameras
- Dashcams (select segm...)
- Public Transportation
- Road Weather Stations
- Radio Scanners
- FITM Plans
- Montgomery County
- Evacuation Support
- Fleets
- Road Weather Data
- Probe Speed Data
- Weather Radar
- Weather Alerts
- Military Bases



VIZZION_142541

8:13 AM 11/24/2025 14 mph

38.79819, -77.57087

19 / 102

Mapbox © OpenStreetMap Improve this map

Scale: 500 ft



Dashcam: Incident detection/verification (Debris Spill)

Obstructions reported by MDOT_CUART Baltimore County, Maryland

695 I-895 INNER LOOP PRIOR TO EXIT 18A MD 26 LIBERTY RD (IL)

Event: Obstructions
0 Responders on Scene
Started: Feb 19, 2026 10:11 AM
Last Update: Feb 19, 2026 10:24 AM

Operator Notes
[mimorka] Feb 19, 2026 10:11 AM
PILE OF DIRT AND ROCKS IN CENTER LANES
[rzeback] Feb 19, 2026 10:19 AM
DUMP TRUCK LOST DIRT ROCKS AND TREE BRANCHES

Attachments: None

02/19/2026 10:37 AM 0 mins ago



Probe Speed Data provided by INRIX

695 Bearing North @ I-895 N
BALTIMORE County, MD
XD Segment ID: 1310357731

Length: 0.33 mi Free Flow Speed: --

Speed			Congestion		Travel Time
Current	Historical Avg.	Comparative	Current	Historical Avg.	
--	--	Better ■	100% ■	100% ■	--

Graph: Feb 19, 2026 10:01 AM - 10:36 AM

10:01 AM 10:08 AM 10:15 AM 10:22 AM 10:29 AM 10:36 AM

Probe Speed Data provided by INRIX

695 Bearing North @ I-895 N
BALTIMORE County, MD
XD Segment ID: 1310242396

Length: 0.44 mi Free Flow Speed: 59 mph

Speed			Congestion		Travel Time
Current	Historical Avg.	Comparative	Current	Historical Avg.	
8 mph ■	51 mph	Worse ■	14% ■	86% ■	3 min 19 sec

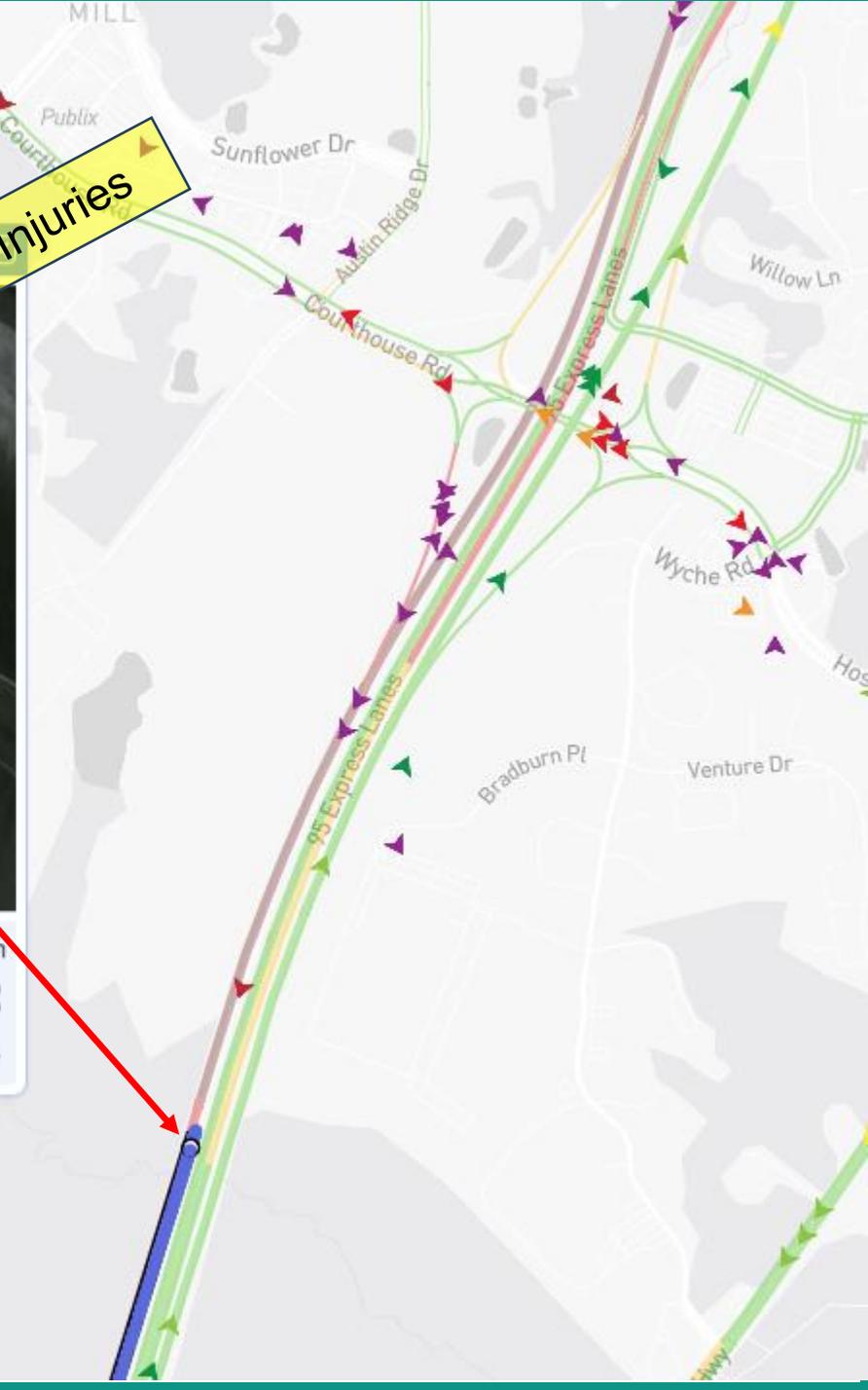
Graph: Feb 19, 2026 10:00 AM - 10:37 AM

10:00 AM 10:07 AM 10:15 AM 10:22 AM 10:29 AM 10:37 AM

Dashcam: Status of incident response (CCTV: No line of sight)



Crash with Injuries





10:57 AM 12/17/2025

39.08893, -77.5658

< Prev

4 / 8

22 mph



Next >

Dashcam: Status of incident response (no CCTV in the area)

Dashcam: Status of incident response (no CCTV in the area)

I-95 between Exit 104 and Exit 110, Caroline County, VA

Time range

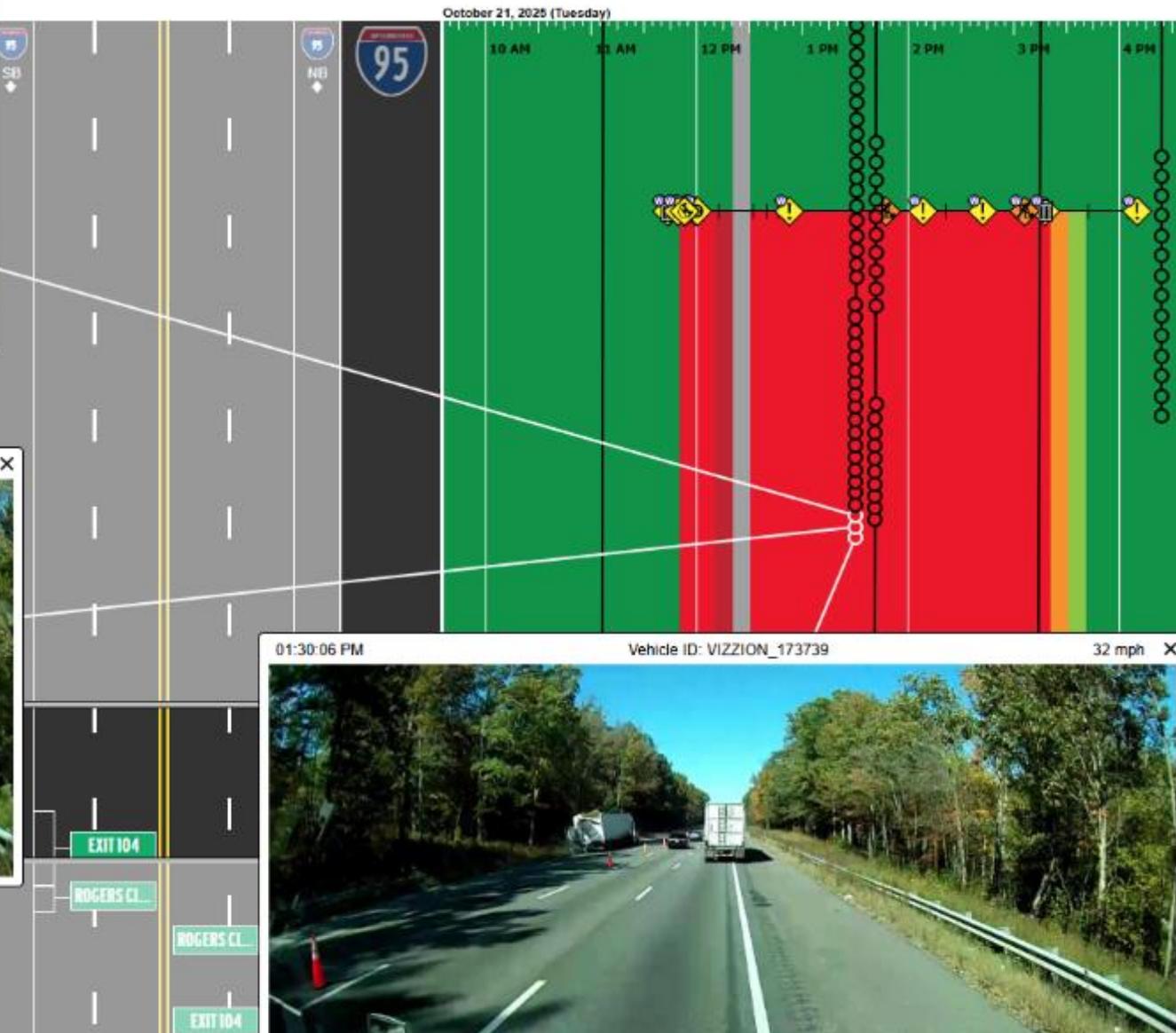
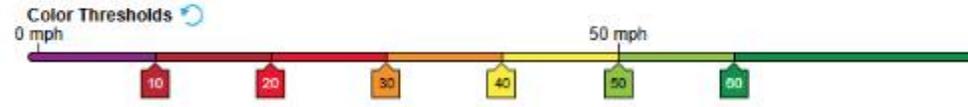
12:00 AM

October 21, 2025 (Tues)



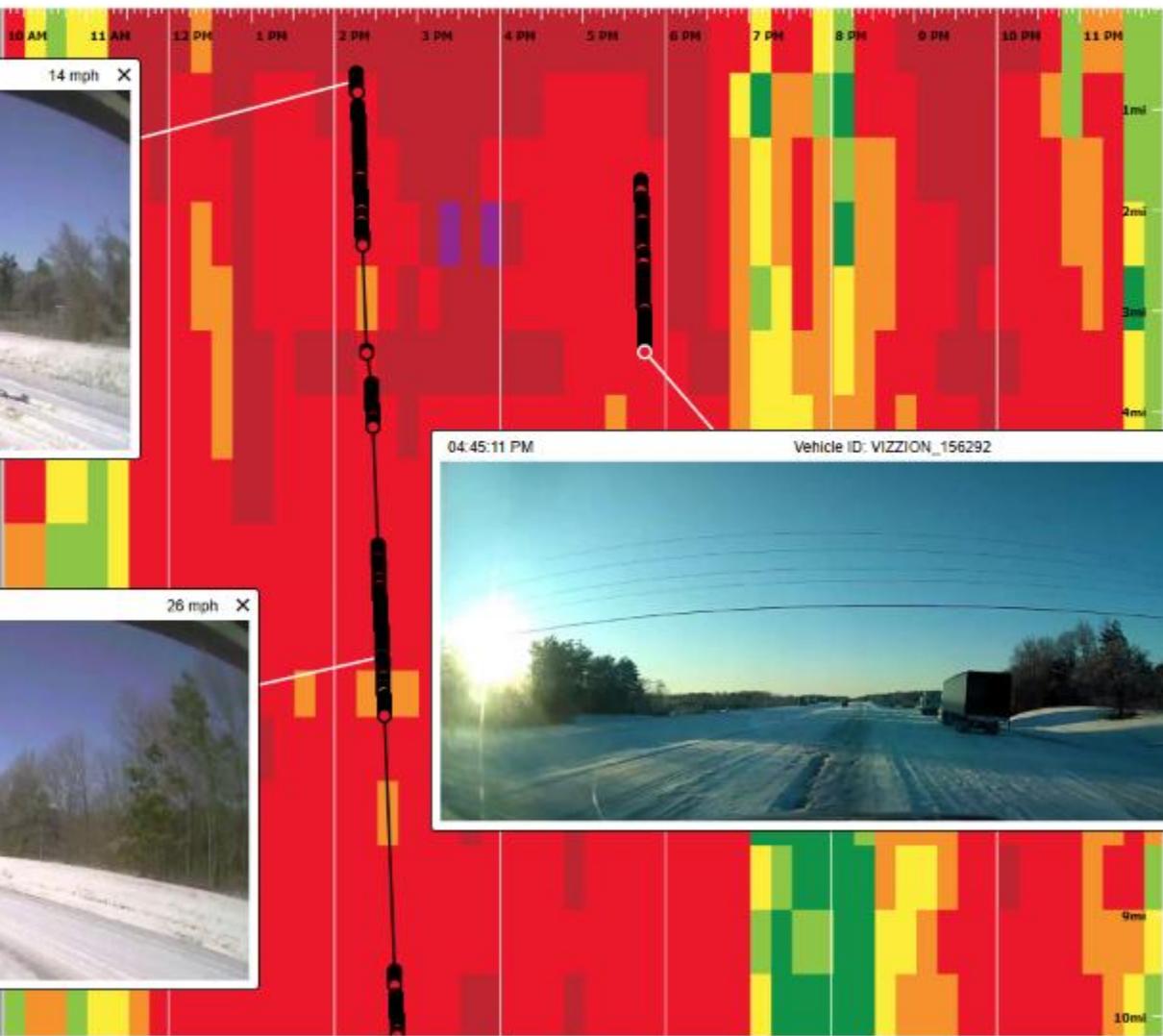
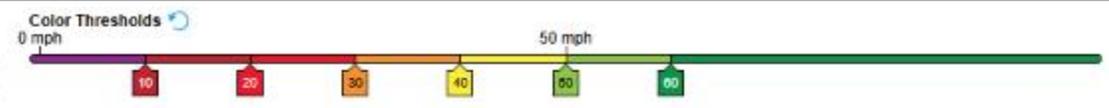
Data type

Speed (mph)



Dashcam: Road Conditions after winter weather event (rural area)

I-22 between Byhalia and Holly Springs, Mississippi - January 26-28, 2026



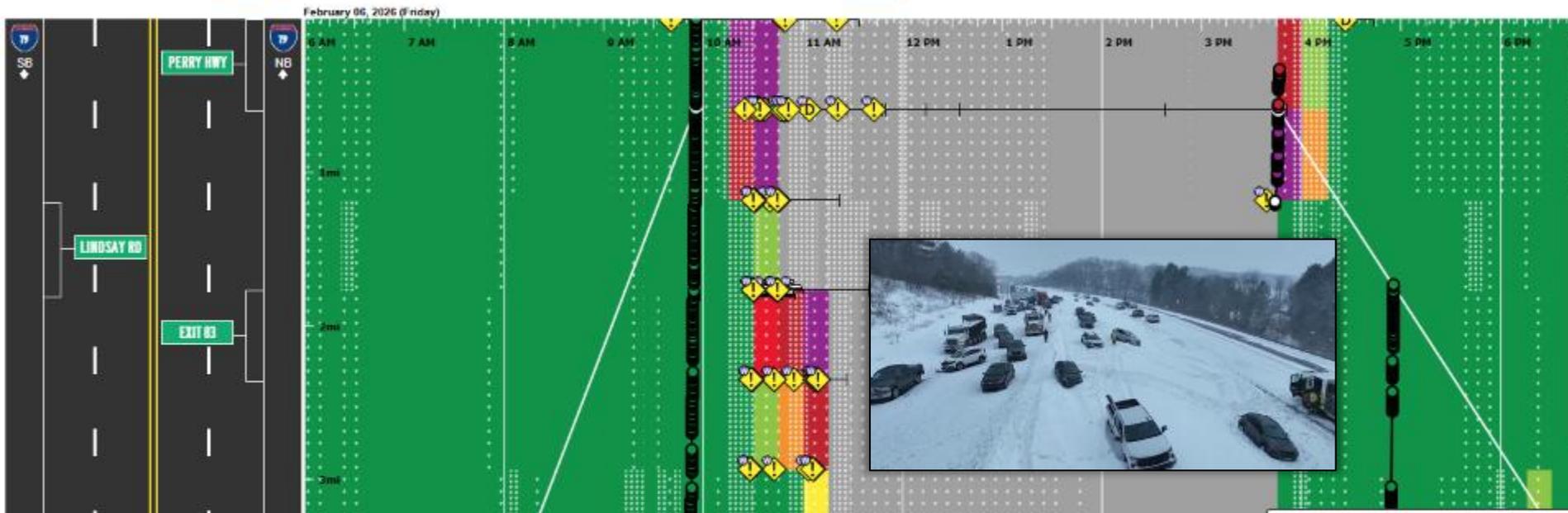
Dashcam: Road Conditions before & after highway closure (snow)

I-79 between Zelenople and Cranberry Township, PA - February 6, 2026

Time range: 12:00 AM to 12:00 PM

Data type: Speed (mph)

Color Thresholds: 0 mph to 40 mph



Display Options

Show

- Left graph
- Right graph
- Traffic events
 - Agency-reported events
 - Waze events
- Precipitation pattern
 - 0 in/hr to 0.165+ in/hr
 - Low to High
 - Light Rain, Heavy Rain, Light Snow, Heavy Snow
- Dash Cameras
- Graph Data

Zooming

- Use advanced zooming options
- Zoom time range with mouse wheel
- Zoom road with mouse wheel

Clear all tooltips



Questions

Taran Hutchinson

MATOC Facilitator

Metropolitan Area Transportation Operations Coordination Program

5000 College Avenue, Suite 3121

College Park, MD 20742

Phone: 301-405-7841

taran.hutchinson@matoc.org



Spotlight Presentation:

RITIS Data Ramp Metering

William Morgan

Transportation Specialist V (ITS), Transportation Management Center

Georgia Department of Transportation



Ramp Meters in Georgia

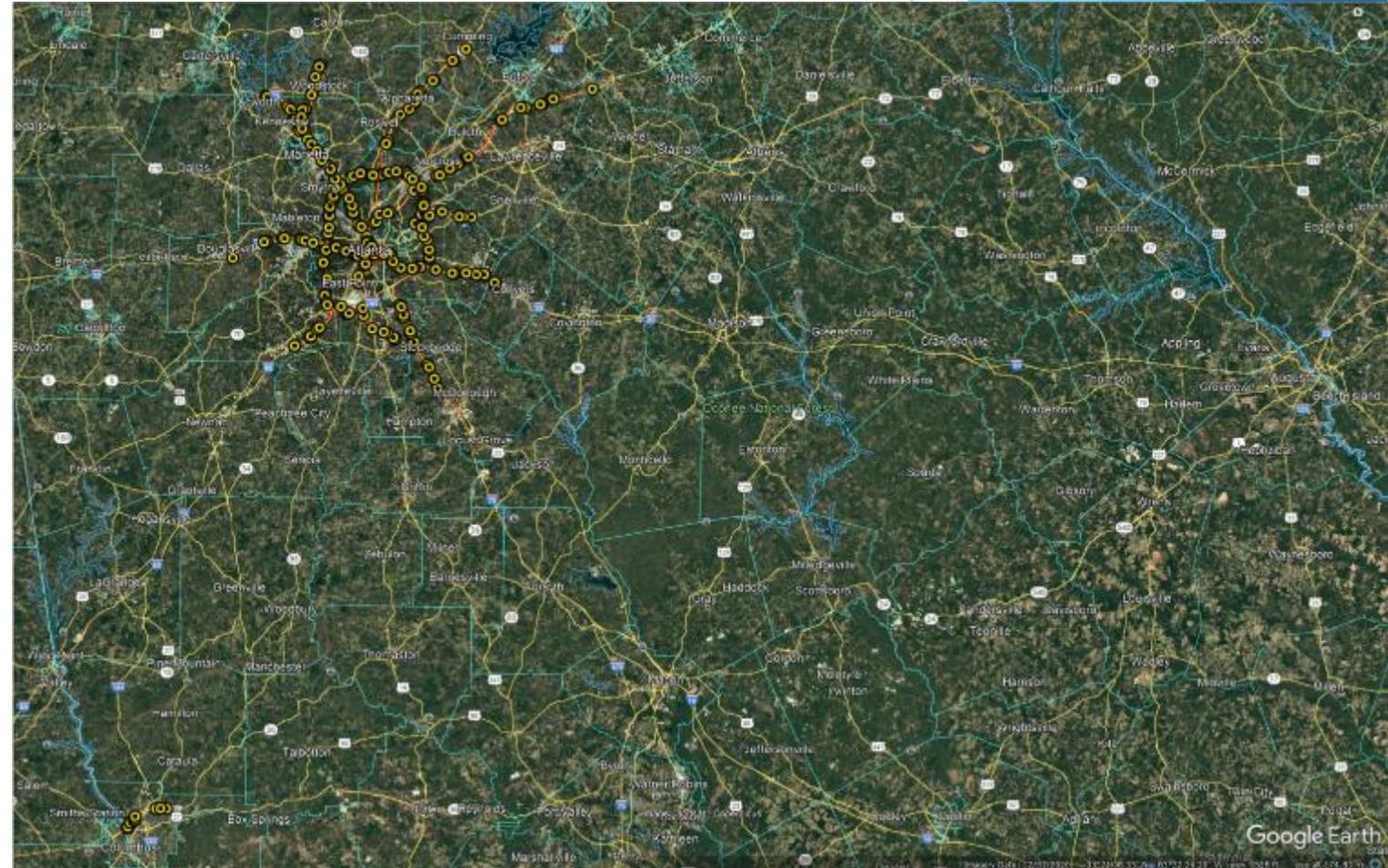
William Morgan, EIT

Transportation Specialist V (ITS), Transportation Management Center



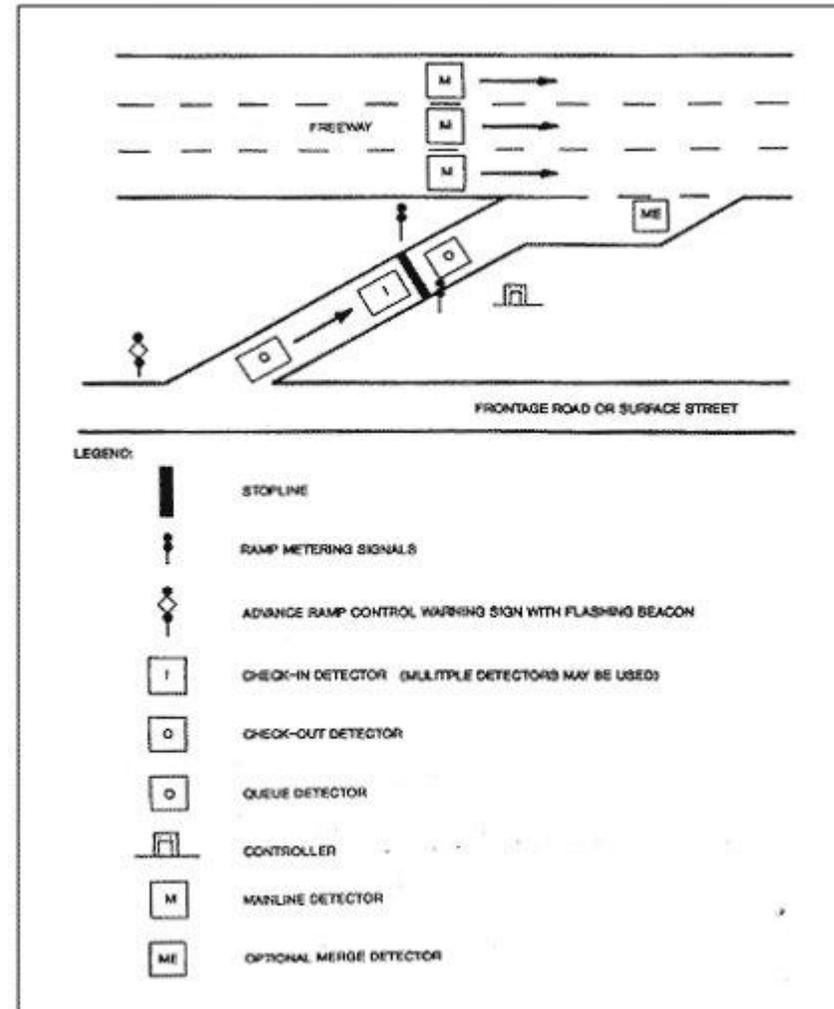
Ramp Metering in Georgia

- ▶ 235 locations
 - ▶ Mostly in Metro Atlanta
 - ▶ Columbus has a few
- ▶ Mostly single or double lane meters
 - ▶ A few three-lane meters
 - ▶ One four-lane meter
- ▶ No freeway-to-freeway meters*
 - ▶ Mostly avoided installing meters on Collector-Distributor ramps
 - ▶ One metered entrance to the reversible toll lanes



Ramp Meter Components in Georgia

- ▶ Caltrans 334-spec Cabinet
- ▶ Signals
- ▶ Advance Warning Sign(s)
- ▶ Mainline Detection
- ▶ Ramp Detection
 - ▶ Passage Detectors
 - ▶ Demand Detectors
 - ▶ Excessive (and Intermediate) Queue Detectors
- ▶ Signage
 - ▶ “Stop Here on Red”
 - ▶ “One Car per Green”



Ramp Meter Software in Georgia

▶ QFree Maxtime (Maxview)

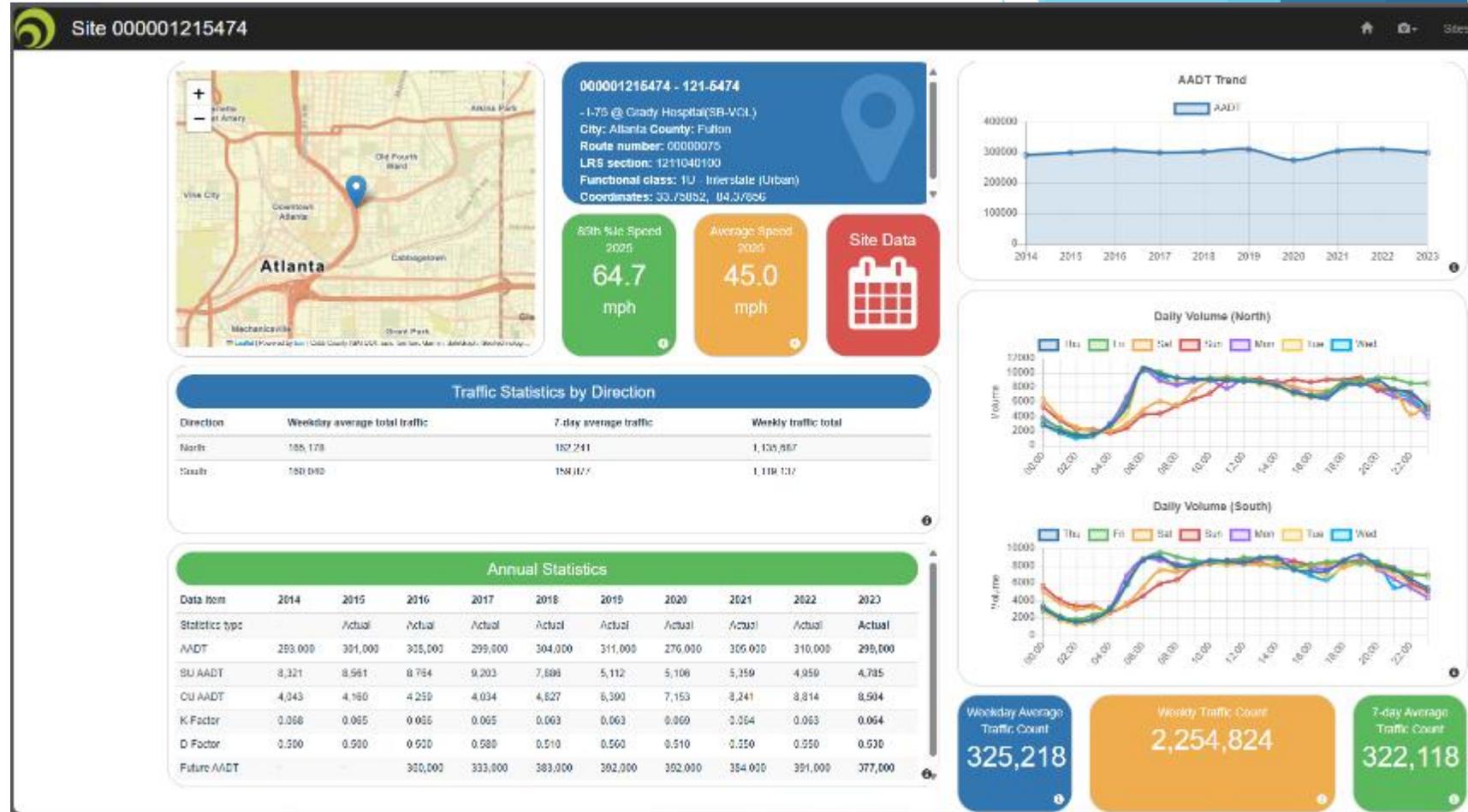
The screenshot displays the MAXTIME rampmeter web interface. The browser address bar shows '10.209.30.106/maxtime-rampmeter/'. The page title is 'MAXTIME rampmeter' and the location is '1 - C247B I-75_85 & Intl Blvd NB'. The interface is divided into several sections:

- METERED LANE STATUS:** A table showing lane status for lanes 1 and 2. Lane 1 has a green dot, and Lane 2 has a red dot.
- MAINLINE STATISTICS:** A summary of traffic flow: 885 AVG. FLOW RATE, 21.2 AVG. OCC., 15 AVG. SPEED, and 4 NUM FLOW LANES, 4 NUM OCC. LANES, 4 NUM SPEED LANES.
- CONTROLLER INFO:** LOCATION: C247B I-75_85 & Intl Blvd NB, AGENCY: GDOTv1.1.13, ACTIVE DATABASE: TO5_C247b I-75_85 @ Intl Blvd NB.bin, LAST SAVED TIME: May 19 2025 2:07:36 pm, CURRENT TIME: May 22 2025 3:48:18 pm, TIME SOURCE: Linesync.
- METERED LANE DETAIL STATUS:** A detailed table for lanes 1 and 2, including Command Source, Meter Rate (400), Action (Traffic Responsive), Set Plan (4), Set Fix Rate (0), Set Veh/Green (1), Request Source, Request Action, Request Plan, Request Rate, Request Veh/Green, Demand (Working), Cycle Count (2), Queue Adjust (Override/Adjust), and Override Queue (False).
- MAINLINE LANE STATUS:** A table showing lane status (Working) and usage (Vol-Occ-Speed) for lanes 1 through 4.

The interface includes a sidebar with navigation options: Search, Home, Status, Controller, General Config, Mainline Lanes, Metered Lanes, Metered Lane Control, Metering Plans, Dependency Groups, Lane Groups, Demand Detectors, Passage Detectors, Metered Queues, Sensor Zones, Advanced IO, Scheduler Configuration, Alarm Configuration, and Administration. At the bottom, there are buttons for 'MANAGE TEMPLATES', 'SAVE TEMPLATE', and 'ADD NEW TILE'. The Windows taskbar at the bottom shows the system tray with weather (83°F Windy), search, and application icons.

Ramp Meter Operations in Georgia

- ▶ Goal is to reduce overall congestion
 - ▶ This is accomplished by increasing throughput on the freeway
 - ▶ Without causing gridlock on the signalized roads
- ▶ Ramp Meters in Georgia are local traffic responsive
 - ▶ Metering rates are set by time of day
 - ▶ Along with speeds and occupancy of the freeway
- ▶ How do we evaluate performance?
 - ▶ Ideally, using count data
 - ▶ Otherwise, using speeds from probe data



Ramp Metering: How it Works



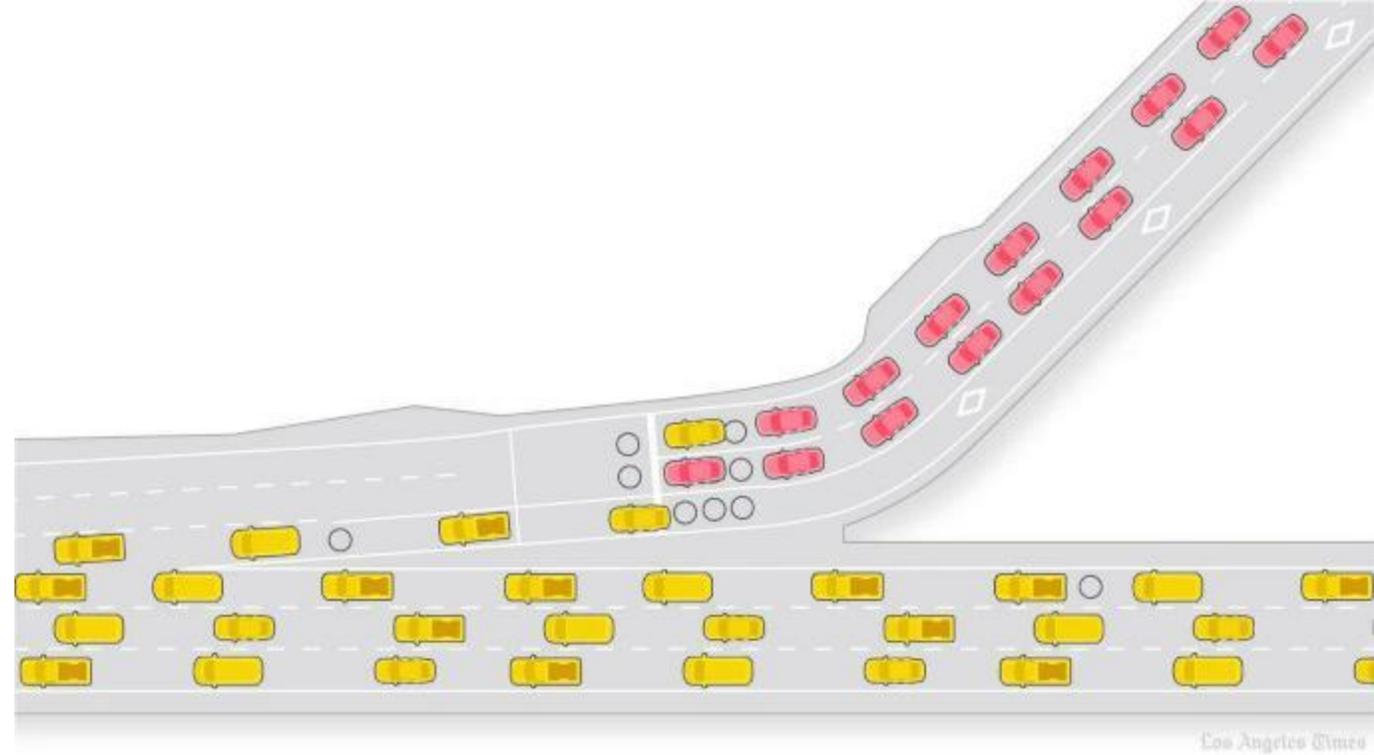
Why do we meter?

- ▶ To mitigate automotive traffic congestion
- ▶ By maximizing flow on freeways



How does metering help?

- ▶ Main Causes of Freeway Congestion
 - ▶ Incidents/Accidents
 - ▶ Queues of exiting vehicles spill onto freeway
 - ▶ Bottlenecks
 - ▶ Flow disrupted by platooned entering vehicles (shockwaves)
- ▶ Ramp Meters can mitigate the latter two causes
 - ▶ By reducing the volume of entering vehicles at bottlenecks, where demand for the downstream segment exceeds the service rate provided by that segment
 - ▶ By chopping up platoons, space is created between vehicles to smooth out the merging process, thereby lowering the density of vehicles at the merge point



Los Angeles Times

How does lowering the density of vehicles at the merge point help?

- ▶ It delays bottleneck formation
- ▶ It increases throughput when the bottleneck is active
- ▶ It speeds up the recovery of flow after peak periods
- ▶ However, beware that there is such a thing as too low of a metering rate
 - ▶ You may “starve” the bottleneck, where the downstream segment is not pushing through as many vehicles as possible
 - ▶ You may redirect trips to enter the freeway at less desirable locations, with larger negative impacts on throughput

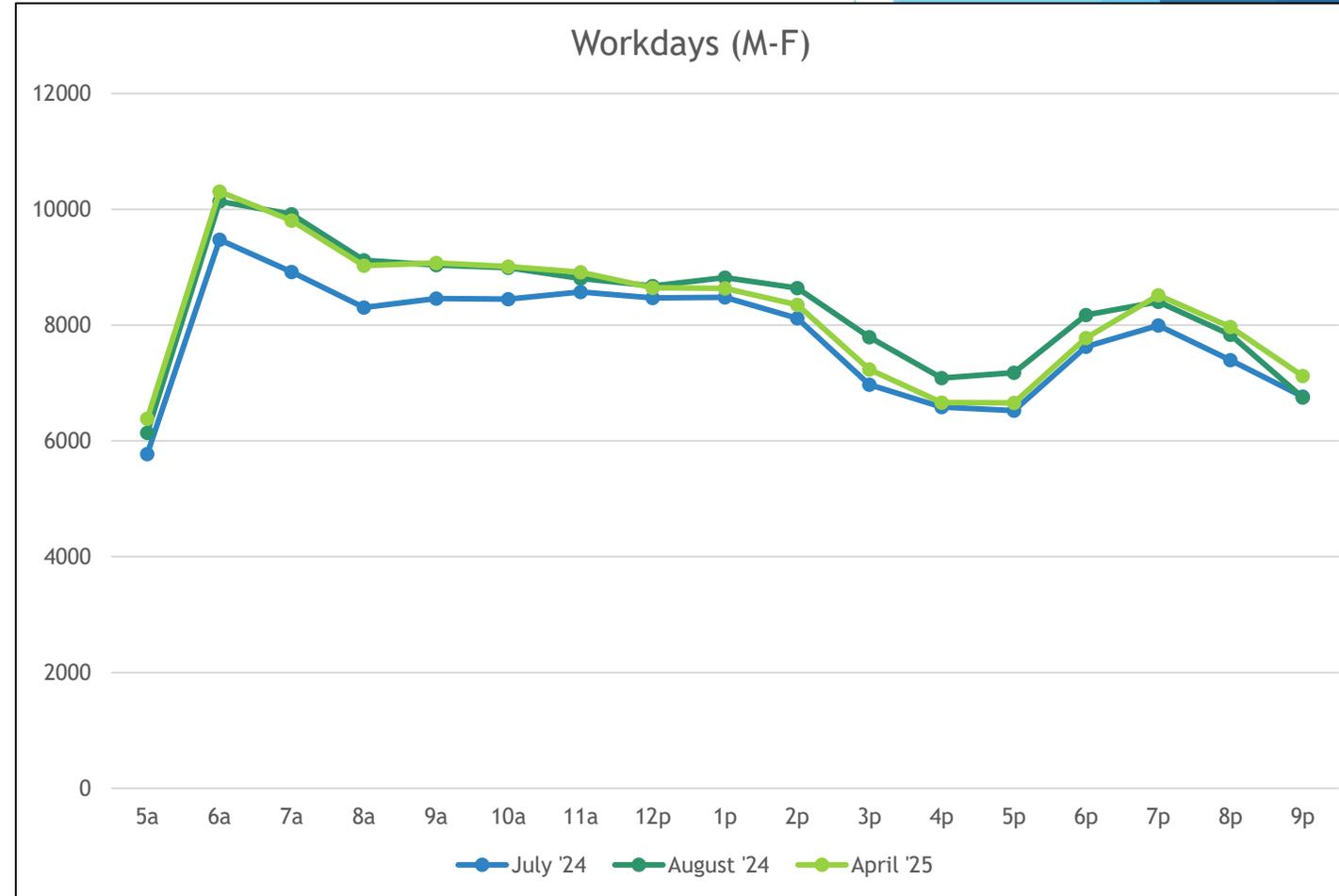


Any proof?

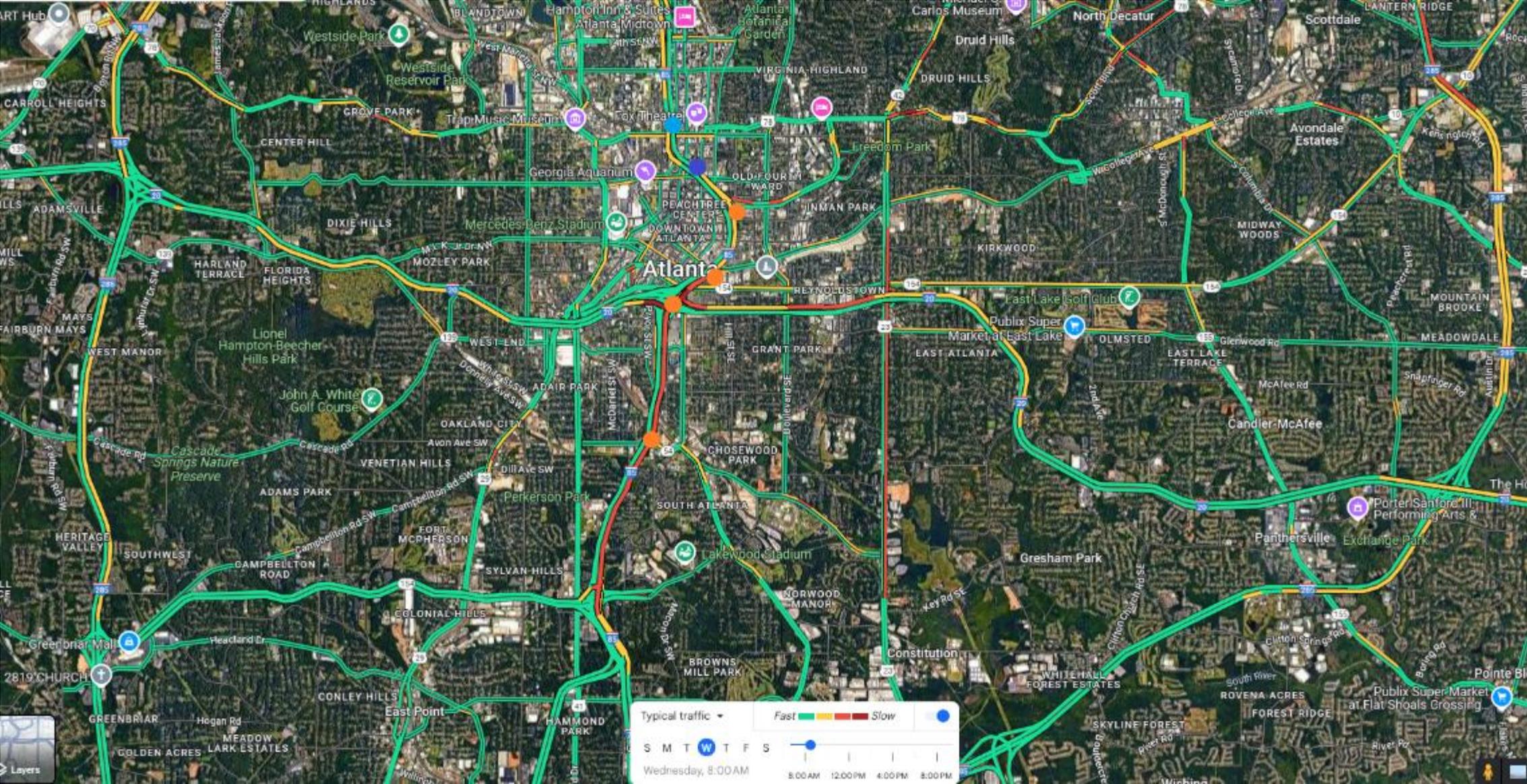
▶ Yes!

▶ ATL Downtown Connector NB

- ▶ July 2024: Spring/Linden/Ivan Allen/Williams Ramp Meter was disabled
- ▶ August 2024: It was enabled
- ▶ April 2025: Improvements mostly sustained
 - ▶ Except PM Peak
- ▶ 6.5% -> 5.4% improvement in overall throughput
- ▶ 11.2% -> 10.0% peak hourly improvement in throughput (7 AM)



Location



Restrictive Ramp Metering

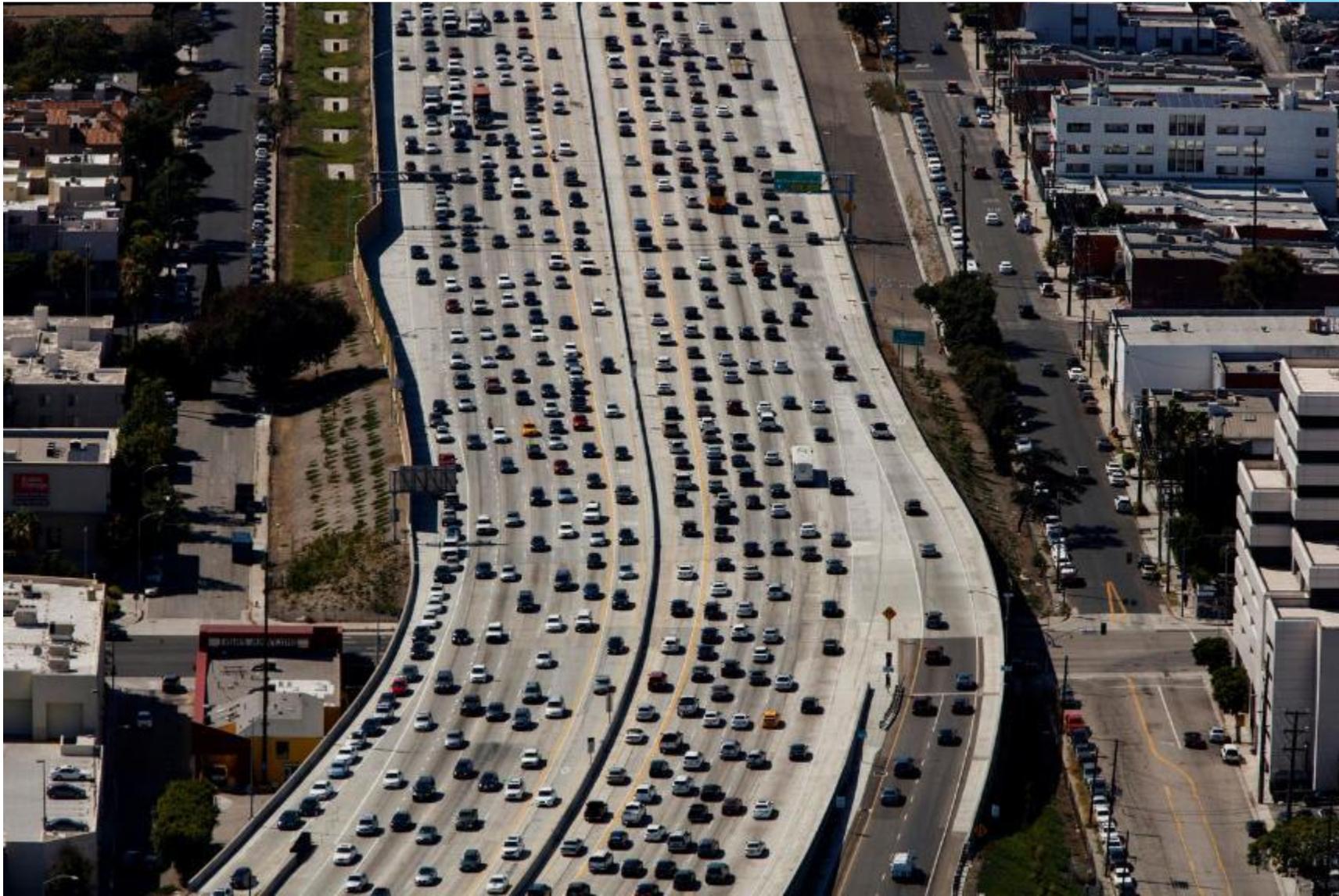
- ▶ When the metering rate is set below the non-metered ramp volume
 - ▶ Should only be done post-breakdown of mainline flow
 - ▶ Done to shift freeway arrivals to more desirable (from a system perspective) access points
 - ▶ To properly pull this off, adequate ramp storage must be provided (>5-10% PHV)



Common arguments against ramp metering

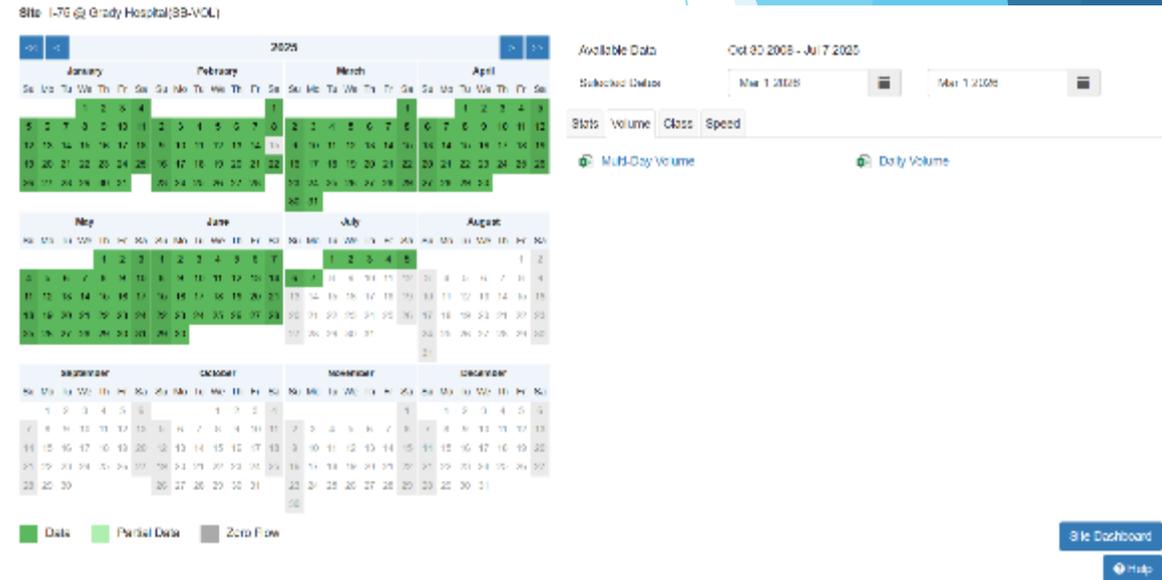
- ▶ Traffic Diversion
 - ▶ Metering should only be implemented on corridors where traffic diversion was happening due to the severity of congestion
 - ▶ When considering lowering meter rates, the increase in throughput on the freeway should be greater than the decrease in throughput on the ramp, thus causing a net decrease in diverted trips
- ▶ Equity (wealthy suburbanites are being prioritized over poor city dwellers)
 - ▶ Ramp meters do not promote longer trips
 - ▶ By restoring capacity lost due to congestion on the freeway, due to equilibrium effects, travel times on adjacent arterials should improve as travel times on the freeway improve
- ▶ Socio-economics (areas around freeways tend to be poorer)
 - ▶ Ramp meters do not shift traffic congestion and associated impacts from one location to another
 - ▶ The goal is to shorten the queue behind the bottleneck while keeping impacts confined to the ramp segment(s)

Using RITIS to Evaluate Ramp Meters



Background

- ▶ Continuous count station on the Downtown Connector (I-75/85) in Atlanta went down in July 2025 due to repaving
- ▶ After observing ramp meter operations, I decided to try implementing restrictive ramp metering at 3 locations along the northbound Connector at the end of September 2025
 - ▶ Freedom Parkway
 - ▶ Fulton Street
 - ▶ University Avenue
- ▶ Why?



RITIS Probe Data Analytics

- ▶ Temporal Comparison Maps
 - ▶ I prefer year-over-year comparisons to filter out seasonal effects
 - ▶ In this case that would be October 2024 Every Weekday vs. October 2025 Every Weekday
 - ▶ Time Range: 6am-10pm (when the ramp meters are active/available)

Segments from HERE [Report a problem with this road](#)

Show segment IDs Save as segment set

3. Select one or more time periods to analyze

Days Months Years

Select a range of one or more months

2024 October - to - 2024 October

1 month

Create a single time period for this range

Create a time period for each month within this range

Limit to specific days of week

Sun Mon Tue Wed Thu Fri Sat

+ Add time period

Your selected time periods Remove All

October 2025 Every weekday

October 2024 Every weekday

4. Select time ranges to analyze within each time period

AM Peak (6AM - 10AM)

Midday (10AM - 4PM)

PM Peak (4PM - 8PM)

Daily (6AM - 8PM)

Custom Time Range

12:00 AM 12:00 PM 12:00 AM

6:00 AM 10:00 PM

+ Add another time range

5. Provide a title for this report (optional)

Enter a title for the report that will appear in the results page and My History

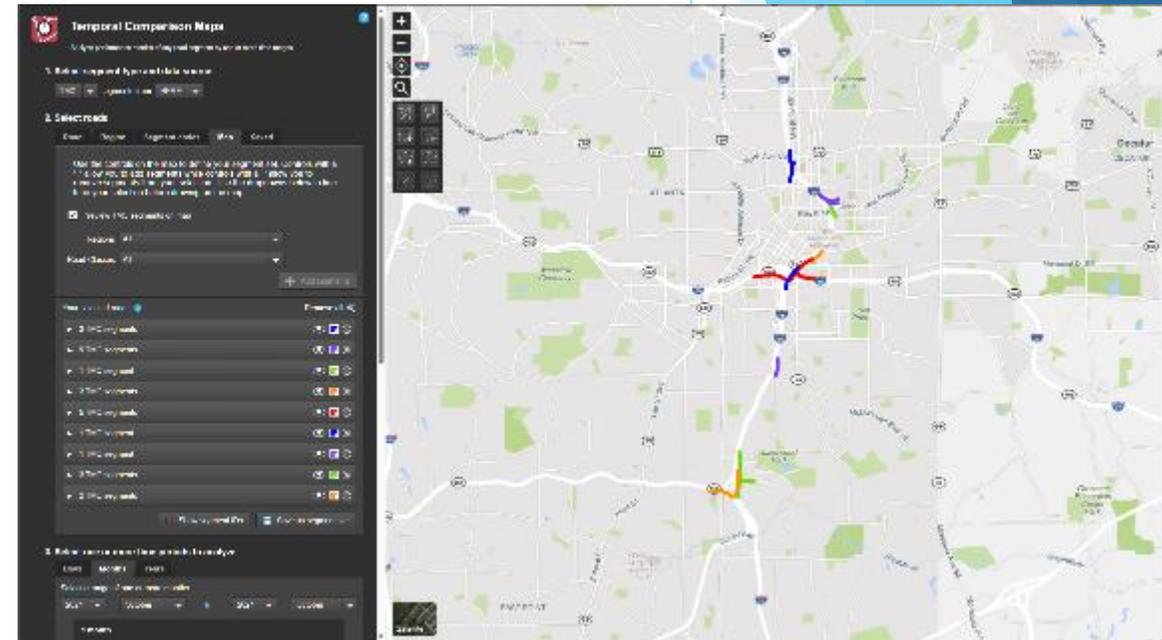
6. Notes (optional)

+ Add notes

SUBMIT

Spatial Scope

- ▶ Started with Corridor in Question (Northbound Connector)
 - ▶ Ramps were selected using Map tool
- ▶ Then checked connecting freeways and continued upstream until improvement disappeared
 - ▶ I-20 (which led to I-285)
 - ▶ I-75
 - ▶ I-85
 - ▶ GA-166
- ▶ Essentially searching for reduction in rear of queue (presumably due to increased throughput)



Reduction in Delay Calculation

- ▶ For each segment, the average speed from each time period is entered into an Excel spreadsheet
- ▶ Next, I measured the length of each segment in Google Maps
- ▶ Then, I entered the AADT for each segment from GDOT's Traffic Analysis & Data Application (TADA)
- ▶ Using that information, the change in vehicle-hours of delay per day is calculated using the below formula:

$$\Delta Vehicle * hours = \left(\left(\frac{length}{speed_{2024}} \right) - \left(\frac{length}{speed_{2025}} \right) \right) * (AADT * F)$$

- ▶ F is a factor used to convert AADT to approximate 6am-10pm counts

Excel Spreadsheet

Segment	Delta	2024	2025	Length	AADT	0.8345049	Ramp	Delta	2024	2025	Length	AADT	5280	Tail	Segment	Delta	2024	2025	Length	AADT	delta(veh*hrs/day)		
Techwood	0	56	56	0.628977	361300	0.0	Spring	1	20	21	0.138447	29200	8.0	I-20WB	Connector	2	53	55	0.23125	199000	13.2		
10th	1	49	50	0.664962	372000	42.1	Williams	3	22	25	0.285417	14600	19.0	I-20WB	Hill	1	39	40	0.407955	216000	23.6		
North	0	40	40	0.069318	405000	0.0	Spring	3	9	12	0.047727	14600	16.2	I-20WB	Blvd	2	40	42	1.08	195000	104.6		
Williams	1	36	37	0.268939	350000	29.5	Freedom	0	28	28	0.13428	21900	0.0	I-20EB	Connector	1	54	55	0.065909	176000	1.6		
Spring	1	36	37	0.191477	339000	20.3	Ellis	-10	19	9	0.125189	10950	-66.9	I-20EB	Windsor	2	51	53	0.237121	190000	13.9		
Pine	1	34	35	0.287879	360000	36.3	Intl	-2	32	30	0.082576	5475	-0.8	I-20EB	McDaniel	2	50	52	0.500758	205000	32.9		
Freedom	2	26	28	0.176326	355000	71.8	Freedom	-1	7	6	0.083902	10950	-18.3	I-20EB	Lee	3	52	55	0.18428	186000	15.0		
Dobbs	3	23	26	0.194318	319000	129.8	Freedom	-3	13	10	0.098295	5475	-10.4	I-20EB	JEL	3	51	54	0.688636	181000	56.7		
Freedom	1	23	24	0.427083	307000	99.1	Highland	-2	15	13	0.13447	5475	-6.3	I-20EB	Langhorn	7	44	51	0.921591	168000	201.5		
Edgewood	1	23	24	0.23447	343000	60.8	Dobbs	0	12	12	0.135038	7910	0.0	I-20EB	MLK	9	48	57	1.64	166000	373.7		
MLK	2	21	23	0.187121	372000	120.3	MLK	-2	14	12	0.158523	10400	-16.4	I-20EB	HEH	4	58	62	0.855303	162000	64.3		
I-20	2	22	24	0.263258	253000	105.3	MLK L	-2	18	16	0.033902	5200	-1.0	I-20EB	I-285	0	48	48	2.15	186000	0.0		
Fulton	2	21	23	0.341477	238510	140.7	MLK R	-2	12	10	0.030303	5200	-2.2	I-20EB	Fulton Ind	0	34	34	1.59	156000	0.0		
I-20	2	23	25	0.472917	296440	203.5	Fulton	-6	21	15	0.33447	7530	-40.0	I-20EB	Six Flags	3	32	35	0.502841	148000	83.2		
Central	2	20	22	0.382386	326000	236.4	University	-3	17	14	0.215152	10400	-23.5	I-20EB	Riverside	4	32	36	2.66	134000	516.4		
Pryor	3	19	22	0.315152	329340	310.8	I-20	0	14	14	0.263258	51200	0.0	I-20EB	Thornton	10	52	62	2.48	119000	381.9		
University	4	23	27	1.53	317000	1303.5	I-20 L	1	7	8	0.499053	22925	170.5	I-285 NB	I-20	1	47	48	0.345455	143000	9.1		
Lakewood	5	30	35	0.643182	259400	331.5	I-20 EB	3	35	38	0.150568	40500	11.5	I-285 NB	MLK	3	37	40	1.82	149000	229.4		
I-85	3	41	44	0.011364	244000	1.9	I-20 R	2	12	14	0.140909	24100	33.7	I-285 NB	Cascade	5	40	45	2.24	146000	379.1		
					Subtotal	3243.6	I-20 WB	4	22	26	0.20322	45200	53.6	I-285 NB	Lakewood	0	53	53	2.38	143000	0.0		
							Lakewood	0	40	40	0.32197	22600	0.0	I-75 NB	Exit 242	-1	50	49	0.476136	134770	-10.9		
							Lakewood L	-1	51	50	0.350758	11300	-1.3	I-75 NB	Exit 241	-1	62	61	0.348674	156000	-6.0		
							Lakewood R	4	41	45	0.245455	11300	5.0	I-75 NB	Cleveland	2	67	69	1.54	177000	49.2		
							Langford	2	42	44	0.360606	15400	5.0	I-75 NB	US-41	7	64	71	0.712879	154000	70.6		
							Langford EB	1	45	46	0.108144	35100	1.5	I-75 NB	Ford	7	63	70	0.418561	154000	42.7		
						I-285	Ramp	4	50	54	0.32822	27100	11.0	I-75 NB	I-285	6	64	70	0.212311	154000	18.3		
						I-285	SB Ramp	-2	46	44	0.377841	16200	-5.0	I-75 NB	US-41	2	67	69	0.667235	171000	20.6		
						I-285	NB Ramp	0	48	48	0.352083	11800	0.0	I-75 NB	I-285	2	67	69	0.256818	141200	6.5		
						I-85NB	I-75	-1	41	40	0.722727	53100	-19.5	I-75 NB	GA-85	4	66	70	0.670833	223000	54.0		
						I-85NB	US-41	0	50	50	0.11572	53100	0.0	I-75 NB	Forest	2	60	62	2.16	202000	97.9		
						I-85NB	Lakewood	2	54	56	0.201136	74600	8.3	GA-166EB	Connector	5	53	58	0.168561	75860	8.7		
														Subtotal	131.7	GA-166EB	Perkerson	5	57	62	0.274053	69510	11.2
														Excluding Tails	137.0								
																					Subtotal	2862.9	
																					Total	6238.1	
																					Excluding Tails	3380.6	

Results

- ▶ The reduction in delay on the northbound Connector from October 2024 to October 2025 was 3380.6 vehicle-hours per weekday
- ▶ Including adjacent freeways, the reduction in delay could have been as much as 6238.1 vehicle-hours per weekday
- ▶ The reduction in delay on the freeway and freeway-to-freeway ramps outweighed the increase in delay on the metered ramps, in terms of vehicle-hours
 - ▶ This was calculated without even considering that volumes on the metered ramps probably decreased after dropping the rates
 - ▶ Which would make the delay reduction numbers look even better

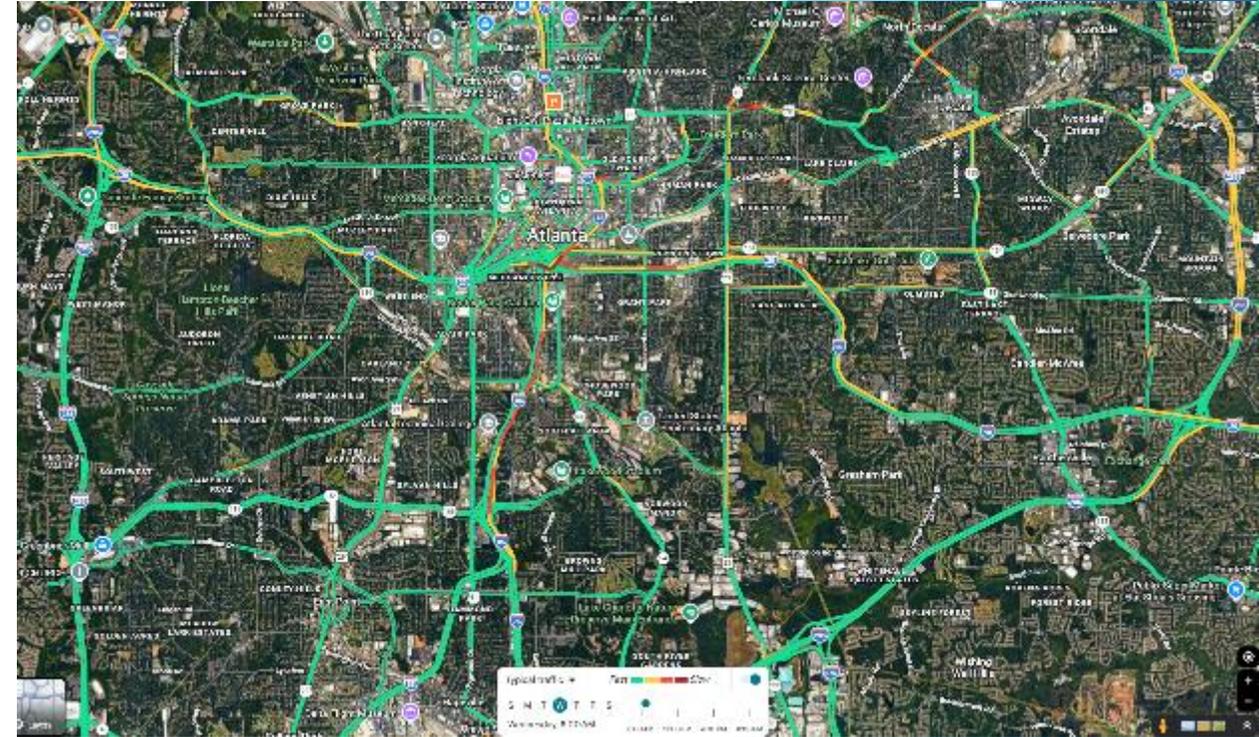
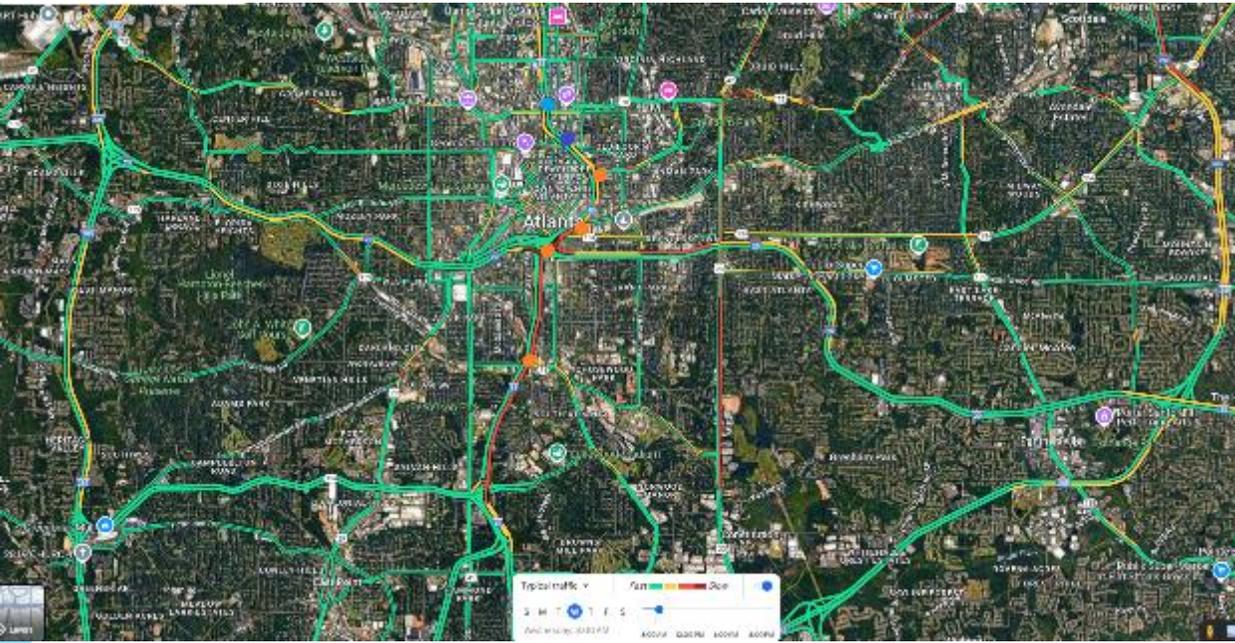


Discussion

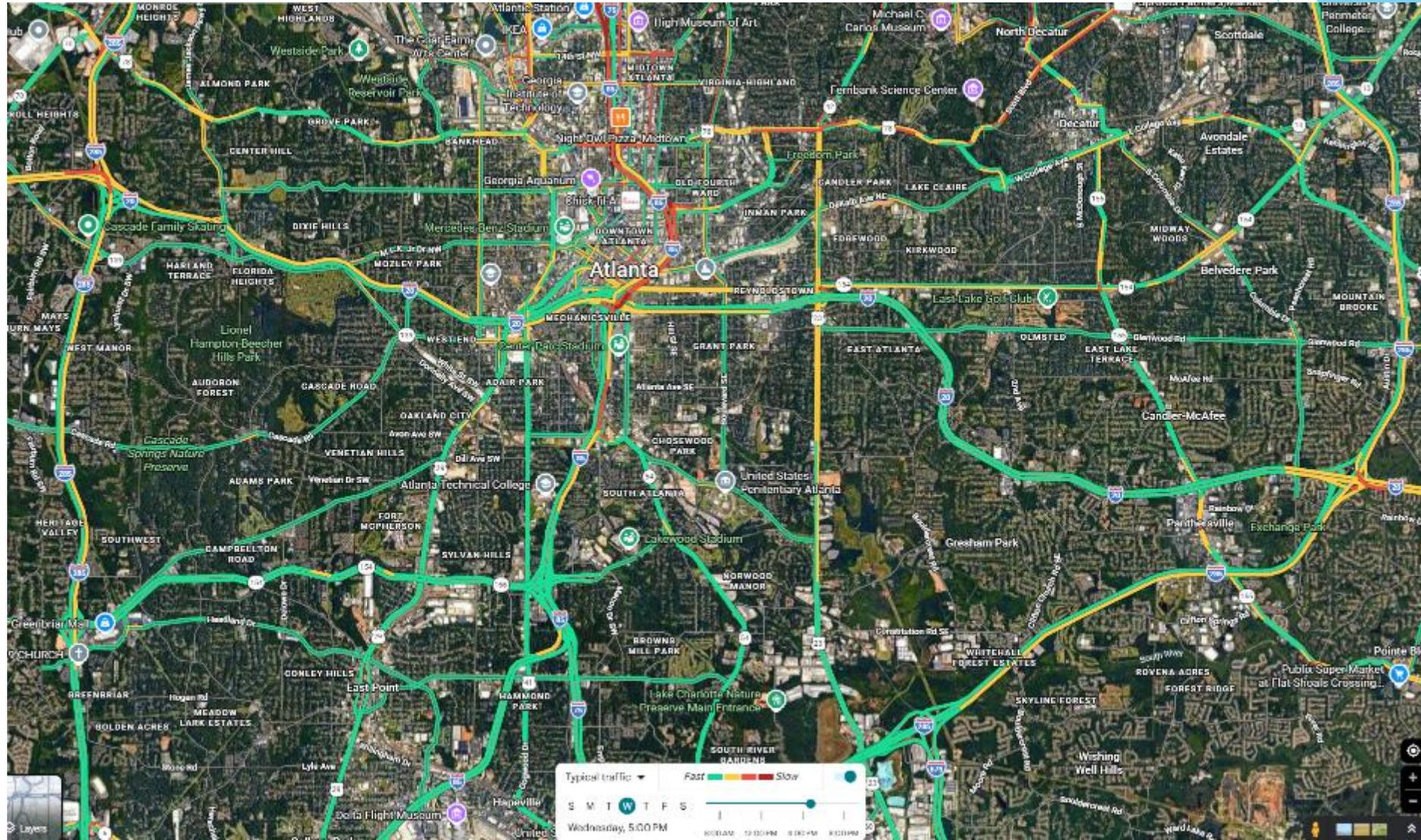
- ▶ Many simplifications! Including, but not limited to:
 - ▶ During rush hours, the queue spillback is known to go onto the adjacent arterials, but I did not query their changes in speeds for this analysis
 - ▶ I am assuming that the effects of crashes is mitigated by doing month-long analysis periods
 - ▶ Also, I am assuming that both analysis periods did not see major disruptions from construction activities
 - ▶ Behind the segments where the queue on the freeway was reduced, RITIS shows a drop in speed. I am assuming that drop in speed was not caused by the changes made to the ramp meters
 - ▶ I am also assuming that both analysis periods saw similar disruptions due to weather



Google Maps Corroboration: AM



Google Maps Corroboration: PM

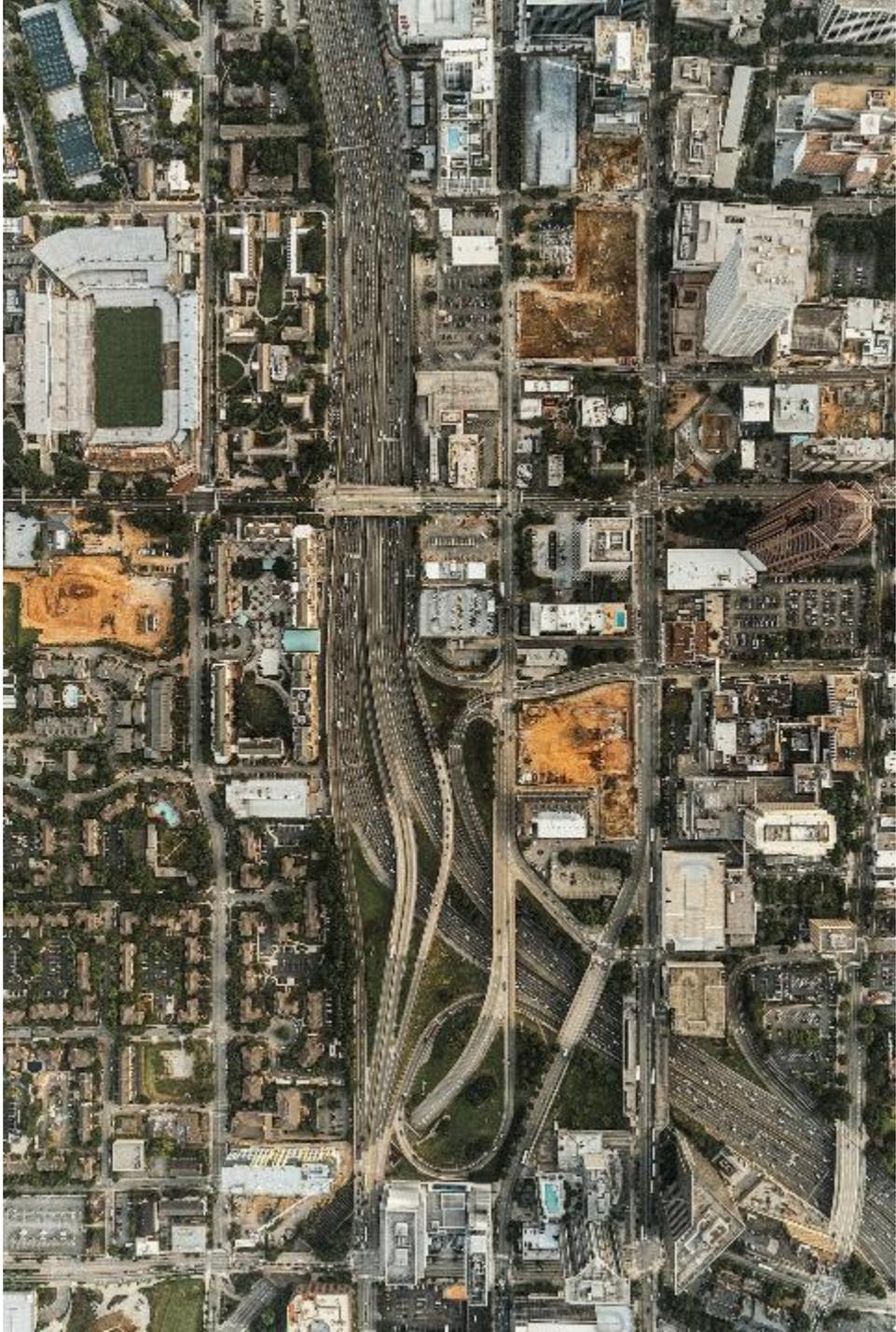


Conclusion

- ▶ Lowering metering rates when the merge point is congested, and especially if there is also spare storage on the ramp, resulted in freeway queue reduction and overall delay reduction
- ▶ This suggests throughput was increased, which is our primary goal



Questions?





Spotlight Presentation:

RITIS Signal Analytics to Improve Traffic
Signal Timing

Ian Newman

Metropolitan Washington Council of Governments (MWCOCG)



Metropolitan Washington
Council of Governments



■ ■ PROBE DATA
■ ■ ANALYTICS SUITE

User Feedback Session, Q/A & Wrap Up



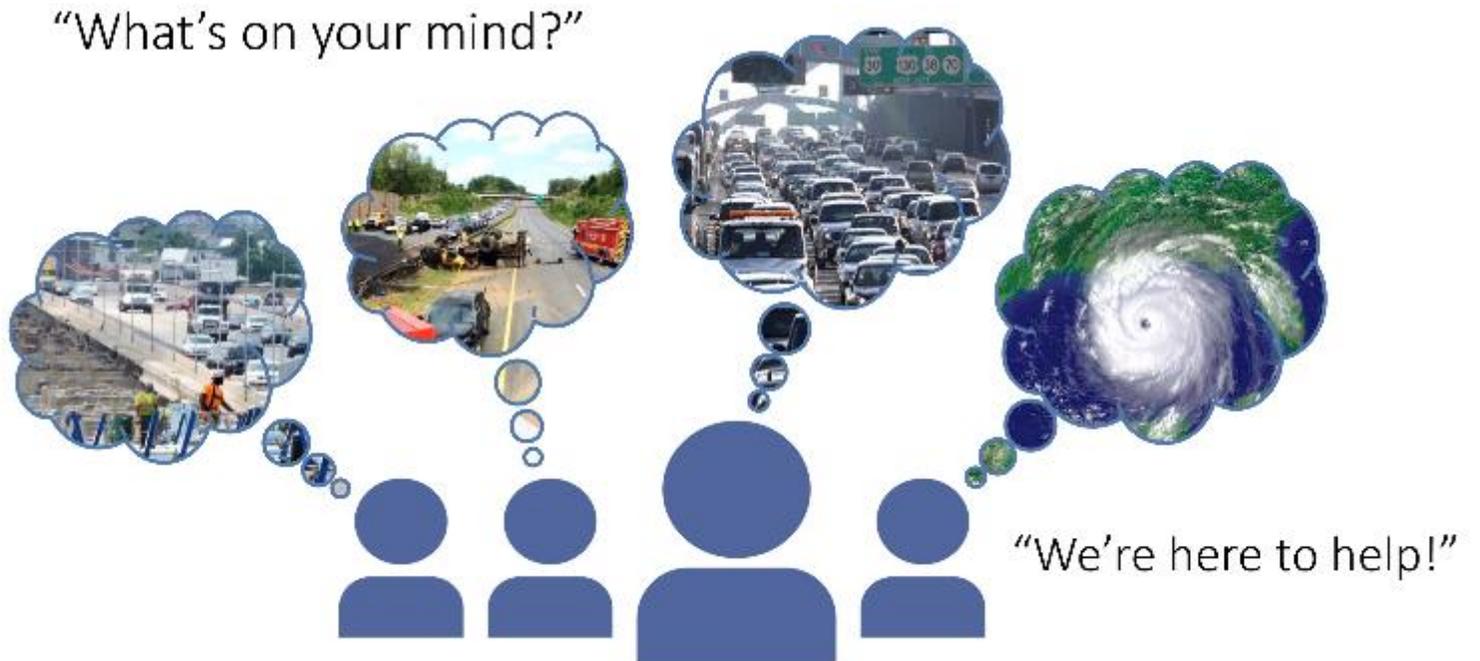
Michael Pack
Director
UMD CATT Lab



Jesse Buerk
Associate Director, Office of Capital Programs
DVRPC
RITIS User Group Co-chair

We want to hear from you!

- All features and functionality are driven by state/MPO users.
- Next Enhancement Group meeting is Tuesday, December 9th.
- You are welcome to join any of our User Groups / Working Groups / Listening Sessions to brainstorm/define these new features and functionality.
- You can also type your comments to us today either in the Q&A box or with an email to support@ritis.org



Agency Input – Polling and Open Discussion

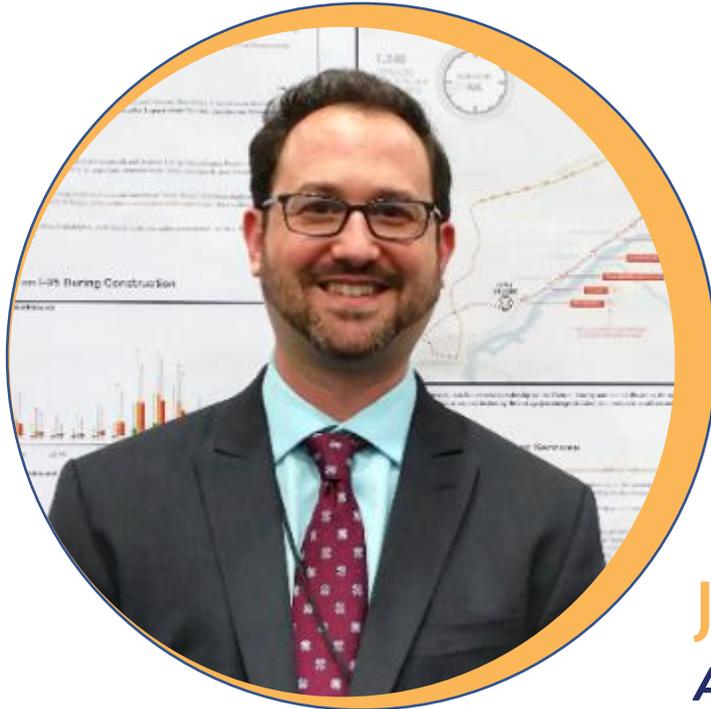
Please type your answer under the question in the pop-up box.

Poll –

1. Is there any topic you would like to see added to a future User Group meeting?
2. Please provide detailed feedback on new features/capabilities you would like to see built out in the future.



Wrap Up

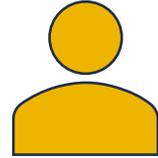


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Questions?



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