RITIS User Group

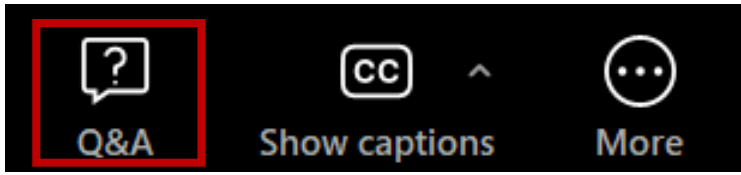
RITIS User Group Web Meeting

October 3, 2024

In collaboration with THE EASTERN TRANSPORTATION COALITION

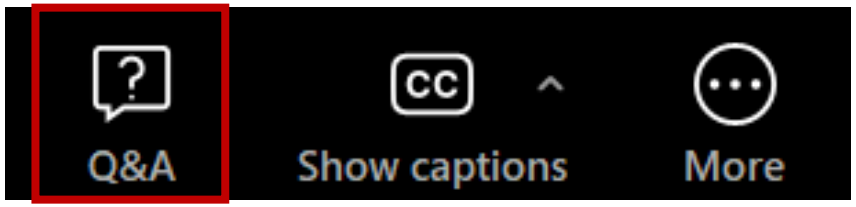
Welcome!

- 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 Esther directly via email (ekleit@kmjinc.com)
- Please use the **Q&A box** for questions to the presenters. The **Chatbox** is not available to participants.

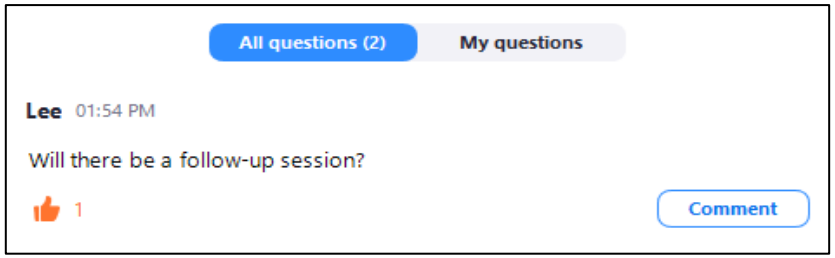


Asking Questions in the Q&A Box

- 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**

Upcoming RITIS Events!

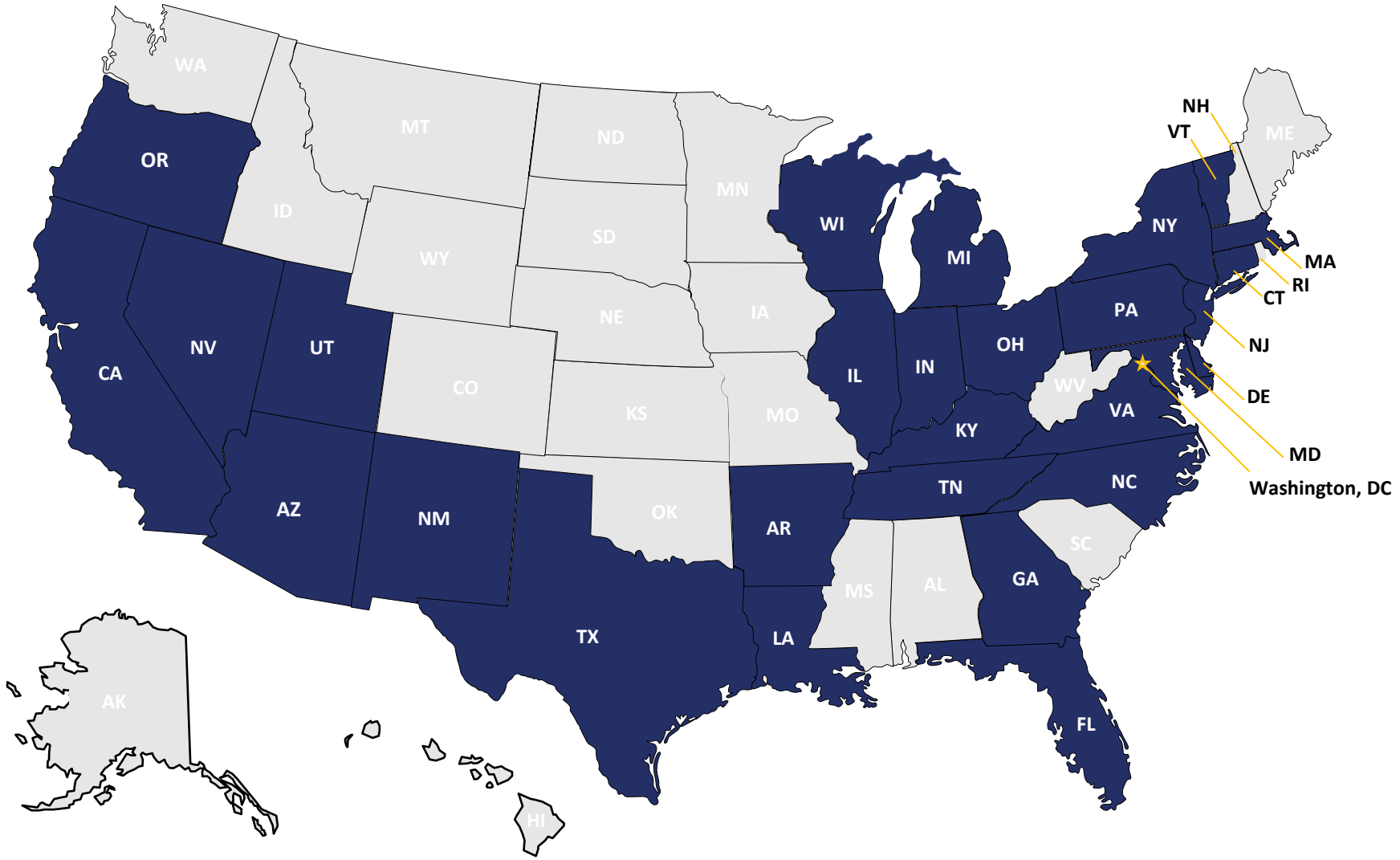
Nicole Forest
The Eastern Transportation Coalition
TSMO Program Associate

Event	Date
RITIS User Group Web Meetings	• February 6, 2025 • May 1, 2025
RITIS Workshop: Using Probe Data Analytics for Congestion Management Process Reports	February 25, 2025

Welcome & Introductions

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

Welcome to our Meeting Participants



39 States are participating in today's virtual event!

- DOTs
- MPOs
- Transportation Authorities
- Federal Agencies
- Local Agencies
- Universities

Today's Meeting

RITIS Events Update Welcome & Introductions	Nicole Forest, The Eastern Transportation Coalition Jesse Buerk, DVRPC & RITIS User Group Co-chair
Spotlight Presentation: I-24 Smart Corridor: Using RITIS to Build Performance Management Dashboards	Patrick Jacks, Arcadis
Status of Enhancements & Major Updates to RITIS tools	Michael Pack, UMD CATT Lab
RITIS Product Enhancement Working Group Update & Future Enhancements	Bob Frey, Massachusetts DOT RITIS Product Enhancement Working Group chair
User Feedback Session & Wrap Up	Michael Pack & Jesse Buerk

Today's Speakers

Michael Pack
UMD CATT Lab
Director

Patrick Jacks
Arcadis
Management Consultant

Bob Frey
Massachusetts DOT
Director of Project-Oriented Planning

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

I-24 Smart Corridor: Using RITIS to Build Performance Management Dashboards

Patrick Jacks
Management Consultant
Arcadis

ARCADIS

TDOT Department of Transportation

24 smart CORRIDOR

RITIS User Group Meeting

October 3, 2024

ARCADIS

I-24 Smart Corridor

Agenda

- Mission and Goals
- Project Phases
- Lane Control System (LCS)
- Variable Speed Limits (VSL)
- Project Goals
- RITIS on I-24 SC
  - RITIS KPIs
  - RPA
  - API

Mission & Goals

TDOT Mission:

*To provide a **safe and reliable transportation system** that supports economic growth and quality of life.*

I-24 Smart Corridor Mission:

*To improve the **safety and reliability of all travel** along the corridor through the proactive management of intelligent and connected infrastructure, and the formation of strong operational partnerships between local and state agency stakeholders.*

I-24 Smart Corridor Goals:

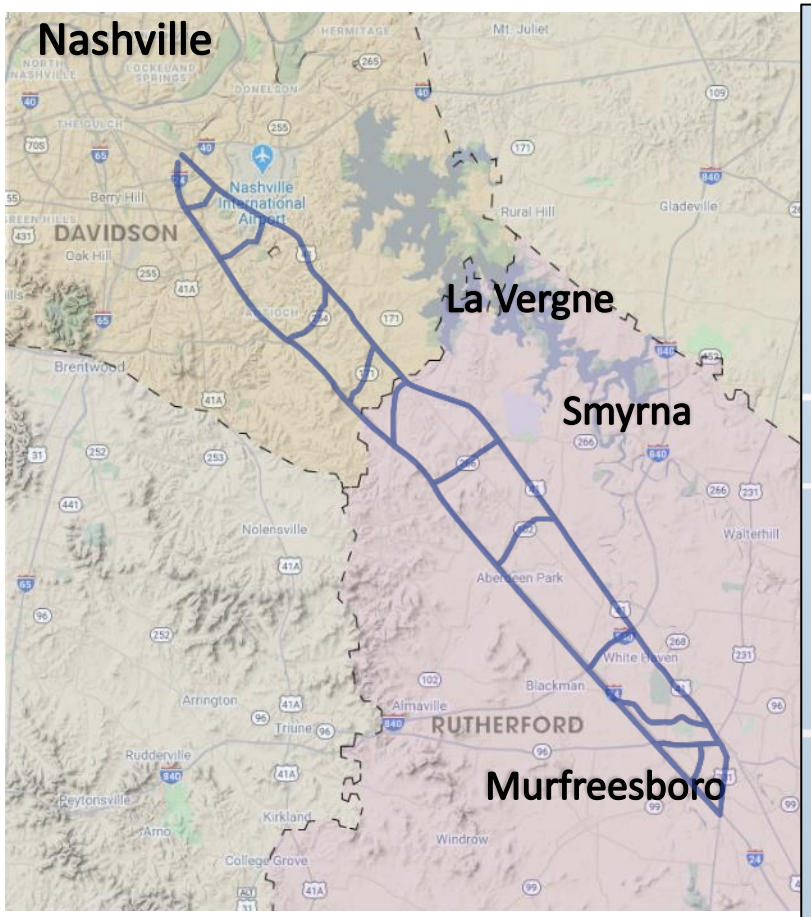
Goal 1: Increase Travel Time Reliability

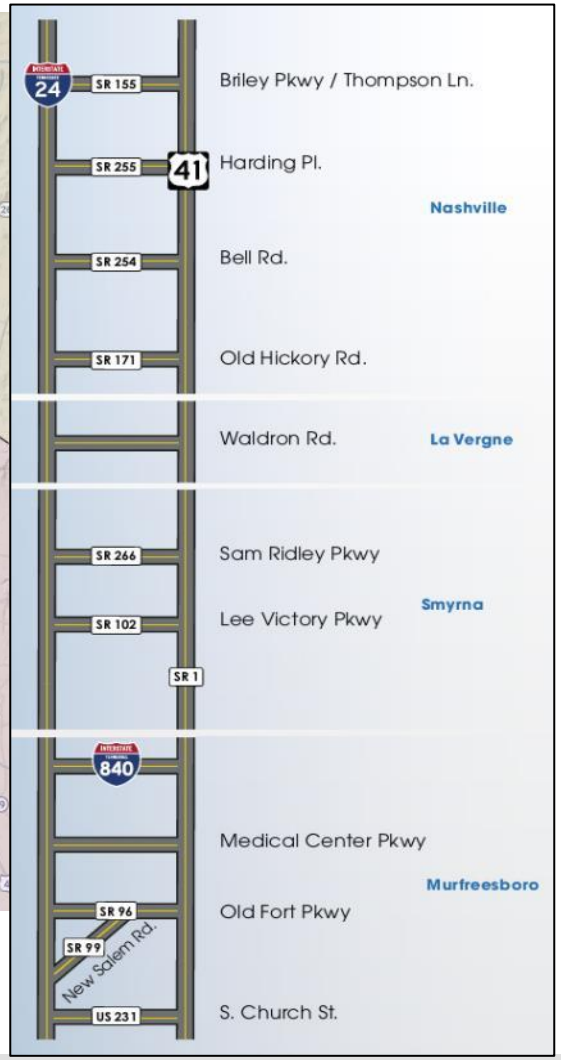
Goal 2: Increase Mobility of all Modes

Goal 3: Reduce the Concentration of Crashes

Goal 4: Develop Agency Coordination

I-24 SMART Corridor Phase 1





Length: 94 Total Miles (29 Miles along I-24)

Footprint:

- I-24 from I-440 to SR-231
- US 41 from I-24 to SR-231
- Various connector routes

Phase 1

- **Scope of Work:**
  - Interchange ramp improvements along I-24
  - Roadside Dynamic Message Signs (DMS) along I-24
  - Connected vehicle infrastructure – Dedicated Short Range Communication (DSRC) devices
  - Upgraded signal system and signal timing
  - Emergency pull-offs along I-24
- **Let to Contract:** October 2018
- **Contractor:** Stansell Electric

I-24 SMART Corridor Phase 2

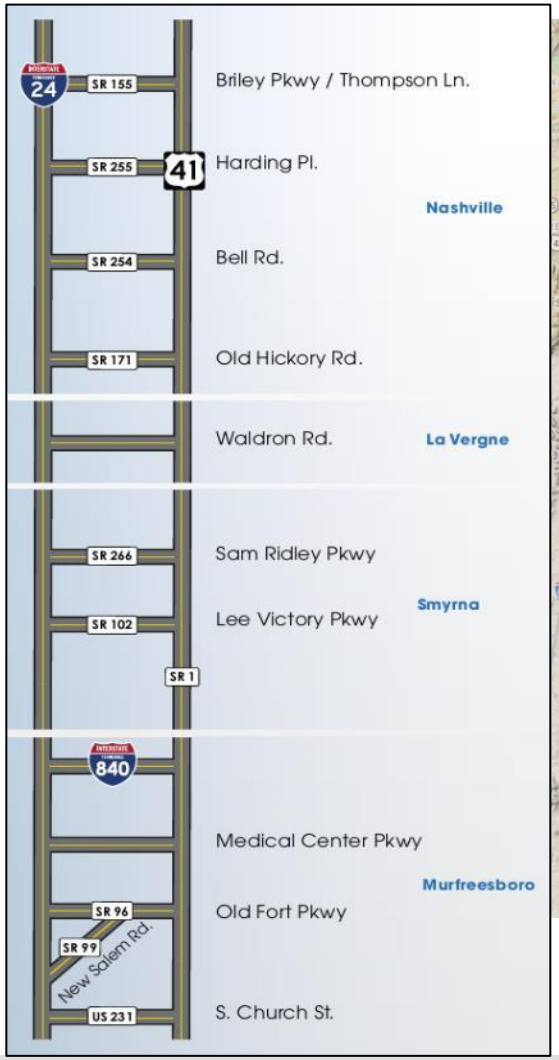
Length: 94 Total Miles (29 Miles along I-24)

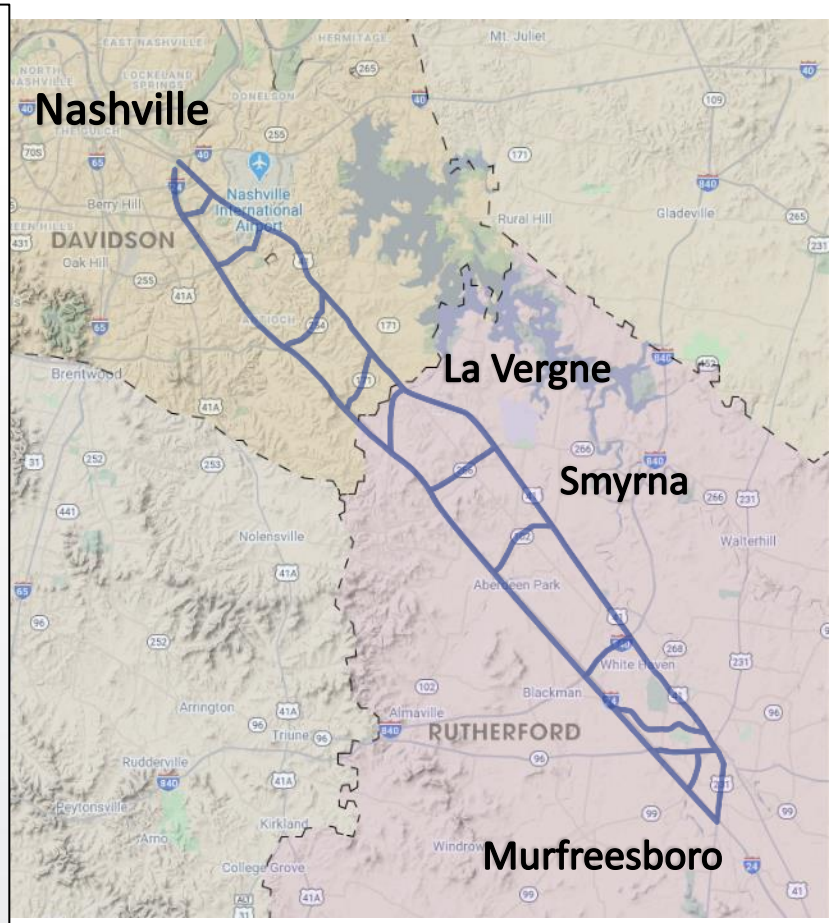
Footprint:

- I-24 from I-440 to SR-231
- US 41 from I-24 to SR-231
- Various connector routes

Phase 2

- **Scope of Work:**
  - Overhead DMS for Active Traffic Management (LCS and VSL) on I-24 between I-440 and SR-102
  - Upgraded Interstate Fiber Communications
  - Traffic Signal upgrades: radar and video detection
  - Implement Active Traffic Management (Arterial & Freeway)
- **Let to Contract:** October 2019
- **Contractor:** Stansell Electric





Lane Control System (LCS)

- Compliance with Red and Yellow X and Green Arrow
- Active Lane Management
- Maintain Traffic Flow around traffic incident
- Reduce Driver Frustration
- Buffer Zone for First Responders
- Improved Incident Clearance Time
- Reduced Delay

Variable Speed Limits (VSL)

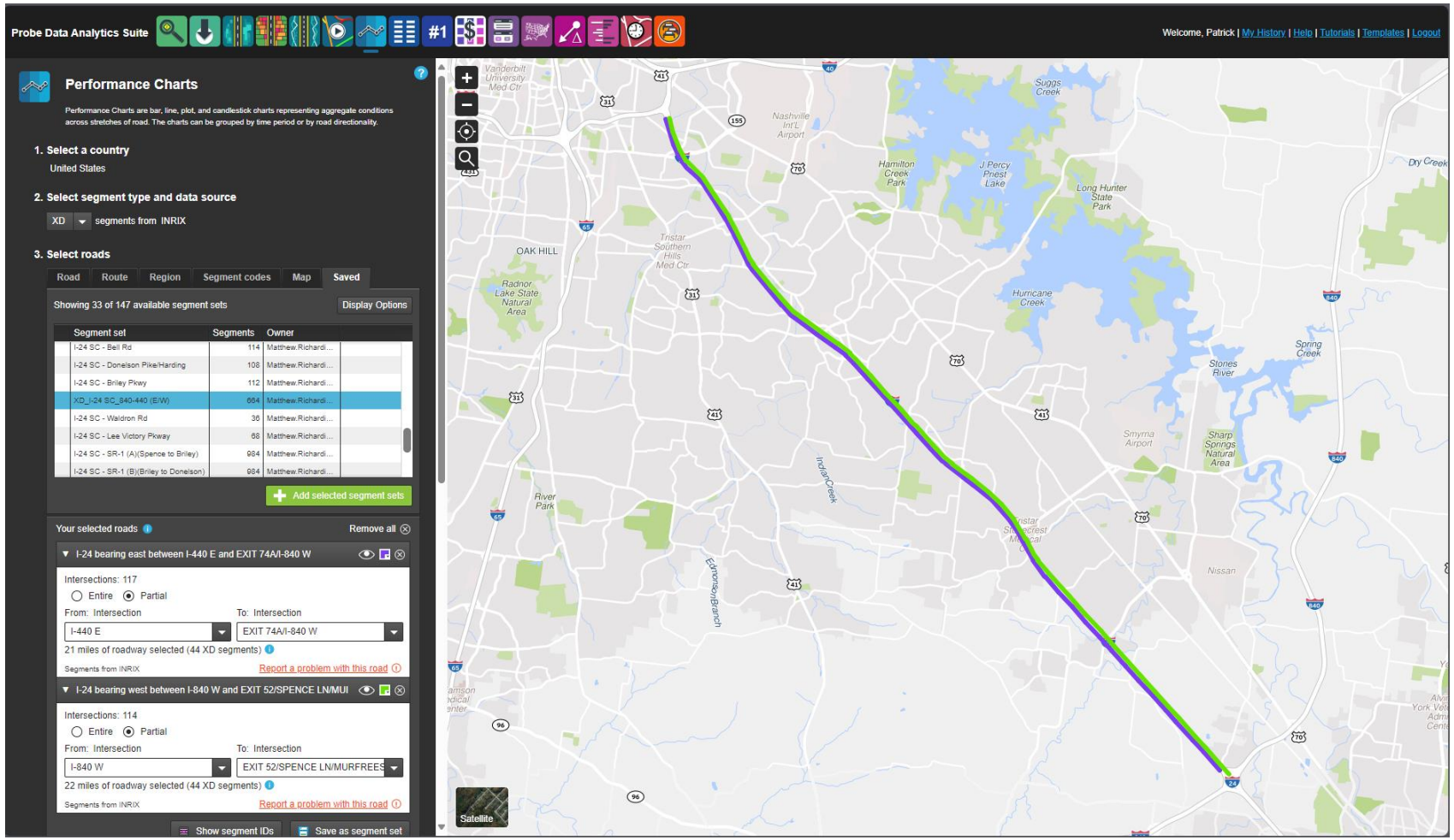
- Regulatory not Advisory Speed Limit
- Advance Warning of Recurring and Non-Recurring Congestion
- Speed Harmonization
- Slow is Smooth, Smooth is Fast
- Work Zone Safety

Project Goals

- **TDOT Community Relations Division developed a campaign to share information with the public.**
- **Goals:**
  - **Increase Safety**
    - Reduce Secondary Crashes due to incidents occurring in the congestion.
  - **Increase Travel Time Reliability**
    - Standardize the commute time.

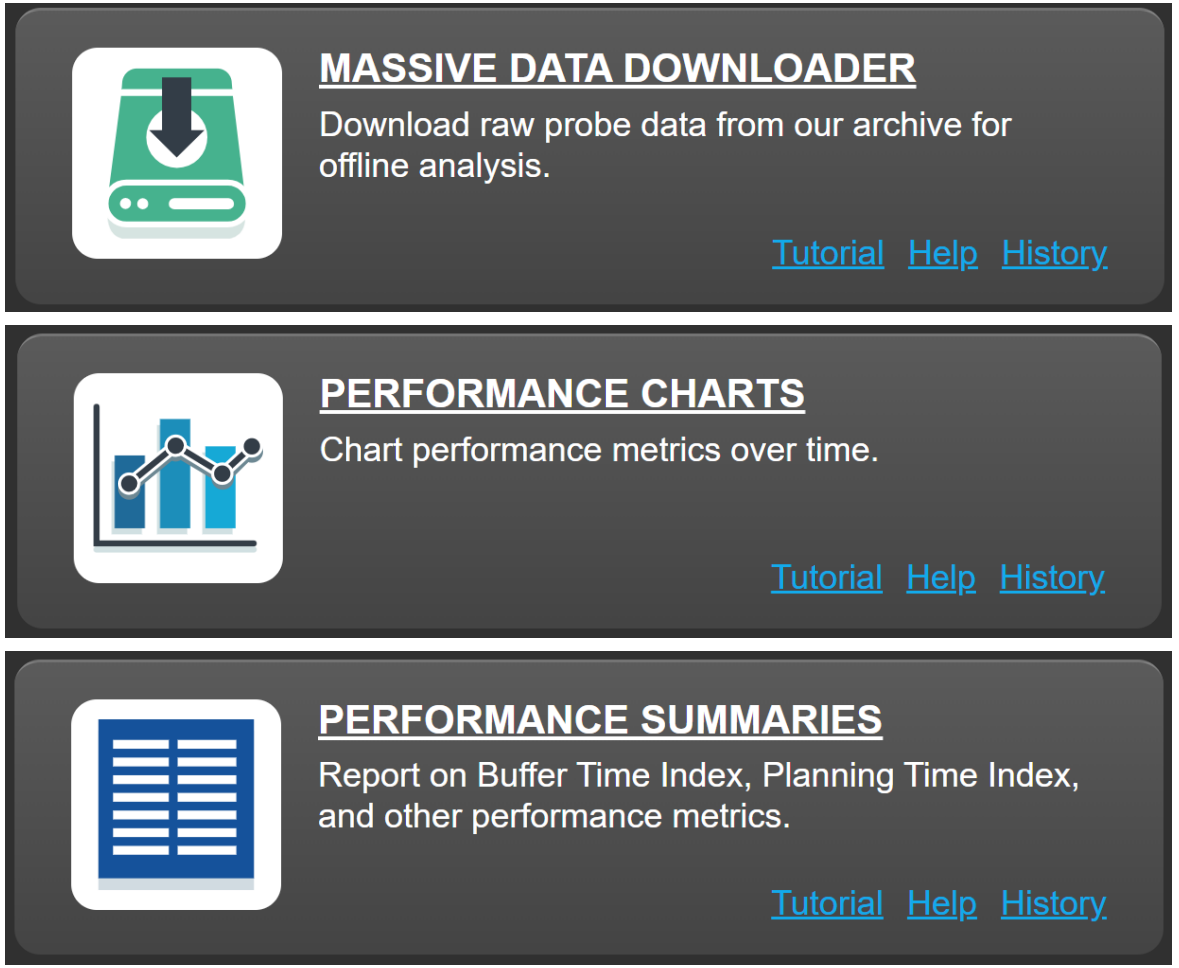
RITIS for I-24 SC

- **RITIS is used to capture key performance metrics such as:**
  - Travel Time
  - Travel Time Index
  - Planning Time
  - Planning Time Index
  - Buffer Time Index
  - Speed
  - User Delay



RITIS for I-24 SC

Utilizing tools from the **RITIS PDA Suite** makes it **easy** to **capture critical information** about the **corridor's health**.

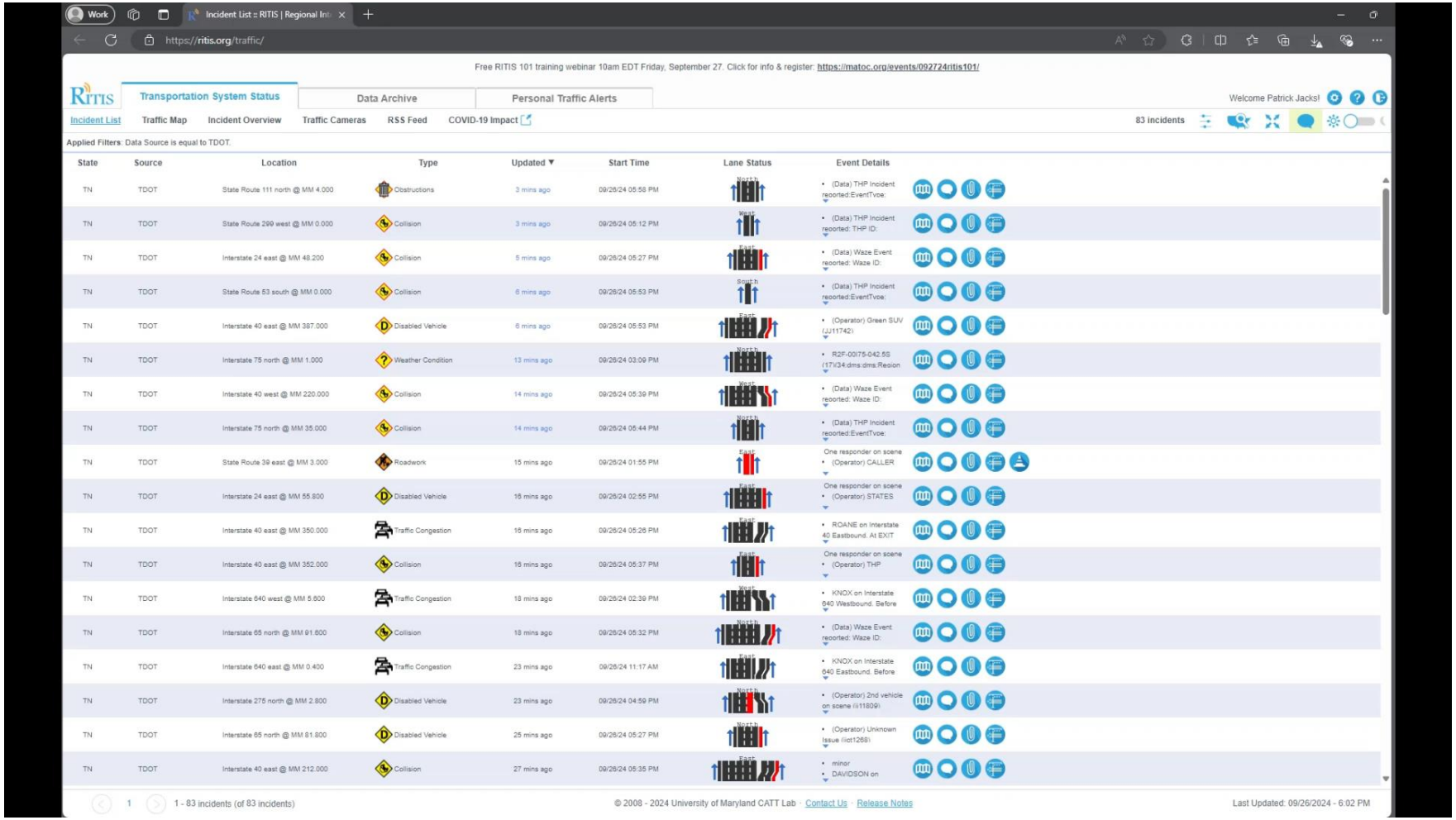


RITIS for I-24 SC

The **I-24 SC** team can keep a **holistic view** of the project by integrating **RITIS data**, crash data, maintenance data, and event monitoring data into a **dashboard**.

RITIS for I-24 SC

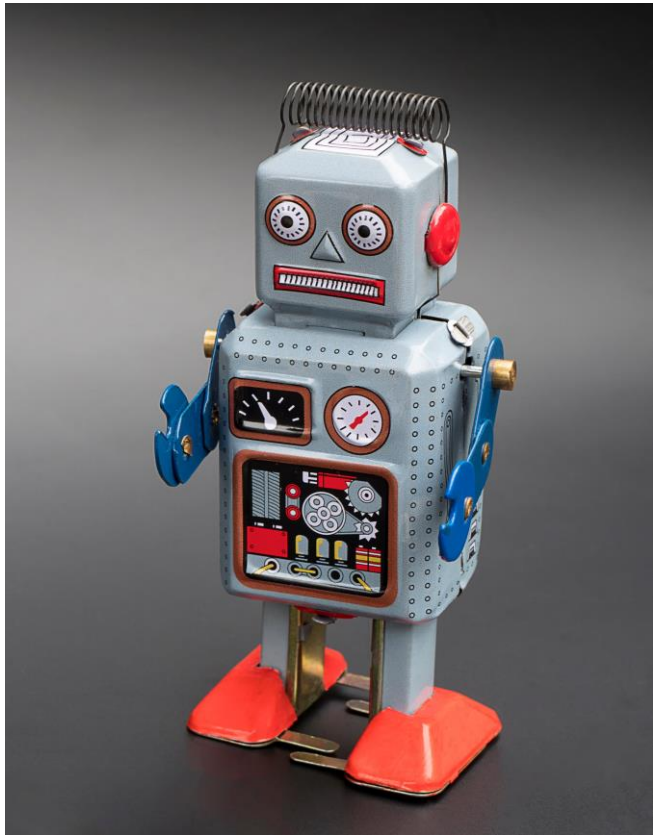
I-24 SC team started using **RPA (Robotic Process Automation)** to **automate** monthly data extractions from **RITIS.**



RITIS for I-24 SC

What is RPA?

Robotic Process Automation is use of software bots to automate repetitive, rule-based tasks across various applications, improving efficiency and accuracy in workflows.



RITIS for I-24 SC

What is RPA?

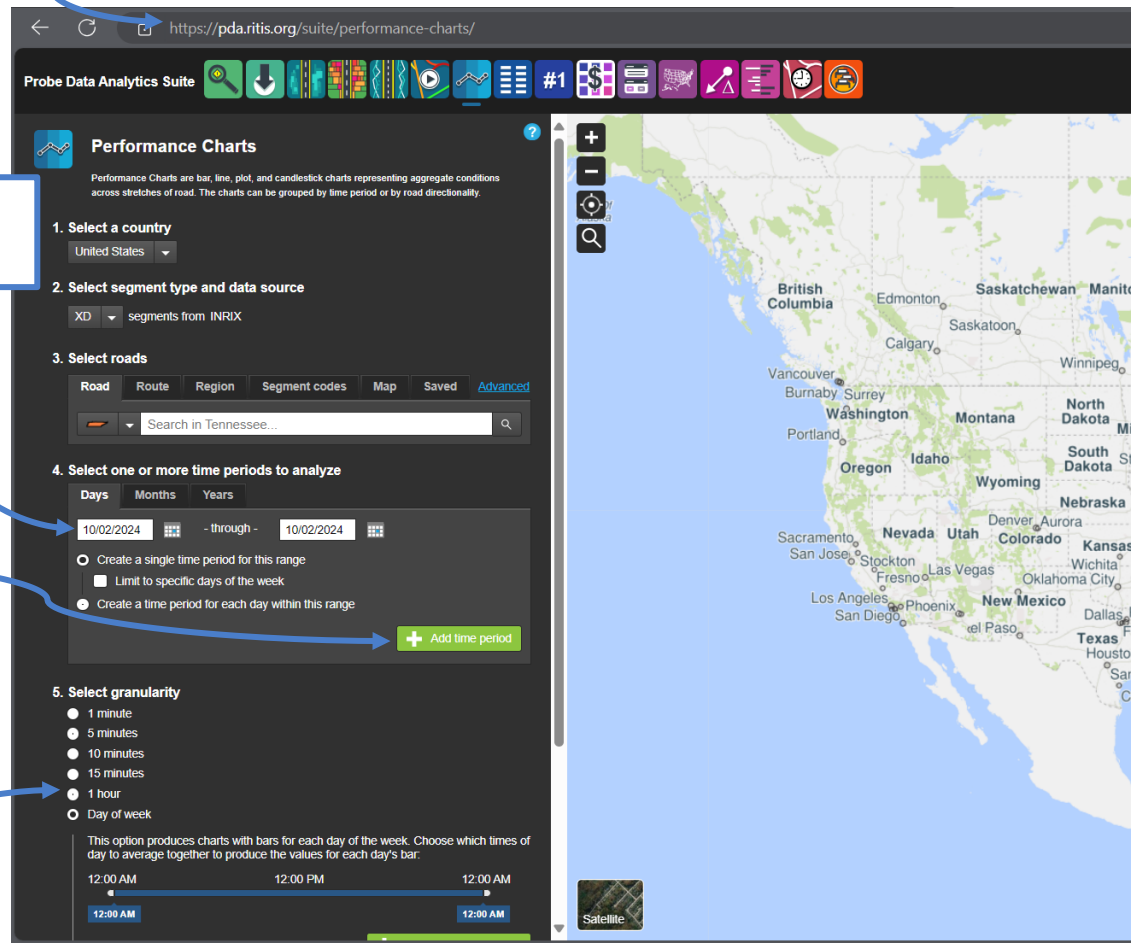
RPA uses **rules** to point to specific **User Interface elements** on the application to **execute** specific tasks.

Populate text box Id ‘1234’ with
https:///pda.ritis.org/suite/performance-charts
Send keystroke ‘{Return}’ to foreground

Wait 2 seconds
Send Left Click event at {x:386, y:251} Screen1

Send Left Click event at element div title ‘Add time period’

Send Left Click event at element div is ‘5432’



RITIS for I-24 SC

RPA can…

Save

20% to **50%**

of the time spent on repetitive, manual tasks, depending on the complexity and volume of the processes being automated

Without RPA	With RPA
12 Routes	12 Routes
2 Resources	**0 Resources**
1.5 Hours	**6 Minutes**
During Peak Hours	**During Off Peak Hours**

RITIS API

Now the **I-24 SC** team is utilizing the **RITIS API** to pull **Massive Data Downloader** reports as well as **Performance Metrics** reports to further **streamline** the data compilation process.

RITIS

Expand / Collapse All

Probe Data Analytics API 2.5.1 OAS3

Version

PDA API released September 11, 2024

Introduction

Welcome to the RITIS Probe Data Analytics (PDA) Application Programming Interface (API). This API allows authorized users to submit queries a
protocols instead of the web-based PDA interface.

The PDA API provides three major functions:

1. **Segment Search**: Resolving geographic and road designations into specific TMCs for submitting job requests.
2. **Bottleneck data requests:** Submitting queries to identify road clusters of road segments containing the most significant congestion (recur
3. **Job submission and result retrieval:** Submitting queries to obtain raw aggregated probe data, performance metrics, or user delay costs

Background

APIs are very technical interfaces intended to be used by those with a software development background. If you are unfamiliar with APIs in gene
and uses, including several practical examples:

- https://www.freecodecamp.org/news/apis-for-beginners-full-course/ (video: 2:20:32)

  This video covers everything about APIs, starting with 'what are they' through building interactions with services like Spotify and Twilio, GE
  operations.

If you have some familiarity with programming using APIs and just need a refresher on the data format used to send and receive information, you

- https://www.w3resource.com/JSON/introduction.php (web page)

  There is good general coverage of JSON on the first page, and if you want deeper coverage you can learn more in the later pages of this t

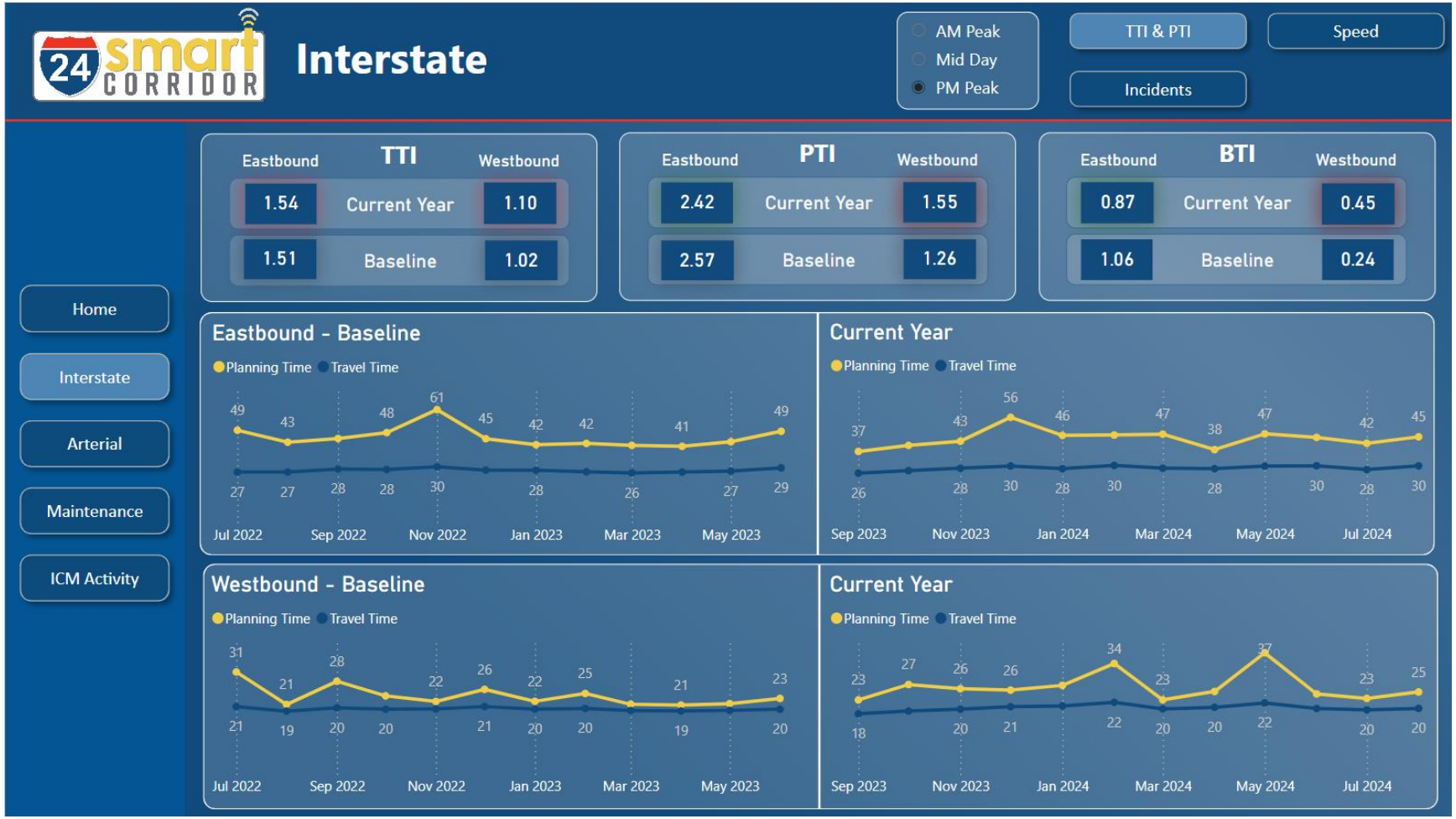
Most PDA API users use Python or Java or another programming language to automate their requests. While GET requests consist of a single q
parameters using precise syntax. Many API users use a specialized API Interaction tool to draft their API requests, then use modified versions of
with a free tier that enables you to create, edit, and review API submissions and responses using GET and POST. Postman is a full-featured syst
you install and use Postman and Insomnia for both GET and POST requests:

- https://docs.insomnia.rest/insomnia/get-started (web page)
- https://learning.postman.com/docs/getting-started/overview/ (web page)

```python
# Import necessary libraries
from datetime import datetime, timedelta

# Sample data representing travel time records
travel_data = [
    {"xd_number": 101, "tdot_segment": "I-40", "start_time": "2024-09-25 08:00", "end_time": "2024-09-25 08:45"},
    {"xd_number": 102, "tdot_segment": "I-65", "start_time": "2024-09-25 09:00", "end_time": "2024-09-25 09:30"},
    {"xd_number": 103, "tdot_segment": "I-24", "start_time": "2024-09-25 10:00", "end_time": "2024-09-25 10:50"},
]

# Function to calculate travel time in minutes
def calculate_travel_time(start_time, end_time):
    start = datetime.strptime(start_time, '%Y-%m-%d %H:%M')
    end = datetime.strptime(end_time, '%Y-%m-%d %H:%M')
    travel_time = (end - start).total_seconds() / 60  # Convert seconds to minutes
    return travel_time

# Function to process travel data and return a summary
def process_travel_data(travel_data):
    summary = []

    for record in travel_data:
        xd_number = record['xd_number']
        tdot_segment = record['tdot_segment']
        start_time = record['start_time']
        end_time = record['end_time']

        # Calculate travel time for each record
        travel_time = calculate_travel_time(start_time, end_time)

        # Store the processed data in a summary list
        summary.append({
            "XD Number": xd_number,
            "TDOT Segment": tdot_segment,
            "Travel Time (minutes)": travel_time
        })

    return summary

# Get the processed travel data
travel_summary = process_travel_data(travel_data)

# Display the summary in a clean format
def display_summary(summary):
    print(f"{'XD Number':<10} {'TDOT Segment':<15} {'Travel Time (minutes)':<20}")
    print("-" * 45)
    for record in summary:
        print(f"{record['XD Number']:<10} {record['TDOT Segment']:<15} {record['Travel Time (minutes)']:<20.2f}")

# Run the display function to show the travel summary
display_summary(travel_summary)
```

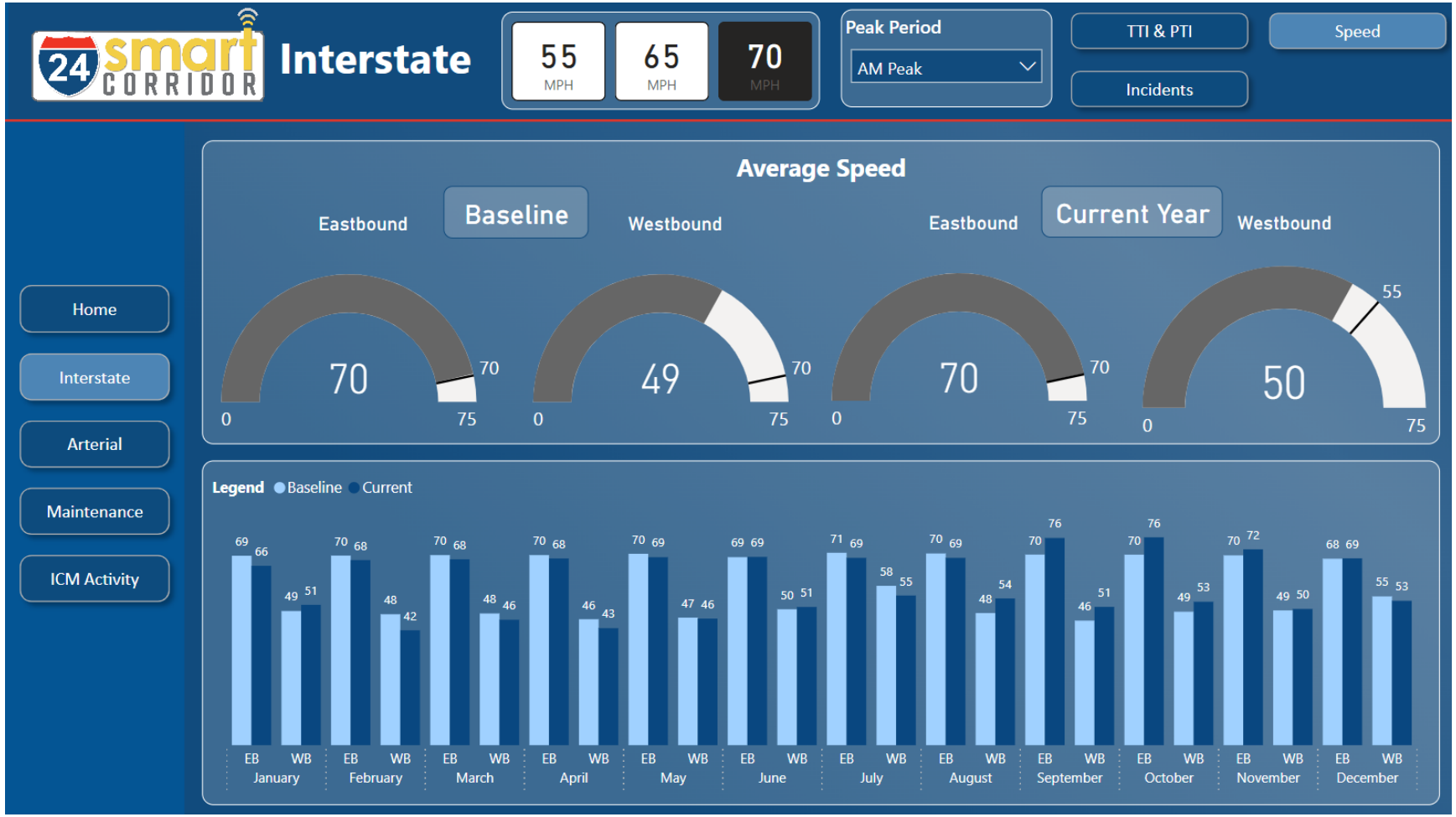
RITIS for I-24 SC

I-24 SC Dashboard



RITIS for I-24 SC

I-24 SC Dashboard



RITIS for I-24 SC

What's next?

Who's next?

Lee Smith, TDOT Traffic Operations Division, Technical & Program Advisor
lee.j.smith@tn.gov

Amy Bailey, TDOT Traffic Operations Division, TSMO Manager
amy.bailey@tn.gov

Matt Richardi, Arcadis, I-24 SC ICM Coordinator
matthew.richardi@arcadis.com

Patrick Jacks, Arcadis, I-24 SC ICM Digital Lead
patrick.jacks@arcadis.com

Thank You!

RITIS | Probe Data Analytics suite

RITIS Product Enhancement Working Group Update & Future Enhancements

Michael Pack
Director
UMD CATT Lab

Bob Frey
Director of Project-Oriented Planning
Massachusetts DOT
RITIS Product Enhancement Working Group Chair

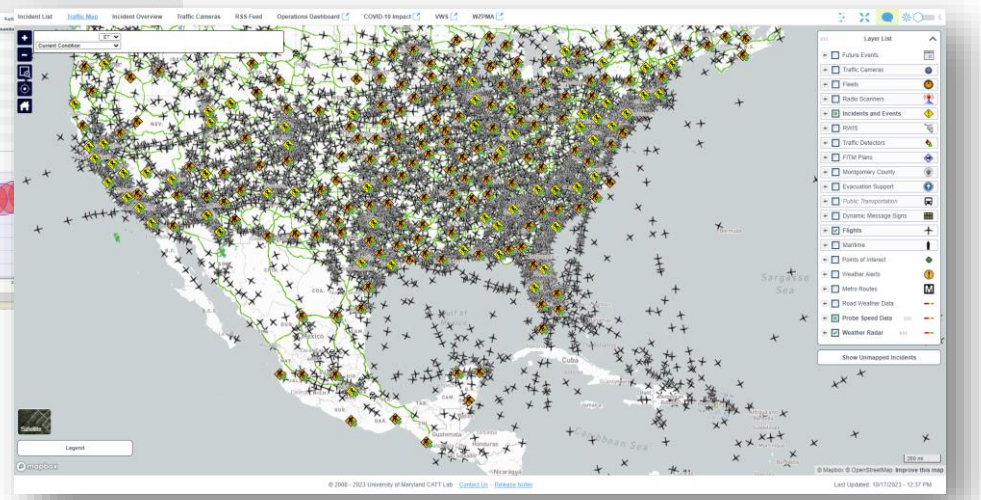
Things funded in the past

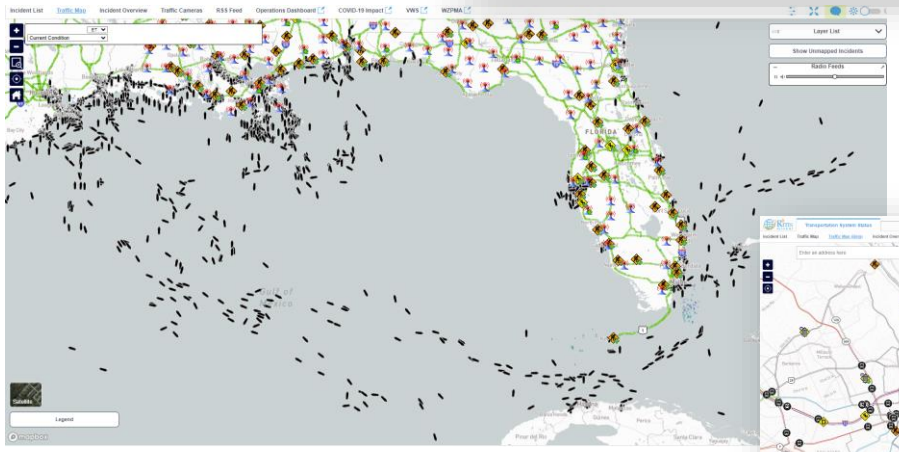
- Causes of Congestion
- Waze Enhancements
- Aerial Photography/Satellite view
- Speed tile layer options
- Road weather tiles
- Map Search
- Advanced Road Selection/routing in XDs
- Sharing of Dashboards
- Speed Bins Visualization
- Corridor Speed Graphs
- User Delay Cost
- Reporting Templates
- Signal Analytics
- Trip Analytics
- Travel Time Comparison
- Travel Time Delta Ranking
- Many, many more

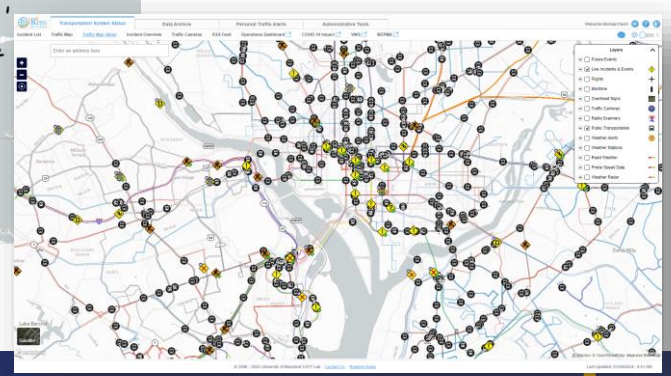
Things currently funded (outside of our group)

- Safety Analytics
- Custom percentiles
- Detour Analytics
- Maritime Traffic Integration
- Air Traffic Integration
- Mapping Modernization
- Real-time Transit scalability
- Trip Analytics Speed & Scalability
- Signal Analytics
- Energy Analytics (Partial)
- RITIS Tracker

>$11M







Costs & Review of Features

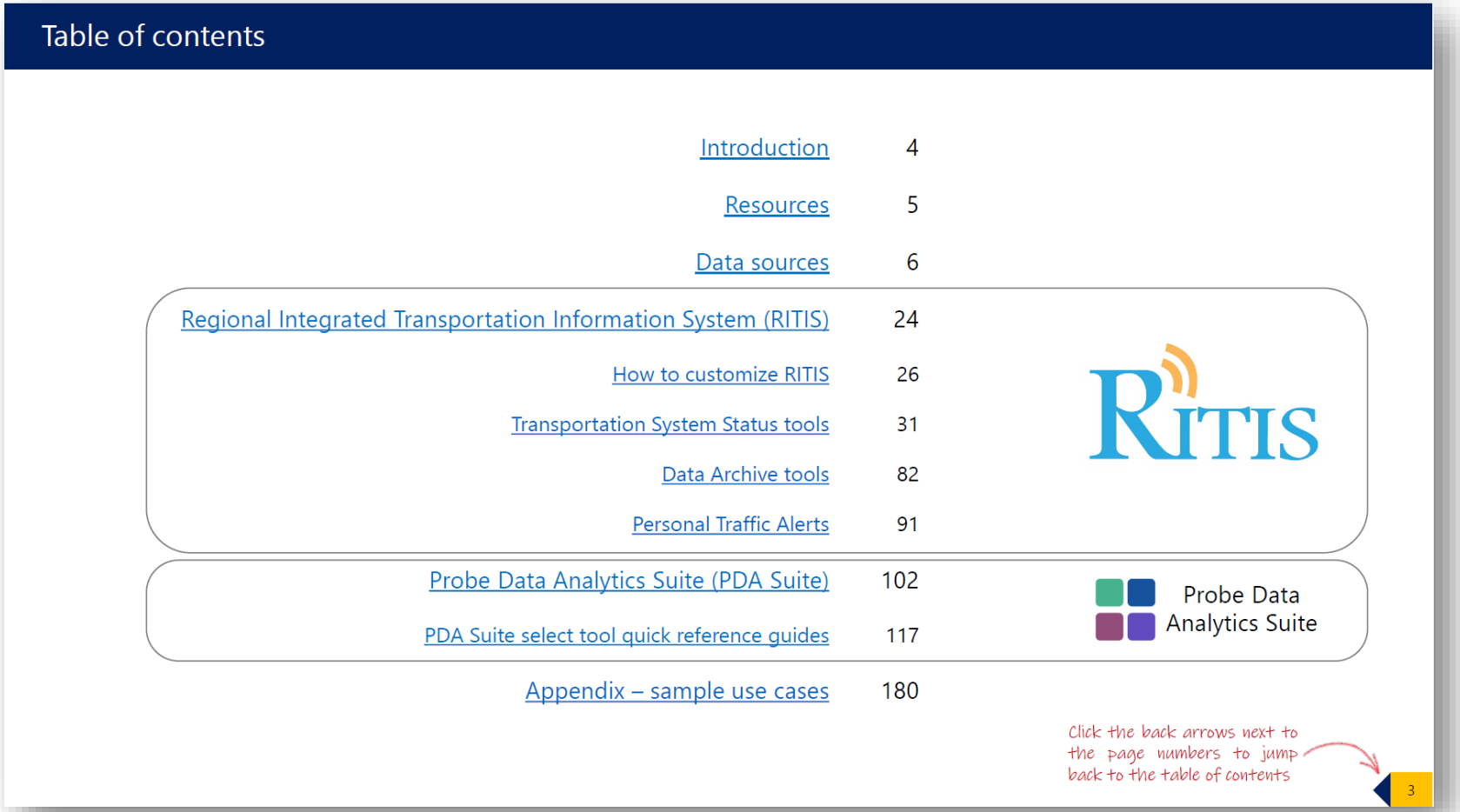
$92k

~$40k

Item	Estimated Cost	Notes
XD API Enhancements	$20k	Top pick. In dev.
Safety Analytics	$250k	Mostly funded.
Business use-case handbook	$15k	Top pick.
Automated Work Zone Reporting	$395k	Top pick. Scoping and design complete.
Mirror XD Selections + TMC Routing	$22k	Top pick.
Downloadable Volumes	$35k	Top pick.
Embedding Dashboards	$350k	Well defined
Advanced Time Selections	$245k	Well defined
AAR Queue Visualizations in EQT	TBD	
ROI Tool	TBD	Exploratory funding from a grant
PM3 Target Setting Support Tools	TBD	Needs more design. $$
Detour Analytics for disruptions	$$$	Partially funded by grant
XD Bottlenecks	$580k	High value, but long lead-time
Weather Overlays in Congestion Scans	$68k	Low-hanging fruit. Partial funding available.
XD in UDC Tool	$47k	
Energy & Emissions Analytics	$135k	Significant work already complete.

Status of Enhancements

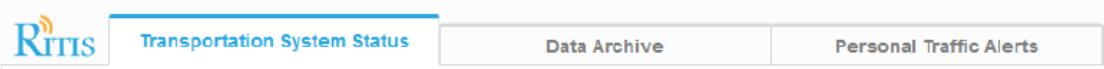
- RITIS Best Practices
  - Added to the tutorials page



RITIS portal – available tools

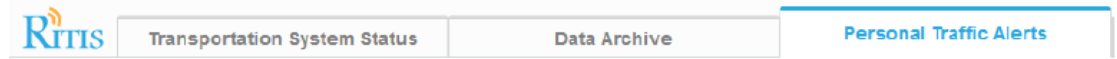
The RITIS Suite of Tools

The RITIS platform is equipped with an ever-growing suite of tools to help agencies operate their transportation network more efficiently in real time and to evaluate transportation performance over the long haul. These tools are used by transportation planners and operators alike to gather and visualize the information they need to improve decision-making. Listed below are tools commonly available in RITIS. *Some of these tools require additional data subscriptions, so you might not see all tools listed in your instance of RITIS.*



Transportation System Status: See real-time conditions on roadways

Incident List	A sortable list of incidents in your area, updated once per minute. Can be filtered on incident type and severity options that you choose.
Traffic Map	A traffic map showing real time traffic congestion, incidents, weather, and other critical information to help you monitor incident response in your area.
Incident Overview	A hybrid list/map view focused on active incidents.
Traffic Cameras	A camera-centric portal to select and view live CCTV traffic cameras in your area.
WZPMA	The Work Zone Performance Monitoring Application, which provides recent performance information on active work zones. *(Currently in beta).*



Personal Traffic Alerts: Receive messages when incidents or slowdowns occur.

View Current Subscriptions	View and edit your current list of personal traffic alert subscriptions
Subscribe to a New Incident Alert	Create a new incident alert subscription and receive a message when incidents occur in your area that meet your pre-defined criteria.
Subscribe to a New Speed Alert	Create a new speed alert subscription and receive a message when speeds on roads in your area slow to meet your pre-defined criteria.

Data Archive: Explore recent and historical data for trends and insights.

Event Query Tool	Search for individual incidents or generate reports showing the number and location of incidents across your area.
Detector Tools	Download and analyze traffic detector data from across your area and identify issues with detector health.
Probe Data Analytics	A comprehensive data visualization platform dedicated to gaining transportation insights from historical probe vehicle data from third-party providers.
NPMRDS Analytics	A more limited version of the Probe Data Analytics suite, using data from the National Performance Monitoring Research Data Set (NPMRDS).
Signal Analytics	Monitor the performance of traffic signals using trajectory-based probe data. *Separate data subscription required.*
Trip Analytics	Generate origin-destination analysis and route-based trip analysis using trajectory-based probe data. *Separate data subscription required.*

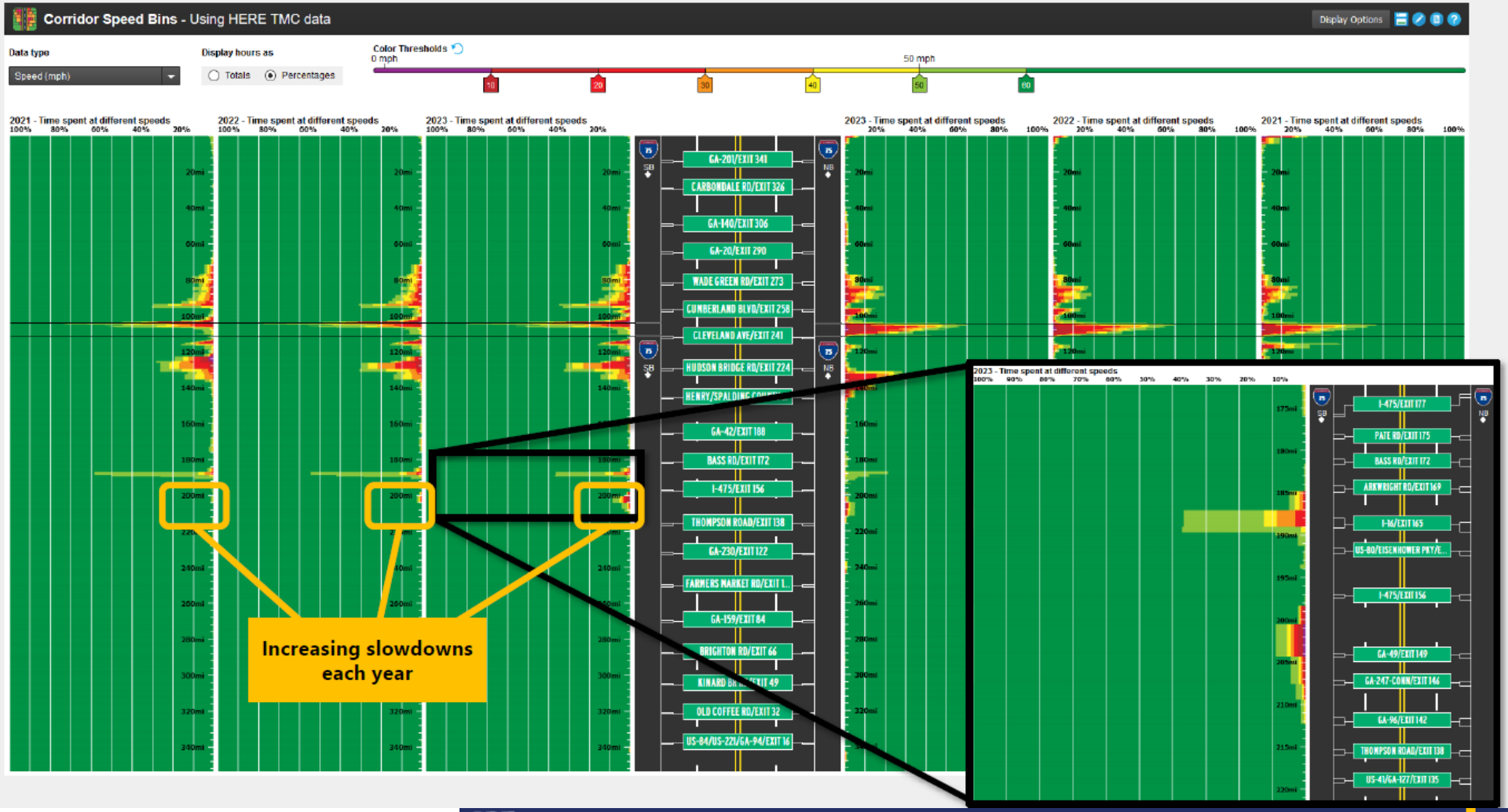
Use case: using Corridor Speed Bins to find locations of slowdowns or excessive speeding

Corridor Speed Bins is a good tool to use for determining the locations and intensity of speed-related driving behavior. The tool allows you to examine long stretches of road (such as the length of an entire interstate within a state) or zero in on specific areas of interest.

Identifying locations of recurring congestion

The following Corridor Speed Bin report shows the entirety of I-75 in Georgia, analyzing speeds over the course of one month. As one would expect, most of the slow speed readings are between exits 212 and 285, which bracket the greater Atlanta metropolitan area.

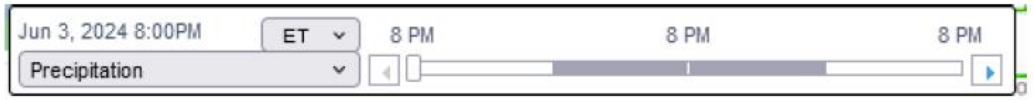
However, we also see clusters of low speeds between exits 142 and 167 in the Macon/Warner Robbins area. The congestion between I-475 and Thompson Road has been steadily increasing since 2021, as can be seen by comparing the three plots on the left.

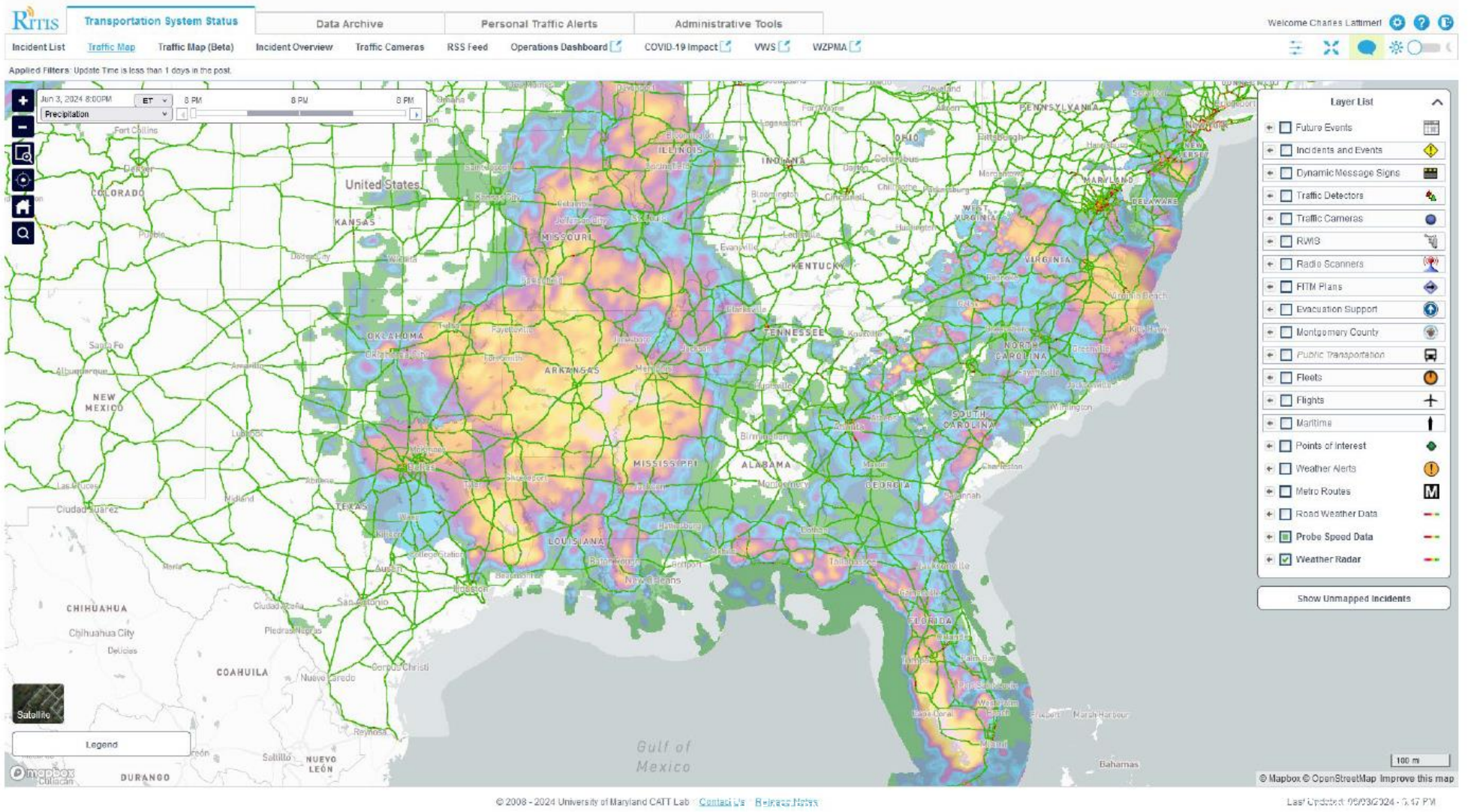


Transportation System Status – Traffic Map

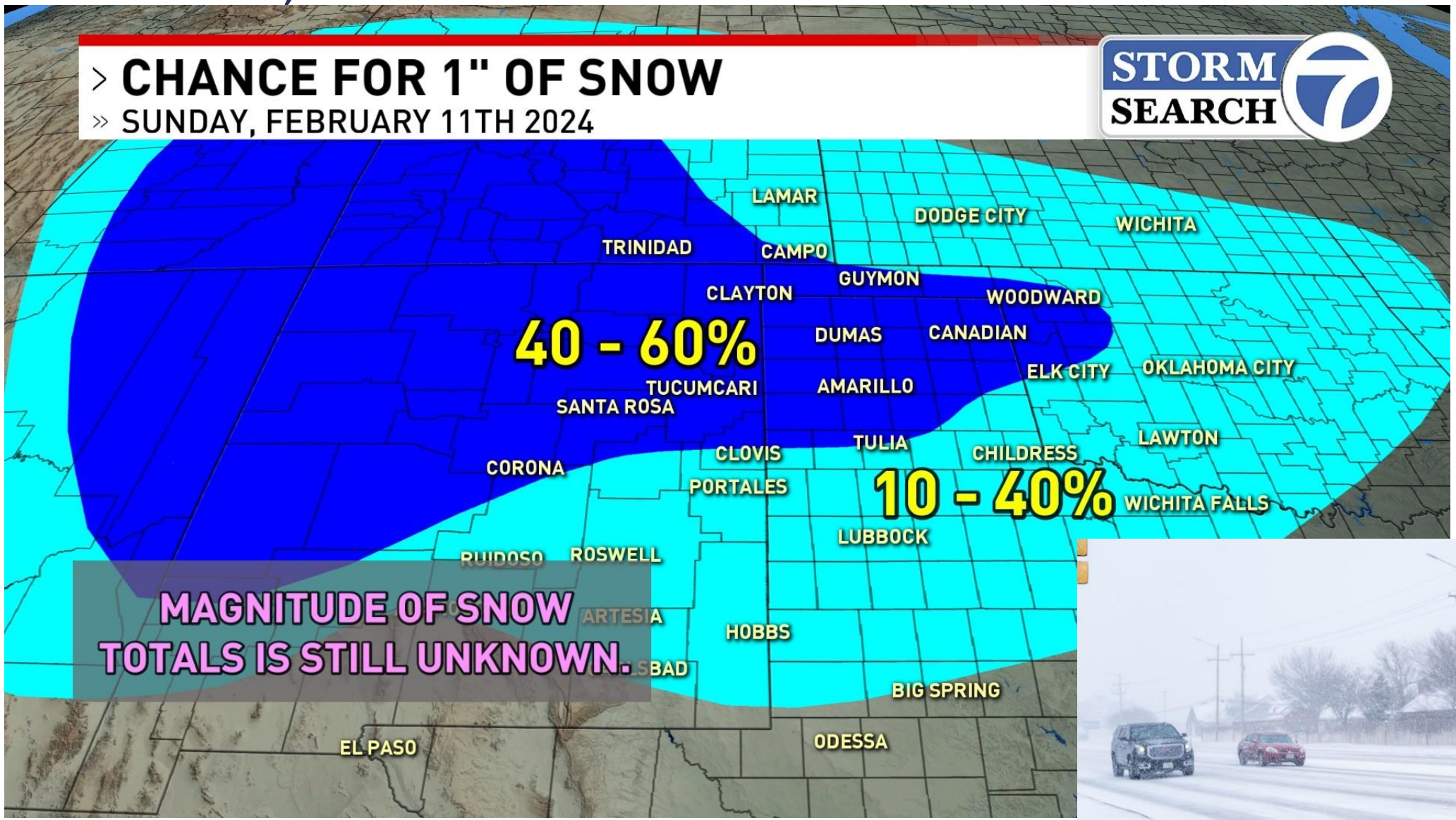
Weather Radar

The **Precipitation** menu shows forecast precipitation for the upcoming 48 hours. Click the ◀ ▶ buttons (or click on the time slider) to view forecast precipitation for future times.





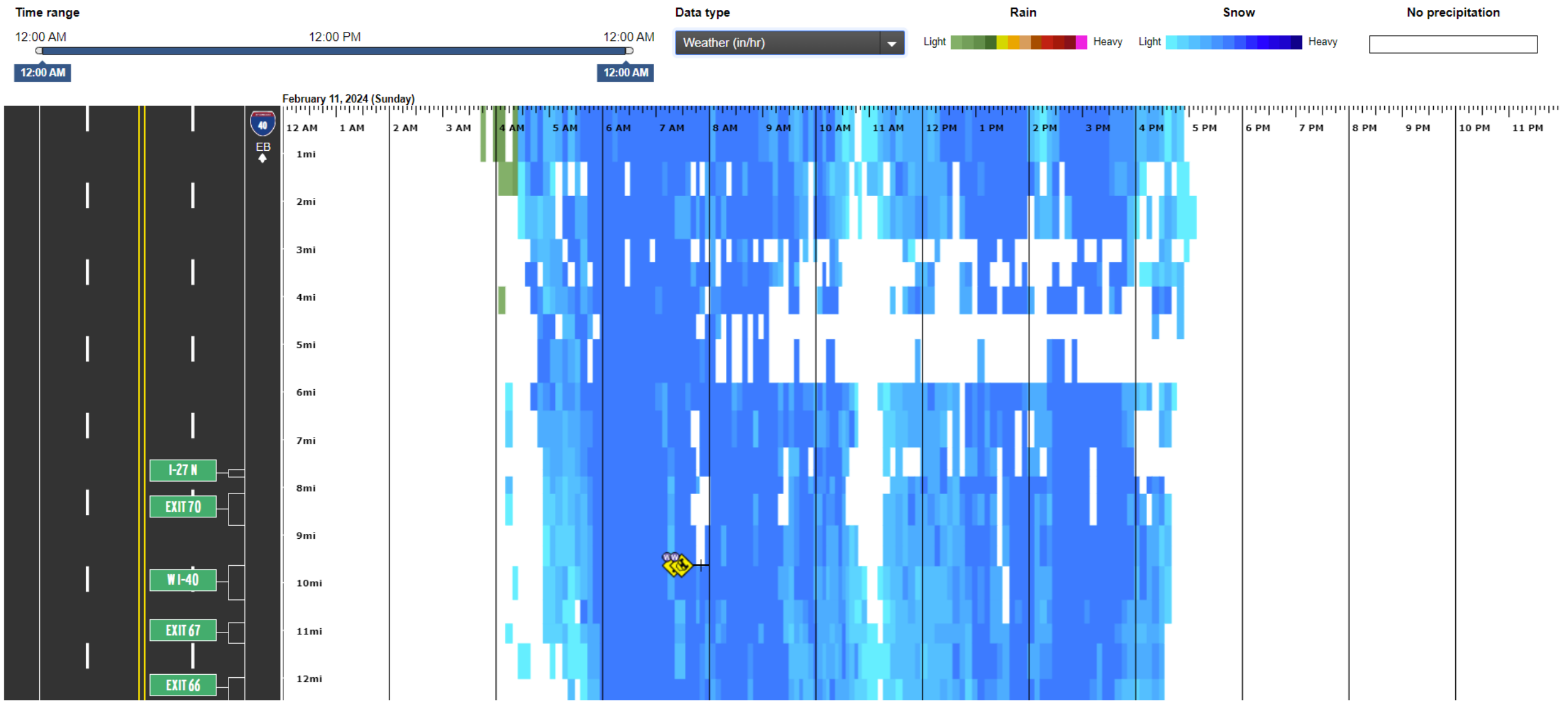
Amarillo, TX


CHANCE FOR 1" OF SNOW
SUNDAY, FEBRUARY 11TH 2024
STORM SEARCH 7
LAMAR
DODGE CITY
WICHITA
TRINIDAD
CAMPO
GUYMON
CLAYTON
WOODWARD
40 - 60%
DUMAS
CANADIAN
ELK CITY
OKLAHOMA CITY
TUCUMCARI
AMARILLO
SANTA ROSA
LAWTON
TULIA
CHILDRESS
CLOVIS
CORONA
PORTALES
10 - 40%
WICHITA FALLS
LUBBOCK
ROSWELL
MAGNITUDE OF SNOW
TOTALS IS STILL UNKNOWN.
ARTESIA
HOBBS
BAD
BIG SPRING
EL PASO
ODESSA

I-40 Snowfall & Congestion: Feb. 11, 2024

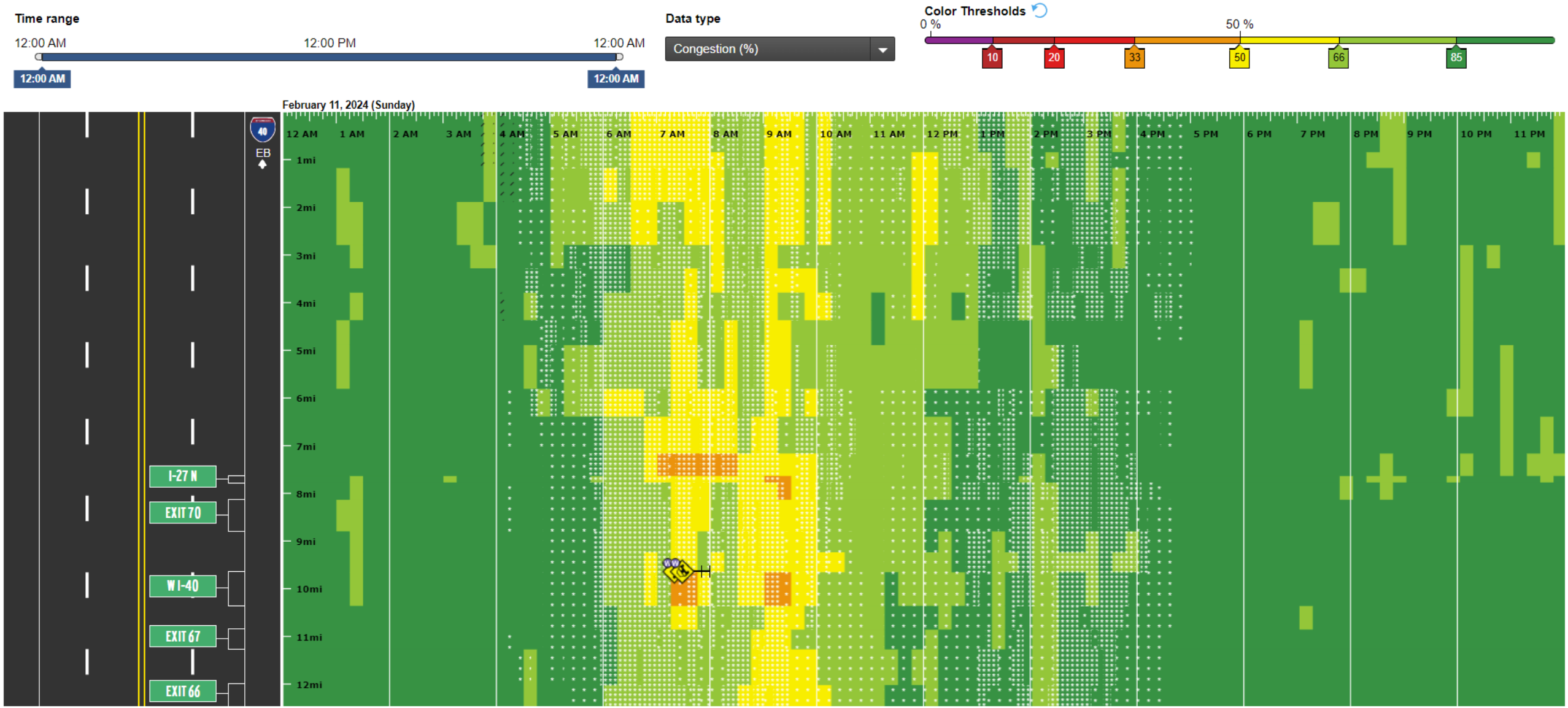
https://pda.ritis.org/suite/cscan/?uuid=e0834258-666b-422d-a6c0-5aa4de1e9378

I-40 Snowfall & Congestion: Feb. 11, 2024



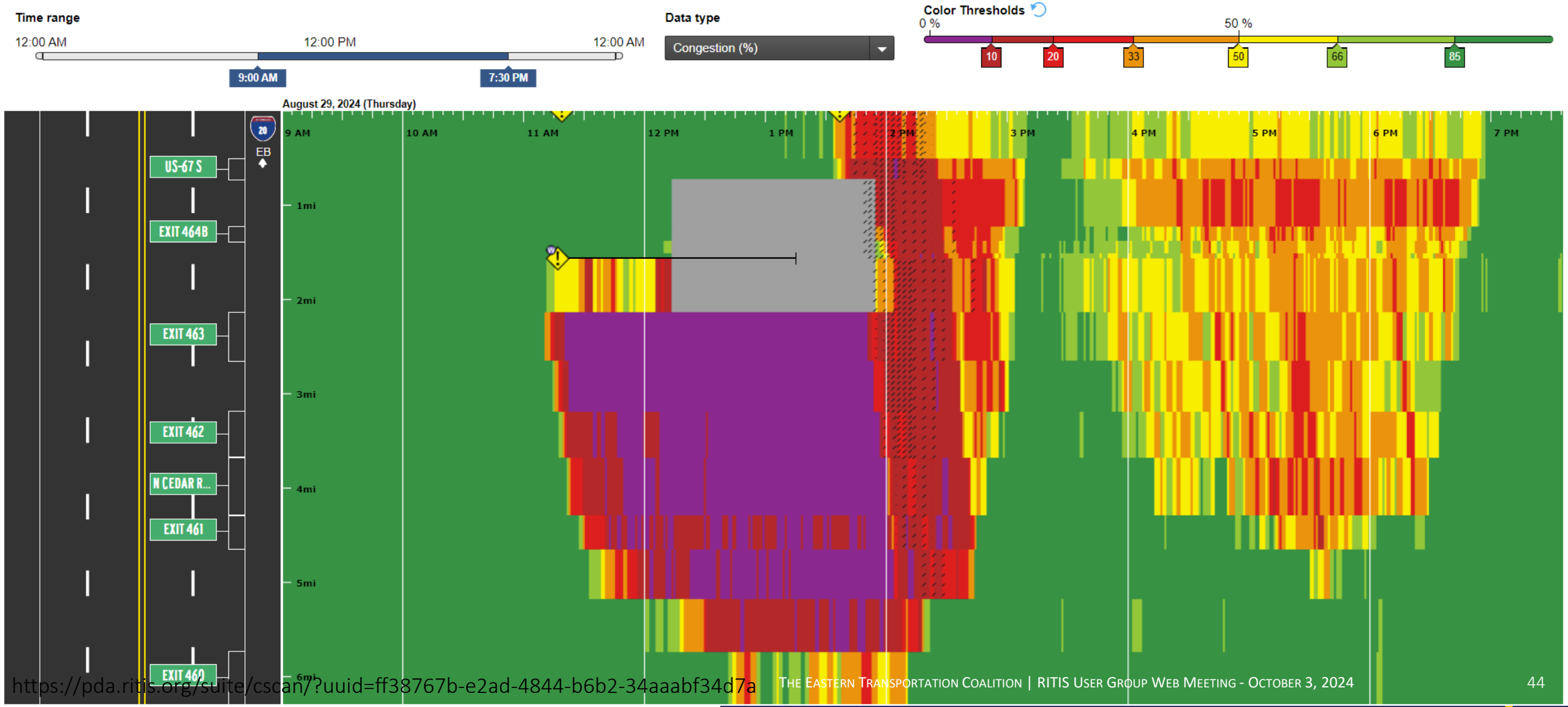
https://pda.ritis.org/suite/cscan/?uuid=e0834258-666b-422d-a6c0-5aa4de1e9378

I-40 Snowfall & Congestion: Feb. 11, 2024



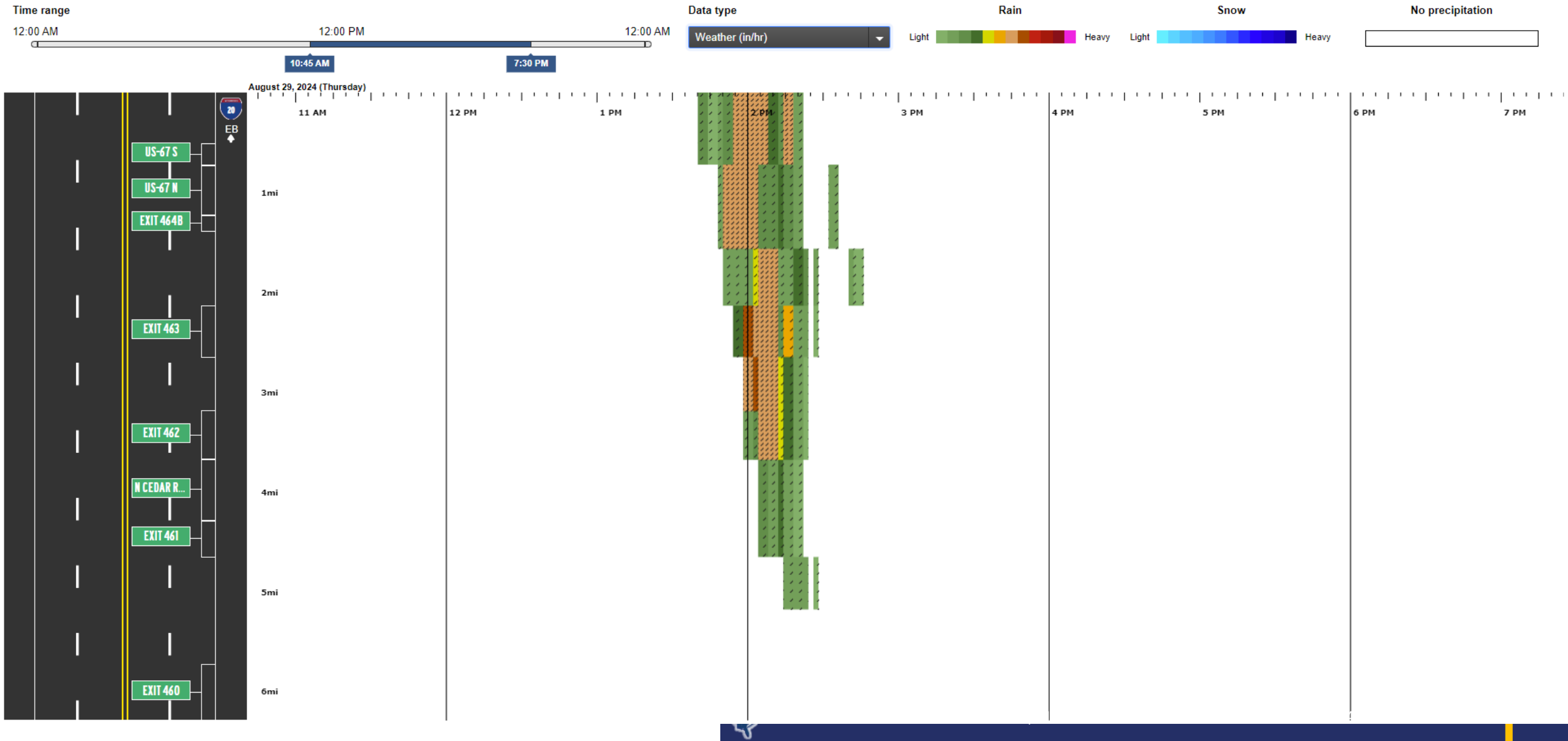
https://pda.ritis.org/suite/cscan/?uuid=e0834258-666b-422d-a6c0-5aa4de1e9378

I-20 incident: rainfall occurred just after the incident cleared

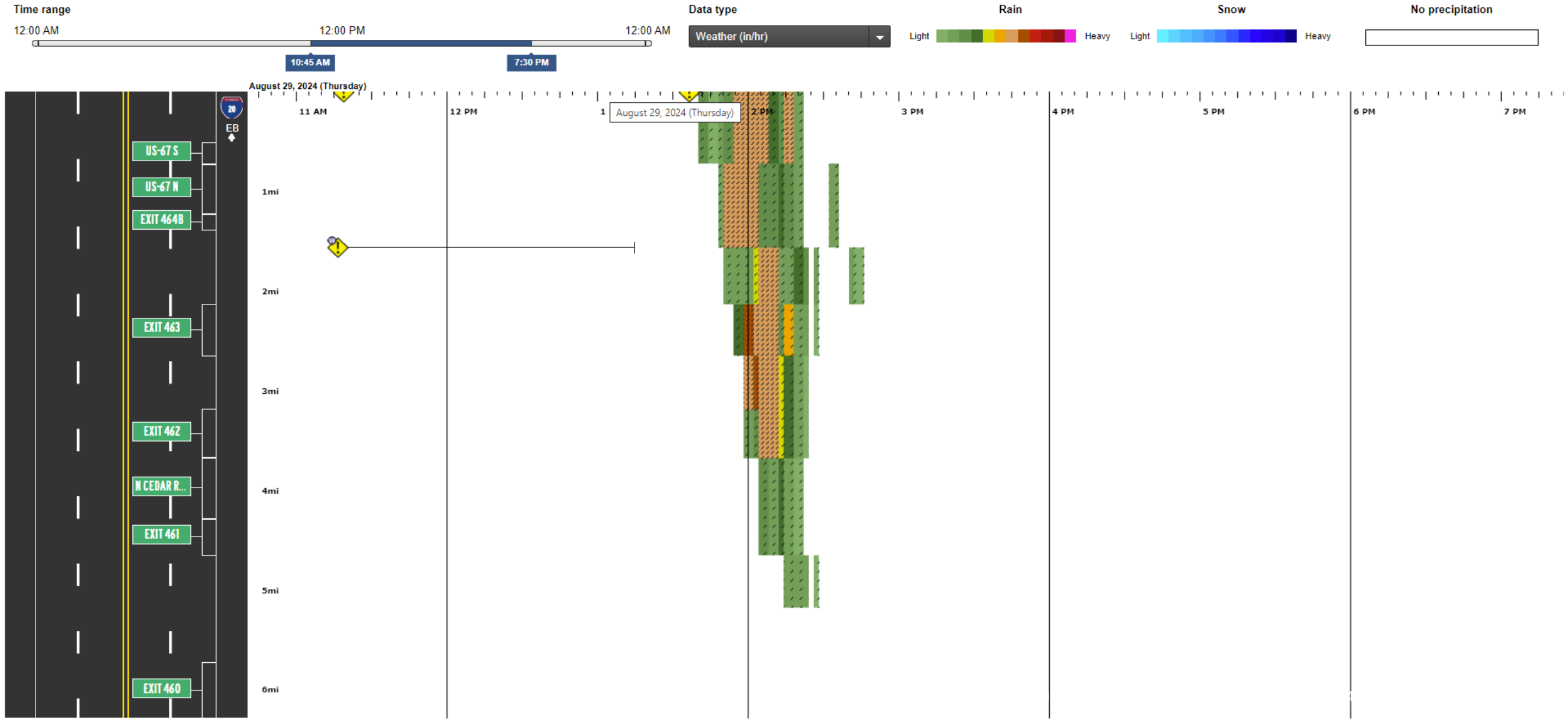


https://pda.ritis.org/suite/cscan/?uuid=ff38767b-e2ad-4844-b6b2-34aaabf34d7a

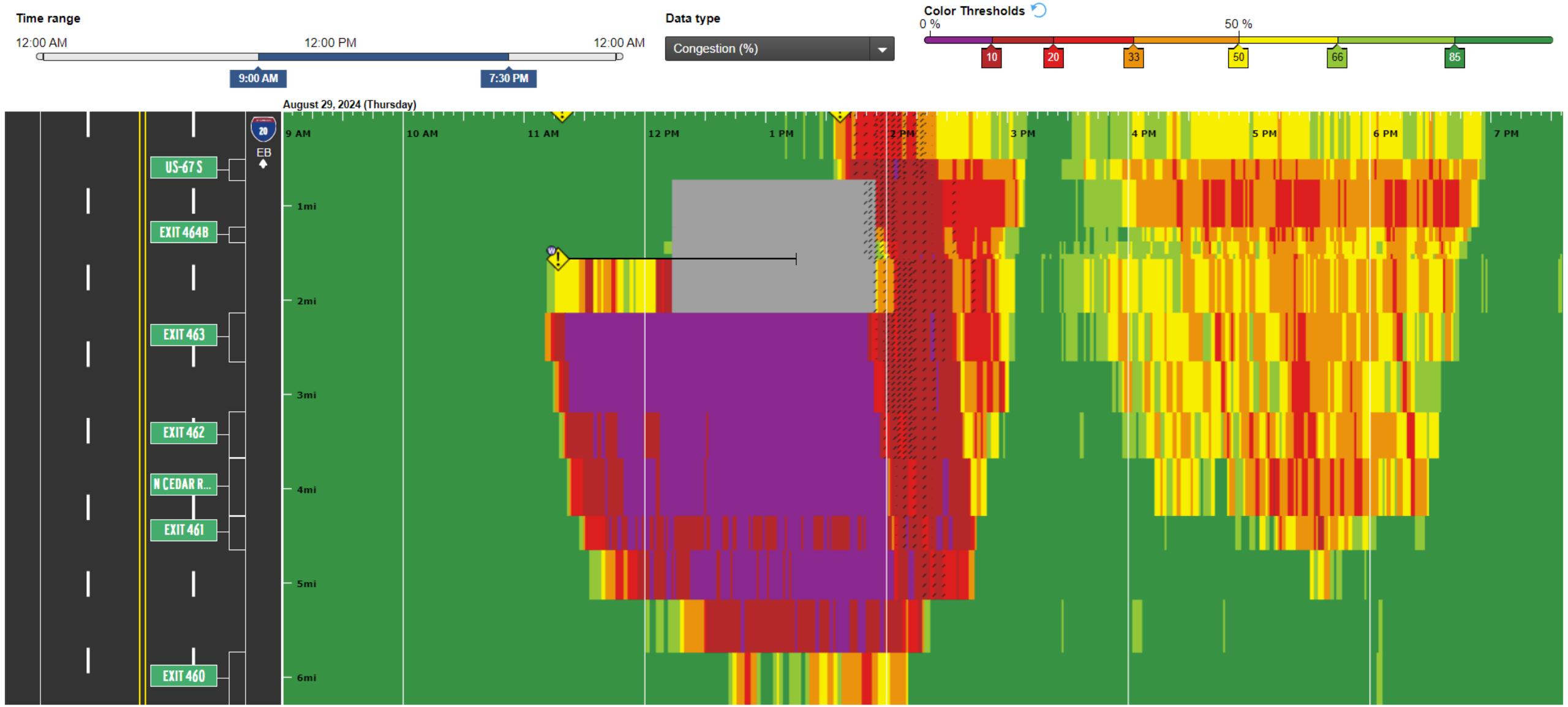
Weather was a factor



Weather was a factor



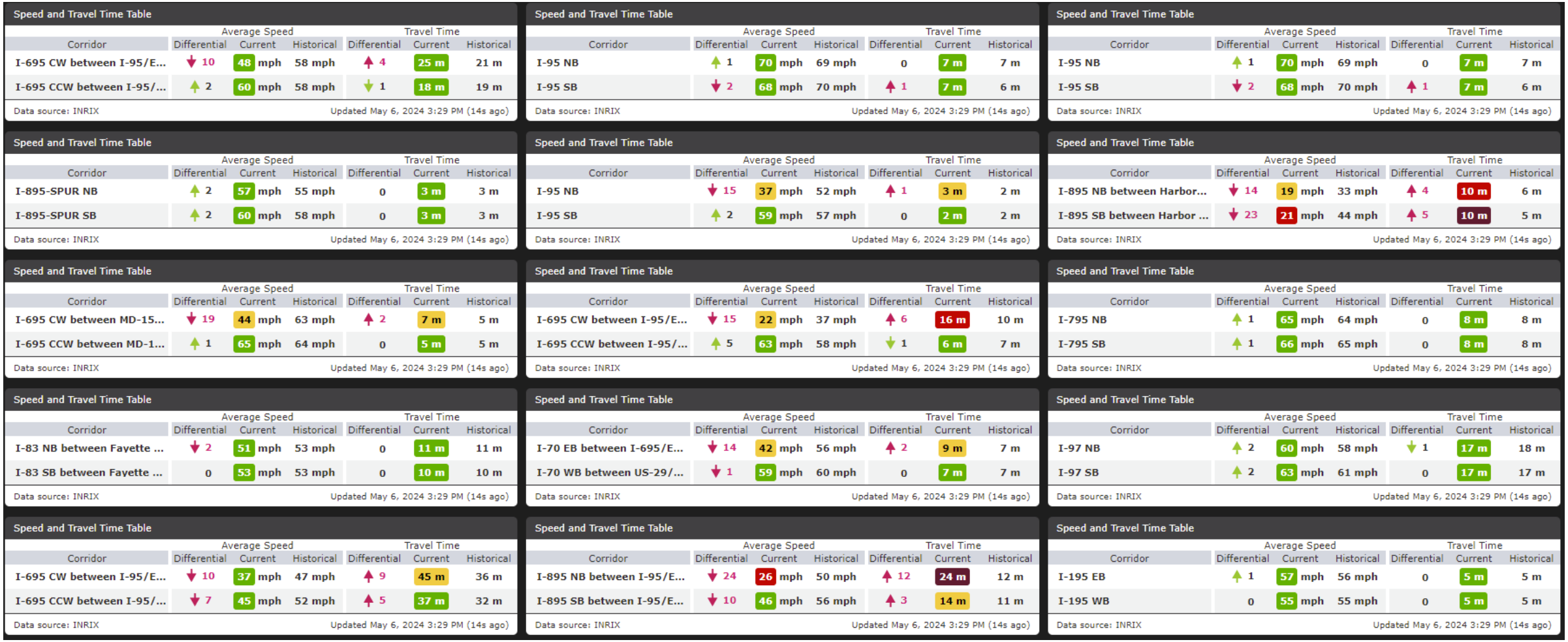
Weather was a factor



https://pda.ritis.org/suite/cscan/?uuid=ff38767b-e2ad-4844-b6b2-34aaabf34d7a

Status of Enhancements

- Speed & Travel Time Widgets now support XD segments



Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-695 CW between I-95/E...	↓ 10	48 mph	58 mph	↑ 4	25 m	21 m
I-695 CCW between I-95/...	↑ 2	60 mph	58 mph	↓ 1	18 m	19 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-95 NB	↑ 1	70 mph	69 mph	0	7 m	7 m
I-95 SB	↓ 2	68 mph	70 mph	↑ 1	7 m	6 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-95 NB	↑ 1	70 mph	69 mph	0	7 m	7 m
I-95 SB	↓ 2	68 mph	70 mph	↑ 1	7 m	6 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-895-SPUR NB	↑ 2	57 mph	55 mph	0	3 m	3 m
I-895-SPUR SB	↑ 2	60 mph	58 mph	0	3 m	3 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-95 NB	↓ 15	37 mph	52 mph	↑ 1	3 m	2 m
I-95 SB	↑ 2	59 mph	57 mph	0	2 m	2 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-895 NB between Harbor...	↓ 14	19 mph	33 mph	↑ 4	10 m	6 m
I-895 SB between Harbor ...	↓ 23	21 mph	44 mph	↑ 5	10 m	5 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-695 CW between MD-15...	↓ 19	44 mph	63 mph	↑ 2	7 m	5 m
I-695 CCW between MD-1...	↑ 1	65 mph	64 mph	0	5 m	5 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-695 CW between I-95/E...	↓ 15	22 mph	37 mph	↑ 6	16 m	10 m
I-695 CCW between I-95/...	↑ 5	63 mph	58 mph	↓ 1	6 m	7 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-795 NB	↑ 1	65 mph	64 mph	0	8 m	8 m
I-795 SB	↑ 1	66 mph	65 mph	0	8 m	8 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-83 NB between Fayette ...	↓ 2	51 mph	53 mph	0	11 m	11 m
I-83 SB between Fayette ...	0	53 mph	53 mph	0	10 m	10 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-70 EB between I-695/E...	↓ 14	42 mph	56 mph	↑ 2	9 m	7 m
I-70 WB between US-29/...	↓ 1	59 mph	60 mph	0	7 m	7 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-97 NB	↑ 2	60 mph	58 mph	↓ 1	17 m	18 m
I-97 SB	↑ 2	63 mph	61 mph	0	17 m	17 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-695 CW between I-95/E...	↓ 10	37 mph	47 mph	↑ 9	45 m	36 m
I-695 CCW between I-95/...	↓ 7	45 mph	52 mph	↑ 5	37 m	32 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-895 NB between I-95/E...	↓ 24	26 mph	50 mph	↑ 12	24 m	12 m
I-895 SB between I-95/E...	↓ 10	46 mph	56 mph	↑ 3	14 m	11 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

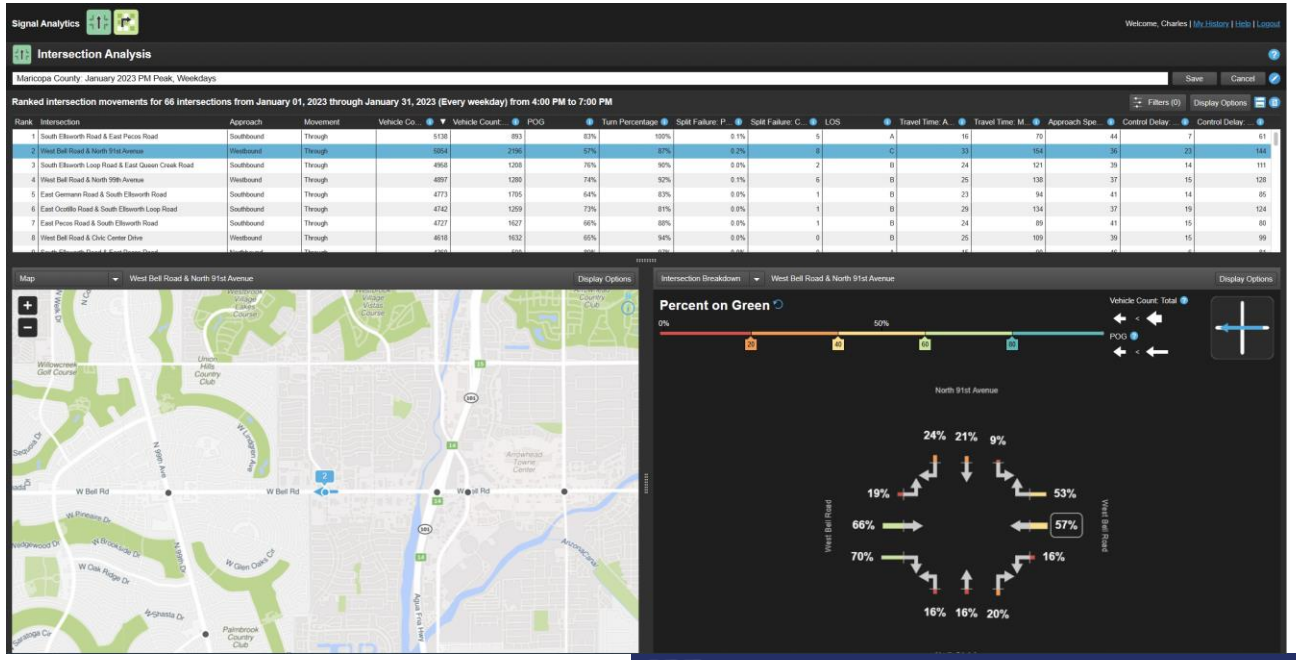
Speed and Travel Time Table

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-195 EB	↑ 1	57 mph	56 mph	0	5 m	5 m
I-195 WB	0	55 mph	55 mph	0	5 m	5 m

Data source: INRIX — Updated May 6, 2024 3:29 PM (14s ago)

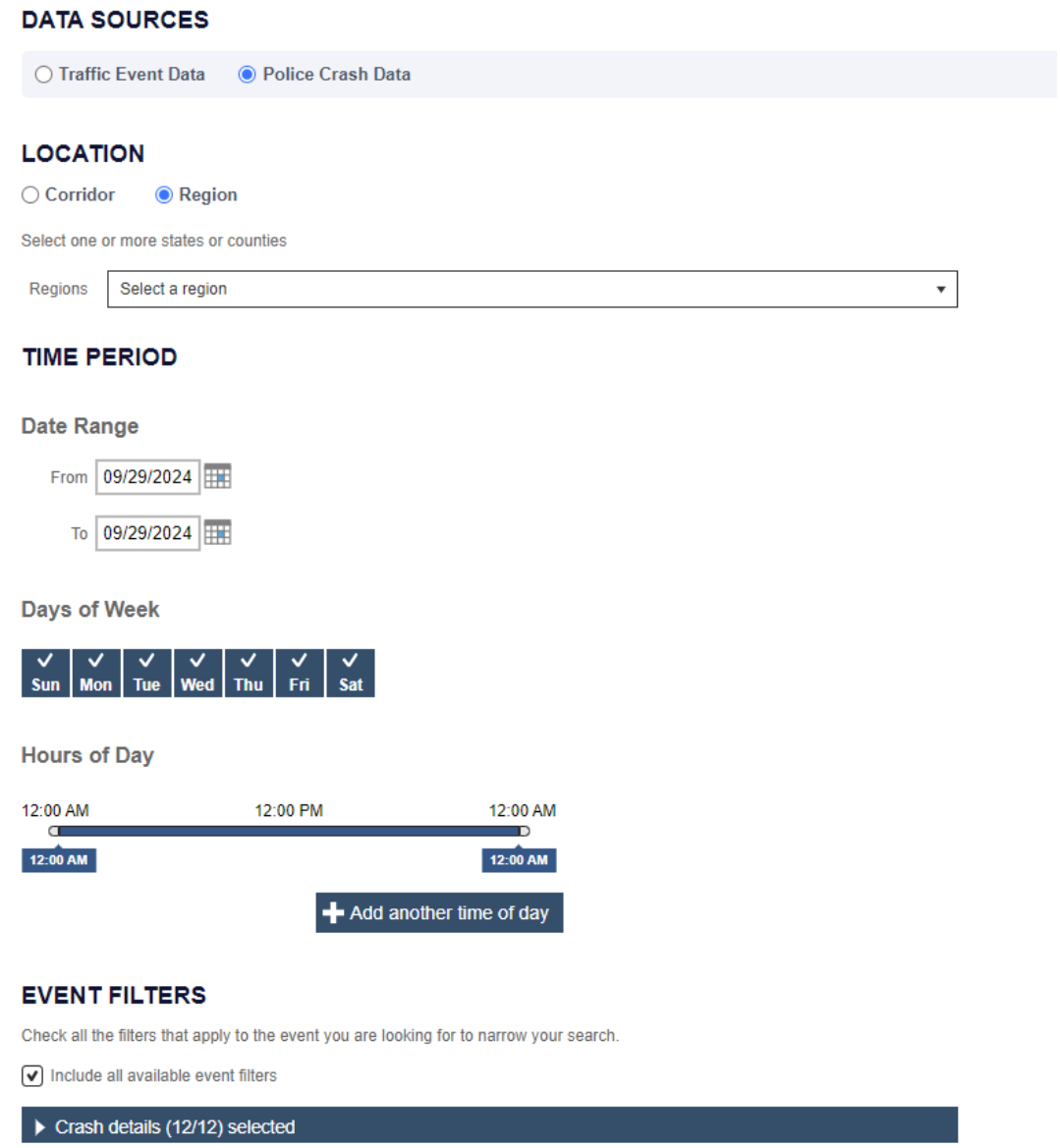
Status of Enhancements

- Signal Analytics
  - Added 3-minute delay metric
  - Tracks the number of vehicles experiencing delays longer than 3 minutes at each intersection. This metric is available in both raw count (3MD Count) and percentage (3MD %) formats, giving you deeper insights into where longer delays are occurring.



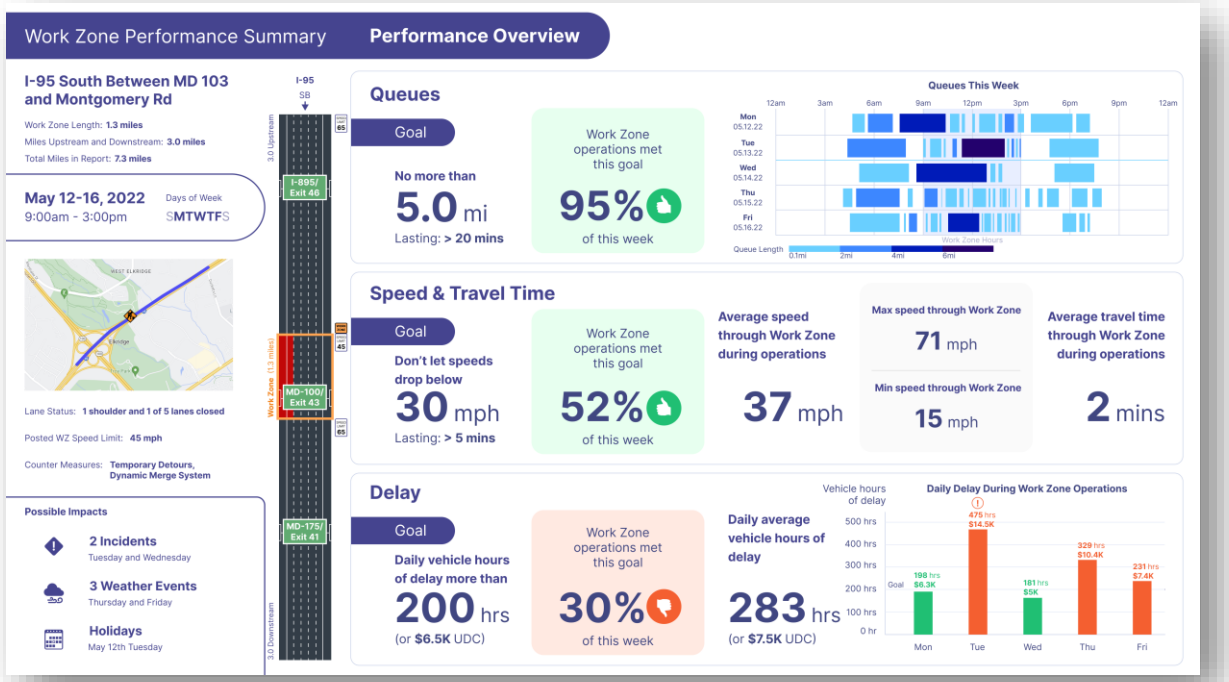
Status of Enhancements

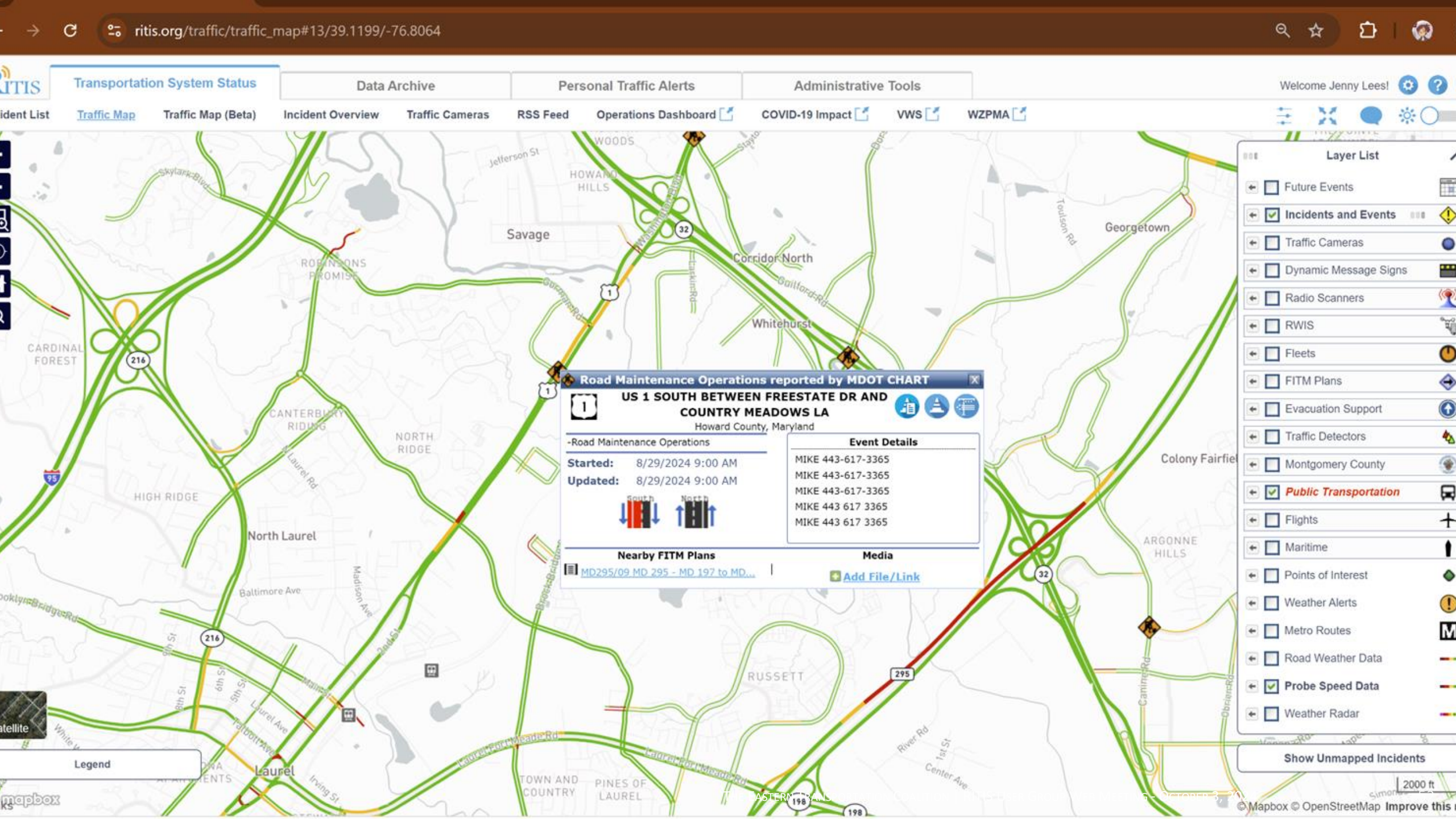
- Police Crash Data Sets in EQT (phase I)



Status of Enhancements

- Work-in-Progress: Automated Work Zone Reporting Tools
  - Partially funded
  - Development work is beginning




ritis.org/traffic/traffic_map#13/39.1199/-76.8064
RITIS
Transportation System Status
Data Archive
Personal Traffic Alerts
Administrative Tools
Welcome Jenny Lees!
ident List
Traffic Map
Traffic Map (Beta)
Incident Overview
Traffic Cameras
RSS Feed
Operations Dashboard
COVID-19 Impact
VWS
WZPMA
Road Maintenance Operations reported by MDOT CHART
US 1 SOUTH BETWEEN FREESTATE DR AND COUNTRY MEADOWS LA
Howard County, Maryland
-Road Maintenance Operations
Started: 8/29/2024 9:00 AM
Updated: 8/29/2024 9:00 AM
Event Details
MIKE 443-617-3365
MIKE 443-617-3365
MIKE 443-617-3365
MIKE 443 617 3365
MIKE 443 617 3365
Nearby FITM Plans
MD295/09 MD 295 - MD 197 to MD...
Media
Add File/Link
Layer List
Future Events
Incidents and Events
Traffic Cameras
Dynamic Message Signs
Radio Scanners
RWIS
Fleets
FITM Plans
Evacuation Support
Traffic Detectors
Montgomery County
Public Transportation
Flights
Maritime
Points of Interest
Weather Alerts
Metro Routes
Road Weather Data
Probe Speed Data
Weather Radar
Show Unmapped Incidents
Legend
Savage
Corridor North
Whitehurst
Georgetown
North Laurel
Laurel
RUSSETT
TOWN AND COUNTRY
PINES OF LAUREL
HOWARD HILLS
NORTH RIDGE
HIGH RIDGE
CARDINAL FOREST
CANTERBURY RIDING
ROBINSONS PROMISE
ARGONNE HILLS
Colony Fairfie
2000 ft
© Mapbox © OpenStreetMap Improve this

RITIS Work Zone Performance Report

Welcome Jenny | My History | Help

Report Parameters

1. Select work zone location

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

TMC segments from INRIX × Clear All

Planned Closure
@ US 40 EAST/WEST BETWEEN THIOKOL RD AND ELKTON RD

Segment Codes
110N09239

2. Select additional segments around work zone location

You may want to expand the area of analysis beyond the work zone location to understand its full impact. This report will only calculate performance metrics from the selected work zone location above and the additional segments selected in this step.

Select from Map | Segment Codes | Road

You can define your work zone by selecting one or multiple segments on the map.

× Clear All

A Click here to start selection of segments

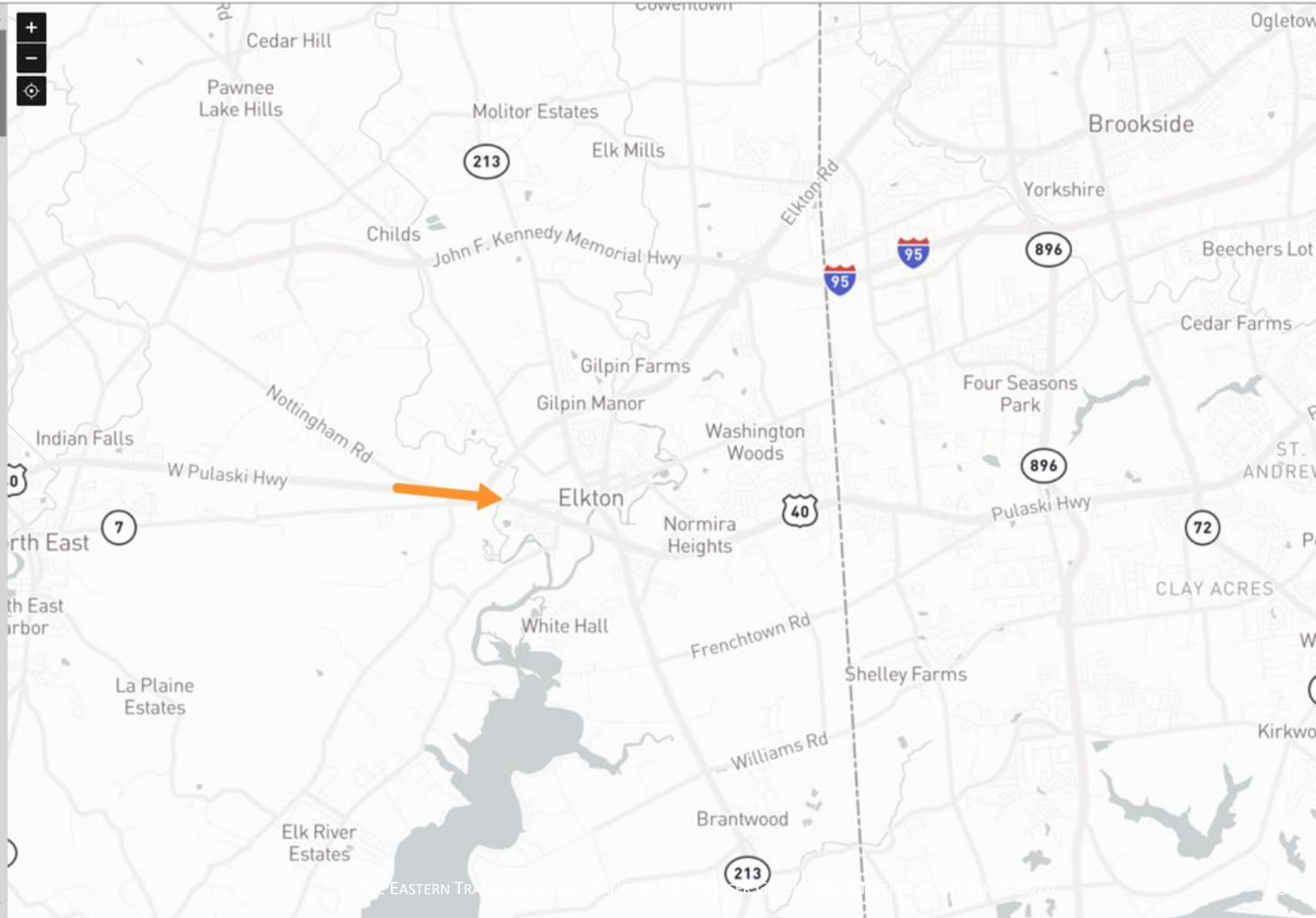
Starting segment Ending segment

+ Add Segment(s)

3. Select date range

00/00/0000 - through - 00/00/0000

4. Select days of week



RITIS Work Zone Performance Report

Welcome Jenny | My History | Help

Select from Map | Segment Codes | Road

You can define your work zone by selecting one or multiple segments on the map.

Clear All

A Click here to start selection of segments

Starting segment **Ending segment**

Add Segment(s)

Your selected roads Clear All

US-40 Eastbound at MD-213

3. Select date range

00/00/0000 - through - 00/00/0000

4. Select days of week

Sun | Mon | Tue | Wed | Thu | Fri | Sat

5. Select hours of operation

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

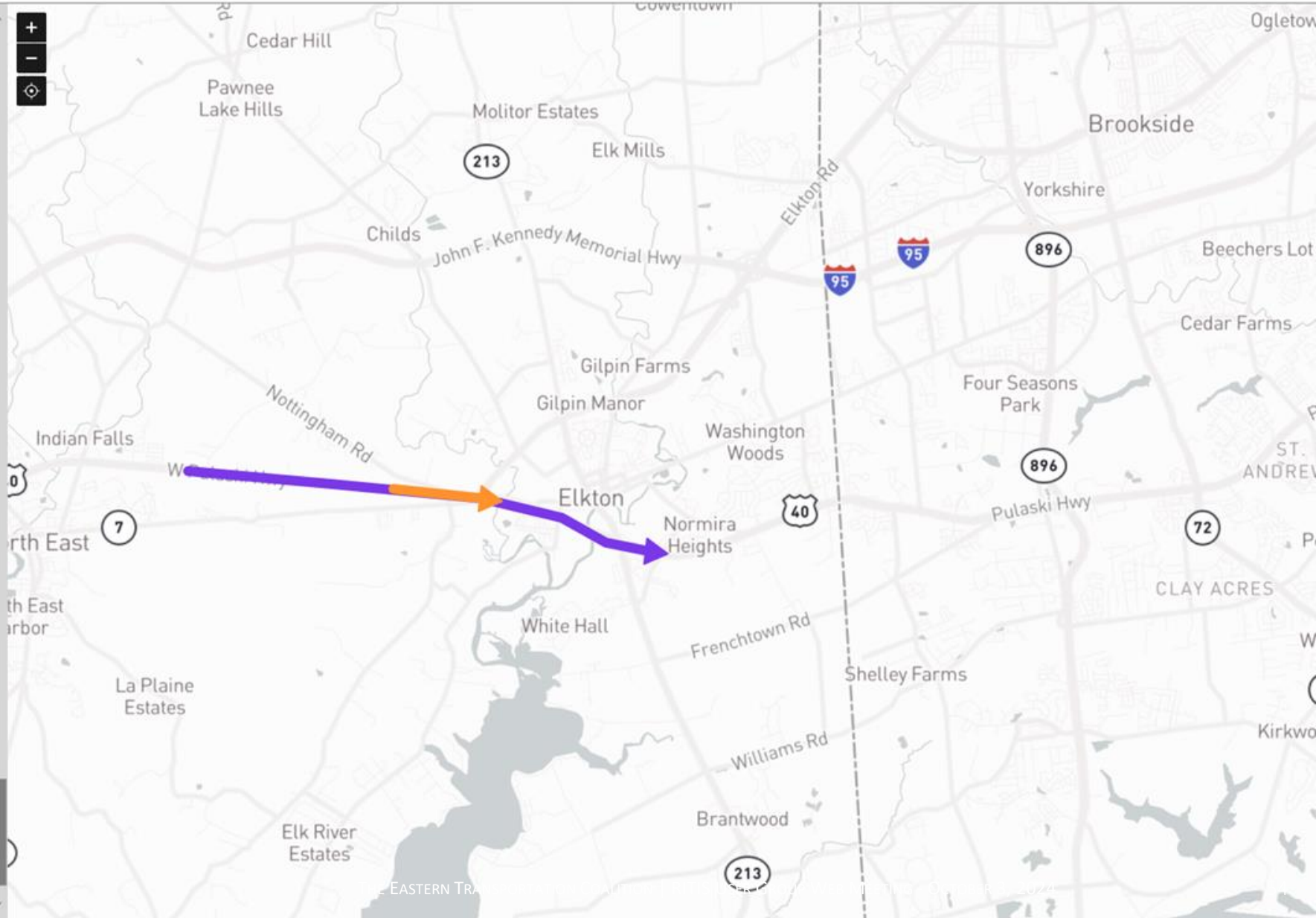
12:00 AM 12:00 AM

6. Compare against another time period (optional)

Include a comparison time period

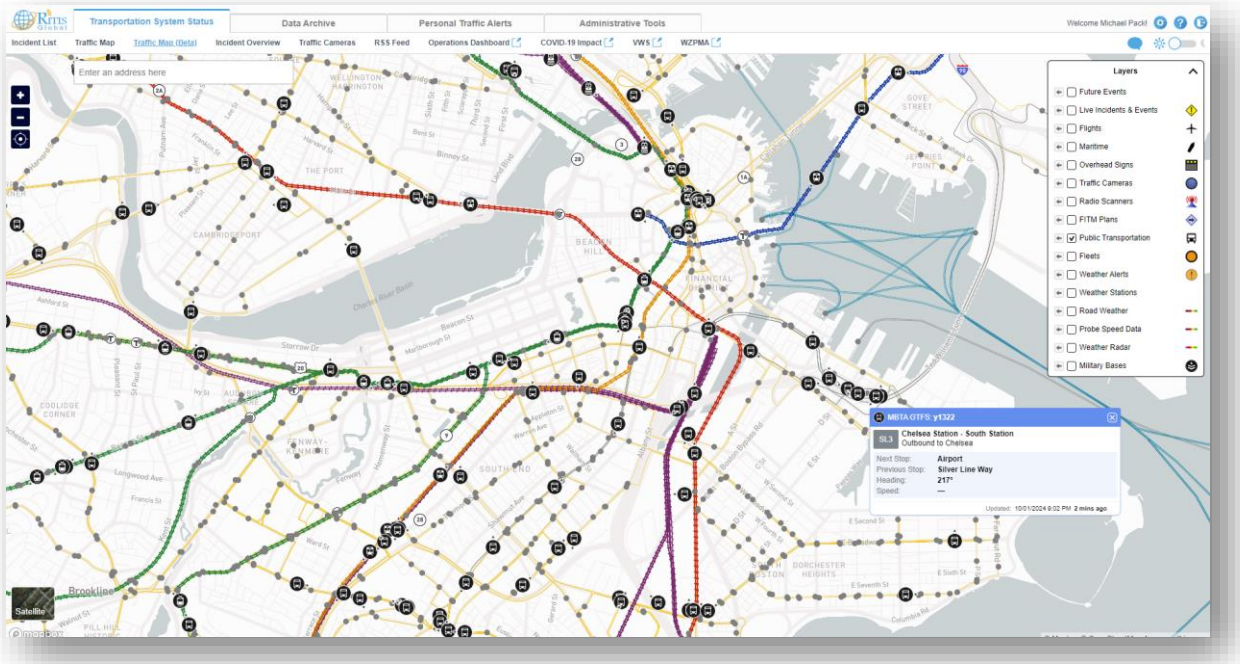
An additional time period will be added to the multi line chart analysis page. You can use this to compare performances from week to week.

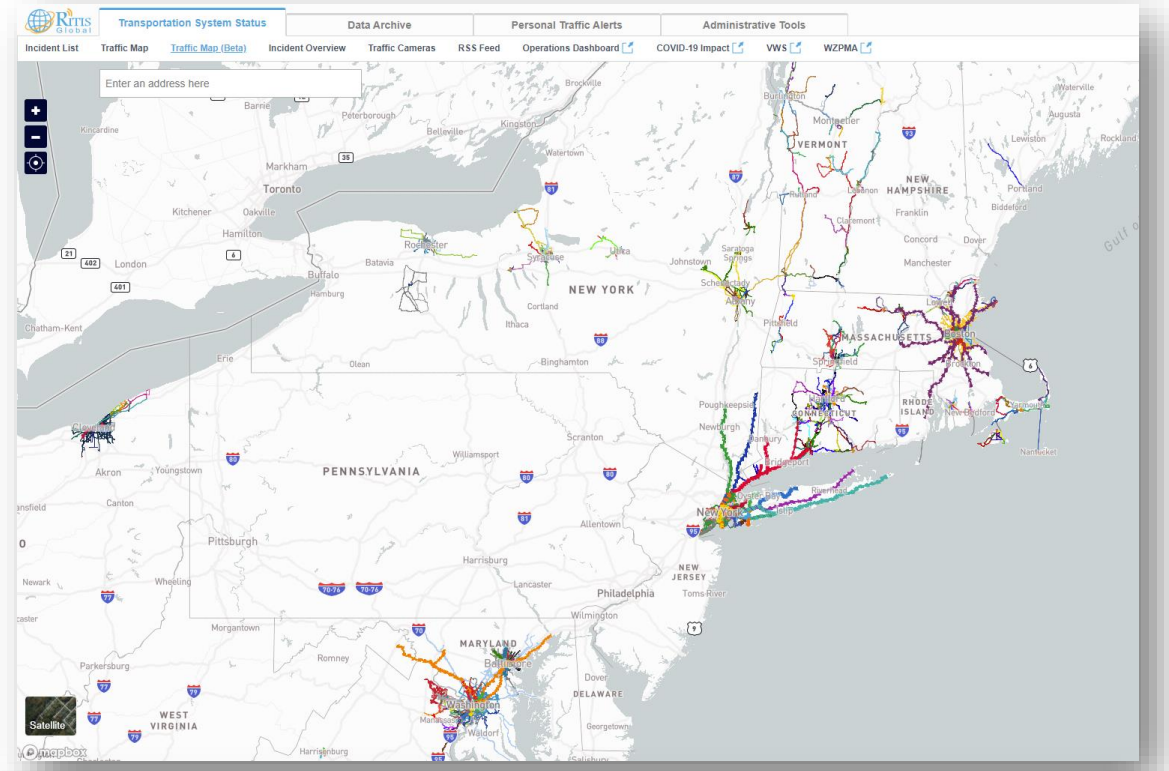
Generate Report

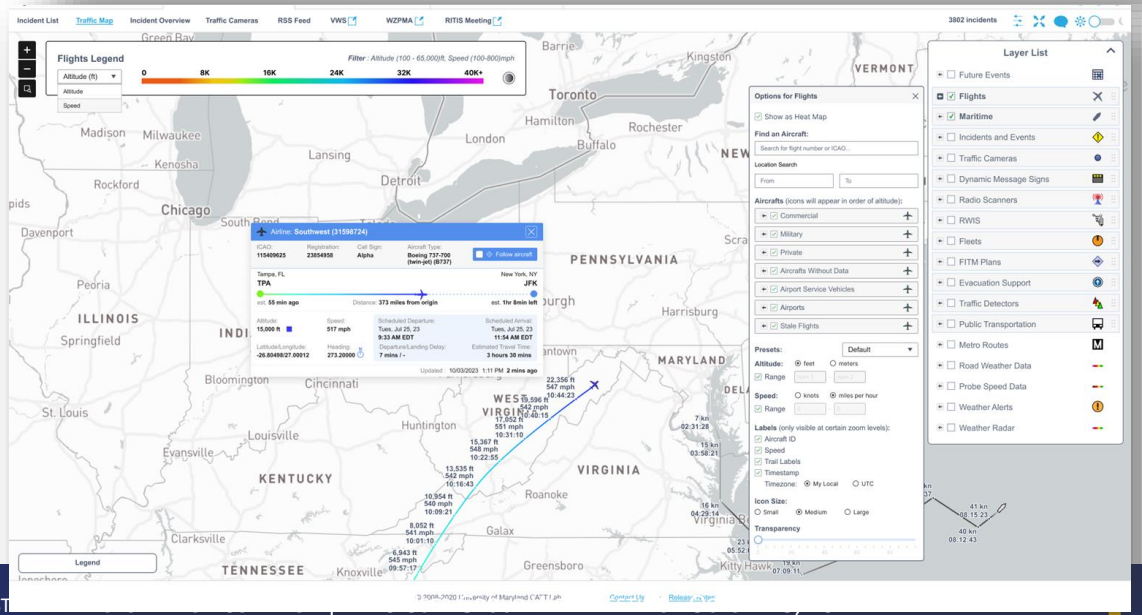


Works in Progress

- Mapping Modernization
- Animations of “moving” data sets
- Scalability and UI work for Transit



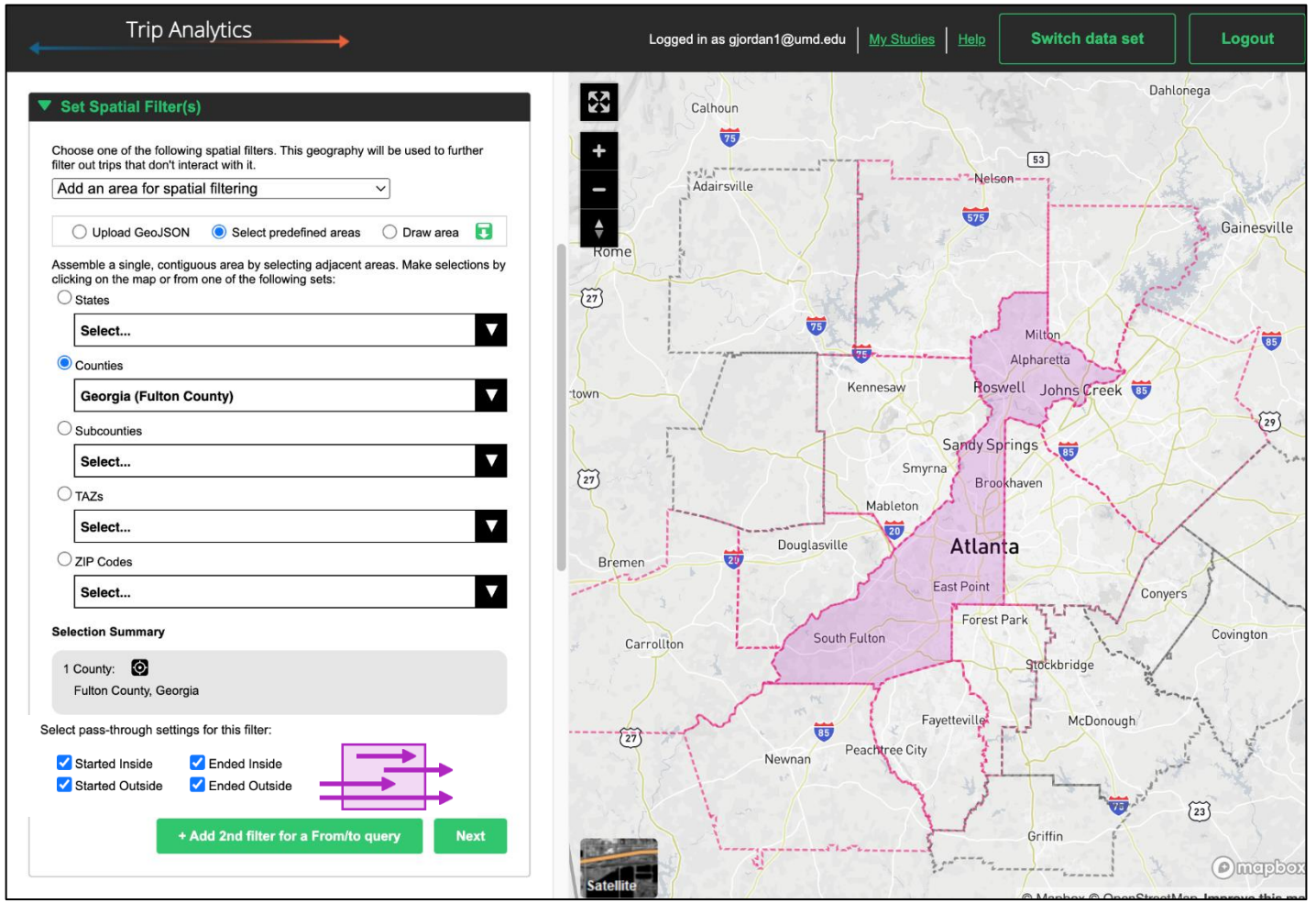




Trip Analytics – New travel time and distance metrics

Example: Make OD matrix and calculate metrics for trips to and from Fulton County, GA

(Find all available trips that moved within Fulton County during a specified temporal range)



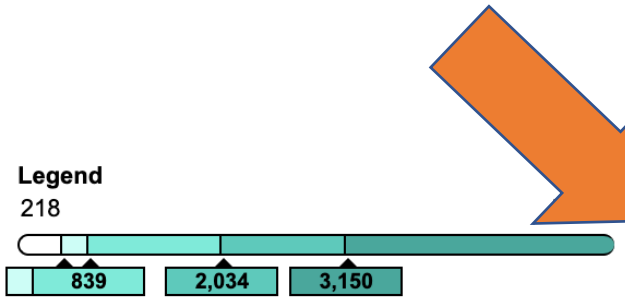
Test by Greg -- prod version

Data Set: Georgia

Study Area: Base Geography | Spatial Filter: 1 area in Georgia Data Set

Internal Zones: Counties | Temporal Filter: 12/1/2023 – 12/31/2023

External Zones: Counties | Other Filters: Vehicle type: all



Display Options

Open as...

Export

Destinations

Sample counts

Origins			Internal													
			Georgia													
			Bartow County	Cherokee County	Clayton County	Cobb County	Coweta County	DeKalb County	Douglas County	Fayette County	Forsyth County	Fulton County	Gwinnett County	Henry County	Other	Total
Internal	Georgia	Fulton County	218	805	2,628	4,749	757	5,571	928	839	2,034	411	3,150	597	2,287	24,974
		Total	218	805	2,628	4,749	757	5,571	928	839	2,034	411	3,150	597	2,287	24,974

Displaying 1 origin and 12 destinations

188 other destinations (lowest subtotals) shown in 'Other' category

Test by Greg -- prod version

Data Set: Georgia

Study Area: Base Geography | Spatial Filter: 1 area in Georgia Data Set
Internal Zones: Counties | Temporal Filter: 12/1/2023 – 12/31/2023
External Zones: Counties | Other Filters: Vehicle type: all

Legend
218
839 | 2,034 | 3,150

Display Options | **Open as...** | **Export**

Sample counts

Destinations

Origins			Internal / Georgia									
			Bartow County	Cherokee County	Clayton County	Cobb County	Coweta County	DeKalb County	Douglas County	Henry County	Other	Total
Internal	Georgia	Fulton County	218	805	2,628	4,749	757	5,571	928	597	2,287	24,974
		Total	218	805	2,628	4,749	757	5,571	928	597	2,287	24,974

Matrix Options

Show trips as...

- (•) Sample counts
- ( ) Percentages
- ( ) Average travel time
- ( ) 5th percentile travel time
- ( ) 50th percentile (median) travel time
- ( ) 95th percentile travel time

[x] Include intrazonal trips

[x] Display a max of 12 geographies.

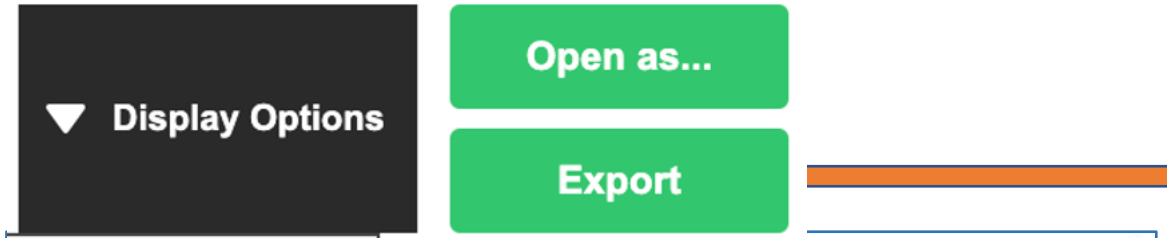
Source matrix is 1x200. Displayed rows and columns are selected based on subtotals (highest values). Non-displayed rows and columns will be summarized in the "Other" groups.

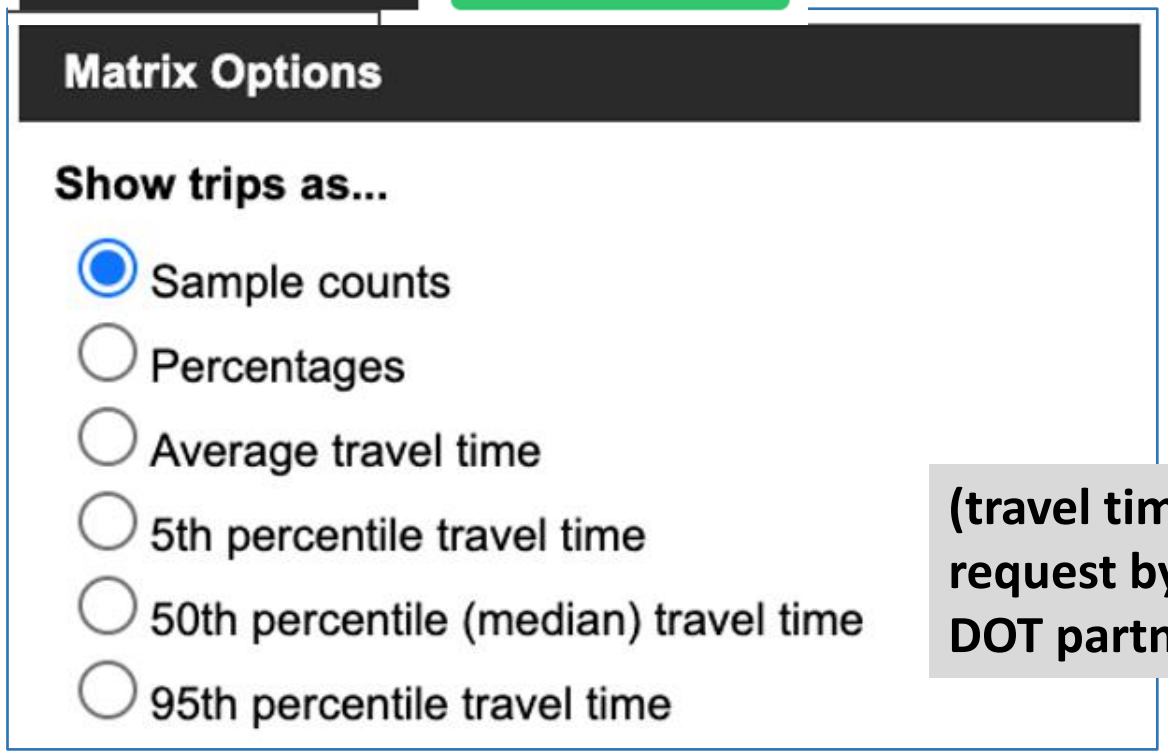
[ ] Hide geographies below 3 trips

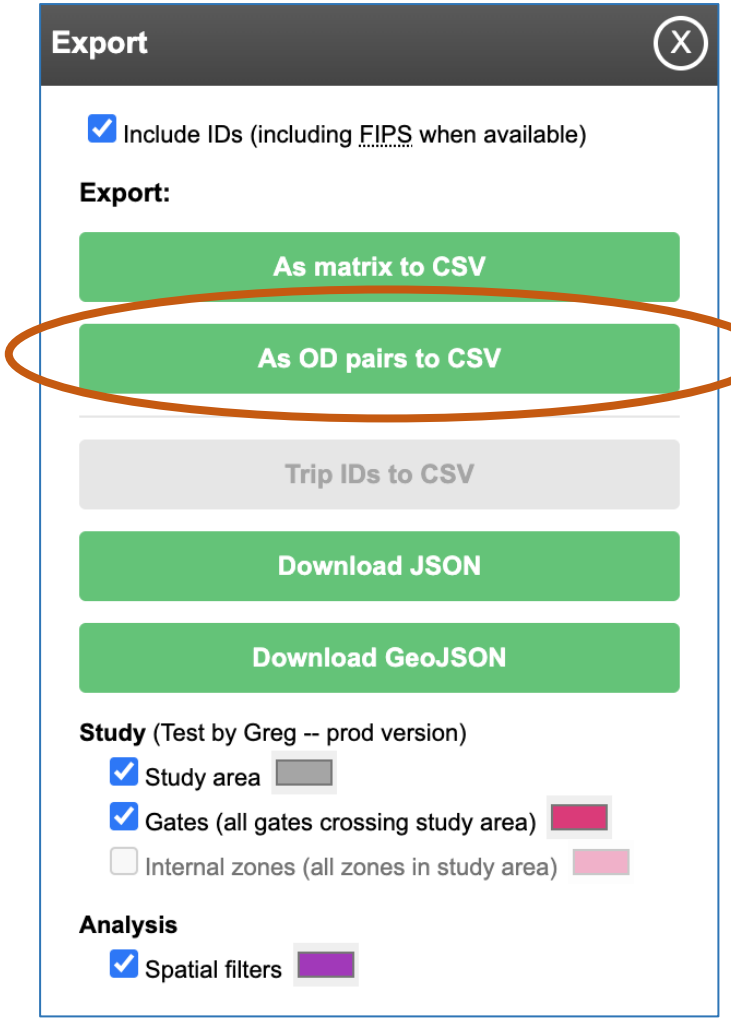
To have at least one origin and one destination geography trip count cannot exceed 5571.

Displaying 1 origin and 12 destinations

188 other destinations (lowest subtotals) shown in 'Other' category







(travel times per request by a Nevada DOT partner)

- 50th percentile (median) pathway distance

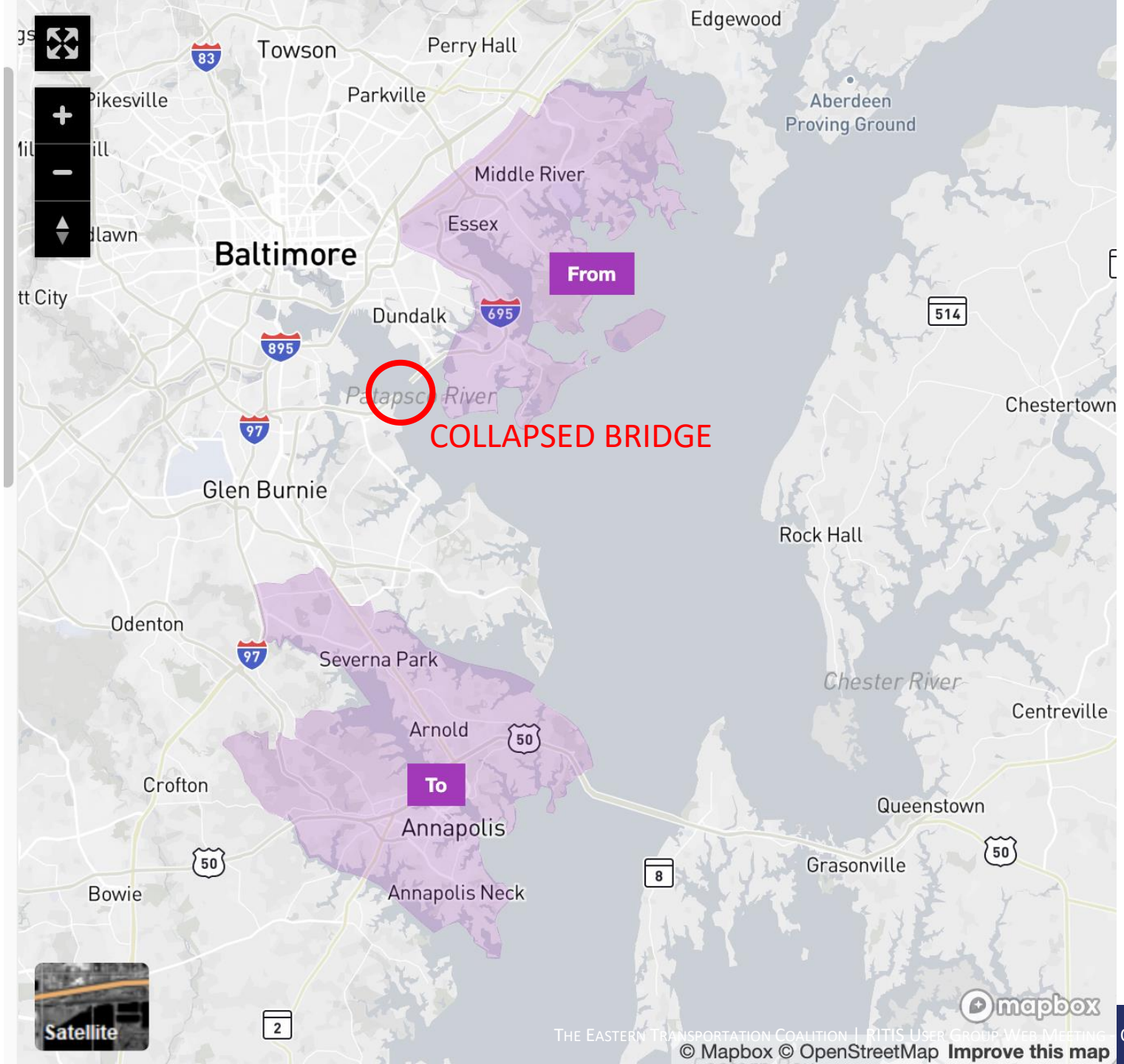
NEWEST (per request by PennDOT contractor)

Origin Source	Origin State	Origin ID	Origin Geo ID	Origin Area	Destination Source	Destination State	Destination ID	Destination Geo ID	Destination Area	Trips	Trips (Vehicle type: Light)	Trips (Vehicle type: Medium)	Trips (Vehicle type: Heavy)	Median Travel Time	Average Travel Time	95th Percentile Travel Time	5th Percentile Travel Time	Median Trip Distance (mi)
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	723	13089	DeKalb County	5571	5042	456	73	0:20:47	0:26:26	1:02:18	0:05:59	9.51
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	712	13067	Cobb County	4749	4282	385	82	0:21:56	0:26:54	0:58:26	0:06:01	10.93
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	746	13135	Gwinnett County	3150	2822	275	53	0:25:50	0:31:06	1:08:23	0:07:50	11.5
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	710	13063	Clayton County	2628	2216	331	81	0:19:21	0:26:19	1:06:28	0:04:55	9.99
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	737	13117	Forsyth County	2034	1900	118	16	0:19:40	0:23:45	0:56:38	0:05:22	9.35
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	727	13097	Douglas County	928	771	104	53	0:24:54	0:30:59	1:02:44	0:08:00	13.48
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	735	13113	Fayette County	839	731	99	9	0:25:48	0:29:04	1:03:59	0:08:09	12.11
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	707	13057	Cherokee County	805	724	74	7	0:28:38	0:32:31	1:04:05	0:09:22	12.94
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	717	13077	Coweta County	757	652	61	44	0:29:39	0:33:44	1:07:16	0:08:15	18.04
Internal	Georgia	739	13121	Fulton County	Internal	Georgia	754	13151	Henry County	597	507	66	24	0:37:15	0:42:40	1:18:08	0:19:15	25.34

Travel times

Distances

Median Travel Time	Average Travel Time	95th Percentile Travel Time	5th Percentile Travel Time	Median Trip Distance (mi)
0:20:47	0:26:26	1:02:18	0:05:59	9.51
0:21:56	0:26:54	0:58:26	0:06:01	10.93
0:25:50	0:31:06	1:08:23	0:07:50	11.5
0:19:21	0:26:19	1:06:28	0:04:55	9.99
0:19:40	0:23:45	0:56:38	0:05:22	9.35
0:24:54	0:30:59	1:02:44	0:08:00	13.48
0:25:48	0:29:04	1:03:59	0:08:09	12.11
0:28:38	0:32:31	1:04:05	0:09:22	12.94
0:29:39	0:33:44	1:07:16	0:08:15	18.04
0:37:15	0:42:40	1:18:08	0:19:15	25.34


Towson
Perry Hall
Edgewood
Parkville
Aberdeen
Proving Ground
Middle River
Essex
Baltimore
From
Dundalk
695
895
514
Patapsco River
COLLAPSED BRIDGE
Chestertown
97
Glen Burnie
Rock Hall
Odenton
97
Severna Park
Chester River
Centreville
Arnold
50
To
Crofton
Queenstown
Annapolis
50
50
Grasonville
8
Bowie
Annapolis Neck
Satellite
2
mapbox
© Mapbox © OpenStreetMap Improve this map

Demo Travel Time and Dis…

Data Set: Maryland (freight-only 1/1/20 thru 1/31/24)

Study Area: Base Geography
Internal Zones: Subcounties
External Zones: OD gates

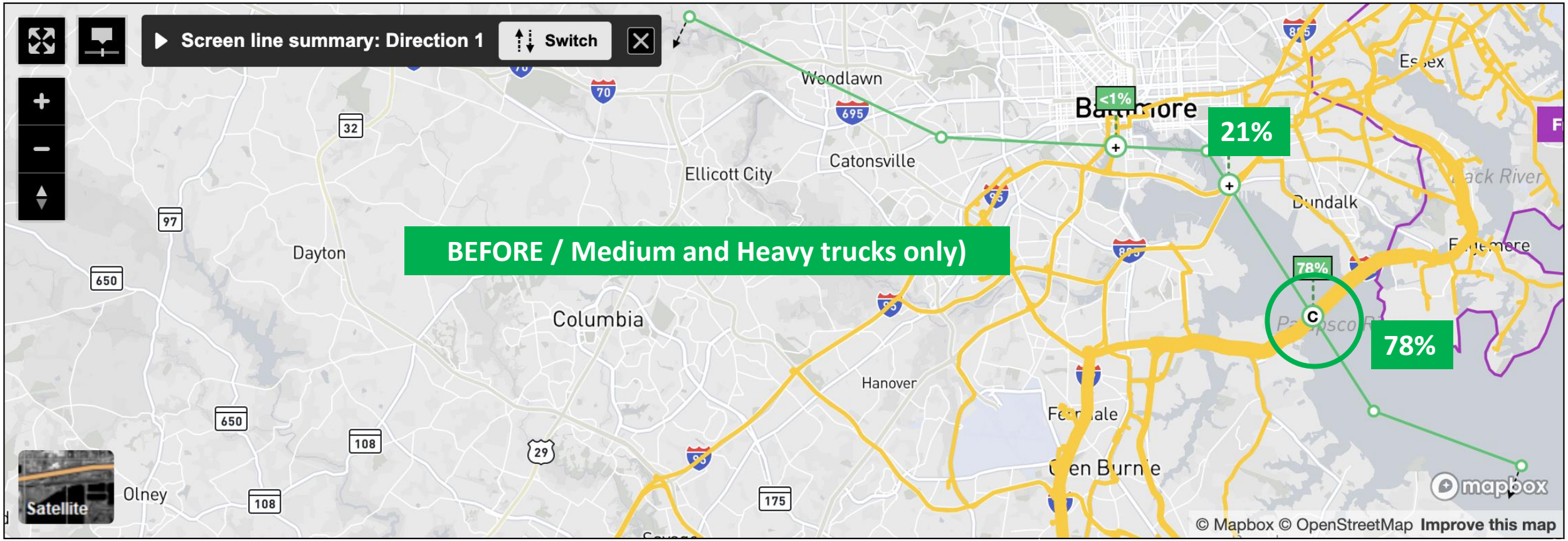
Spatial Filter: 3 areas in Maryland (freig…
Temporal Filter: 2/1/2024 – 3/25/2024
Other Filters: Vehicle type: Medium, He…

479 trips in 461 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips ▼	Medium Vehicles	Heavy Vehicles	Avg Speed	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
☑	23	▶ North Point Boulevard, MD 151; Bal	1	1	0	41 mph	33 mi	49 m	49 m	49 m	49 m	1
☑	24	▶ Carroll Island Road; Eastern Boulev	1	1	0	35 mph	42 mi	1 h 11 m	1 h 11 m	1 h 11 m	1 h 11 m	1
☑	25	▶ Kingston Road; Eastern Boulevard,	1	1	0	49 mph	31 mi	38 m	38 m	38 m	38 m	1
☑	26	▶ Pulaski Highway, US 40; Golden Ri	1	1	0	56 mph	39 mi	42 m	42 m	42 m	42 m	1
	Total		479	463	16							

≡



Demo Travel Time and Dis…

Data Set: Maryland (freight-only 1/1/20 thru 1/31/24)

Study Area: Base Geography
Internal Zones: Subcounties
External Zones: OD gates

Spatial Filter: 3 areas in Maryland (freig…
Temporal Filter: 7/10/2024 – 8/31/2024
Other Filters: Vehicle type: Medium, He…

424 trips in 422 routes

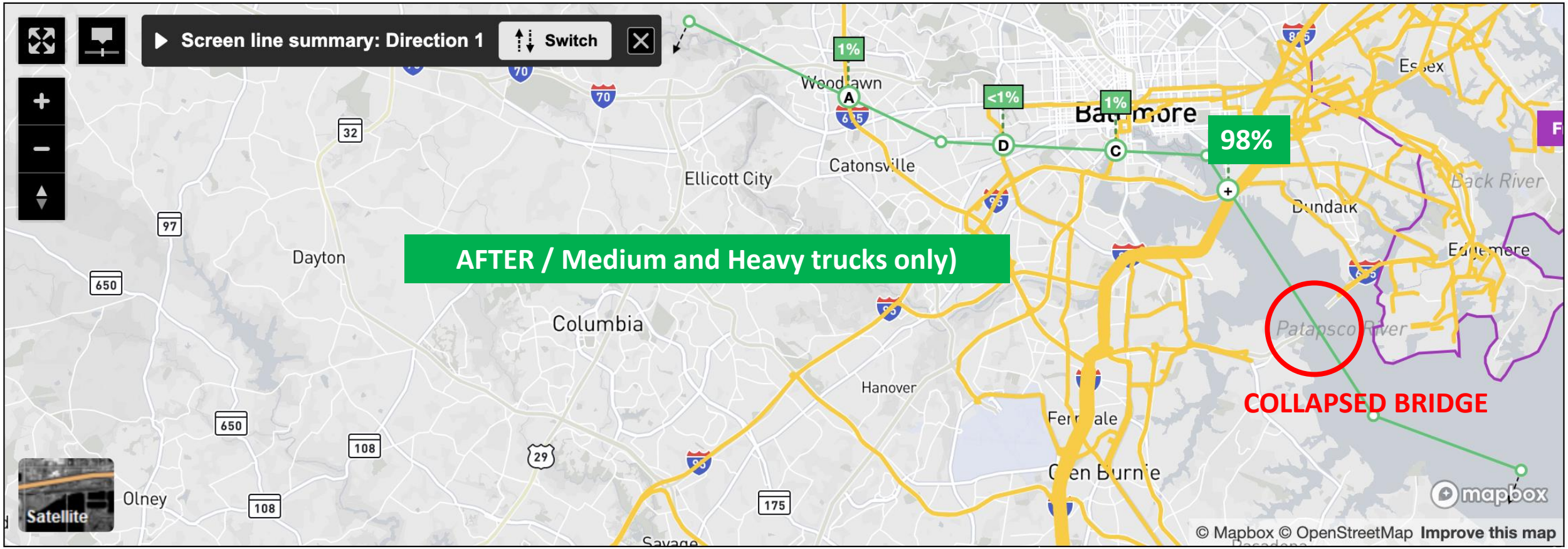
Display Options

Open as...

Export

Map	Rank	Route	# of Trips ▼	Medium Vehicles	Heavy Vehicles	Avg Speed	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
☑	419	▶ Schaefers Lane; Pulaski Highway, U	1	1	0	41 mph	23 mi	33 m	33 m	33 m	33 m	1
☑	420	▶ Pulaski Highway, US 40; Baltimore I	1	1	0	31 mph	58 mi	1 h 51 m	1 h 51 m	1 h 51 m	1 h 51 m	1
☑	421	▶ Cunninghill Cove Road; Graces Qua	1	1	0	28 mph	43 mi	1 h 30 m	1 h 30 m	1 h 30 m	1 h 30 m	1
☑	422	▶ Rolling Mill Road; Kane Street; East	1	1	0	45 mph	20 mi	26 m	26 m	26 m	26 m	1
	Total		424	413	11							

≡



Demo Travel Time and Dis…

Data Set: Maryland (freight-only 1/1/20 thru 1/31/24)

Study Area: Base Geography
Internal Zones: Subcounties
External Zones: OD gates

Spatial Filter: 3 areas in Maryland (freig…
Temporal Filter: 2/1/2024 – 3/25/2024
Other Filters: Vehicle type: Medium, He…

Legend

193 286

211 229 268

Display Options

Open as...

Export

Sample counts

Destinations

Origins			Internal	
			Maryland	
			5 - 0039037601929621 (Anne Arundel County)	6 - 0039046801929643 (Anne Arundel County)	Total
Internal	Maryland	15 - 0059129601929490 (Baltimore County)	193	286	479
		Total	193	286	479

Displaying 1 origin and 2 destinations

Demo Travel Time and Dis…

Data Set: Maryland (freight-only 1/1/20 thru 1/31/24)

Study Area: Base Geography
Internal Zones: Subcounties
External Zones: OD gates

Spatial Filter: 3 areas in Maryland (freig…
Temporal Filter: 2/1/2024 – 3/25/2024
Other Filters: Vehicle type: Medium, He…

Legend

40% 60%

44% 48% 56%

Display Options

Open as...

Export

Matrix Options

Show trips as...

- ○ Sample counts
- ◉ Percentages
- ○ Average travel time
- ○ 5th percentile travel time
- ○ 50th percentile (median) travel time
- ○ 95th percentile travel time

☑ Include intrazonal trips

☑ Display a max of 2 geographies.

Source matrix is 1x2. Displayed rows and columns are selected based on subtotals (highest values). Non-displayed rows and columns will be summarized in the "Other" groups.

☐ Hide geographies below 286 trips

To have at least one origin and one destination geography trip count cannot exceed 286.

Percentages

Destin

Origins			Inte		Total
			Mar		
			5 - 0039037601929621 (Anne Arundel County)	County)	Total
Internal	Maryland	15 - 0059129601929490 (Baltimore County)	40%		100%
Total			40%		100%

Displaying 1 origin and 2 destinations

Demo Travel Time and Dis…

Data Set: Maryland (freight-only 1/1/20 thru 1/31/24)

Study Area: Base Geography
Internal Zones: Subcounties
External Zones: OD gates

Spatial Filter: 3 areas in Maryland (freig…
Temporal Filter: 2/1/2024 – 3/25/2024
Other Filters: Vehicle type: Medium, He…

Legend

40% 60%

44% 48% 56%

Display Options

Open as...

Export

Destinations

Percentages

Origins			Internal		
			Maryland		
			5 - 0039037601929621 (Anne Arundel County)	6 - 0039046801929643 (Anne Arundel County)	Total
Internal	Maryland	15 - 0059129601929490 (Baltimore County)	40%	60%	100%
		Total	40%	60%	100%

Displaying 1 origin and 2 destinations

Demo Travel Time and Dis…

Data Set: Maryland (freight-only 1/1/20 thru 1/31/24)

Study Area: Base Geography
Internal Zones: Subcounties
External Zones: OD gates

Spatial Filter: 3 areas in Maryland (freig…
Temporal Filter: 2/1/2024 – 3/25/2024
Other Filters: Vehicle type: Medium, He…

Legend

Display Options

Open as...

Export

Average travel time

Destinations

Origins			Internal	
			Maryland	
			5 - 0039037601929621 (Anne Arundel County)	6 - 0039046801929643 (Anne Arundel County)
Internal	Maryland	15 - 0059129601929490 (Baltimore County)	00:44:16	00:54:00
		Total	n/a	n/a

Origins			Total
Internal	Maryland	15 - 0059129601929490 (Baltimore County)	n/a
		Total	n/a

Demo Travel Time and Dis…

Data Set: Maryland (freight-only 1/1/20 thru 1/31/24)

Study Area: Base Geography
Internal Zones: Subcounties
External Zones: OD gates

Spatial Filter: 3 areas in Maryland (freig…
Temporal Filter: 2/1/2024 – 3/25/2024
Other Filters: Vehicle type: Medium, He…

Legend

Display Options

Open as...

Export

Destinations

95th percentile travel time

Origins			Internal	
			Maryland	
			5 - 0039037601929621 (Anne Arundel County)	6 - 0039046801929643 (Anne Arundel County)
Internal	Maryland	15 - 0059129601929490 (Baltimore County)	01:08:02	01:18:32
		Total	n/a	n/a

Origins			Total
Internal	Maryland	15 - 0059129601929490 (Baltimore County)	n/a
		Total	n/a

Displaying 1 origin and 2 destinations

Weekdays Truck Samples – BEFORE and AFTER bridge loss

BEFORE

Trips	Trips (Vehicle type: Medium)	Trips (Vehicle type: Heavy)	Median Travel Time	Average Travel Time	95th Percentile Travel Time	5th Percentile Travel Time	Median Trip Distance (mi)
286	278	8	0:52:13	0:54:00	1:18:32	0:38:00	37.34
193	185	8	0:41:53	0:44:16	1:08:02	0:27:00	29.39
479							

Average travel times:
4 minutes longer or
9 minutes longer

AFTER

Trips	Trips (Vehicle type: Medium)	Trips (Vehicle type: Heavy)	Median Travel Time	Average Travel Time	95th Percentile Travel Time	5th Percentile Travel Time	Median Trip Distance (mi)
274	269	5	0:55:31	0:57:59	1:23:05	0:41:08	38.21
150	144	6	0:49:49	0:53:18	1:20:13	0:32:37	30.63
424							

Weekdays Truck Samples – BEFORE and AFTER bridge loss

BEFORE

Trips	Trips (Vehicle type: Medium)	Trips (Vehicle type: Heavy)	Median Travel Time	Average Travel Time	95th Percentile Travel Time	5th Percentile Travel Time	Median Trip Distance (mi)
286	278	8	0:52:13	0:54:00	1:18:32	0:38:00	37.34
193	185	8	0:41:53	0:44:16	1:08:02	0:27:00	29.39
479							

Median pathway distances:
1 mile longer

AFTER

Trips	Trips (Vehicle type: Medium)	Trips (Vehicle type: Heavy)	Median Travel Time	Average Travel Time	95th Percentile Travel Time	5th Percentile Travel Time	Median Trip Distance (mi)
274	269	5	0:55:31	0:57:59	1:23:05	0:41:08	38.21
150	144	6	0:49:49	0:53:18	1:20:13	0:32:37	30.63
424							

RITIS | PROBE DATA ANALYTICS SUITE

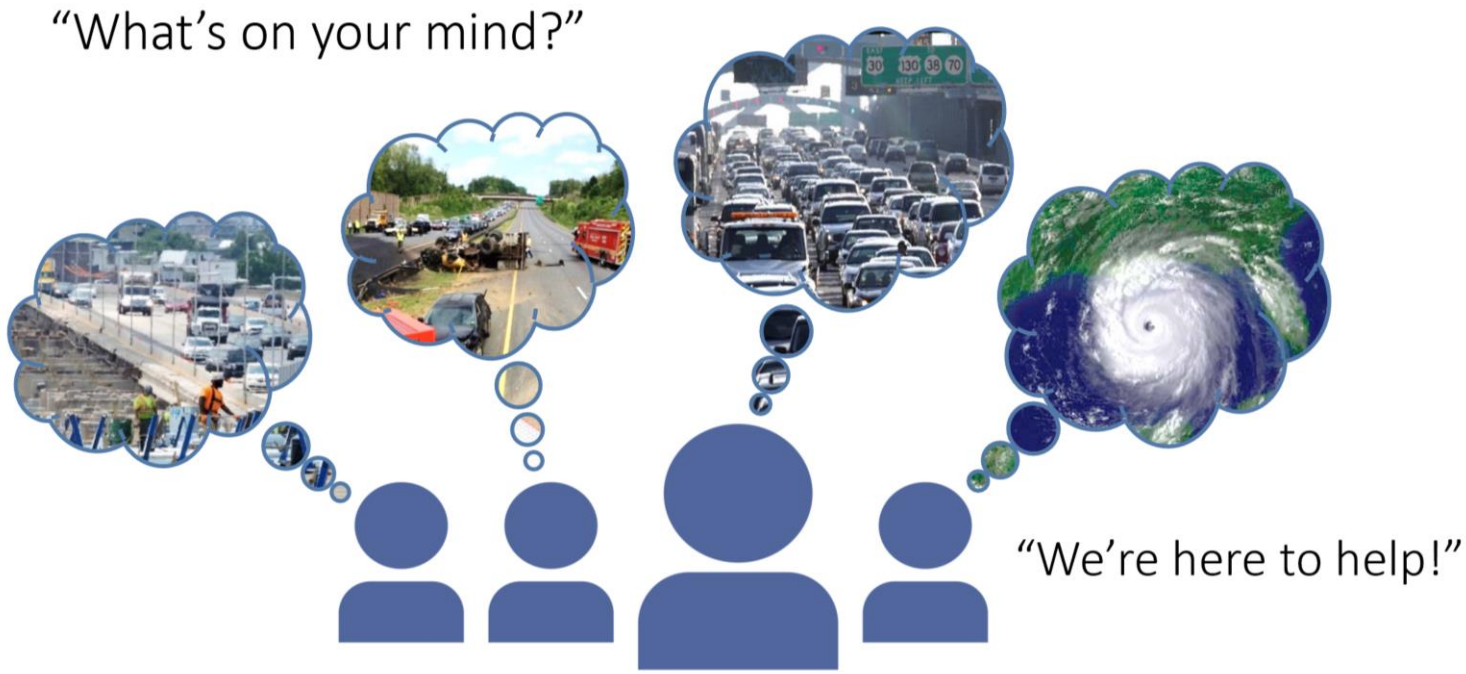
User Feedback Session, Q/A & Wrap Up

Michael Pack
Director
UMD CATT Lab

Jesse Buerk
Manager, 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.
- 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

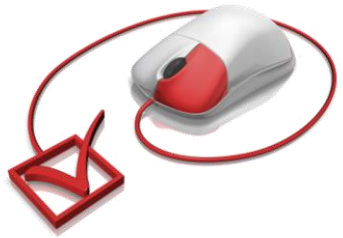


Agency Input – Polling and Open Discussion

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

Poll 4 - What kinds of things are you currently doing with RITIS - Planning/Ops, presentations, project/funding justification, etc.- that you'd be willing to share at a future meeting?

Poll 5 - Is there any topic you would like to see added to a future User Group meeting?



Wrap Up

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

Questions?

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