

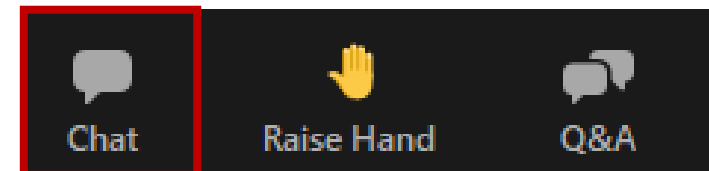
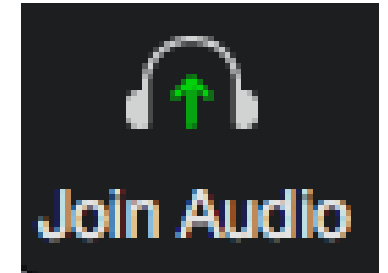
RITIS User Group

Web Meeting | July 27, 2023



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.



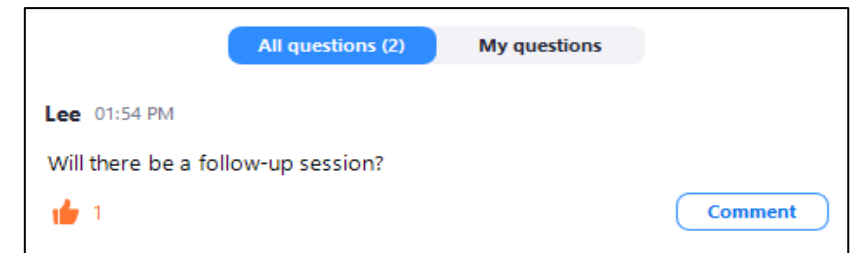
Asking Questions in the Q&A Box



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



- The questions in the Q&A box will be monitored and answered either between presentations 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**



Coalition Update



Marygrace Parker

The Eastern Transportation Coalition
Interim TSMO Program Director
Freight Program Director

— THE EASTERN —
TRANSPORTATION
COALITION



Coalition Update – Recent & Upcoming Events

RECENT

- ✓ Distracted Driving/Move Over Conference: *A Unified Approach to Driving Change on the Roadway* - May 8-10, 2023
- ✓ TDM Vendor Forum (*invite only*) - Volume Data - May 25, 2023
- ✓ Info Sharing Event: Considerations for Digital Infrastructure – June 28, 2023

UPCOMING

- HOGs In-person Exchanges with Virtual Reality TIM Training Sessions (*invite only*) – Sept-Dec 2023
- RITIS User Group Meeting – October 19, 2023
- Travel Information Summit, Raleigh, NC & via web (*invite only*) – October 24 & 25, 2023
- RITIS Workshop – November 2023



TETC TSMO Director position

- Overseeing 5 emphasis areas:
 - Incident Management
 - Travel Information
 - Data (sharing, applications and tools)
 - Connected Vehicle and Other Emerging Technologies
 - Training
- Visit the Coalition website for more information or contact Marygrace Parker (mgparker@tetcoalition.org)
- For best consideration please submit by August 8, 2023



Welcome & Introductions



Matt Glasser

National TSMO Account Lead
Arcadis
RITIS User Group Co-chair



Today's Meeting

Welcome and Introductions	Marygrace Parker, TETC Matt Glasser, Arcadis & RITIS User Group Co-chair
Spotlight Presentation 1: How Florida DOT District 3 leverages RITIS in a rural TMC	Kevin Mehaffy, Florida DOT RTMC, Gannett Fleming
Spotlight Presentation 2: Understanding the Impacts of the Philadelphia I-95 Bridge Collapse on Highway Traffic	Greg Jordan, UMD CATT Lab
RITIS Product Enhancement Working Group Update & Recent Deployments	Michael Pack, UMD CATT Lab
PDA Suite Performance Reporting Working Group Update	John Allen, UMD CATT Lab
Agency Input Session/Wrap Up and Remaining Questions	Matt Glasser



Today's Speakers



Michael Pack
UMD CATT Lab
Director



Kevin Mehaffy
Florida DOT RTMC
Gannett Fleming
Management Team



Greg Jordan
UMD CATT Lab
*Senior Faculty
Specialist*



John Allen
UMD CATT Lab
*Faculty Assistant, Outreach &
Education*

Meeting Participants

Agencies

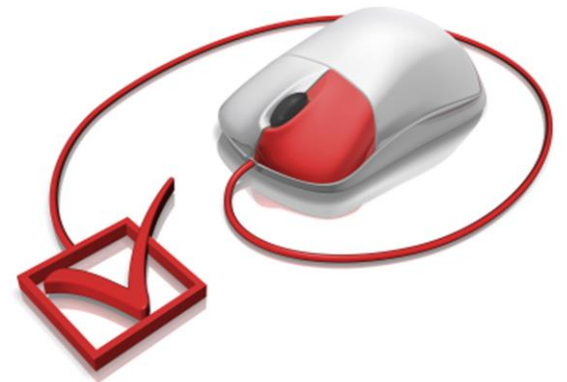
Adams County	Charlotte DOT	Florida's Turnpike Enterprise	Massachusetts DOT	North Carolina DOT	SRPEDD
Alaska DOT&PF	Chattanooga TPO	Gannett Fleming	Miami-Dade County	Northern Virginia Transportation Authority	Tennessee DOT
Alexandria Transit Company (DASH)	City of Charlotte NC	Georgia Environmental Protection Division	Michigan DOT	Office of Intermodal Planning and Investment	Texas A&M Transportation Institute
Arizona DOT	City of Raleigh, NC	Henry County Government	Mid-Willamette Valley Council of Governments	Ohio DOT	Texas DOT
Atlanta Regional Commission	Connecticut DOT	Illinois DOT	MWCOG	Old Colony Planning Council	University of Maryland CATT Lab
Baltimore Metropolitan Council	Corpus Christi MPO	INRIX	MWVCOG	Oregon DOT	University of Tennessee
CAMPO (Raleigh NC)	District DOT	KIPDA	Nashville DOT	Pennsylvania DOT	US DOT
Capital Region Planning Commission	DVRPC	Lackawanna Luzerne MPO	New Jersey DOT	Pennsylvania State Police	Vermont AOT
Centre County MPO	Federal Highway Administration	Manatee County	New York State DOT	Rhode Island Division of Statewide Planning	Virginia DOT
Centre County Regional Planning	Florida DOT	Maryland DOT-SHA	NJTPA	SCCOG	Wisconsin DOT



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

Response Options:

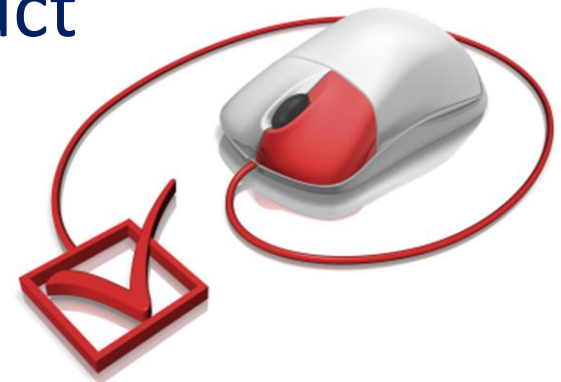
- a) 1-2 times per year
- b) 3-4 times per year
- c) This is my first meeting



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

Response Options:

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)?

Response Options:

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



How Florida DOT District 3 Leverages RITIS in a Rural TMC

Kevin Mehaffy

Management Team

Florida DOT RTMC, Gannett Fleming



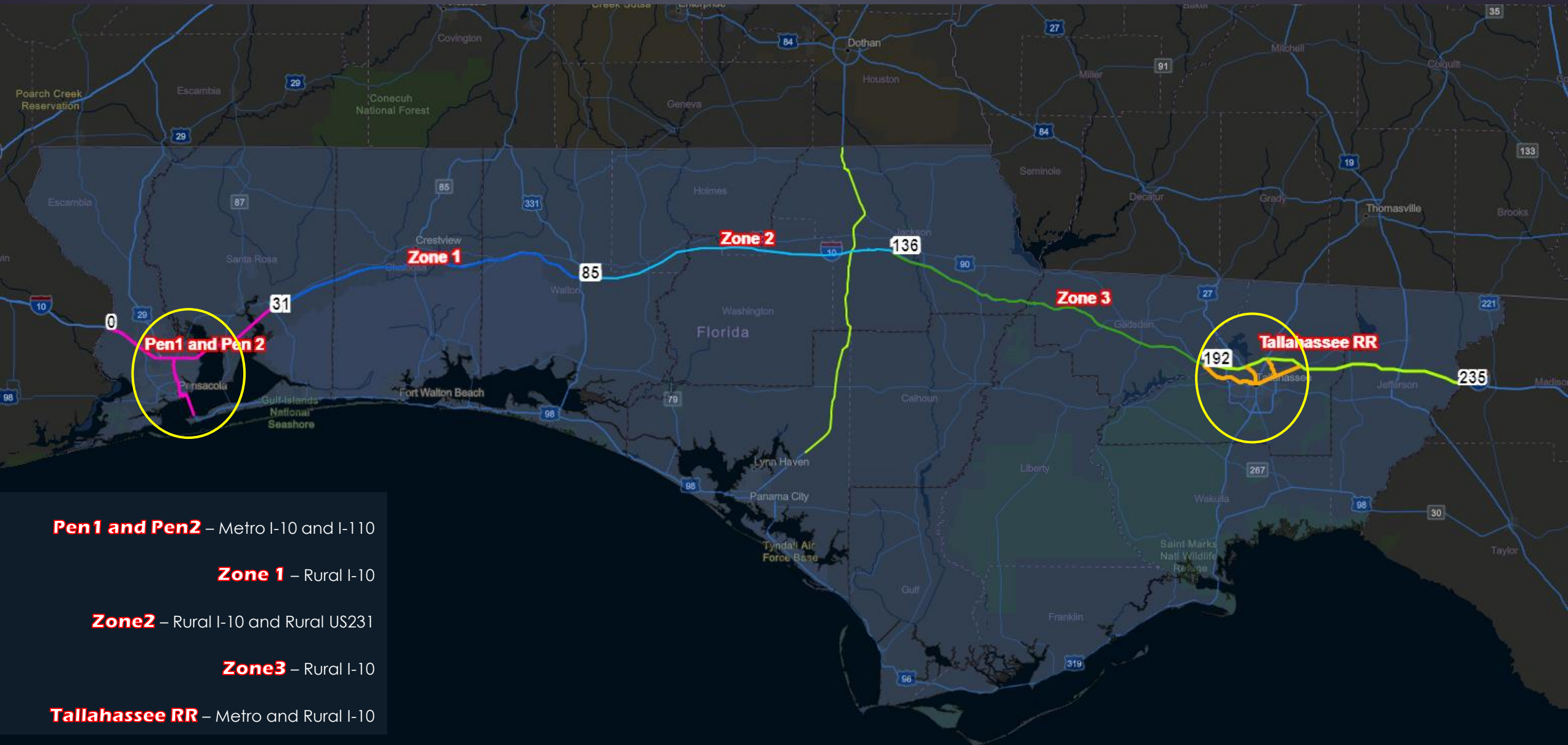
RITIS in the RTMC

FDOT D-3 RTMC • 07.27.23

Introduction D-3 FDOT RTMC

- ▶ Situated in Chipley, Florida, the Northwest Florida SunGuide Center Regional Traffic Management Center (RTMC) operates Florida's Intelligent Transportation System (ITS).
- ▶ This ITS System operates on the backbone of a fiber optic network that extends 235 miles along Interstate 10, from the Alabama state line in Escambia County to Jefferson County.
- ▶ This expansive system manages traffic across the Pensacola metro area, extending eastward to the Tallahassee metro.
- ▶ Additionally, the coverage extends to 56 miles of U.S. 231, starting from the Alabama state line and ending in Bay County, as well as a 9-mile stretch of U.S. 90, from where it intersects with U.S. 231 all the way to the Northwest Florida SunGuide Center.

RTMC Coverage Map



Pen 1 and Pen 2 – Metro I-10 and I-110

Zone 1 – Rural I-10

Zone 2 – Rural I-10 and Rural US231

Zone 3 – Rural I-10

Tallahassee RR – Metro and Rural I-10

RITIS solutions for Rural RTMC



GEOGRAPHIC COVERAGE

RITIS is leveraged to listen to all major radio scanners



INFORMATION SHARING

RITIS platform is inside the DOT Network and allows easier video sharing



DEPLOYMENT EXPANSION

Leverage RITIS to determine impact to travel and historical norms



AUDITS

Real-time Event Audits and After-Action Reviews (AAR) are supported using RITIS



TSM&O REPORTING

RITIS is being utilized to support our TSMO goal to maintain TTI and PTI*



GEOGRAPHIC COVERAGE

Free RITIS 101 training webinar 10am EDT Friday, July 28. Click for info & register: <http://bit.ly/2aP2BZb>

RITIS

- Transportation System Status**
 - Traffic Map**
 - Overview
 - Traffic Cameras
 - RSS Feed
 - COVID-19 Impact
 - WZPMA
- Data Archive
- Personal Traffic Alerts

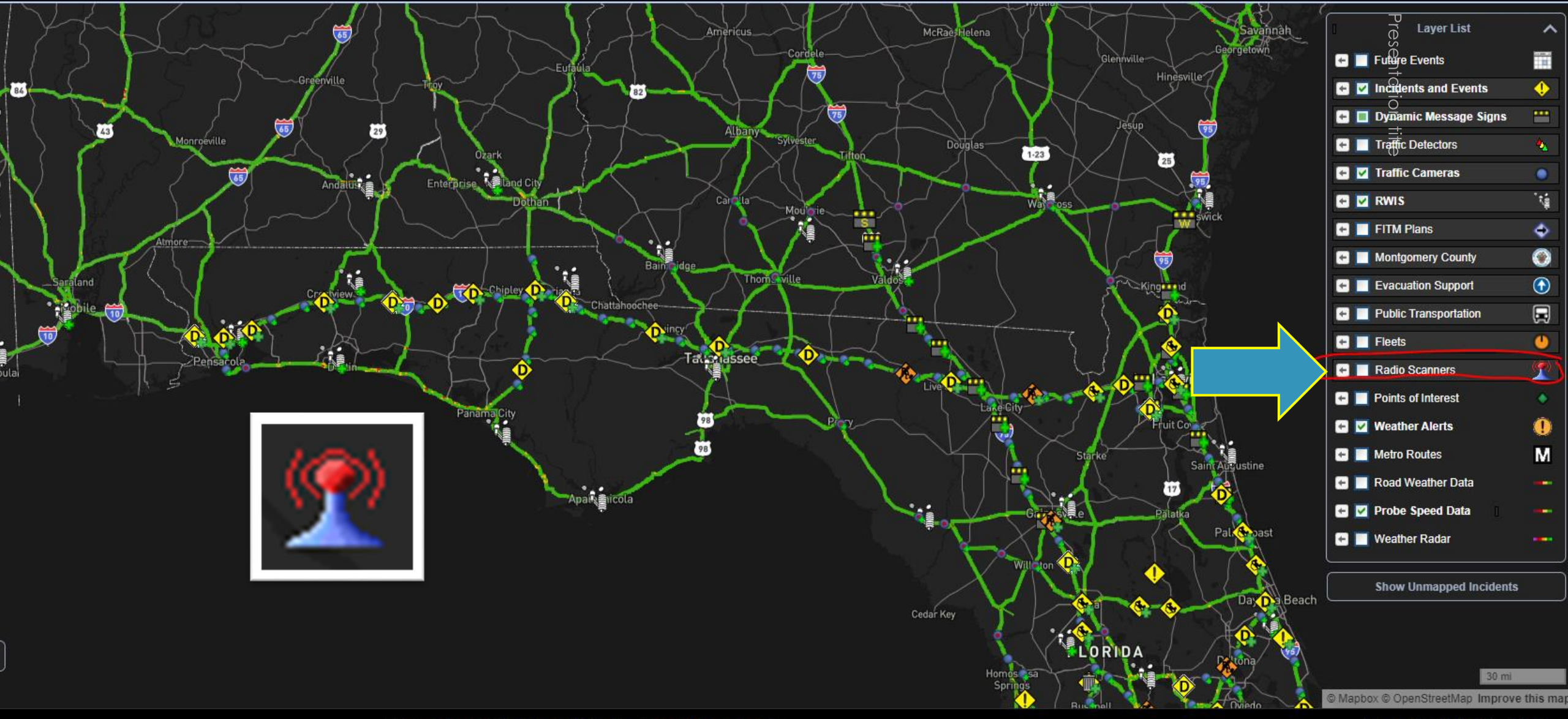
Incident List

Applied Filters: Data Source is equal



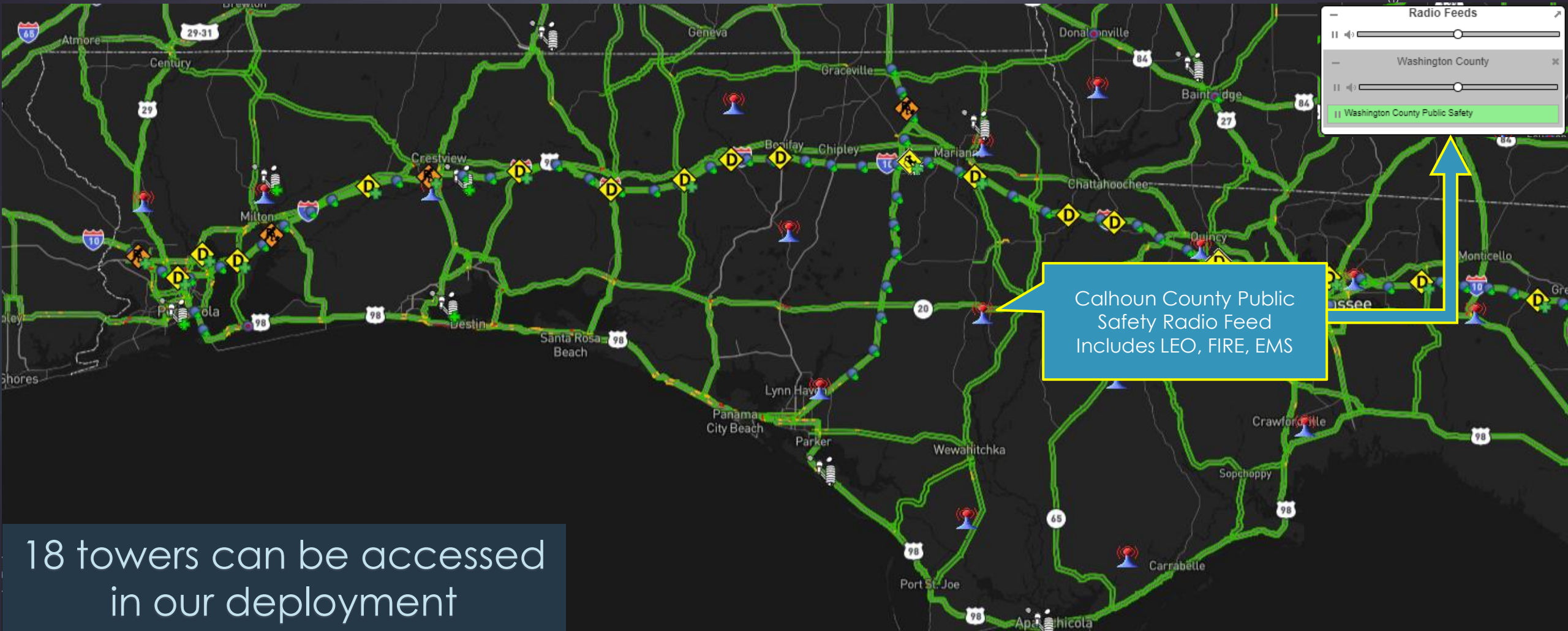


GEOGRAPHIC COVERAGE





GEOGRAPHIC COVERAGE



18 towers can be accessed in our deployment



INFORMATION SHARING

Free RITIS 101 training webinar 10am EDT Friday, July 28. Click for info & register: <http://bit.ly/2aP2BZb>

RITIS

Transportation System Status Data Archive Personal Traffic Alerts

Incident List Traffic Map Incident Overview **Traffic Cameras** RSS Feed COVID-19 Impact WZPMA

Applied Filters: Data Source is equal to FDOT.

Welcome Kevin Mehaffy!

⚙️ ? 🗺️

🔍 🌐 🌙

To remove a video, click and drag it to the recycle icon that appears on the right side.

Mapbox

© Mapbox © OpenStreetMap Improve this map

Video Feeds Static Image Feeds

All

LOADING



INFORMATION SHARING

RITIS Transportation System Status | Data Archive | Personal Traffic Alerts

Incident List | Traffic Map | Incident Overview | **Traffic Cameras** | RSS Feed | COVID-19 Impact | WZPMA

Welcome Kevin Mehaffy!

Applied Filters: Data Source is equal to FDOT.

6
NW
I10-012.4 EB
I-110
CCTV-I10-012.4-EB

I-110
I10-012.4 EB
W
CCTV-I10-012.4-EB-B

Radio Feeds
Layer List

Satellite
mapbox

Video Feeds | Static Image Feeds | Active (2)

	No Thumbnail
I10-MM 012.4EB-I110-B	I10-MM 012.4EB-I110



Large Deployment

Determining historical norms / trends using Performance Charts

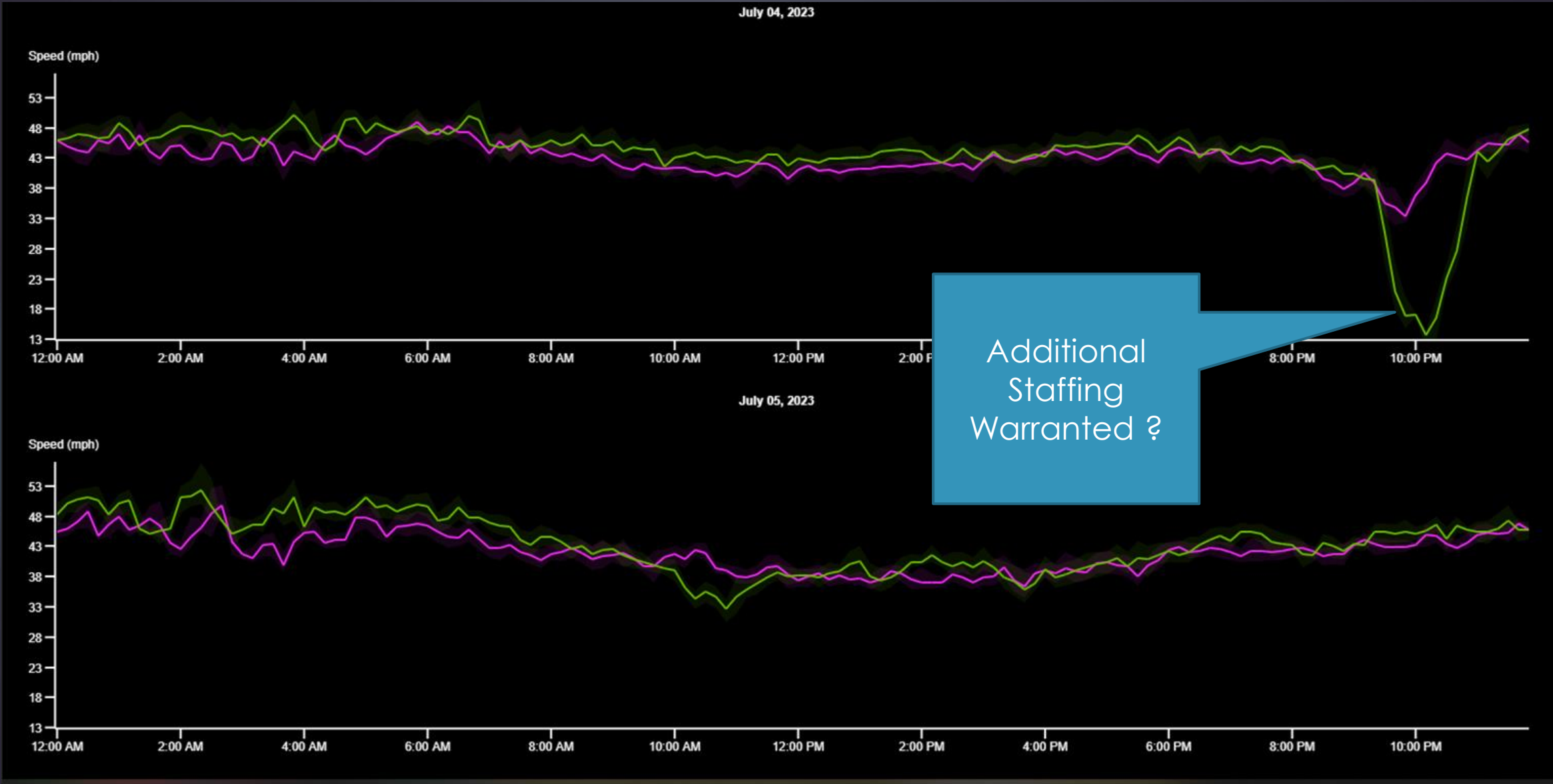


The 2023 data in blue shows increased speed



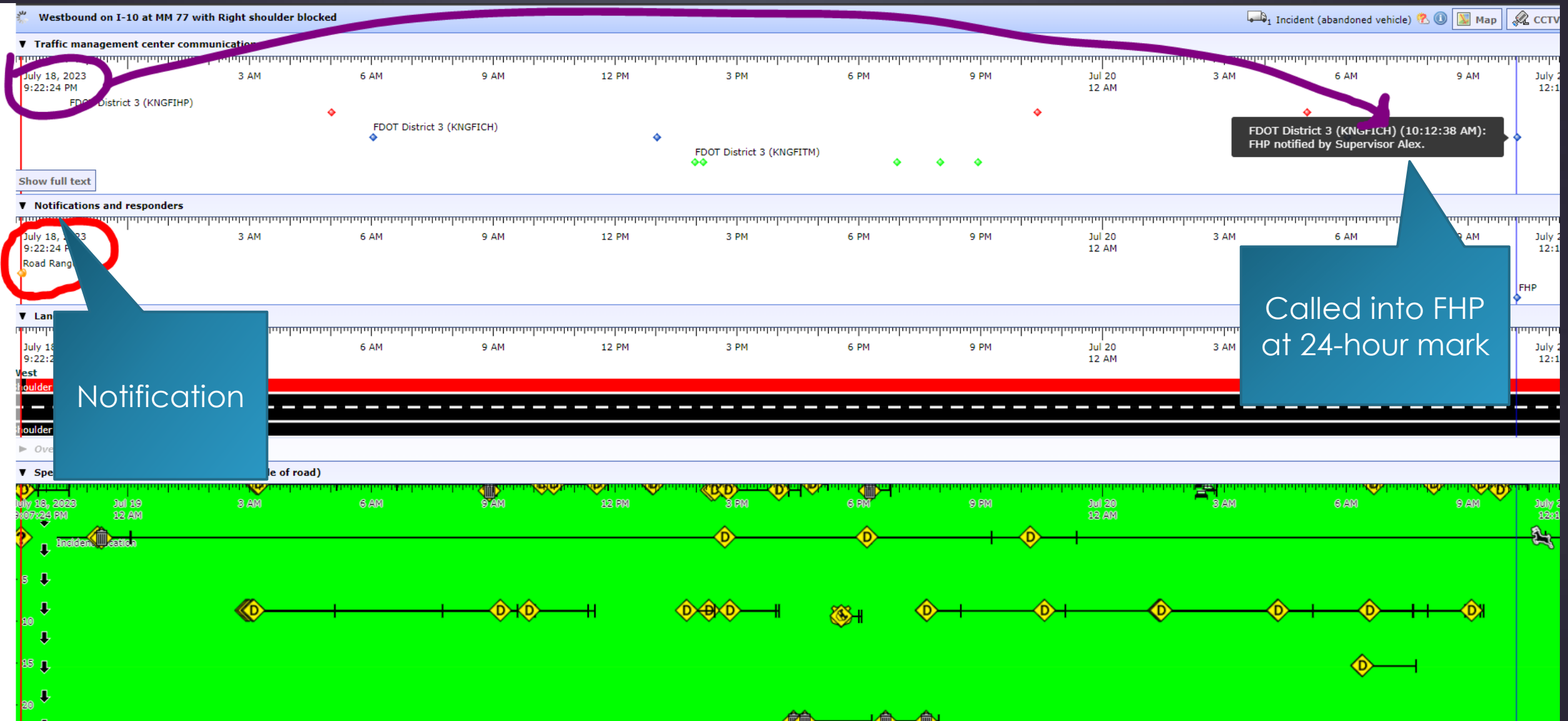
Large Deployment

Determining historical norms / trends





AUDIT SUPPORT



FDOT District 3 (KNGFICH) (10:12:38 AM): FHP notified by Supervisor Alex.

Called into FHP at 24-hour mark

Notification



AUDIT SUPPORT

AAR for event # 290887

Identified Issue

The Leon Co Sheriff office and FHP simultaneously set up detours at the 209 and the 217 both requesting DOT maintenance resources
 The RTMC failed to make phone contact with the Tallahassee TMC for the detour event. Four email notifications were sent to the Tallahassee TMC during the 50-minute detour. Please note that 42 minutes of this closure the RTMC had 2 detours in place awaiting notification of removal of one.

Response

AAR completed with Tallahassee and RTMC

Confirmed the OneNote Operations Manual has contact information for the Tallahassee TMC

The RTMC has updated the policy to contact the Tallahassee TMC for all detour events. Added the phone contact requirement to the desktop references (see attached)

Ongoing response

We will continue to monitor our response to events in Gadsden and Leon County and identify if policy and rules for event management require additional instruction for the operators.

Explore ways to make event emails more distinctive

Event Summary / Lessons Learned

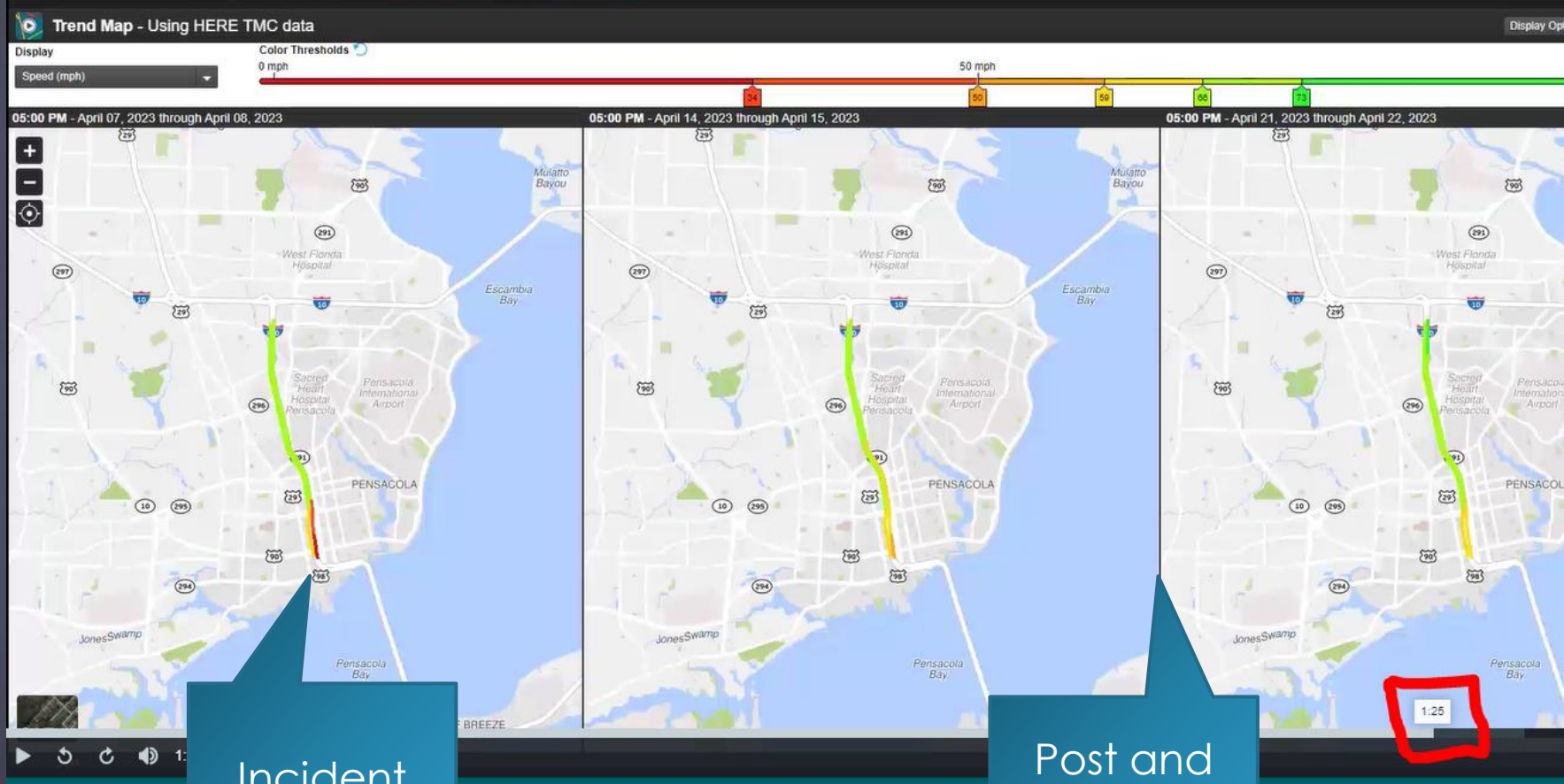
Law Enforcement response may not match with response plans

RTMC will increase communication with the Tallahassee RTMC

Tallahassee TMC will coordinate with LEO

Event Communication Timeline

Date/Time	Occurrence
04/29/2021 15:21:59	Shortly after 4pm a police chase occurred on I-10 and concluded near MM 121
04/29/2021 15:28	All Lanes Closed
4/29/2021 15:34	Initial Event Email sent (including the Tallahassee TMC)
04/29/2021 15:41	TMC contacted by SO notified of detour being set up at the 209
04/29/2021 15:43	Detour established at 209
4/29/2021 16:02	Event Update Email with detour info sent (including the Tallahassee TMC)
4/29/2021 16:08	Event Update Email with detour info sent (including the Tallahassee TMC)
4/29/2021 16:15	FHP Notified TMC of detour at the 217
04/29/2021 16:43	Executive Email with detour info sent (including the Tallahassee TMC)
04/29/2021 16:58	Cleared (16:43 / 50 minutes) Executive Event Notification Informing Detour had been removed at 209 / established at the 217 (including the Tallahassee TMC)
04/29/2021 17:30	Executive Event Notification Informing Detour had been removed at the 217 (including the Tallahassee TMC)
04/29/2021 17:56	Executive Update email sent (including the Tallahassee TMC)



Incident Duration

Post and Previous Weeks

1:25



TSM&O REPORTING



REGION EXPLORER
Explore the relationships between bottlenecks and traffic events in real-time and in the past.

[Tutorial](#) [Help](#)

MASSIVE DATA DOWNLOADER
Download raw probe data from our archive for offline analysis.

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

CONGESTION SCAN
Analyze the rise and fall of congested conditions on a stretch of road.

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

CORRIDOR SPEED BINS
Visualize congestion measures by time spent at each speed on a stretch of road.

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

CORRIDOR TIME COMPARISON
View congestion metrics as a function of location on a road.

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

TREND MAP
Create animated maps of roadway conditions.

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

PERFORMANCE CHARTS
Chart performance metrics over time.

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

PERFORMANCE SUMMARIES
Report on Buffer Time Index, Planning Time Index, and other performance metrics.

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

BOTTLENECK RANKING
Rank bottlenecks and discover which ones have the greatest impact.

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

USER DELAY COST ANALYSIS
Put a dollar amount on how much a road's performance impacts its users.

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

DASHBOARD
Create your own personal dashboards to monitor corridor performance in regions of interest.

[Tutorial](#) [Help](#)

TEMPORAL COMPARISON MAPS
Analyze performance metrics of any road segment by one or more time ranges.

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

CAUSES OF CONGESTION GRAPHS

TEMPORAL COMPARISON MAPS





TSM&O REPORTING

FDOT D3 TSM&O Quarterly Report

TSM&O Goals / Supporting Info | PTI | ITS Uptimes | Clearance Times | Network Uptimes

Secondary Crashes	PTI (Planning Time Index)	ITS Device Uptimes	Reduce Clearance Times	ITS Network Uptime
15 Crashes Reduced secondary crashes over same quarter last	Urban 1.17 Rural 1.18 Maintain Freeway Urban PTI below 1.2 q/q Maintain Freeway Districtwide PTI below 1.5 q/q	83 % Uptimes Overall Freeway Device Uptime to remain greater than 75%	Urban 22.2 min Rural 31.5 min Keep all lanes clearance time for urban areas below 45 minutes q/q Keep all lanes clearance time Districtwide below 60 minutes q/q	99.7% Uptimes Overall Freeway Network Uptime to remain greater than 95%

Crashes | PTI | ITS Uptimes | Clearance

FDOT D3 TSM&O Quarterly Report

TSM&O Goals / Supporting Info | Secondary Crash Goals | PTI | ITS Uptimes | Clearance Times | Network Uptimes

Goals

- Maintain Freeway Urban PTI below 1.2 q/q
- Maintain Freeway Districtwide PTI below 1.5 q/q

Efforts towards reducing PTI

- Timely incident identification and reporting
- Timely dispatch of Road Ranger Service Patrol to incident scene
- Timely roadway clearance and RISC activation

District Status - D3 had urban maintained PTI lower than 1.2 and District PTI lower than 1.5 and met District goals

Segment	2021 Q4	2022 Q4	Change	Goals Met
I-10 (District) EB	1.18	1.19	-01	Yes
I-10 (District) WB	1.15	1.17	+02	Yes
I-10 (Urban) EB	1.17	1.16	- .01	Yes
I-10 (Urban) WB	1.17	1.17	NC	Yes





REGIONAL INTEGRATED TRANSPORTATION INFORMATION SYSTEM

A data-driven platform for transportation analysis, monitoring, and data visualization








TSM&O REPORTING


FDOT D3 TSM&O Quarterly Report


TSM&O Goals / Supporting Info
Secondary Crash Goals
PTI
ITS Uptimes
Clearance Times
Network Uptimes

TSM&O as defined by FHWA is "to optimize the performance of existing multi-modal infrastructure through implementation of systems, services, and projects to preserve capacity and improve the security, safety, and reliability of our transportation system." Below is a flow chart outlining basic TSM&O principles.

Below are the identified reporting goals for D-3

Secondary Crashes	PTI (Planning Time Index)	ITS Device Uptimes	Reduce Clearance Times	ITS Network Uptime
<p>15 Crashes</p> <p style="font-size: x-small;">Reduced secondary crashes over same quarter last yr.</p> 	<p>Urban 1.17 Rural 1.18</p> <p style="font-size: x-small;">Maintain Freeway Urban PTI below 1.2 q/q Maintain Freeway Districtwide PTI below 1.5 q/q</p> 	<p>83 % Uptimes</p> <p style="font-size: x-small;">Overall Freeway Device Uptime to remain greater than 75%</p> 	<p>Urban 22.2 min Rural 31.5 min</p> <p style="font-size: x-small;">Keep all lanes clearance time for urban areas below 45 minutes q/q Keep all lanes clearance time Districtwide below 60 minutes q/q</p> 	<p>99.7% Uptimes</p> <p style="font-size: x-small;">Overall Freeway Network Uptime to remain greater than 98%</p> 

Crashes
PTI
ITS Uptimes
Clearance Times
Network Uptimes

D-3 Supporting Information

Quarter Over Quarter (Q/Q)


- o October 1, 2021 to December 31, 2021
- o October 1, 2022 to December 31, 2022

Urban

- o Escambia County
- o Leon County

Districtwide

- o All District Counties



Reporting five (5) Goals

- o Reduce Secondary Crashes
- o Improve PTI
- o Reduce All Lanes Cleared Time
- o ITS Device Uptime
- o ITS Network Uptime

Period Reported: 2022 Q4

Corridors Reported

- o Freeways: I-10 and I-110

IN SUMMARY

- ▶ D-3 RTMC increased incident awareness by leveraging the RITIS radio feeds 24/7
- ▶ D-3 is sharing high resolution video with internal and external partners using RITIS
- ▶ D-3 is leveraging RITIS to accurately identify congestion trends
- ▶ D-3 uses RITIS to verify After Action and Audit data
- ▶ D-3 Utilizes RITIS to demonstrate TSM&O goal compliance

Enhancement Requests

- ▶ Make the reporting exportable and easier to share
- ▶ Consider an API for ESRI or Power BI
- ▶ Consider saved reports for users that run the same report frequently
- ▶ Allow users to archive past reports for easy access and reference later

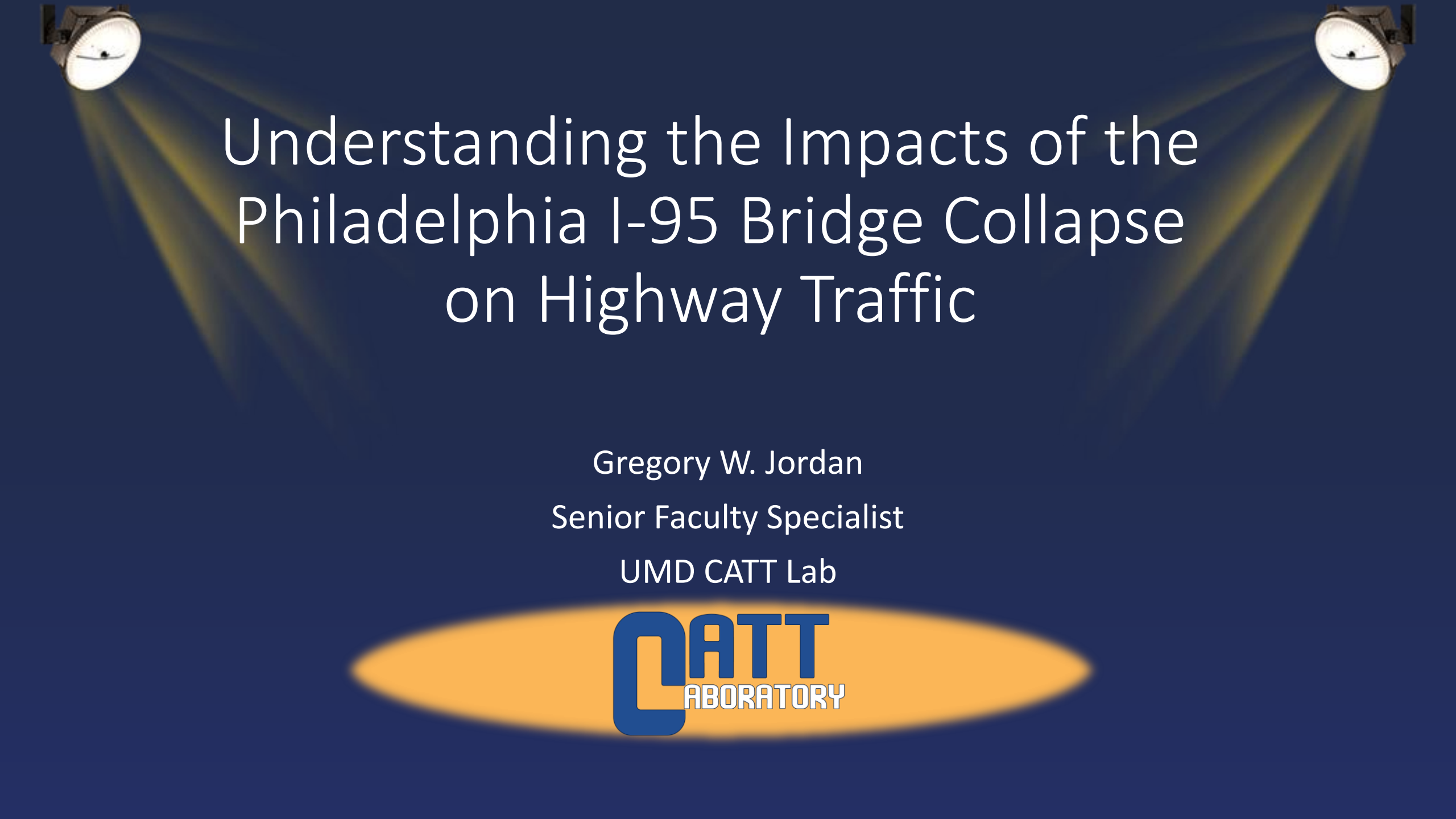


THANK YOU

KEVIN MEHAFFY

KMEHAFFY@GFNET.COM

KEVIN.MEHAFFY@DOT.STATE.FL.US



Understanding the Impacts of the Philadelphia I-95 Bridge Collapse on Highway Traffic

Gregory W. Jordan
Senior Faculty Specialist
UMD CATT Lab



Welcome to Nextgen Trip Analytics

BETA
Jul 11, 2023

Using the [Pennsylvania/New Jersey \(I-95 closure\) data set](#) ?

[Switch to the original version of Trip Analytics](#)

[Learn more about Nextgen Trip Analytics](#)



CREATE A STUDY

Begin an analysis here.

START



MY STUDIES

Resume work or manage existing studies.

START

Who has access to Trip Analytics *today*?

- Vermont
 - Rhode Island
 - Massachusetts
 - Pennsylvania
 - Maryland (freight)
 - North Carolina
 - Tennessee
 - Georgia
 - Texas
 - Illinois
 - Nevada
- ...and growing

Investigation of Bay Bridge Traffic Complaints

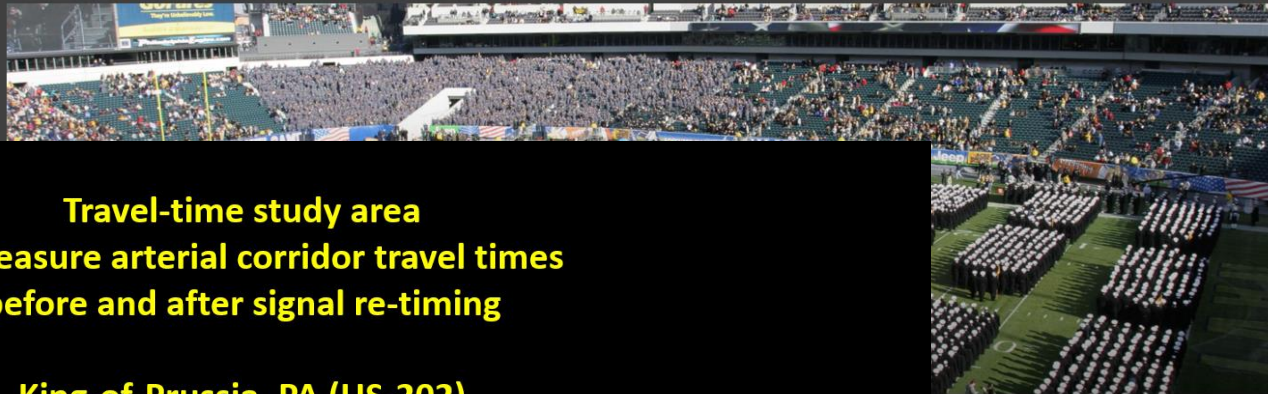
EB US-50
July 2022
(Saturdays)



Before & After Ribbon-cutting: How routes and travel times have changed

Last-Mile Travel Time Analysis

Philadelphia Stadium Parking District
Pre-game Analysis for December 10, 2022

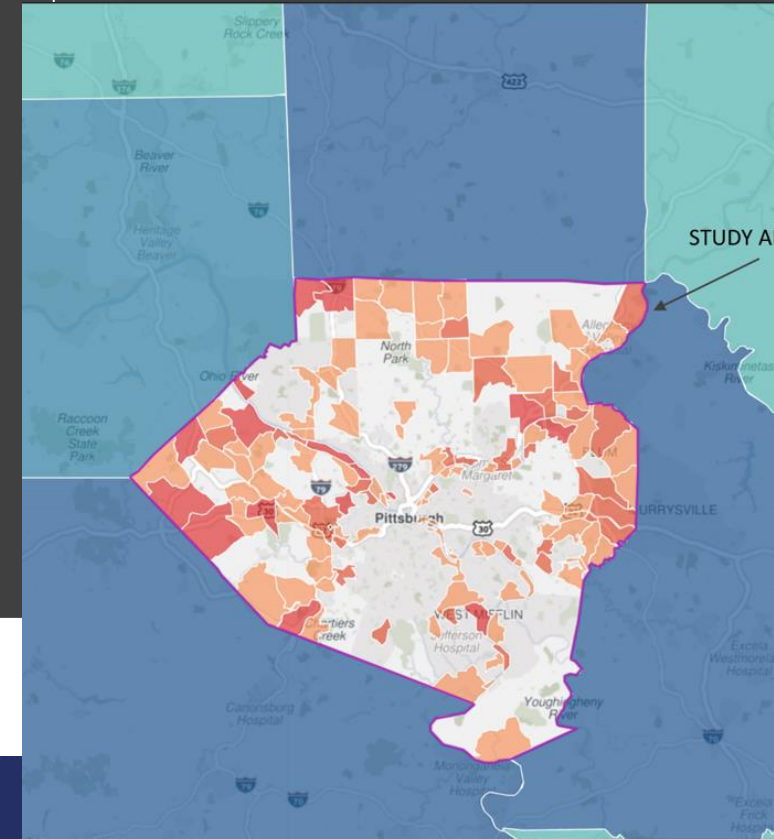


Travel-time study area to measure arterial corridor travel times before and after signal re-timing

King-of-Prussia, PA (US-202)

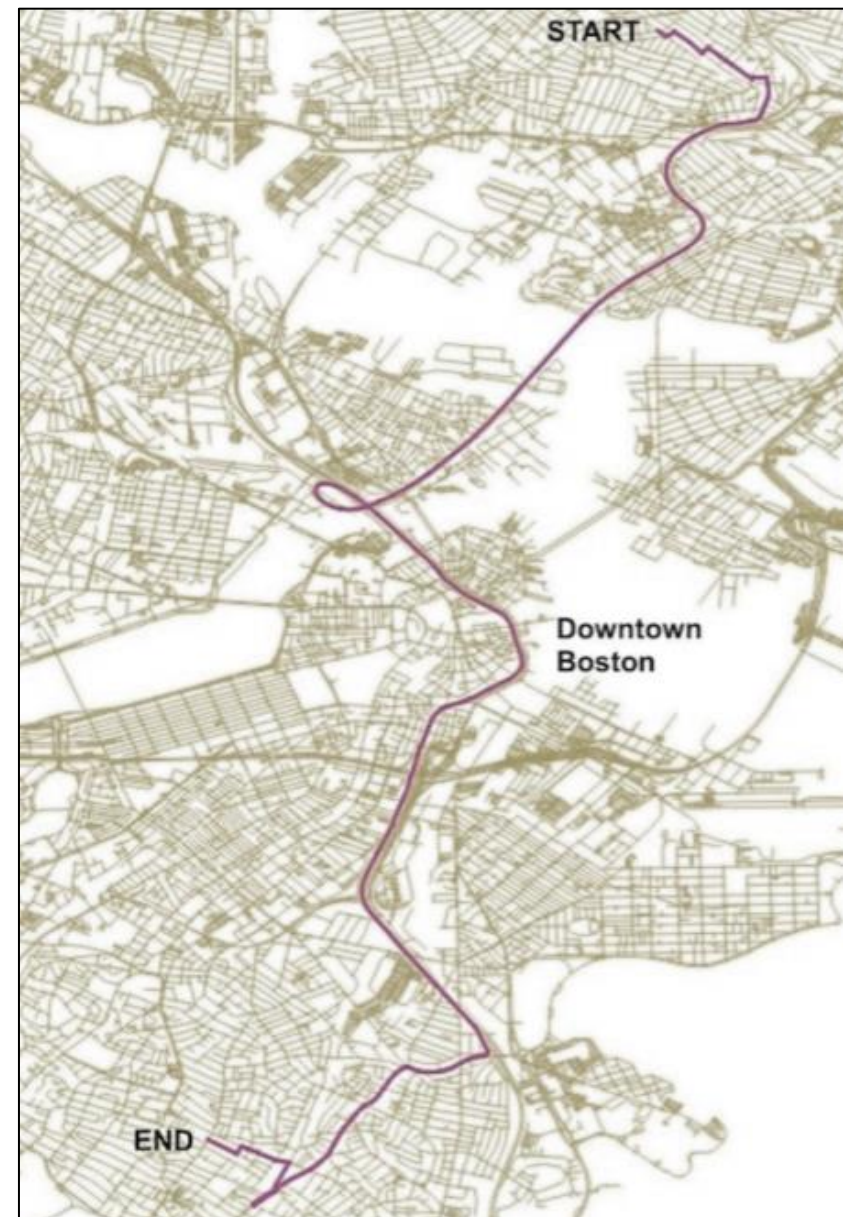


Route 147)

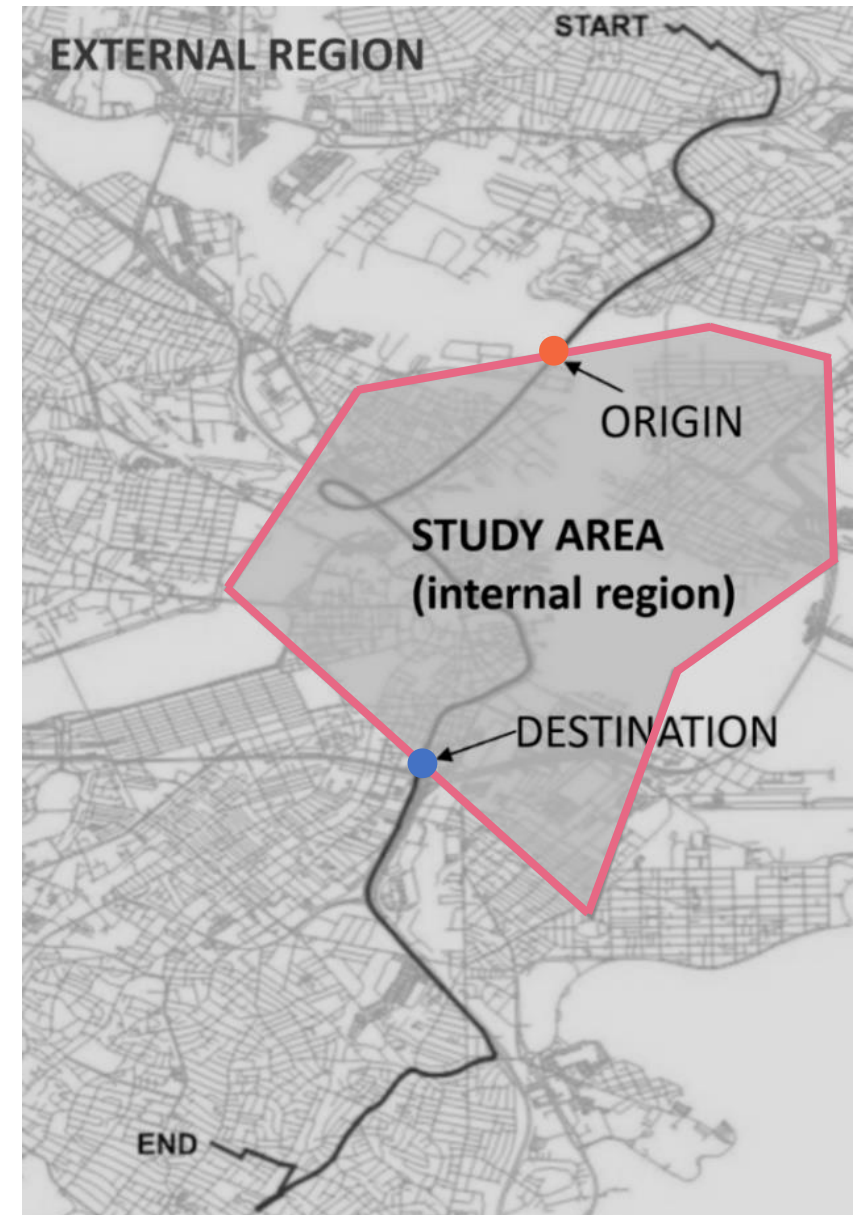


The Big Picture – What does Trip Analytics do?

- Analyzes samples of real-world trip pathways to document driver route choices and travel time differences from one time period to another
- Data sources: GPS “bread crumb” trails from cell phones, connected vehicles and trucking fleets



- A **bounded study area** makes it easy to document route choices and travel times for each route crossing the area, from origin to destination



U.S. NEWS

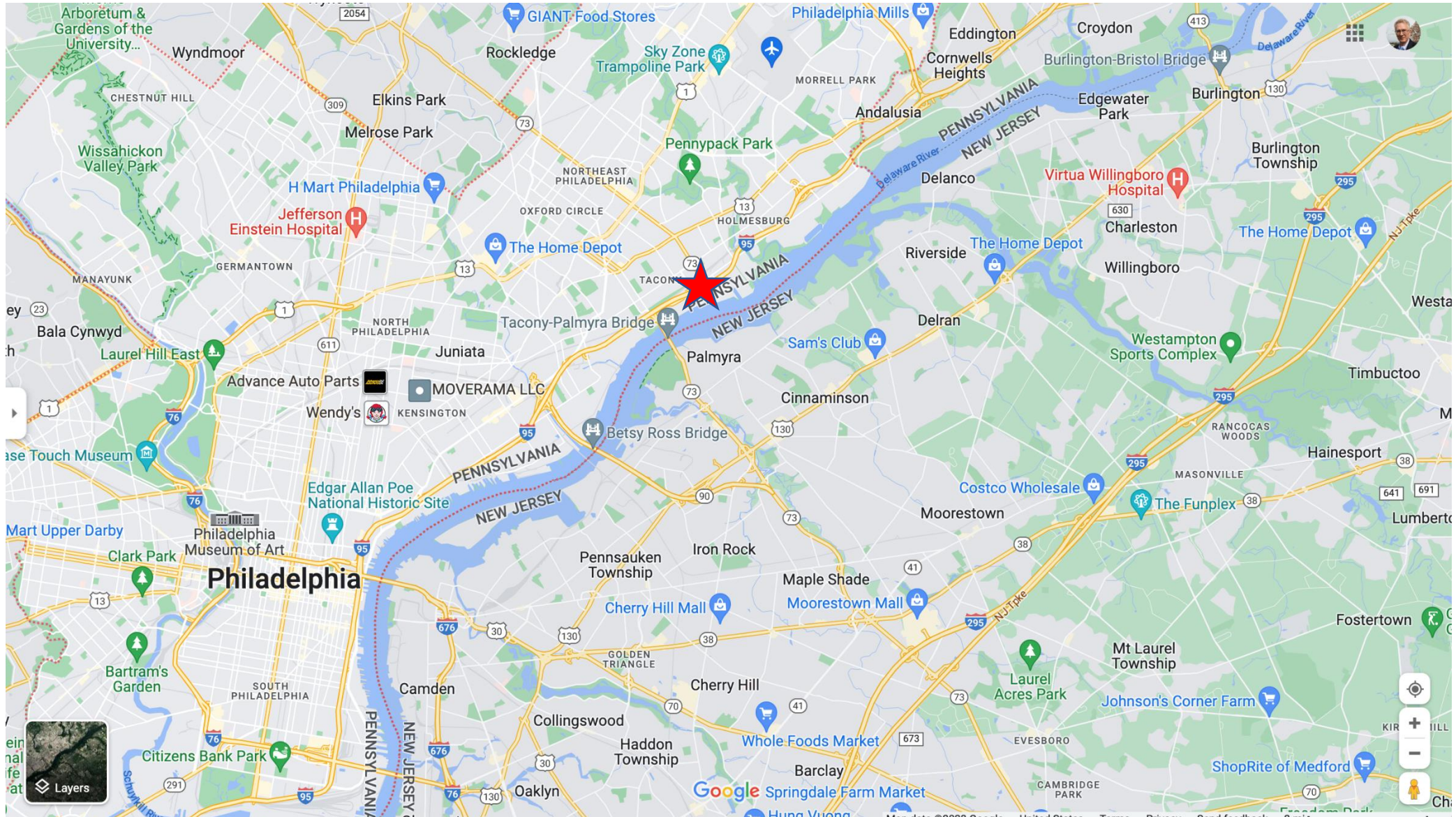
Fiery truck crash in Philadelphia closes stretch of I-95, possibly for months

The collapse of an elevated section of the highway will shutter part of a key East Coast route on the city's northeast side, officials said.



June 12, 2023

Crash / fire at 6:20 a.m.



A study area to focus our analysis was drawn to help us answer this question:

“To what degree did SB I-95 drivers shift to a parallel route across the river in NJ?”

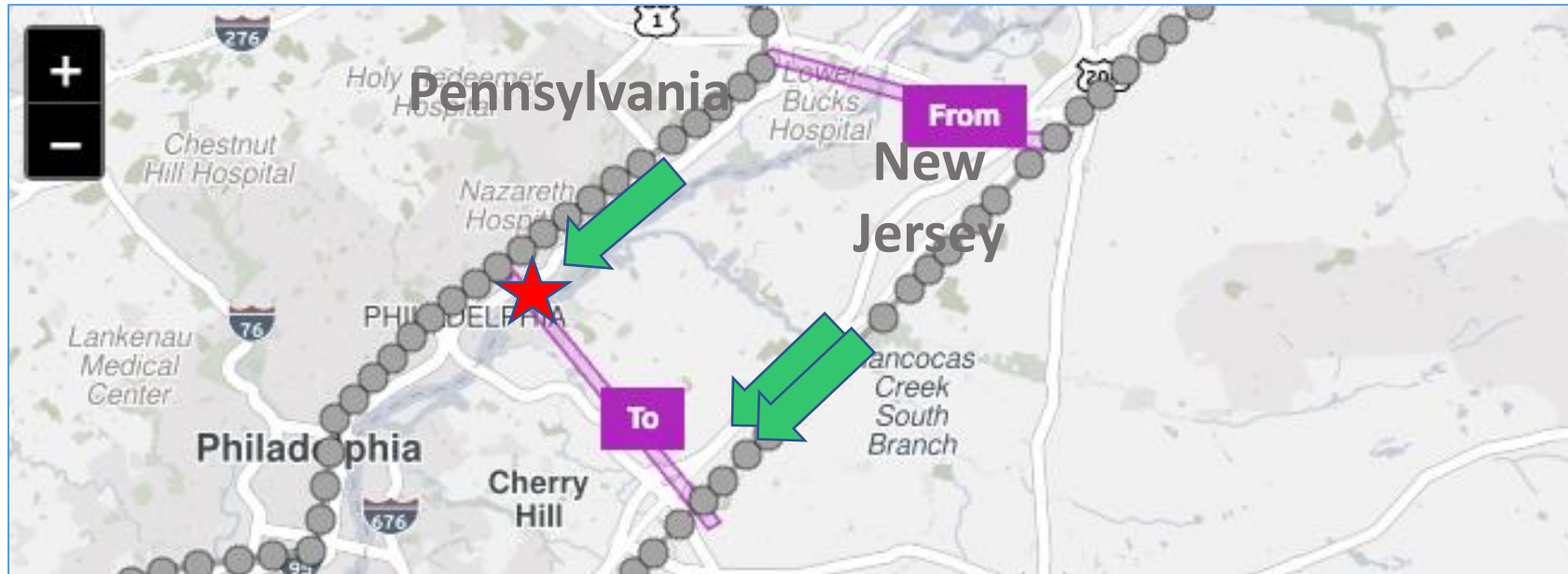
The screenshot displays a web application interface for Trip Analytics. The top navigation bar includes the title "Trip Analytics", a user login "Logged in as gjordan1@umd.edu", and links for "My Studies", "Help", "Switch data set", and "Logout".

The left sidebar contains a configuration panel with the following sections:

- Using the Pennsylvania/New Jersey (I-95 closure) data set**: Includes a "Switch data set" button.
- 1. Study: Diversion to NJ Routes / DMB to Trenton 295/195**:
 - Diversion to NJ Routes / DMB to Trenton 295/195**: Option 3: Using Custom Geography as Study Area. Number of study area OD gates: 1667. Internal Zones: Subcounties. External Zones: Subcounties.
- 2. Set Filters and Submit Query**:
 - Pathway Options**: Use pathways.
 - Set Spatial Filter(s)**: From: Use a custom area as a Spatial Filter: Screen line along PennTPK Ext.geojson. Include trips that: Started Inside and Outside. To: Use a custom area as a Spatial Filter: Screen line along NJ73.geojson. Include trips that: Ended Inside and Outside.
 - Set Temporal Filter(s)**: Precise temporal filtering: On. Date Range: 6/1/2023 to 6/9/2023. Times of Day: 5:00 AM to 12:00 PM (Eastern). Days of Week: Monday, Tuesday, Wednesday, Thursday, and Friday.
 - Set Other Filter(s)**: Vehicle type: Light.
 - Report External Origins and Destinations**: Using OD gates Using external zones.

The main map area shows a map of the Philadelphia, Pennsylvania and Trenton, New Jersey region. A red star is located in Philadelphia, and a blue arrow points to a shaded area along the Delaware River labeled "Study Area". The map includes labels for "Pennsylvania", "New Jersey", "Philadelphia", "Trenton", and "Wilmington". A path of grey dots is drawn along the Delaware River, with a pink line segment labeled "From" and "To" indicating a specific route.

Filter based on where they went...



Purple FROM / TO polygons were drawn to find the trips we need for answering our question about shifting pathways across the river to New Jersey

Filter based on when they went there...

7 weekdays “BEFORE”: June 1-11

6 weekdays “AFTER”: June 12-19

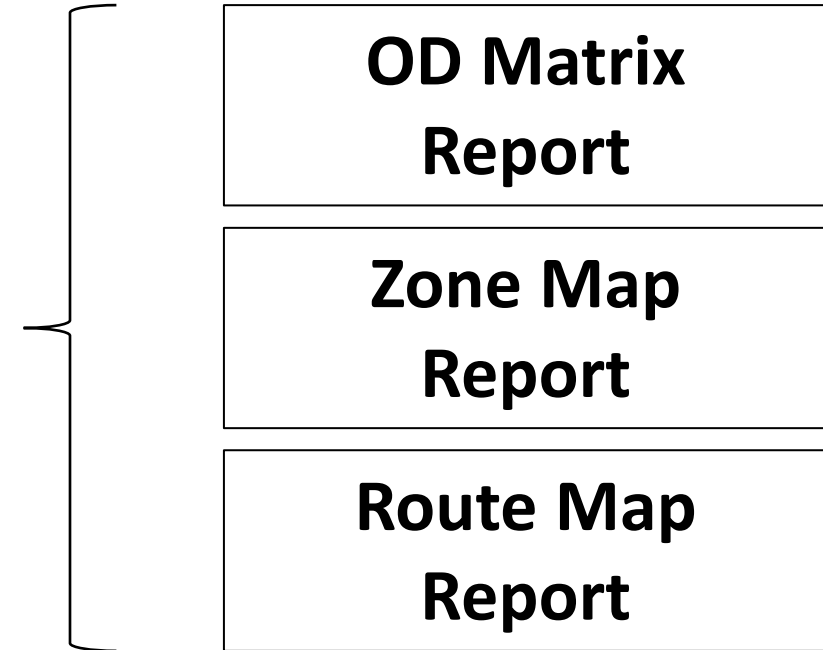
5:00 a.m. to 12:00 p.m. (noon)



Light Vehicles (passenger cars & light trucks)

Three formats for viewing the results

**Results for the BEFORE query:
1169 trips were found following 872
unique pathways (routes)**



Diversion to NJ Routes / Study Area: Custom Geography / Spatial Filter: 2 custom areas in Pennsylv...
 Data Set: Pennsylvania/New Jersey (I-95 closure) / Internal Zones: Subcounties / Temporal Filter: 6/1/2023 - 6/9/2023
 External Zones: OD gates / Other Filters: Vehicle type: Light

1,169 trips in 872 routes

Display Options
 Open as...
 Export

Map	Rank	Route	# of Trips	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
<input checked="" type="checkbox"/>	1	New Jersey Turnpike, I 95, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike; New Jersey Turnpike, NJTP, US 40; I 295, US 40; I 295, US 40, I 295, US 40; Delav	59	59	74 mi	58 m	52 m	57 m	1 h 05 m	1.09
<input checked="" type="checkbox"/>	2	New Jersey Turnpike, I 95, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike, NJTP, US 40; I 295, US 40; I 295, US 40, I 295, US 40; Delaware Memorial Bridge,	38	38	74 mi	58 m	50 m	57 m	1 h 07 m	1.11
<input checked="" type="checkbox"/>	3	New Jersey Turnpike, I 95, NJTP; I 95; New Jersey Turnpike Pennsylvania Extension, I 95; New Jersey Turnpike Pennsylvania Extension, I 95, New Jersey Turnpike Peni	15	15	39 mi	47 m	36 m	48 m	1 h 01 m	1.03
<input checked="" type="checkbox"/>	4	Taylorville Road; I 295; I 95; Delaware Expressway, I 95; Vine Street Expressway	10	10	30 mi	33 m	24 m	26 m	56 m	1.46
<input checked="" type="checkbox"/>	5	James J. Howard Interstate Highway, I 195; New Jersey Turnpike, I 95, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike; New Jersey Turnpike, NJTP, US 40; I 2	9	9	75 mi	1 h 02 m	58 m	1 h 02 m	1 h 10 m	1.01
Total			1169	1169						

Screen line summary: Direction 1 [Switch]

Zoom to screen line

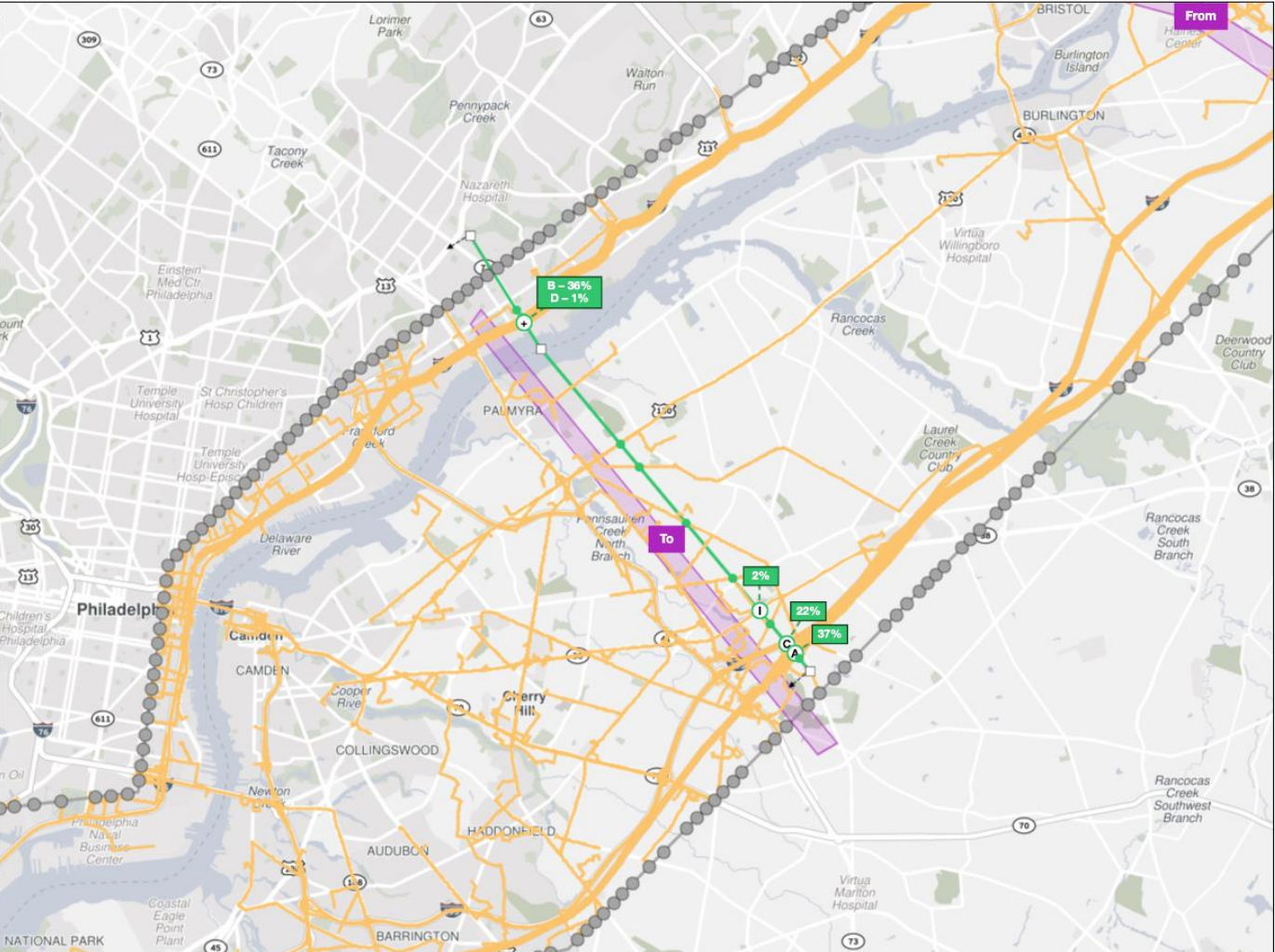
Direction 1	Direction 2	Crossing	Flow	# Trips*	% Trips
<input checked="" type="checkbox"/>	<input type="checkbox"/>	A New Jersey Turnpike, NJTP	↘	431	37%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	B Delaware Expressway, I 95	↘	418	36%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	C I 295	↘	254	22%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	I NJ 38	↘	22	2%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	D Milnor Street	↘	15	1%
<input type="checkbox"/>	<input type="checkbox"/>	L North Church Street, CR 607	↘	8	0.7%
<input type="checkbox"/>	<input type="checkbox"/>	R Wissinoming Street	↘	5	0.4%
<input type="checkbox"/>	<input type="checkbox"/>	E Fellowship Road, CR 673	↘	4	0.3%
<input type="checkbox"/>	<input type="checkbox"/>	X Branch Pike, CR 606	↘	4	0.3%
<input type="checkbox"/>	<input type="checkbox"/>	J Camden Avenue, CR 537	↘	3	0.3%
<input type="checkbox"/>	<input type="checkbox"/>	P Burlington Pike, US 130	↘	3	0.3%
<input type="checkbox"/>	<input type="checkbox"/>	M State Road	↘	2	0.2%
<input type="checkbox"/>	<input type="checkbox"/>	G Ramblewood Parkway	↘	1	0.09%
<input type="checkbox"/>	<input type="checkbox"/>	T Keystone Street	↘	1	0.09%
Total				1171	100%

*# Trips is the sum of displayed routes through each crossing. Routes not shown on map are not included.

Warning! Some routes cross the screen line more than once, inflating trip count: 369, 379, 414, 626, 675, 792

Coordinates:
 (40.04665, -75.04863), (40.01789, -75.02531), (39.93633, -74.93622)

Replace coordinates [Delete screen line]



Route Map Report

trips-beta.ritis.org/routemap?id=b735a581-4699-40bf-a085-be8996dff744

Trip Analytics

Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Study Area: Custom Geography | Spatial Filter: 2 custom areas in Pennsyl... | 1,169 trips in 872 routes

Data Set: Pennsylvania/New Jersey (I-95 closure) | Internal Zones: Subcounties | Temporal Filter: 6/1/2023 - 6/9/2023 | External Zones: OD gates | Other Filters: Vehicle type: Light

Map Rank Route # of Trips Light Vehicles Length Avg TT 5% TT 50% TT 95% TT Reliability

Map	Rank	Route	# of Trips	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
<input checked="" type="checkbox"/>	1	New Jersey Turnpike, I 95, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike; New Jersey Turnpike, NJTP, US 40; I 295, US 40; I 295, US 40, I 295, US 40; Delav	59	59	74 mi	58 m	52 m	57 m	1 h 05 m	1.09
<input checked="" type="checkbox"/>	2	New Jersey Turnpike, I 95, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike, NJTP, US 40; I 295, US 40; I 295, US 40, I 295, US 40; Delaware Memorial Bridge,	38	38	74 mi	58 m	50 m	57 m	1 h 07 m	1.11
<input checked="" type="checkbox"/>	3	New Jersey Turnpike, I 95, NJTP; I 95; New Jersey Turnpike Pennsylvania Extension, I 95; New Jersey Turnpike Pennsylvania Extension, I 95, New Jersey Turnpike Peni	15	15	39 mi	47 m	36 m	48 m	1 h 01 m	1.03
<input checked="" type="checkbox"/>	4	Taylorville Road; I 295; I 95; Delaware Expressway, I 95; Vine Street Expressway	10	10	30 mi	33 m	24 m	26 m	56 m	1.46
<input checked="" type="checkbox"/>	5	James J. Howard Interstate Highway, I 195; New Jersey Turnpike, I 95, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike; New Jersey Turnpike, NJTP, US 40; I 2	9	9	75 mi	1 h 02 m	58 m	1 h 02 m	1 h 10 m	1.01
Total			1169	1169						

ROUTE MAP OF THE PATHWAYS WE WANT, BEFORE JUNE 12TH

Screen line summary: Direction 1

Zoom to screen line

Direction 1	Direction 2	Crossing	Flow	# Trips*	% Trips
<input checked="" type="checkbox"/>	<input type="checkbox"/>	A New Jersey Turnpike, NJTP	↘	431	37%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	B Delaware Expressway, I 95	↘	418	36%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	C I 295	↘	254	22%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	I NJ 38	↘	22	2%
<input checked="" type="checkbox"/>	<input type="checkbox"/>	D Milnor Street	↘	15	1%
<input type="checkbox"/>	<input type="checkbox"/>	L North Church Street, CR 607	↘	8	0.7%
<input type="checkbox"/>	<input type="checkbox"/>	R Wissinoming Street	↘	5	0.4%
<input type="checkbox"/>	<input type="checkbox"/>	E Fellowship Road, CR 673	↘	4	0.3%
<input type="checkbox"/>	<input type="checkbox"/>	X Branch Pike, CR 606	↘	4	0.3%
<input type="checkbox"/>	<input type="checkbox"/>	J Camden Avenue, CR 537	↘	3	0.3%
<input type="checkbox"/>	<input type="checkbox"/>	P Burlington Pike, US 130	↘	3	0.3%
<input type="checkbox"/>	<input type="checkbox"/>	M State Road	↘	2	0.2%
<input type="checkbox"/>	<input type="checkbox"/>	G Ramblewood Parkway	↘	1	0.09%
<input type="checkbox"/>	<input type="checkbox"/>	T Keystone Street	↘	1	0.09%
Total				1171	100%

*# Trips is the sum of displayed routes through each crossing. Routes not shown on map are not included.

Warning! Some routes cross the screen line more than once, inflating trip count: 369, 379, 414, 626, 675, 792

Coordinates: (40.04665, -75.04863), (40.01789, -75.02531), (39.93633, -74.93622)

Replace coordinates | Delete screen line

7 WEEKDAYS "BEFORE"

PA / I-95 = 36%
PA / other = 1%

NJ / I-295 = 22%
NJ / TPK = 37%

Spatial Filter:

From - Screen line along PennTPK
Ext.geojson
Started Inside
Started Outside

To - Screen line along NJ73.
geojson
Ended Inside
Ended Outside

Temporal Filter:

Precise temporal filtering: On
6/1/2023 - 6/9/2023
5:00 AM - 12:00 PM (Eastern)
MTWTFSS

Other Filters:

Vehicle type:
 Light
 Medium
 Heavy

(summary of filter settings)

Trip Analytics

Logged in as gordan1@umd.edu | My Studies | Help | Switch data set | Logout

888 trips in 669 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
<input checked="" type="checkbox"/>	1	New Jersey Turnpike, I 95, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike, NJTP, US 40; I 295, US 40; I 295, US 40, I 295, US 40; Delav	52	52	74 mi	1 h 00 m	53 m	58 m	1 h 14 m	1.18
<input checked="" type="checkbox"/>	2	New Jersey Turnpike, I 95, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike, NJTP, US 40; I 295, US 40; I 295, US 40, I 295, US 40; Delaware Memorial Bridge,	34	34	74 mi	1 h 00 m	52 m	59 m	1 h 11 m	1.12
<input checked="" type="checkbox"/>	3	New Jersey Turnpike, I 95, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike; NJ 73; Highway 73, NJ-73; NJ 38; Kaighns Avenue, NJ 38; US 30; Admiral Wilson I	13	13	40 mi	45 m	40 m	43 m	53 m	1.09
<input checked="" type="checkbox"/>	4	James J. Howard Interstate Highway, I 195, NJTP; New Jersey Turnpike, NJTP; New Jersey Turnpike, NJTP, US 40; I 295, US 40; I 295, US 40	9	9	75 mi	1 h 02 m	59 m	1 h 01 m	1 h 07 m	1.07
<input checked="" type="checkbox"/>	5	Pennsylvania Turnpike, I 276, PATP; Pennsylvania Turnpike, I 276; Pennsylvania Turnpike, I 95; Pennsylvania Turnpike, I 95, Pennsylvania Turnpike, I 95; New Jersey Tu	9	9	36 mi	31 m	29 m	31 m	33 m	1.02
Total			888	888						

ROUTE MAP OF THE PATHWAYS WE WANT, AFTER JUNE 12TH

6 WEEKDAYS "AFTER"

PA / I-95 = closed
PA / other = 9% (from 1%)

NJ / I-295 = 33% (from 22%)
NJ / TPK = 50% (from 37%)

Screen line summary: Direction 1

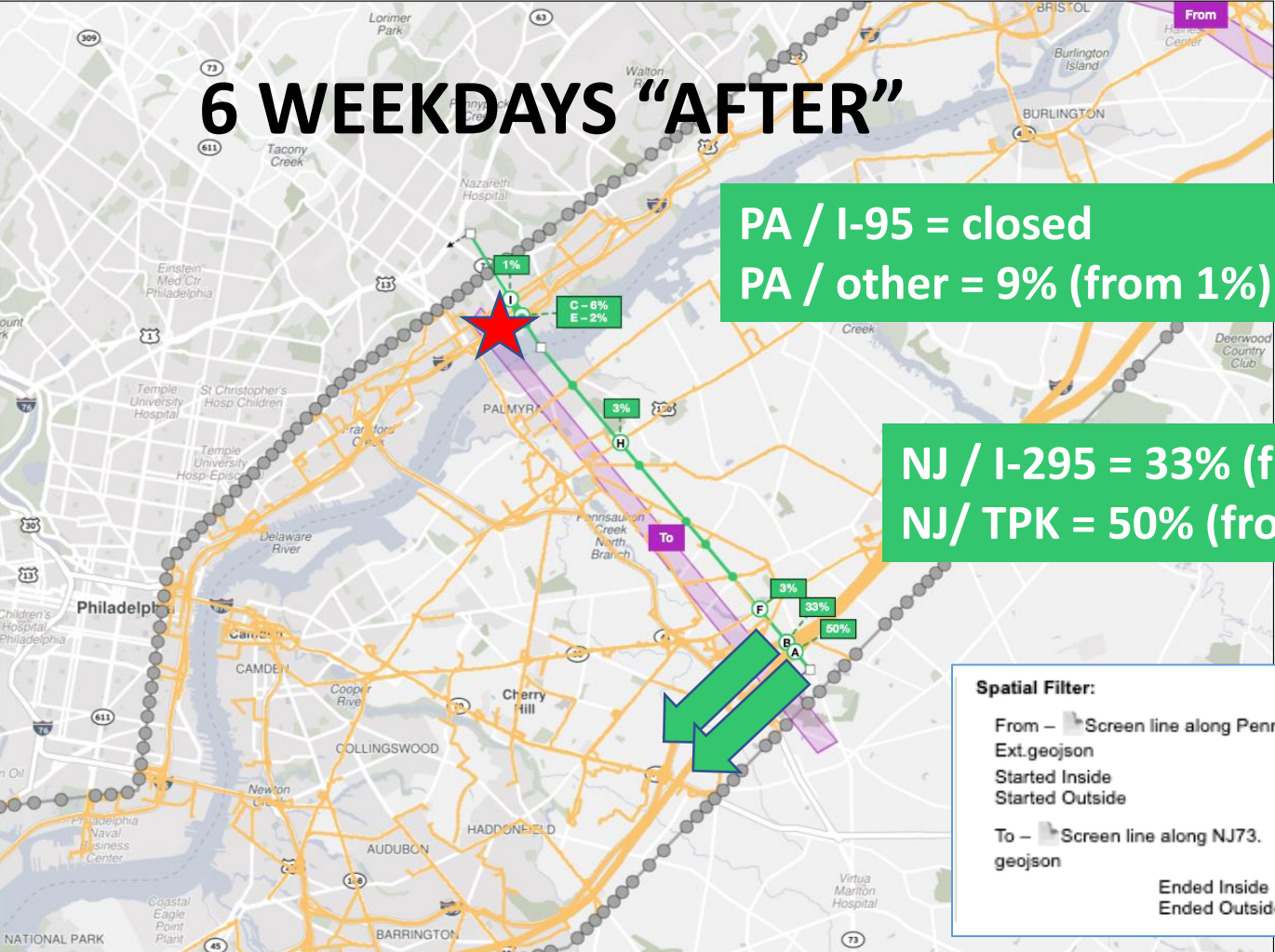
Crossing	Flow	# Trips*	% Trips
<input checked="" type="checkbox"/> A	New Jersey Turnpike, NJTP	444	50%
<input checked="" type="checkbox"/> B	I 295	291	33%
<input checked="" type="checkbox"/> C	State Road	55	6%
<input checked="" type="checkbox"/> F	NJ 38	27	3%
<input checked="" type="checkbox"/> H	Burlington Pike, US 130	25	3%
<input checked="" type="checkbox"/> E	Wissinoming Street	16	2%
<input checked="" type="checkbox"/> I	Torresdale Avenue	10	1%
<input type="checkbox"/> D	North Church Street, CR 607	6	0.7%
<input type="checkbox"/> L	Keystone Street	5	0.6%
<input type="checkbox"/> P	Melrose Street	5	0.6%
<input type="checkbox"/> M	Delaware Expressway, I 95	3	0.3%
<input type="checkbox"/> O	Broad Street, CR 543	1	0.1%
<input type="checkbox"/> R	New Albany Road	1	0.1%
<input type="checkbox"/> S	Camden Avenue, CR 537	1	0.1%
<input type="checkbox"/> W	Milnor Street	1	0.1%
<input type="checkbox"/> X	Branch Pike, CR 606	1	0.1%
Total		892	100%

*# Trips is the sum of displayed routes through each crossing. Routes not shown on map are not included.

Warning! Some routes cross the screen line more than once, inflating trip count: 165, 278, 287, 309, 334, 363, 550, 593, 654

Coordinates: (40.04665, -75.04863), (40.01789, -75.02531), (39.93633, -74.93622)

Replace coordinates | Delete screen line



Spatial Filter:

From – Screen line along PennTPK
Ext.geojson
Started Inside
Started Outside

To – Screen line along NJ73.
geojson

Ended Inside
Ended Outside

Temporal Filter:

Precise temporal filtering: On
6/12/2023 – 6/19/2023
5:00 AM – 12:00 PM (Eastern)
MTWTFSS

Other Filters:

Vehicle type:

Light
 Medium
 Heavy

(summary of filter settings)



LOCAL DETOUR ANALYSIS

Philadelphia Police detour and closure information along I-95

Philadelphia Police have the following closures and detours in place if you are traveling on I-95 in the area of the Cottman Avenue exit. Police will be located along the detour route.

Expect delays along the detour and note these are subject to change.

- **Castor Avenue on-ramp for I-95 northbound**
 - Closed
- **Aramingo Avenue/I-95 on and off-ramps**
 - On-ramp to I-95 northbound closed
 - Betsy Ross off-ramp to I-95 northbound closed
- **Bridge Street ramp**
 - I-95 on-ramp at Bridge Street closed.
 - All traffic on Tacony Street will flow northbound only from Bridge Street to New State Road.
- **Tacony Street and Tacony-Palmyra Bridge**
 - Tacony Palmyra Bridge traffic onto Tacony Street closed. All traffic continues westbound onto Levick Street.
- **Cottman Avenue exit and State Road closures**
 - State Road from Cottman Avenue to Longshore Avenue will be one-way, southbound travel only.

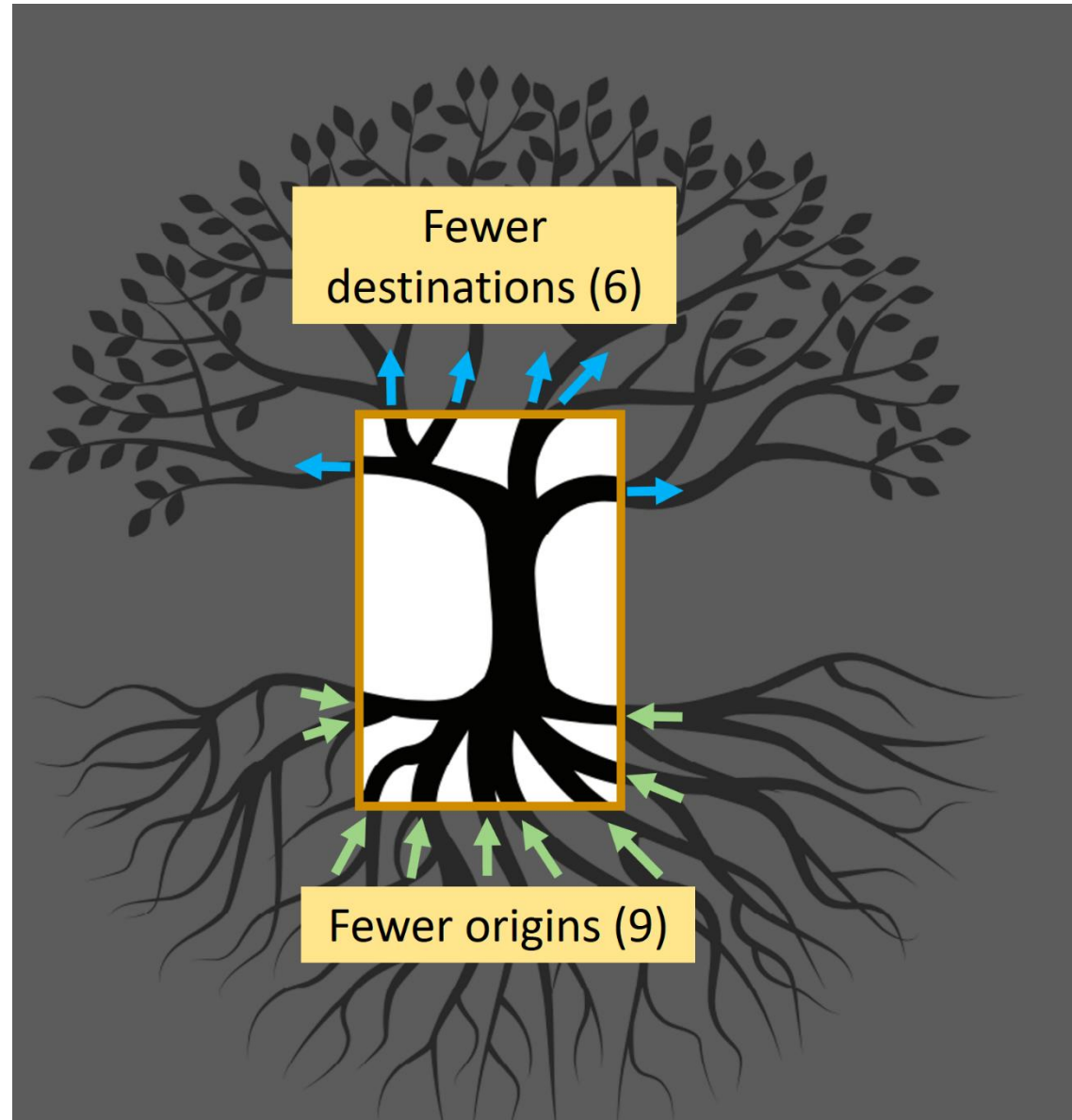
OFFICIAL SB DETOUR VIA BLEIGH ST / STATE RD



- **Southbound I-95 detour**
 - Exit I-95 southbound at Cottman Avenue.
 - At the end of the ramp, right on Bleigh Street.
 - Follow Bleigh to State Road, make a left onto State.
 - Travel State Road South to Longshore Avenue.
 - Re-enter I-95 southbound at State Road and Longshore Avenue.

- **Northbound I-95 detour**
 - Exit I-95 at Aramingo Avenue.
 - At the end of the ramp, make a left onto Aramingo Avenue.
 - Follow Aramingo Avenue to Tacony Street. Turn right.
 - Take Tacony Street northbound around Tacony-Palmyra Bridge loop to New State Road. Continue northbound.
 - Travel New State Road to Milnor Street and re-enter I-95 northbound.

A study area's
“cookie-cutter”
effect increases
sample sizes for
travel time
statistics



“COOKIE-CUTTER” STUDY AREA CREATED TO ISOLATE LOCAL DETOUR TRAVEL TIMES

“BEFORE” QUERY:
JUNE 1-11
Weekdays only

“AFTER” QUERY:
JUNE 13-19
Weekdays only

The screenshot shows a software interface for creating a study area. On the left is a control panel with the following sections:

- Using the Pennsylvania/New Jersey (I-95 closure) data set** (with a 'Switch data set' button)
- 1. Create a Study**
 - Define Study Area** (with a checkmark): Option 3: Using Custom Geography as Study Area. Number of study area OD gates: 212.
 - Specify Internal Zones for Origins and Destinations** (with a checkmark): TAZs.
 - Specify External Zones**: External zones will only be used when the analyst wants information beyond the OD gates, to understand where external (trimmed) legs actually started or ended. A control box will be provided later enabling the analyst to toggle between OD gates and external zones. A dropdown menu shows 'Select one...' and a 'Next' button.
 - Name Study**: A 'Save study and proceed to filters' button.

On the right is a map of the Philadelphia CBD area, showing a pink-shaded study area boundary. A blue star is placed within the study area. A blue arrow points to the I-95 corridor, with the text **I-95 CLOSURE JUNE 12, 2023**. A grey arrow points to the Philadelphia CBD area, with the text **PHILADELPHIA CBD (PA)**. The map also shows the border with New Jersey (NJ) to the east.

Trip Analytics

Logged in as gjordan1@umd.edu

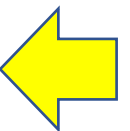
Switch data set Logout

TISA along I-95 and local... Study Area: Custom Geography Spatial Filter: 2 custom areas in Pennsyl...
 Data Set: Pennsylvania New (New I-95 closure) Internal Zones: TAZs Temporal Filter: 6/13/2023 - 6/19/2023
 External Zones: OD gates Other Filters: Vehicle type: Light

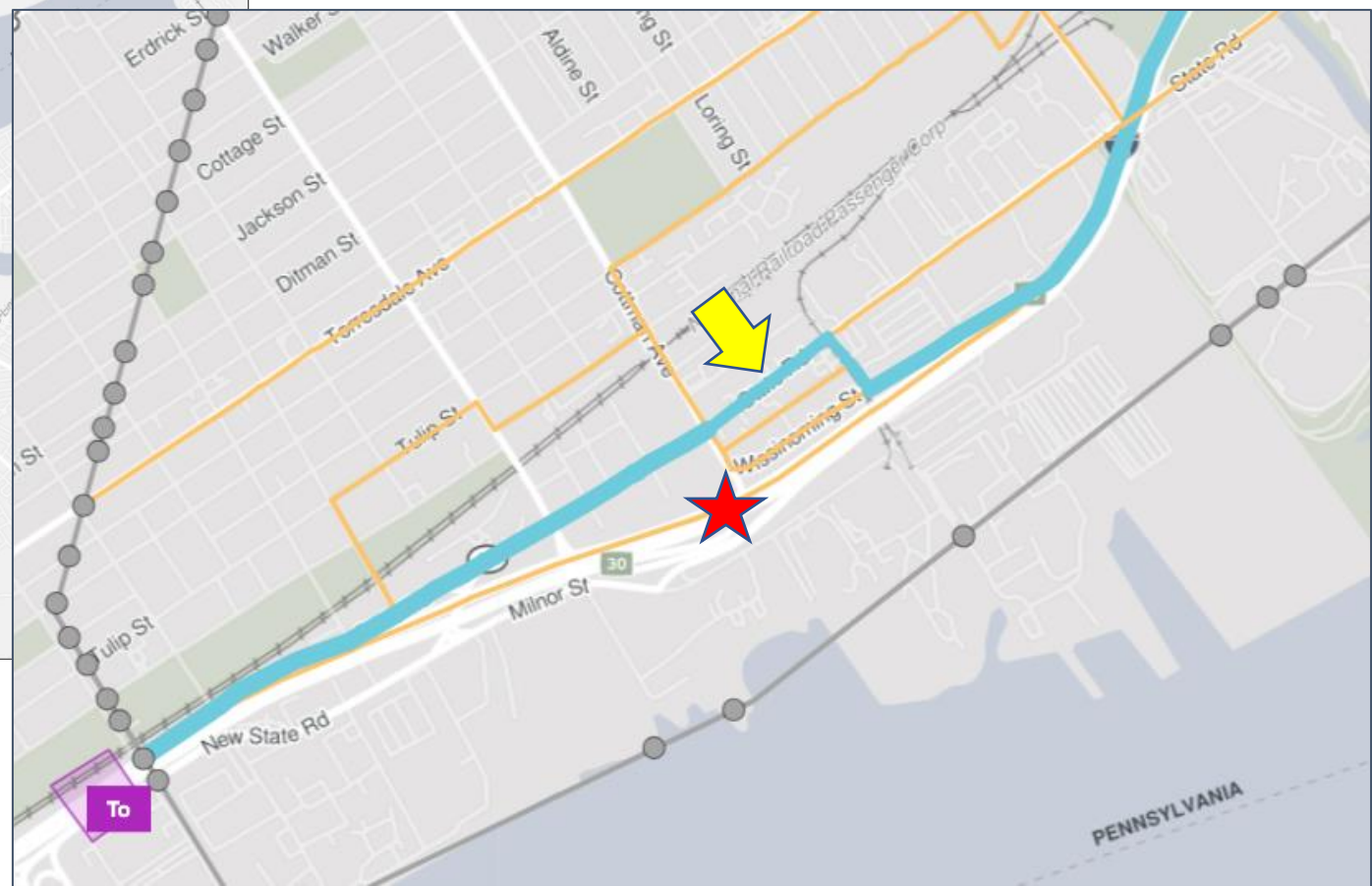
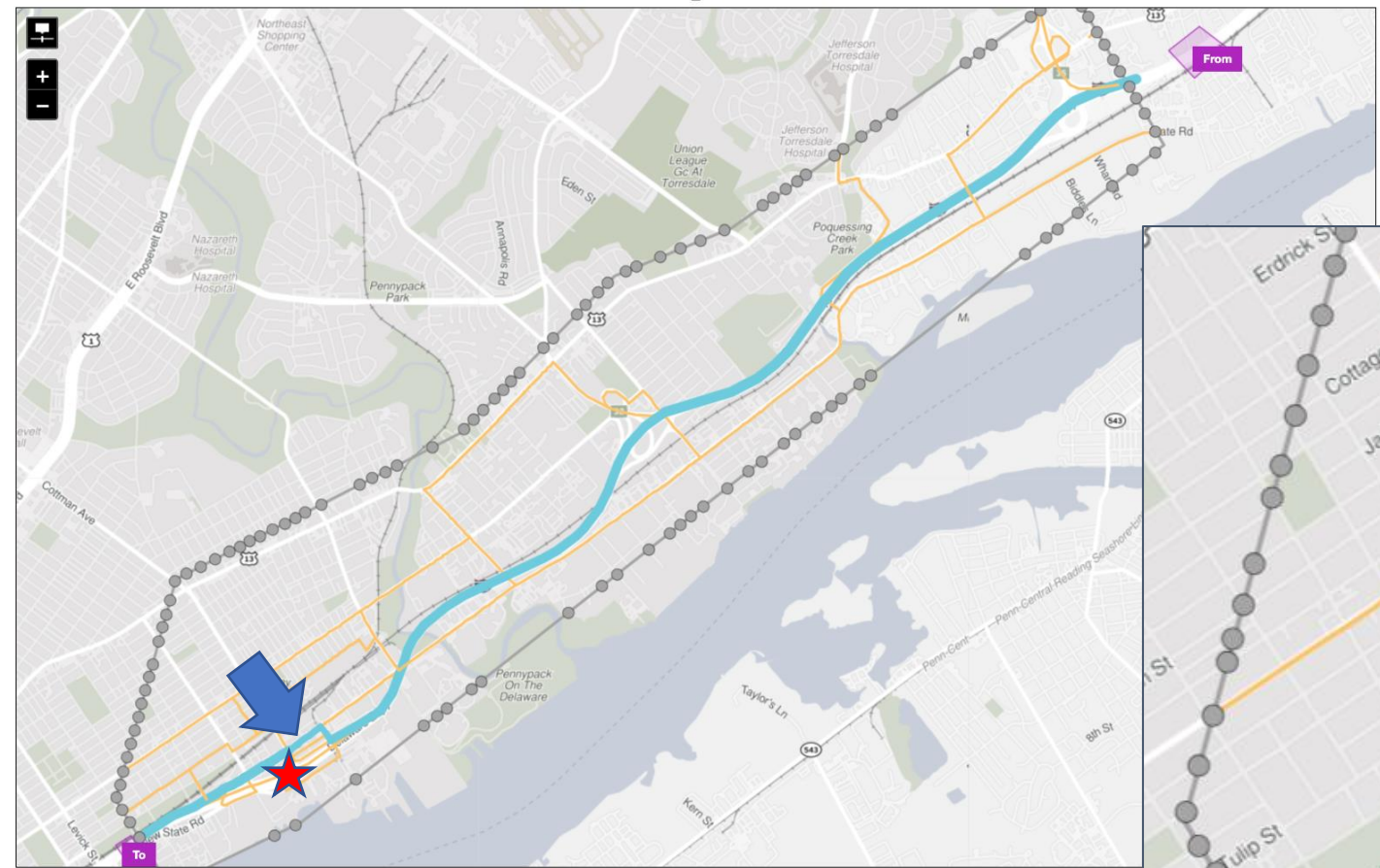
83 trips in 13 routes

Display Options Open as... Export

Map	Rank	Route	# of Trips	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
<input checked="" type="checkbox"/>	1	I 95; Delaware Expressway, I 95; Bleigh Avenue; State Road; State Road, PA 73	41	41	6 mi	18 m	9 m	18 m	31 m	1.35
<input checked="" type="checkbox"/>	2	I 95; Delaware Expressway, I 95; Wissinoming Street; Cottman Avenue; State Road, PA 73; State Road	18	18	6 mi	19 m	8 m	20 m	36 m	1.2
<input checked="" type="checkbox"/>	3	I 95; Delaware Expressway, I 95; Academy Road; Torresdale Avenue; Linden Avenue; State Road; State Road, PA 73	6	6	7 mi	12 m	10 m	12 m	15 m	1.05
<input checked="" type="checkbox"/>	4	I 95; Delaware Expressway, I 95	4	4	6 mi	23 m	18 m	21 m	27 m	1.27
Total			83	83						



#1: Official detour route:
 median travel time = 18 min.
 (average speed for 6 miles = 20 mph)



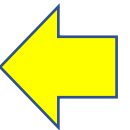
**"AFTER" QUERY:
 JUNE 13-19**

TISA along I-95 and local... Study Area: Custom Geography Spatial Filter: 2 custom areas in Pennsyl...
 Data Set: Pennsylvania New Jersey (I-95 corridor) Internal Zones: TAZs Temporal Filter: 6/13/2023 - 6/19/2023
 External Zones: OD gates Other Filters: Vehicle type: Light

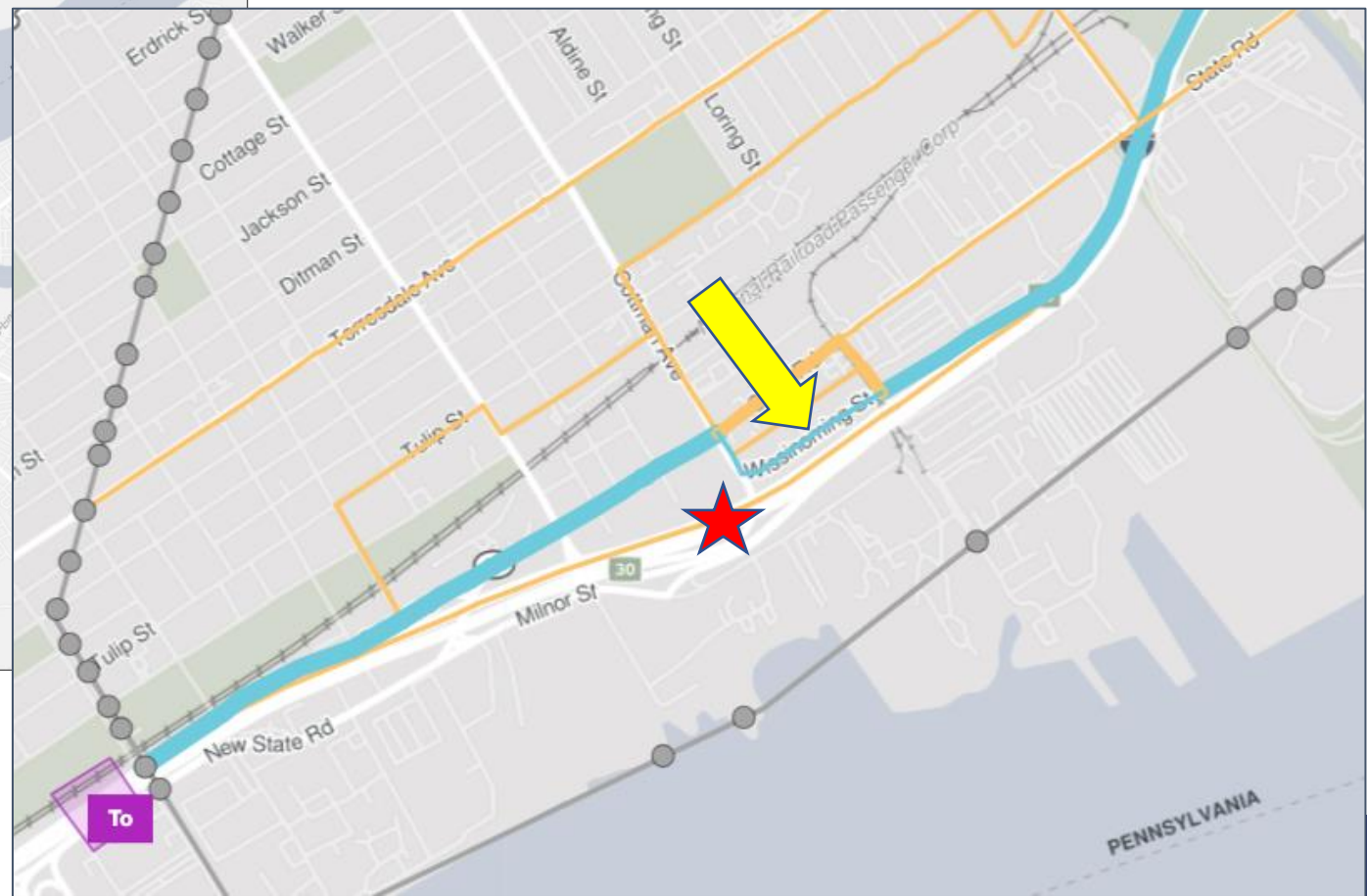
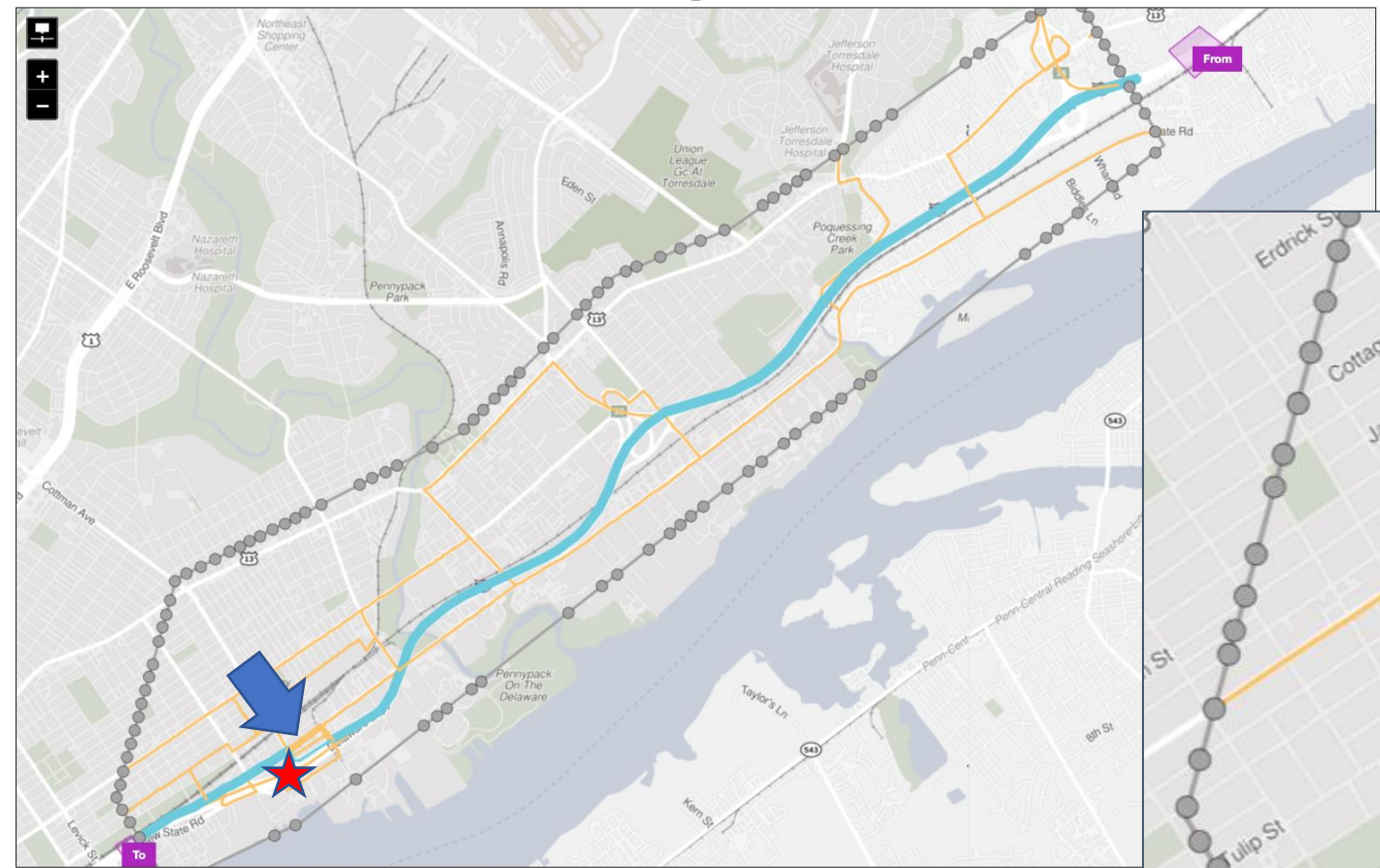
83 trips in 13 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
<input checked="" type="checkbox"/>	1	I 95; Delaware Expressway, I 95; Bleigh Avenue; State Road; State Road, PA 73	41	41	6 mi	18 m	9 m	18 m	31 m	1.35
<input checked="" type="checkbox"/>	2	I 95; Delaware Expressway, I 95; Wissinoming Street; Cottman Avenue; State Road, PA 73; State Road	18	18	6 mi	19 m	8 m	20 m	36 m	1.2
<input checked="" type="checkbox"/>	3	I 95; Delaware Expressway, I 95; Academy Road; Torresdale Avenue; Linden Avenue; State Road; State Road, PA 73	6	6	7 mi	12 m	10 m	12 m	15 m	1.05
<input checked="" type="checkbox"/>	4	I 95; Delaware Expressway, I 95	4	4	6 mi	23 m	18 m	21 m	27 m	1.27
Total			83	83						



#2: Minor route difference:
 median travel time = 20 min.



**"AFTER" QUERY:
 JUNE 13-19**

Trip Analytics

trips-beta.ritis.org/routemap?id=748db884-098b-4749-a9b0-fee320cbcb75b

Logged in as gjordan1@umd.edu

My Studies | Help | Switch data set | Logout

TISA along I-95 and local... Study Area: Custom Geography Spatial Filter: 2 custom areas in Pennsyl...
 Data Set: PennsylvaniaNew (new: I-95, crosst) Internal Zones: TAZs Temporal Filter: 6/13/2023 - 6/19/2023
 External Zones: OD gates Other Filters: Vehicle type: Light

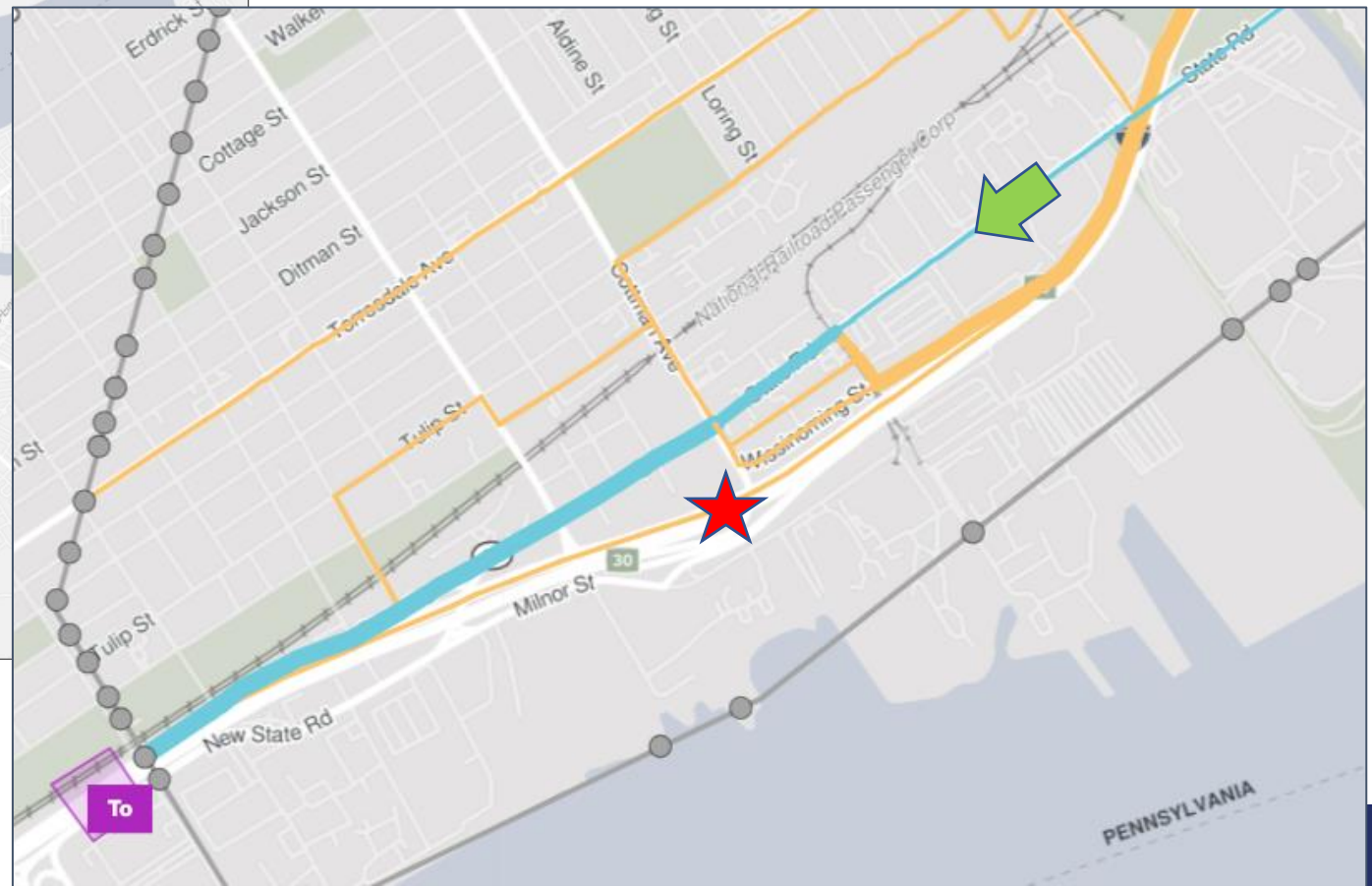
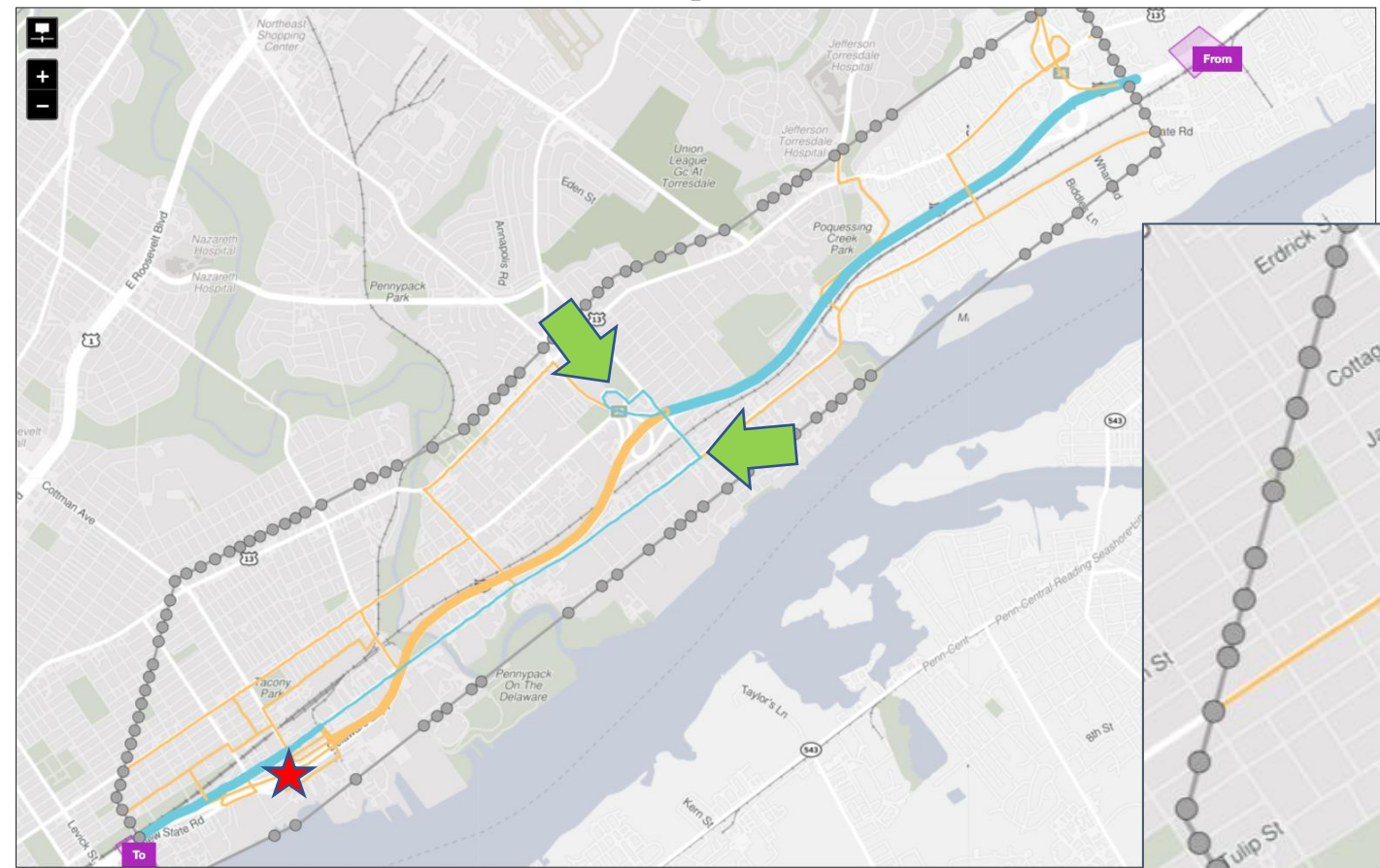
83 trips in 13 routes

Display Options | Open as... | Export

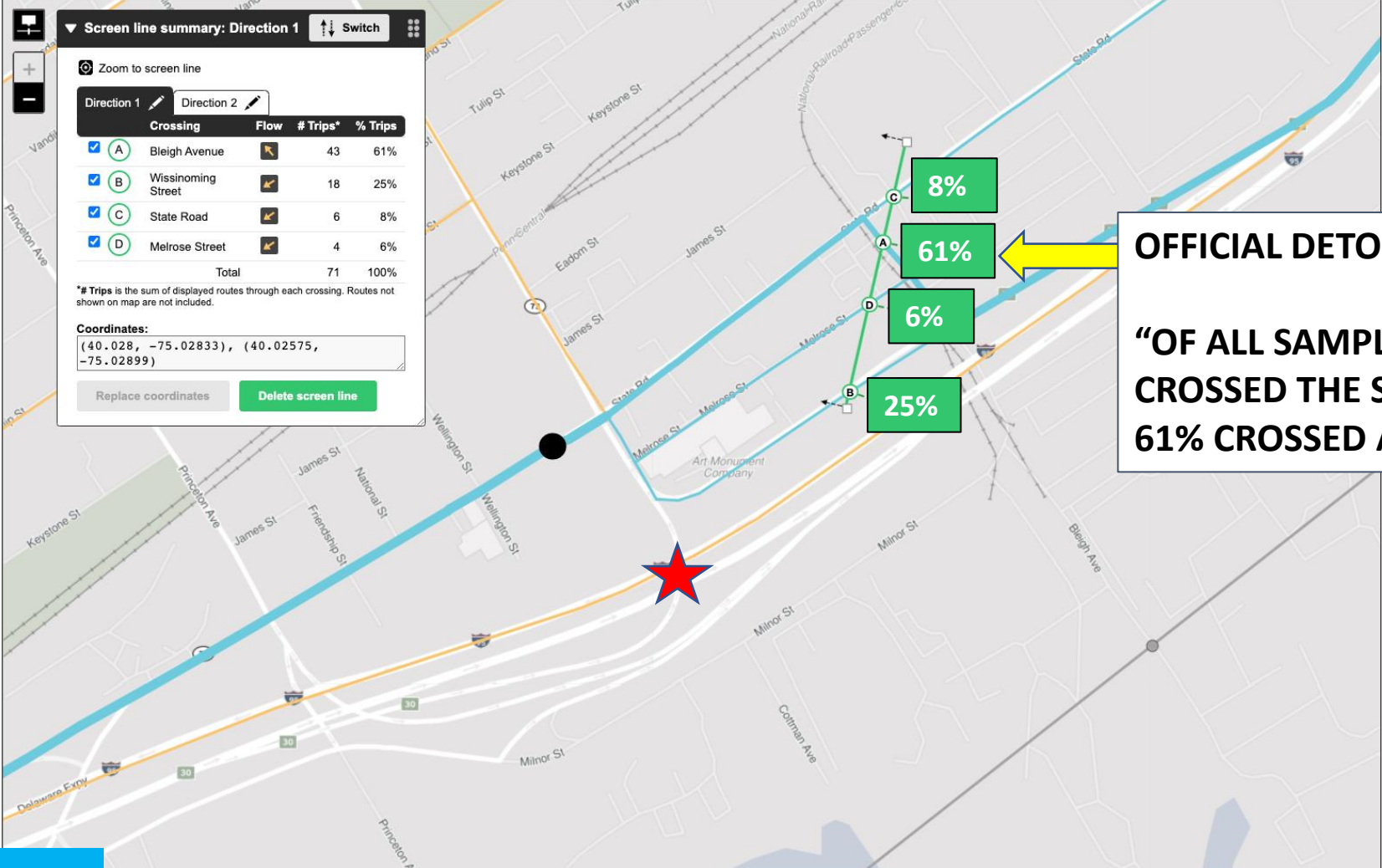
Map	Rank	Route	# of Trips	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
<input checked="" type="checkbox"/>	1	I 95; Delaware Expressway, I 95; Bleigh Avenue; State Road; State Road, PA 73	41	41	6 mi	18 m	9 m	18 m	31 m	1.35
<input checked="" type="checkbox"/>	2	I 95; Delaware Expressway, I 95; Wissinoming Street; Cottman Avenue; State Road, PA 73; State Road	18	18	6 mi	19 m	8 m	20 m	36 m	1.2
<input checked="" type="checkbox"/>	3	I 95; Delaware Expressway, I 95; Academy Road; Torresdale Avenue; Linden Avenue; State Road; State Road, PA 73	6	6	7 mi	12 m	10 m	12 m	15 m	1.05
<input checked="" type="checkbox"/>	4	I 95; Delaware Expressway, I 95	4	4	6 mi	23 m	18 m	21 m	27 m	1.27
Total			83	83						



#3: Exit 3 miles upstream;
 Median travel time = **12 min.**
 (equivalent avg. speed = 30 mph)



**"AFTER" QUERY:
 JUNE 13-19**



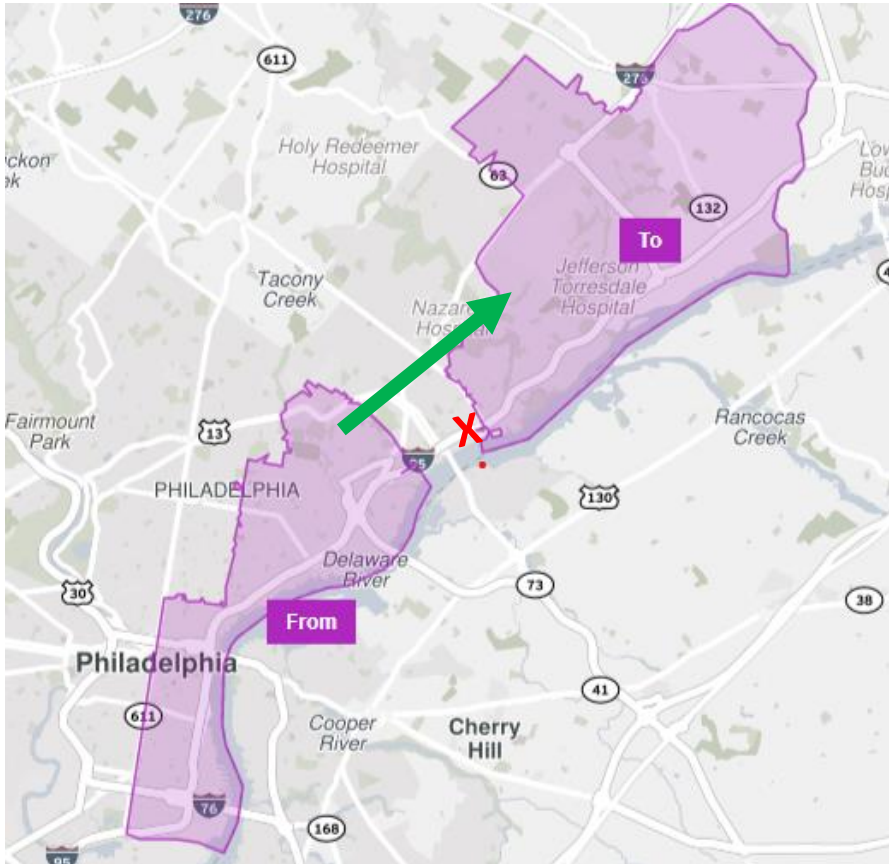
OFFICIAL DETOUR = 61%

**“OF ALL SAMPLES THAT
CROSSED THE SCREEN LINE,
61% CROSSED AT (A)”**

**“AFTER” QUERY:
JUNE 13-19**

I-95 Bridge Collapse Example (from PennDOT)

Northbound Trips – Weekdays



Week Before (6/5-6/9)
1258 total trips
Avg Travel Time: 27:05

Week After (6/12-6/16)
782 total trips
Avg Travel Time: 39:30

Route	# Trips	% Trips
I-95	955	76%
US 1 (Roosevelt Blvd)	132	11%
PA 73 (State Road)	87	7%
US 13 (Frankford Ave)	37	3%
Torresdale Ave	28	2%

Route	# Trips	% Trips
US 1 (Roosevelt Blvd)	319	41%
PA 73 (State Road)	198	26%
US 13 (Frankford Ave)	109	14%
Torresdale Ave	108	14%

- **Total trips decreased by 38%**
 - **158% increase on alternate routes**
- **67% of trips used PennDOT or Local Detour Routes**
- **Average travel time increased 46%**

Source: PennDOT / Scott Benedict



Perspective from the Philadelphia-region MPO

Jesse Buerk, DVRPC



Discussion / Questions



Poll 4: What would you like to hear about at future RITIS User Group Meetings?

Please type your answer in the pop-up box.





PROBE DATA
ANALYTICS SUITE

RITIS Product Enhancement Working Group Update & Recent Deployments



Michael Pack
UMD CATT Lab
Director



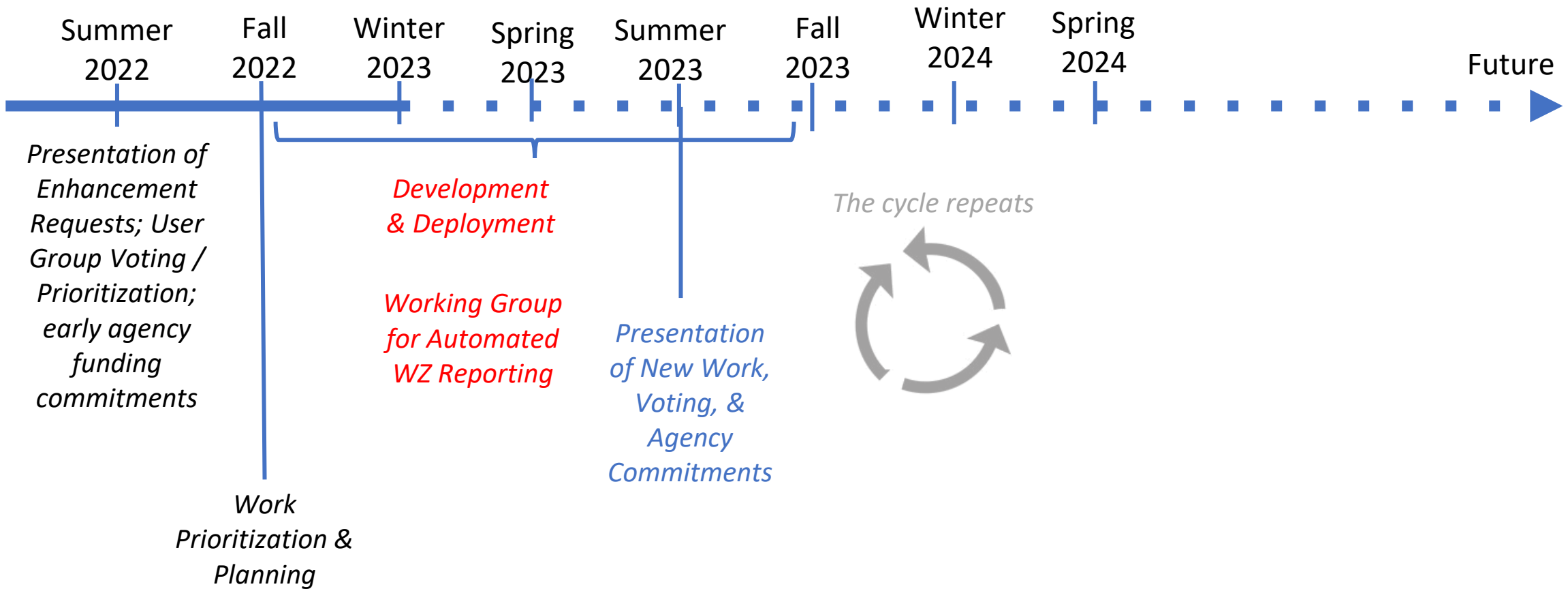
Enhancements Working Group Purpose and Goal

- Form and maintain a nimble “pooled fund” like group to:
 - Fund RITIS Enhancements
 - Assist with prioritization efforts for the CATT Lab
- Provide stable, annualized funding
- Connect agencies with similar needs

Current DOT Funding from:

- Georgia
- Massachusetts
- Michigan
- Oregon
- Virginia

Annual Enhancement Cycle: Current Status



Enhancements in Development: Priorities through August 2023

RITIS Enhancement Working Group Funds supporting:

Enhancement	Estimated Cost	
Aerial Photography in RITIS Maps	\$10k	✓
Additional Reporting Templates	\$35k	✓
Speed Tile Layers	\$30k	✓
Sharing of Dashboards and Reports	\$125k	In-development
Automated Work Zone Reports Scoping	\$25k	Drafts ready for review
Causes of Congestion Enhancements	\$50k	✓
Total =	\$275k	

Other funds (grants) will support:

Enhancement	Estimated Cost	
Freight Movement & Safety Avoidance Analytics	\$1M+	In-development
Safety Analytics (police crash reports) Partially funded	~\$250k	In-development
Signal Analytics Enhancements	TBD	In-development
Trips Analytics Enhancements	TBD	✓
Energy Analytics Geographic Expansion	TBD	In-development
Speed Bins Visualization (time permitting)	\$75k	✓
Map Click Corridor Selection	TBD	✓
Total =	\$\$\$	

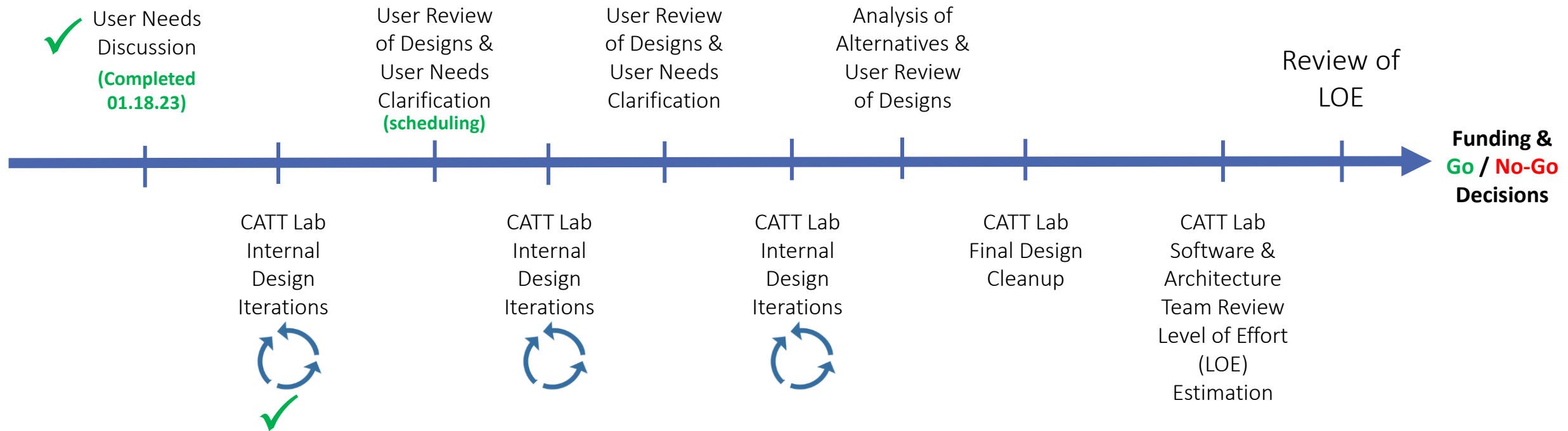


Automated Work Zone Reporting

IN PROGRESS

We've kicked off the scoping study design process w/partners from the RITIS Enhancement Working Group by having an in-depth User Needs Discussion

Scoping Study Design Process



Congestion-Only Layer Option:

Complete

The screenshot displays the RTIS Transportation System Status interface. At the top, there are navigation tabs for 'Transportation System Status', 'Data Archive', 'Personal Traffic Alerts', and 'Administrative Tools'. Below these are various tool links like 'Incident List', 'Traffic Map', 'Incident Overview', etc. The main area is a map showing traffic conditions with a red line indicating congestion on a road. An 'INRIX Probe Data' window is open, showing a line graph of speed over time and a table of statistics.

INRIX Probe Data Window:

I-640 W(I-75/I-640) Southbound @ I-275...
 TMC 121N04121
 Knox County, TN 37912 (Jul 19, 2023 - 9:45 AM)

Length	Speed	Avg. Speed	Ref. Speed	Conf. Score	Travel Time
0.27 mi	27 mph	56 mph	57 mph	High	0:36 min

Click and drag to zoom. Double-Click to Reset.

Legend: Confidence Score (pink), Reference Speed (black), Average Speed (green), Speed (blue)

Graph: Y-axis shows speed from 0MPH to 80MPH. X-axis shows time from 2:00 AM to 10:00 AM. A blue line represents the current speed, and a green horizontal line represents the average speed.

Options for INRIX Probe Data:

Source: Congestion

All Speeds Congestion Only

[View Help File](#)

Opacity: 70%

Probe Speed Data Sub-Layers:

- INRIX Probe Data (Congestion)
- HERE Probe Data (Speed)
- TomTom Probe Data (Speed)

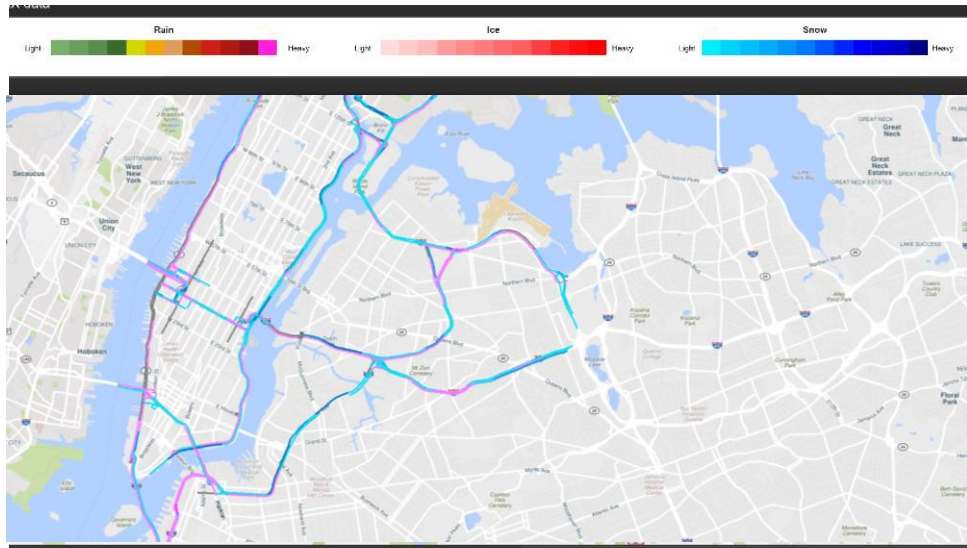
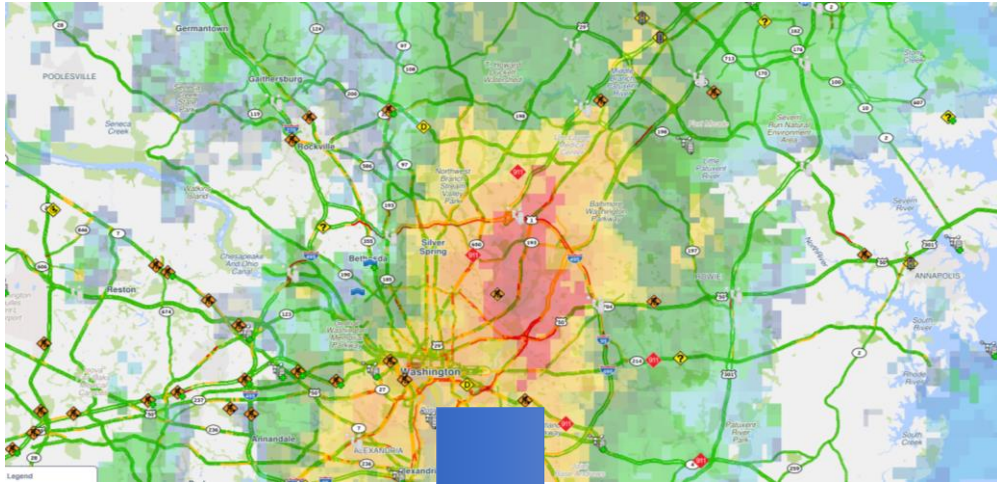
Other Layer List items:

- Future Events
- Traffic Cameras
- Fleets
- Radio Scanners
- Incidents and Events
- RWIS
- Traffic Detectors
- FITM Plans
- Montgomery County
- Evacuation Support
- Public Transportation
- Dynamic Message Signs
- Points of Interest
- Weather Alerts
- Metro Routes
- Road Weather Data
- Probe Speed Data
- Weather Radar

Show Unmapped Incidents

Road Weather Tile Layer Options:

Complete



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
- Points of Interest
- Metro Routes
- Road Weather Data
- Probe Speed Data
- Weather Alerts
- Weather Radar



Speeding Layer Option:

Partially Complete

The screenshot shows a web-based traffic management interface. At the top, there are navigation tabs: "Transportation System Status", "Data Archive", "Personal Traffic Alerts", and "Administrative Tools". Below these are sub-tabs for "Incident List", "Traffic Map", "Incident Overview", "Traffic Cameras", "RSS Feed", "Operations Dashboard", "COVID-19 Impact", "VWS", and "WZPMA".

The main map area shows a street grid with a blue line indicating a speeding area. The map includes labels for streets like "13th St SW", "17th St SW", "21st St SW", "25th St SW", "43rd Ave SW", "66th Ave SW", "74th Ave SW", "Indrio Rd", "Lee Blvd", "Emerson Ave", "Deleon Ave", "Eastwood Dr", "Tumpline Feeder Rd", "US Hwy 1", "Old Dixie Hwy", "Warbler Ln", "Snail Kite Ln", "Swallow Ln", "Dairy Rd", "603", "614", "607", "611", "606", "605", "713", "A1A", and "South Beach".

On the right side, there is a "Layer List" panel with the following items:

- Future Events
- Traffic Cameras
- Fleets
- Radio Scanners
- Incidents and Events
- RWIS
- Traffic Detectors
- FITM Plans
- Montgomery County
- Evacuation Support
- Public Transportation
- Dynamic Message Signs
- Points of Interest
- Weather Alerts
- Metro Routes
- Road Weather Data

Overlaid on the map are three configuration panels:

- Options for HERE Probe Data:** Source: Speed. Radio buttons for "All Speeds" and "Only exceeding speed limit" (selected). Opacity: 100%.
- Probe Speed Data Sub-Layers:** A list of three items: "INRIX Probe Data (Speed)", "HERE Probe Data (Speed)" (checked), and "TomTom Probe Data (Speed)".
- Probe Speed Data Sub-Layers (Right):** A list of two items: "Probe Speed Data" and "Weather Radar" (checked). Below this is a button labeled "Show Unmapped Incidents".

Sharing of Dashboards and Reports

In-development
September Deploy
(estimated)

- Sharing with members of your organization

The screenshot shows the 'Probe Data Analytics Suite' interface. At the top, there's a navigation bar with the title 'Probe Data Analytics Suite' and a user welcome message 'Welcome, Jenny | My History | Help | Tutorials | Logout'. Below this is a 'Dashboard' section with buttons for '+ Create PM3 report' and 'Select/Create a Dashboard'. A 'Select a Dashboard' section follows, featuring a search bar and radio buttons for 'All Dashboards', 'My Dashboards', and 'Dashboards Shared with me'. The main area is a table of dashboards with columns for Name, No. of Widgets, Owner, Shared with me on, and Shared With. A 'Share Dashboard' modal is open over the third row, showing a note, a search input for email or domain, a list of users with checkboxes, and a 'Submit Changes' button.

	★	Name	No. of Widgets	Owner	Shared with me on	Shared With	
Open	☆	Dashboard for DC	8	jlees@umd.edu	02/02/2023	-	Notes Clone
Open	☆	Dashboard for Maryland ✓	16	Me	-	6	Notes Clone Share
Open	★	Dashboard for Maryland ✓	12	Me	-	-	Notes Clone Share Delete
Open	☆	Dashboard for DC	6	jlees@umd.edu			
Open	☆	Dashboard for DC	4	jlees@umd.edu			
Open	★	Dashboard for DC	18	jlees@umd.edu			
Open	☆	Dashboard for Maryland ✓	9	Me			
Open	☆	Dashboard for DC	10	jlees@umd.edu			
Open	☆	Dashboard for Maryland ✓	14	Me			
Open	☆	Dashboard for DC	15	jlees@umd.edu			
Open	☆	Dashboard for DC	18	jlees@umd.edu			
Open	☆	Dashboard for Maryland ✓	11	Me			
Open	☆	Dashboard for Maryland ✓	10	Me			
Open	☆	Dashboard for Maryland ✓	9	Me			
Open	★	Dashboard for DC	8	jlees@umd.edu			
Open	☆	Dashboard for Maryland ✓	5	Me	-	-	Notes Clone Share Delete
Open	☆	Dashboard for Maryland ✓	7	Me	-	-	Notes Clone Share Delete

Share Dashboard

Note:
*Use "@domain" to send it to everyone in the agency

Enter email or domain [Add to List](#)

Users	Shared On
<input checked="" type="checkbox"/> @umd.edu	02/18/2023
<input checked="" type="checkbox"/> jlees@umd.edu	02/18/2023
<input checked="" type="checkbox"/> sjain510@umd.edu	02/18/2023

(shared with: 0 users) [Cancel](#) [Submit Changes](#) [Delete](#)



Build Additional Reporting Templates

Deployed
(Work Zone next month)

We're continuing to provide RITIS users with a wide range of performance reporting options for their mobility, safety and operational needs

The screenshot shows the RITIS web interface. At the top, there are navigation tabs: "Transportation System Status", "Data Archive", "Personal Traffic Alerts", and "Administrative Tools". A user greeting "Welcome Michael Packl" is visible on the right. Below the navigation is a "Templates" section with a heading and a descriptive paragraph. The main content area features six report templates, each with an icon, a title, and a brief description:

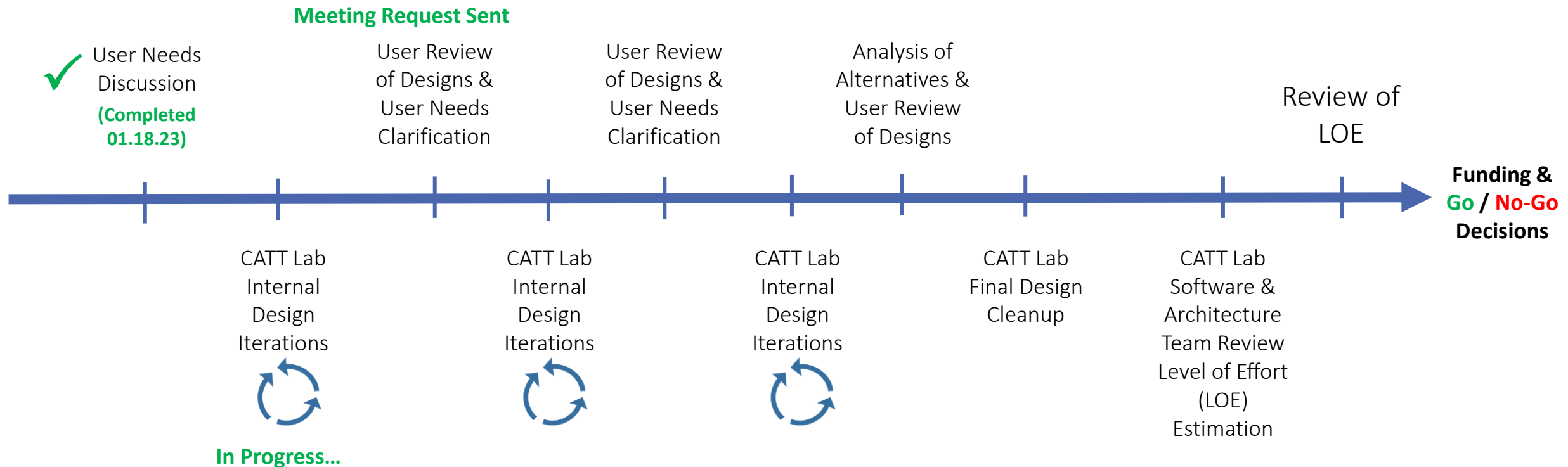
- CORRIDOR PERFORMANCE REPORT**: Create a report that describes the performance of a corridor over a selected time periods (quarterly, yearly) and compares that performance with previous periods.
- MONTHLY CONGESTION REPORT**: Create a monthly report that describes the performance of a roadway over the 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 based on previous years.

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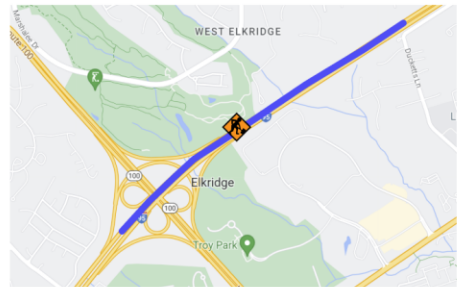
Scoping Study Design Process



I-95 South Between MD 103 and Montgomery Rd

Work Zone Length: **1.3 miles**
 Miles Upstream and Downstream: **3.0 miles**
 Total Miles in Report: **7.3 miles**

May 12-16, 2022 Days of Week
 9:00am - 3:00pm **SMTWTFS**



Lane Status: **1 shoulder and 1 of 5 lanes closed**
 Posted WZ Speed Limit: **45 mph**
 Counter Measures: **Temporary Detours, Dynamic Merge System**

Possible Impacts

- 2 Incidents**
Tuesday and Wednesday
- 3 Weather Events**
Thursday and Friday
- Holidays**
May 12th Tuesday

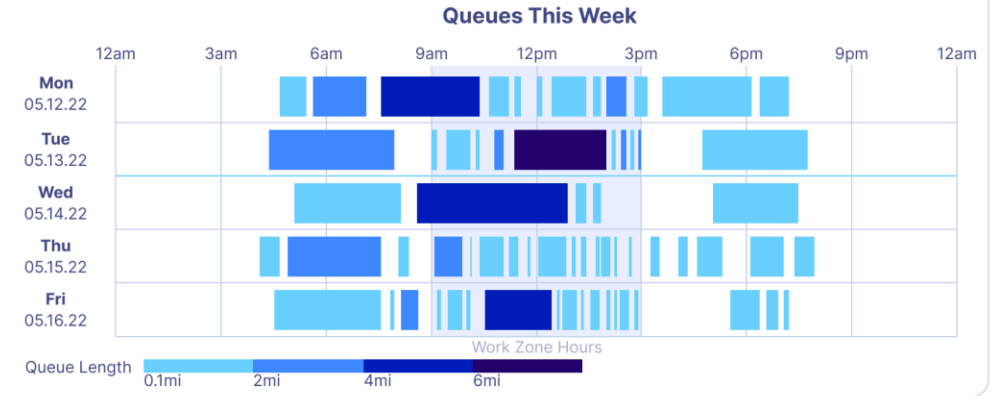


Queues

Goal

No more than
5.0 mi
 Lasting: > 20 mins

Work Zone operations met this goal
95%
 of this week



Speed & Travel Time

Goal

Don't let speeds drop below
30 mph
 Lasting: > 5 mins

Work Zone operations met this goal
52%
 of this week

Average speed through Work Zone during operations

37 mph

Max speed through Work Zone
71 mph
 Min speed through Work Zone
15 mph

Average travel time through Work Zone during operations

2 mins

Delay

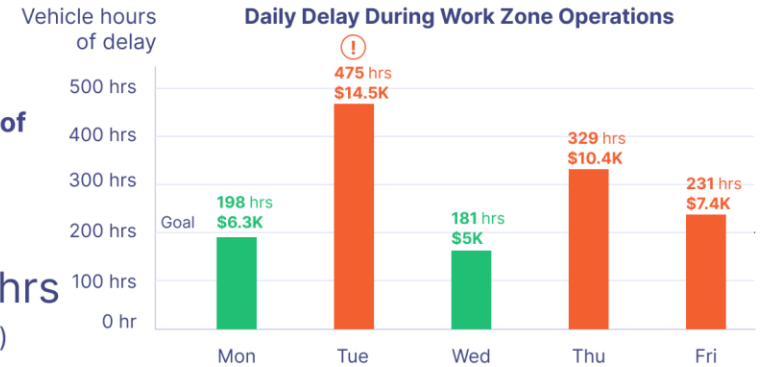
Goal

Daily vehicle hours of delay more than
200 hrs
 (or **\$6.5K UDC**)

Work Zone operations met this goal
30%
 of this week

Daily average vehicle hours of delay

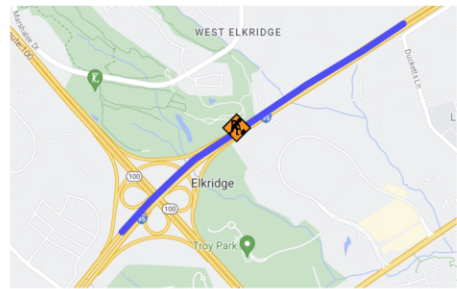
283 hrs
 (or **\$7.5K UDC**)



I-95 South Between MD 103 and Montgomery Rd

Work Zone Length: **1.3 miles**
 Miles Upstream and Downstream: **3.0 miles**
 Total Miles in Report: **7.3 miles**

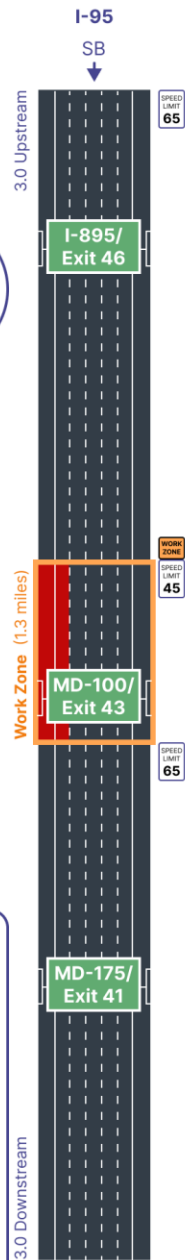
May 12-16, 2022 Days of Week **SMTWTFSS**
 9:00am - 3:00pm



Lane Status: **1 shoulder and 1 of 5 lanes closed**
 Posted WZ Speed Limit: **45 mph**
 Counter Measures: **Temporary Detours, Dynamic Merge System**

Possible Impacts

- 2 Incidents**
Tuesday and Wednesday
- 3 Weather Events**
Thursday and Friday
- Holidays**
May 12th Tuesday

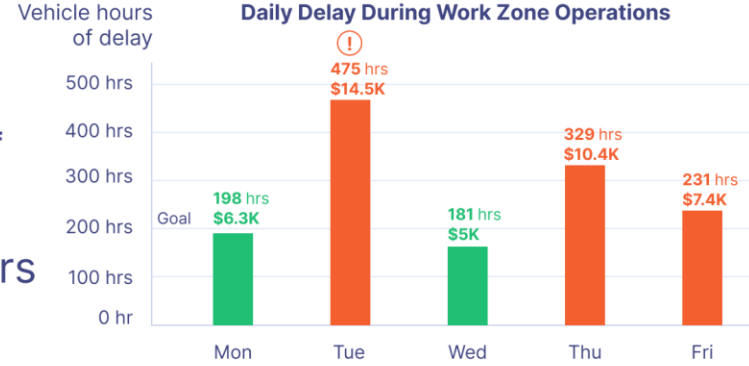


Goal

Daily vehicle hours of delay less than **200 hrs**
 (or **\$6.5K UDC**)

Work Zone operations met this goal **30%** of this week

Daily average vehicle hours of delay **283 hrs**
 (or **\$7.5K UDC**)



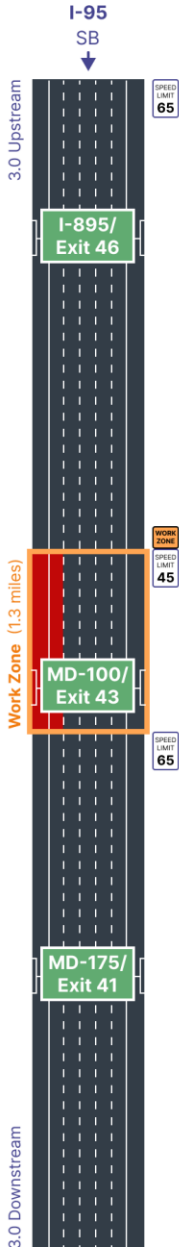
Vehicle Hours of Delay and User Delay Cost

	Work Zone Hours																								Total
	12am	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	
05/12/22 Mon (holiday)	0h	0h	0h	0h	0h	10h	35h	9h	15h	58h	42h	0h	0h	2h	0h	0h	0h	10h	9h	0h	8h	0h	0h	0h	198h
05/13/22 Tue	0h	0h	0h	0h	0h	23h	33h	12h	0h	14h	88h	16h	131h	108h	0h	0h	0h	15h	16h	12h	7h	0h	0h	0h	475h
05/14/22 Wed	0h	0h	0h	0h	0h	12h	13h	10h	8h	63h	20h	6h	1h	0h	0h	0h	0h	10h	23h	15h	0h	0h	0h	0h	181h
05/15/22 Thu	0h	0h	0h	0h	0h	8h	11h	3h	6h	198h	65h	0h	0h	3h	0h	0h	2h	5h	18h	3h	7h	0h	0h	0h	329h
05/16/22 Fri	0h	0h	0h	0h	3h	9h	8h	6h	0h	17h	0h	45h	69h	45h	14h	0h	0h	4h	8h	3h	0h	0h	0h	0h	231h
VHD	0h	0h	0h	0h	3h	62h	100h	40h	29h	350h	215h	67h	201h	158h	14h	0h	2h	44h	74h	33h	22h	0h	0h	0h	16,814h
05/12/22 Mon (holiday)	\$0	\$0	\$0	\$0	\$0	\$0.4K	\$1K	\$0.3K	\$0.4K	\$1.8K	\$1.3K	\$0	\$0	\$0.1K	\$0	\$0	\$0	\$0.4K	\$0.3K	\$0	\$0.3K	\$0	\$0	\$0	\$6.3K
05/13/22 Tue	\$0	\$0	\$0	\$0	\$0	\$0.7K	\$0.9K	\$0.4K	\$0	\$0.3K	\$2.7K	\$0.5K	\$4K	\$3.3K	\$0	\$0	\$0	\$0.5K	\$0.5K	\$0.4K	\$0.3K	\$0	\$0	\$0	\$14.5K
05/14/22 Wed	\$0	\$0	\$0	\$0	\$0	\$0.4K	\$0.4K	\$0.4K	\$0.3K	\$1.9K	\$0.6K	\$0.2K	\$0.1K	\$0	\$0	\$0	\$0	\$0.4K	\$0.7K	\$0.5K	\$0	\$0	\$0	\$0	\$5.9K
05/15/22 Thu	\$0	\$0	\$0	\$0	\$0	\$0.3K	\$0.4K	\$0.1K	\$0.2K	\$6K	\$2K	\$0	\$0	\$0.1K	\$0	\$0	\$0.1K	\$0.2K	\$0.6K	\$0.1K	\$0.3K	\$0	\$0	\$0	\$10.4K
05/16/22 Fri	\$0	\$0	\$0	\$0	\$0.1K	\$0.3K	\$0.3K	\$0.2K	\$0	\$0.5K	\$0	\$1.4K	\$2.1K	\$1.4K	\$0.5K	\$0	\$0	\$0.2K	\$0.3K	\$0.1K	\$0	\$0	\$0	\$0	\$7.4K
UDC	\$0	\$0	\$0	\$0	\$0.1K	\$2.1K	\$3K	\$1.4K	\$0.9K	\$10.5K	\$6.6K	\$2.1K	\$6.2K	\$4.9K	\$0.5K	\$0	\$0.1K	\$1.7K	\$2.4K	\$1.1K	\$0.9K	\$0	\$0	\$0	\$89K



Work Zone Length: **1.3 miles**
 Miles Up and Down Stream: **3.0 miles**
 Total Miles in Report: **7.3 miles**

Lane Status: **1 shoulder and 1 of 5 lanes closed**
 Posted WZ Speed Limit: **45 mph**



Dates of Analysis

◆ **May 12-16, 2022**
 9:00am - 3:00pm
 Days of Week
SMTWTFS

-Compared Against-

◇ **May 5-9, 2022**
 9:00am - 3:00pm
 Days of Week
SMTWTFS

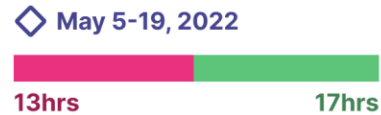
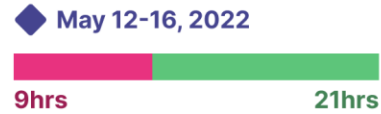
Total Hours of Analysis
30 hrs

Speed

Threshold

No Less Than **35 mph**

■ <35mph ■ >35mph



Speeds through the work zone where less than 35mph

-4 hrs

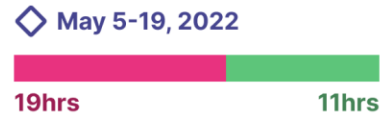
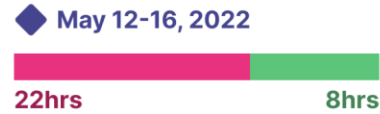
compared against the prior date.

Total Duration of all Queues

Threshold

No More Than **10 hrs** of queues total

■ Queue ■ No Queue



Total duration of all queues was

+3 hrs

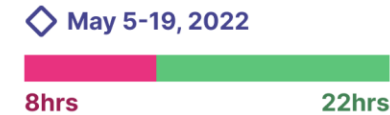
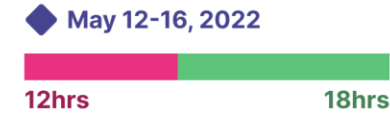
compared against the prior date.

Queue Length

Threshold

No More Than **2 miles**

■ >2miles ■ <2miles



Queue lengths where greater than 2 miles

+4 hrs

compared against the prior date.

Vehicle Hours of Delay

Threshold

No More Than **200 hrs**

◆ May 12-16, 2022

880 hrs

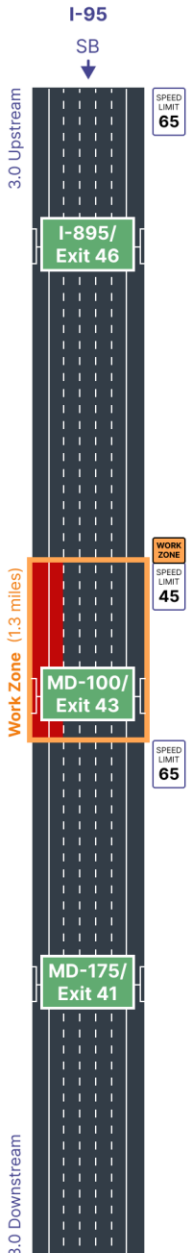
◇ May 5-19, 2022

600 hrs

Queue lengths where greater than 2 miles

+280 hrs

compared against the prior date.



Vehicle Hours of Delay Through the Work Zone

May 5-9 30 hrs	May 12-16 30 hrs	Differential
780 hrs	950 hrs	+ 19%

Possible Impacts

Incidents May 12, 2022 1	Holidays May 12, 2022 1	Weather Events May 12-13, 2022 3
---------------------------------------	--------------------------------------	---

Speed Through the Work Zone

May 12-16 | 30 hrs

Speeds < 35 mph differential

+33%

● Speeds < 35 mph
 ● Speeds > 35 mph

May 12-16, 2022: +33.3%

May 5-9, 2022

Queue Duration That start at the Work Zone

May 12-16 | 30 hrs

Hours of queues differential

+25%

● Hours of queues
 ● No queues

May 12-16, 2022: +25%

May 5-9, 2022

Queue Length That start at the Work Zone

May 12-16 | 30 hrs

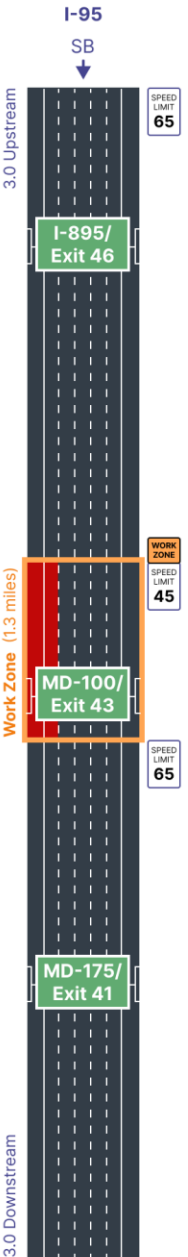
Queues > 3 miles differential

+120% *Differentials above 45% are high

● Queues > 3miles
 ● Queues 0-3 miles

May 12-16, 2022: +120%

May 5-9, 2022



Vehicle Hours of Delay Through the Work Zone

May 5-9 30 hrs	May 12-16 30 hrs	Differential
780 hrs	950 hrs	+ 19%

Daily Differentials of VHD

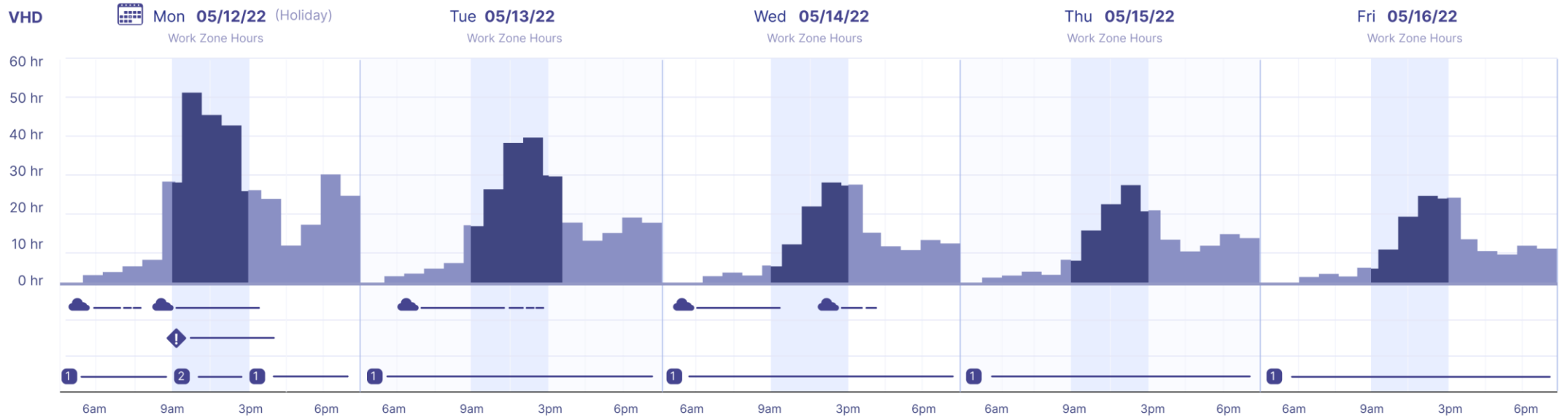
*Differentials above 22% are high

Mon 05/12/22	Tue 05/13/22	Wed 05/14/22	Thu 05/15/22	Fri 05/16/22
+29% ⚠	+19%	+16%	+18%	+15%

VHD Totals by Hour

May 12-16, 2022

■ VHD outside hours of operation ■ VHD during hours of operation — Duration ☁ Rain ⚡ Crash # Number of lanes closed



1 Crash:

- Two passenger vehicles involved
- Personal injuries

Speed (< 35 mph) Through the Work Zone

May 5-9 | 30 hrs May 12-16 | 30 hrs Differential
10 hrs **14 hrs** **+ 33%**

Daily Differentials of Speeds < 35mpg *Differentials above 40% are high

Mon 05/12/22	Tue 05/13/22	Wed 05/14/22	Thu 05/15/22	Fri 05/16/22
+ 49% ⚠️	+ 36%	+ 22%	+ 24%	+ 20%

Speed

May 12-16, 2022



— Duration ☁ Rain ⚠️ Crash # Number of lanes closed

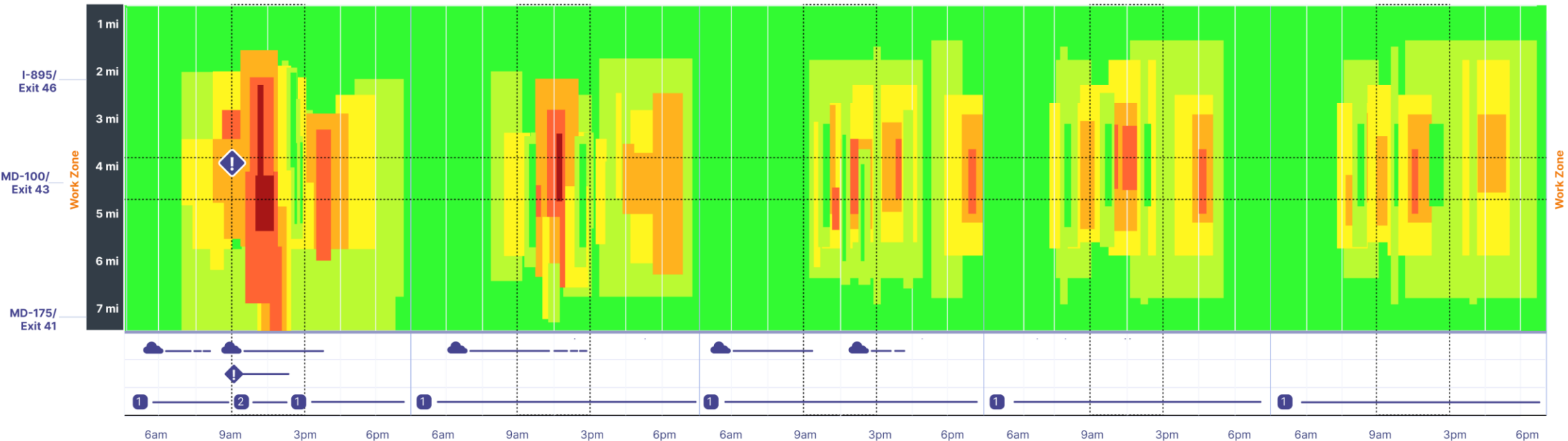
Mon 05/12/22 (Holiday)
 Work Zone Hours

Tue 05/13/22
 Work Zone Hours

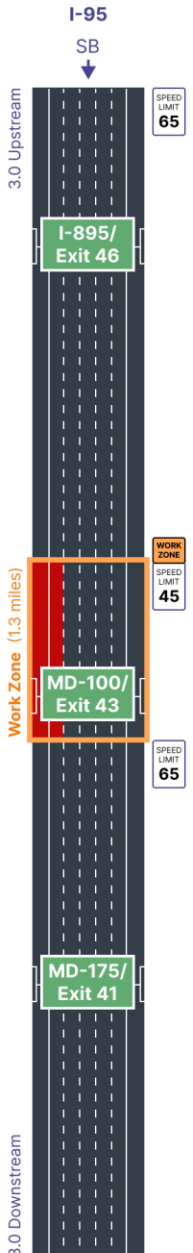
Wed 05/14/22
 Work Zone Hours

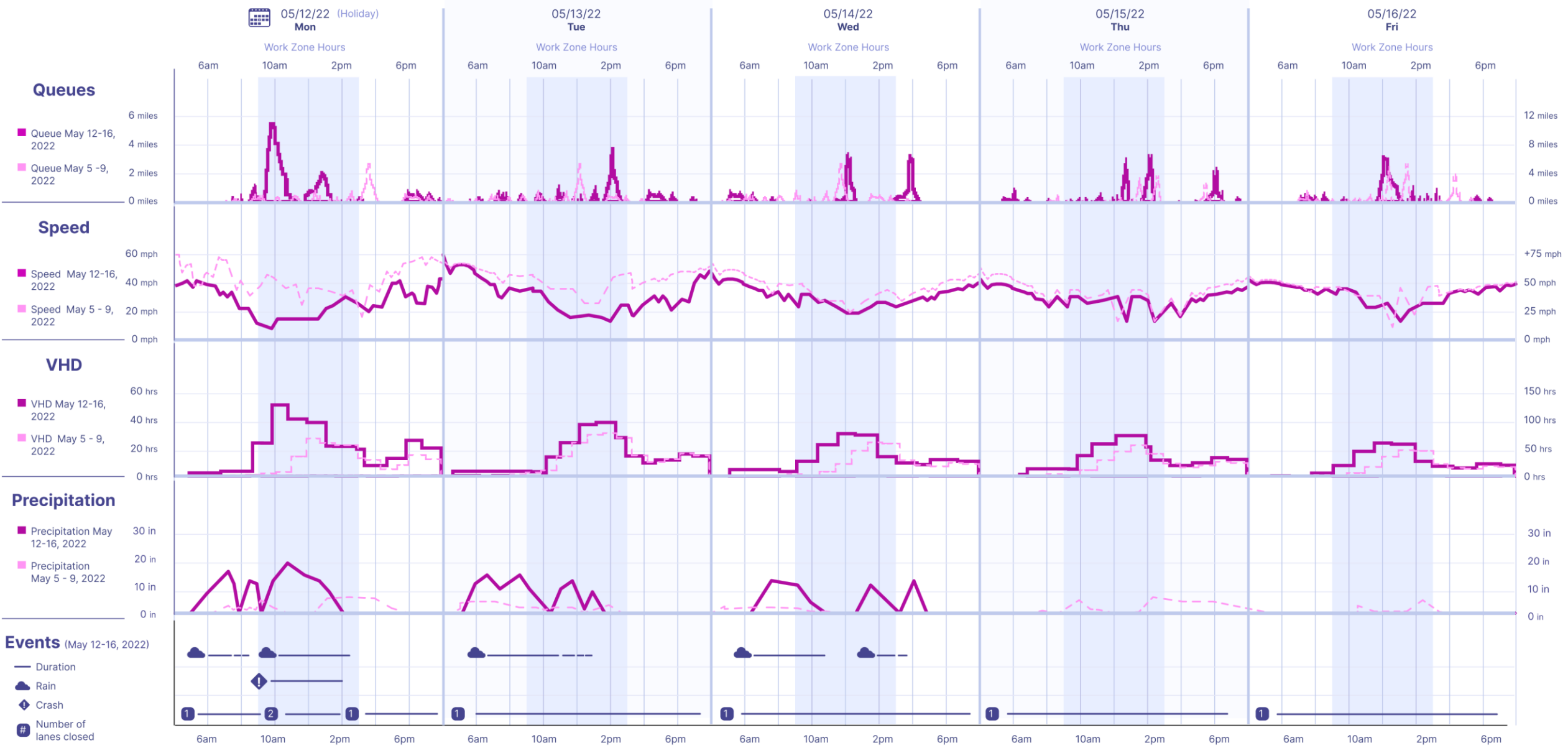
Thu 05/15/22
 Work Zone Hours

Fri 05/16/22
 Work Zone Hours



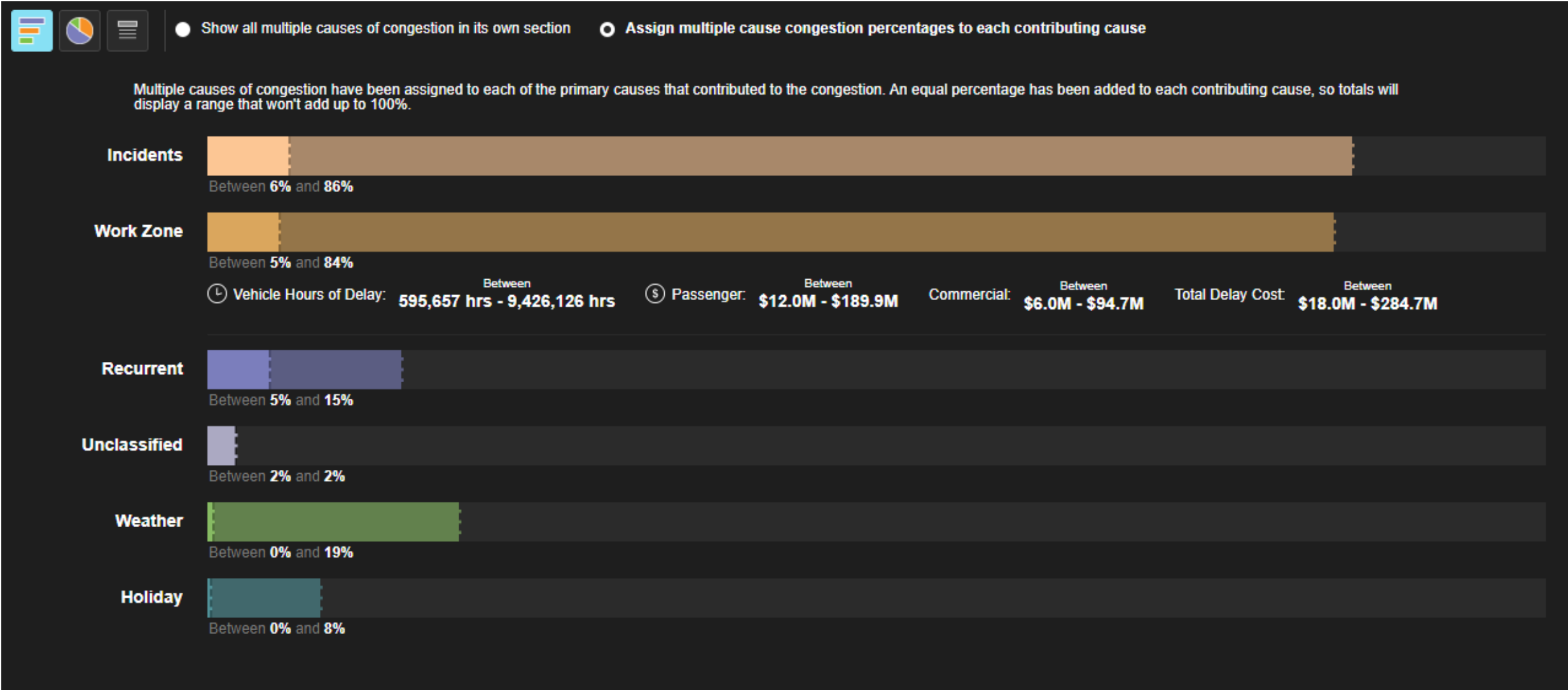
1 Crash:
 • Two passenger vehicles involved
 • Personal injuries





Causes of Congestion: Enhancements & Analysis

Deployed



Causes of Congestion: Enhancements & Analysis

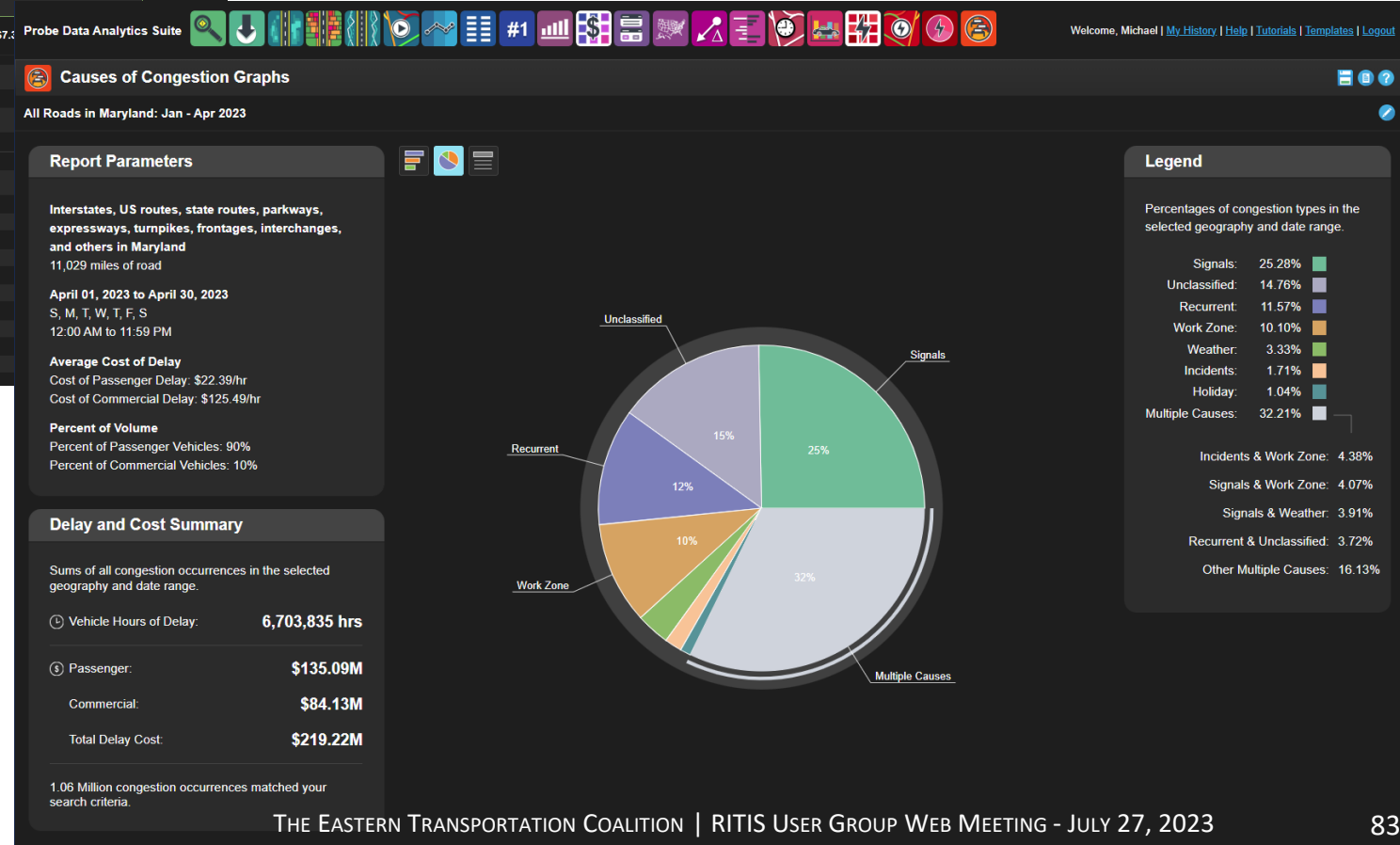
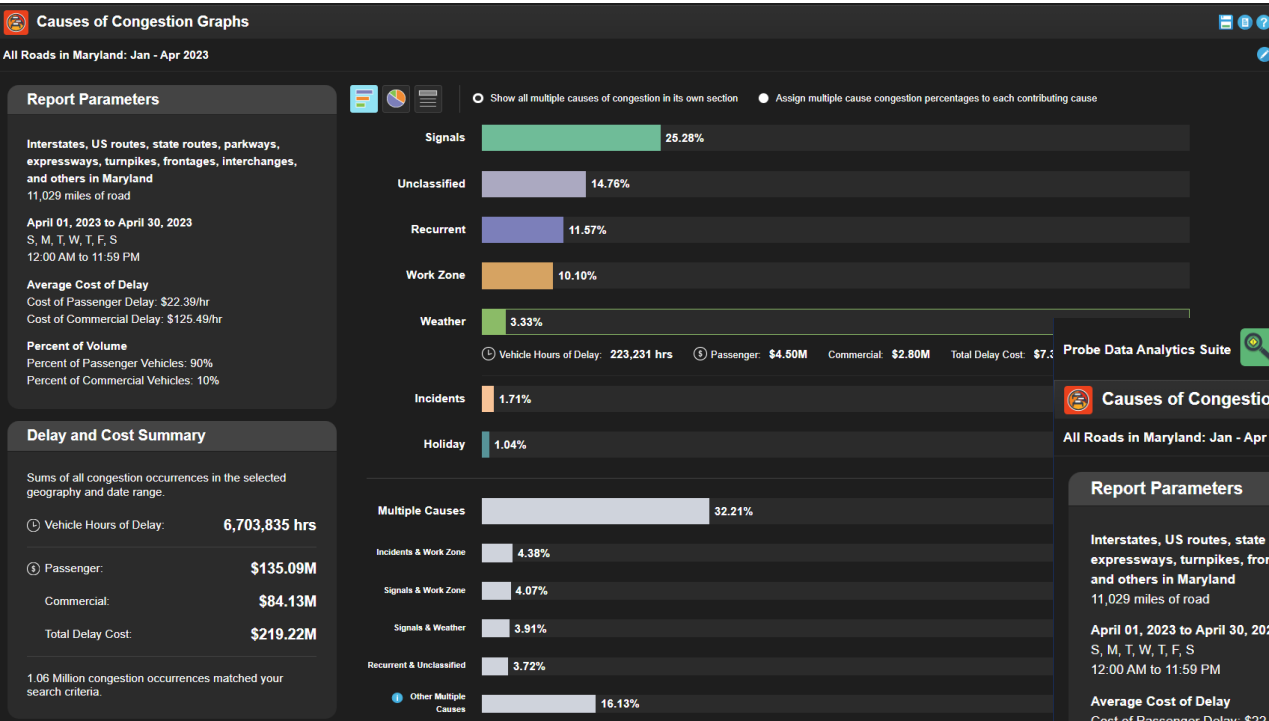
Deployed

Weather

Causes of Congestion	Percentages	Vehicle Hours of Delay	Cost of Passenger Delay	Cost of Commercial Delay	Total Cost of Delay
Total of causes that contain: Weather	Between 0% and 19%	Between 39,558 hrs and 2,099,805 hrs	Between \$797.13k and \$42.31M	Between \$397.51k and \$21.10M	Between \$1.19M and \$63.41M
Holiday, Incidents, Recurrent, Weather & Work Zone	0.02%	2,236 hrs	\$45.05k	\$22.47k	\$67.51k
Recurrent & Weather	0.02%	1,798 hrs	\$36.23k	\$18.07k	\$54.30k
Holiday & Weather	0.03%	3,379 hrs	\$68.10k	\$33.96k	\$102.06k
Incidents, Recurrent & Weather	0.07%	7,596 hrs	\$153.07k	\$76.33k	\$229.40k
Recurrent, Weather & Work Zone	0.08%	8,418 hrs	\$169.64k	\$84.60k	\$254.23k
Holiday, Weather & Work Zone	0.1%	11,467 hrs	\$231.07k	\$115.23k	\$346.31k
Holiday, Incidents & Weather	0.28%	31,293 hrs	\$630.59k	\$314.46k	\$945.05k
Weather	0.35%	39,558 hrs	\$797.13k	\$397.51k	\$1.19M
Weather & Work Zone	0.94%	105,077 hrs	\$2.12M	\$1.06M	\$3.17M
Incidents & Weather	1.13%	126,136 hrs	\$2.54M	\$1.27M	\$3.81M
Incidents, Recurrent, Weather & Work Zone	1.68%	187,768 hrs	\$3.78M	\$1.89M	\$5.67M
Holiday, Incidents, Weather & Work Zone	2.22%	247,972 hrs	\$5.00M	\$2.49M	\$7.49M
Incidents, Weather & Work Zone	11.87%	1,327,108 hrs	\$26.74M	\$13.34M	\$40.08M



Reminder: Volume Data Needed by October

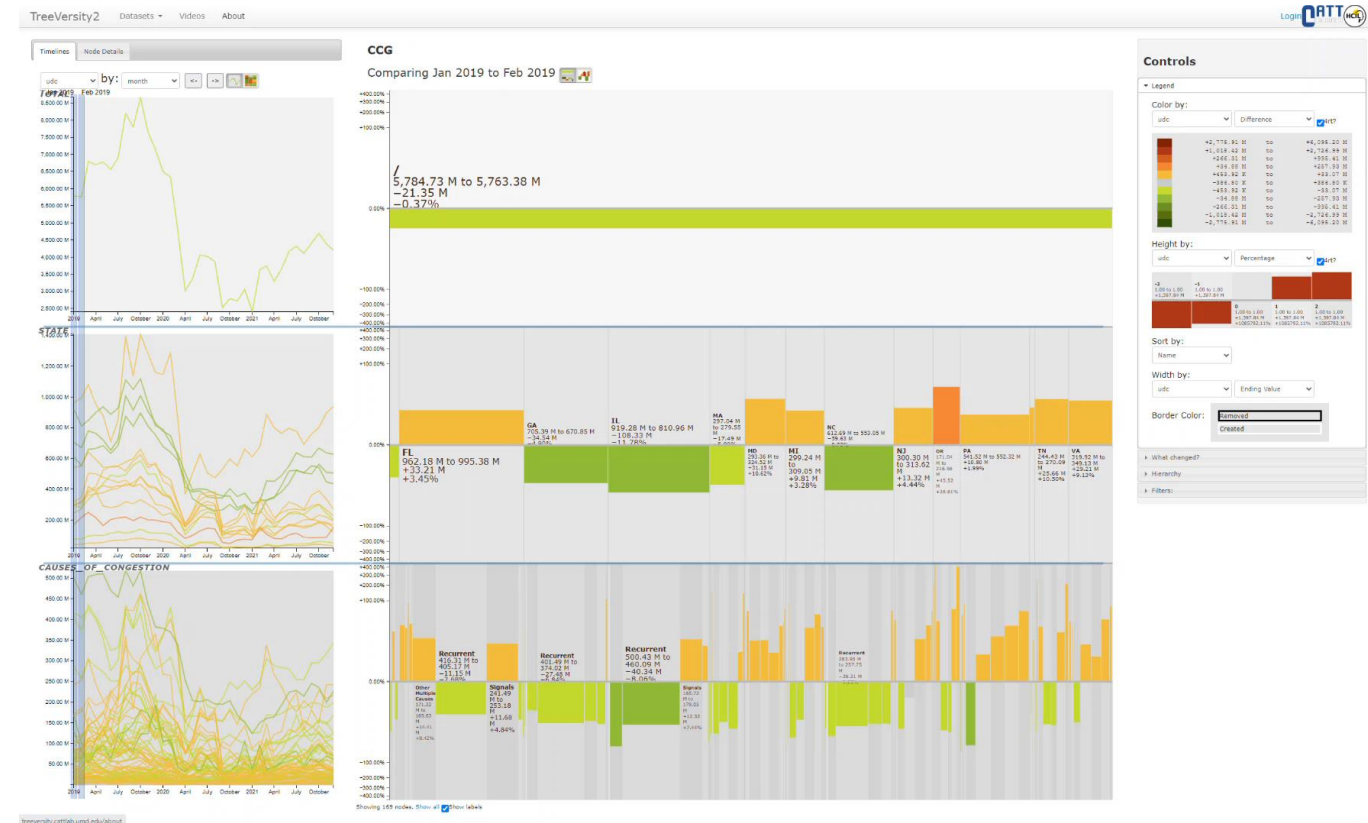


Causes of Congestion: Enhancements & Analysis

Deployed

Treeversity.cattlab.umd.edu Select CCG as data source and <switch to monthly>

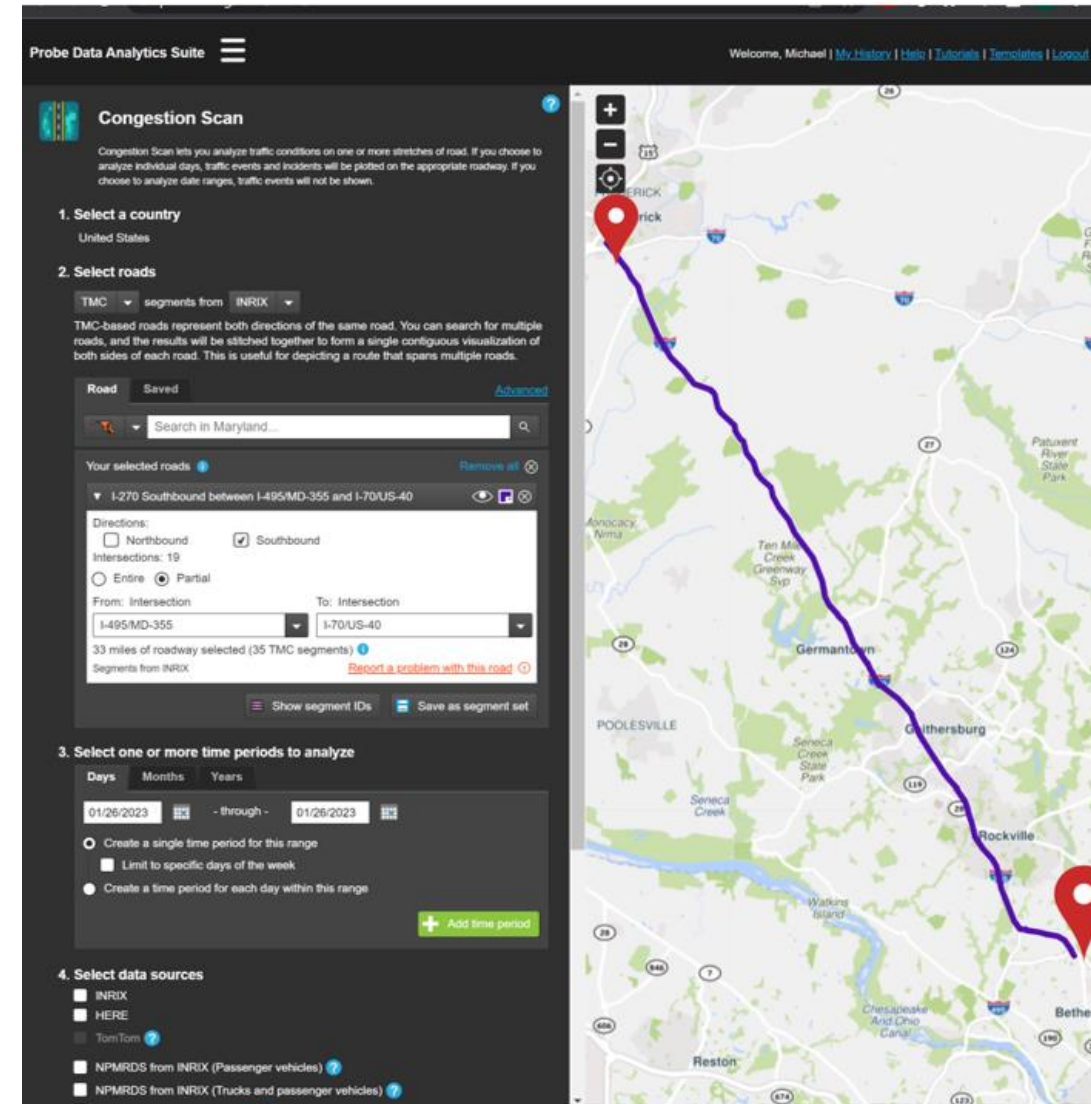
1920 x 1080 resolution needed



Map Click Corridor Selection

In-development

- Click start and end location, and the map automatically connects the points and selects all of the segments
- In-development (several months remain)
- Finished API and related back-end development
- Front-end designs are complete
- Front-end implementation is in-progress





Trend Map

The Trend Map allows you to create animated maps showing changes in congestion over the course of time at various granularities. The maps can be exported to animated GIFs or MP4s.

1. Select roads

XD segments from INRIX

Roads **Route** Region List of TMC codes Saved TMC sets

Select a start, end, and waypoint segments on the map to generate a route. [Tutorial](#)

Clear All

Northbound Segment A

Starting segment Ending segment
Northbound Segment A

+ Add Route

2. Select one or more time periods to analyze

Day(s) Month(s) Year

A maximum of 7 days is allowed within a single date range

08/16/2016 - through - 08/16/2016

Create a single time period for this range

Limit to specific days of week

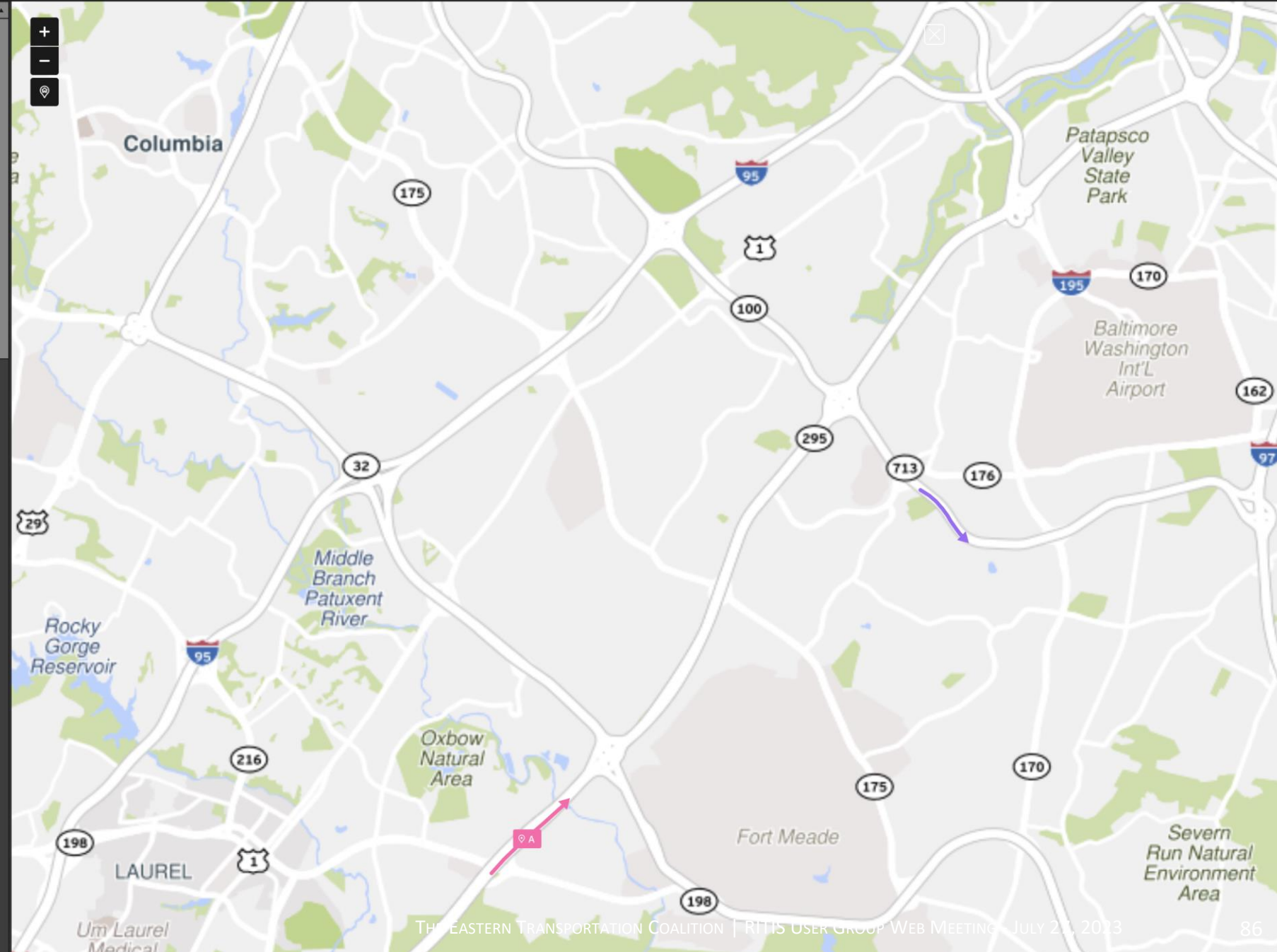
Sun Mon Tue Wed Thu Fri Sat

Create a time period for each day within this range

+ Add time period

3. Select data sources

- DITTLab
- HERE
- INRIX





Trend Map

The Trend Map allows you to create animated maps showing changes in congestion over the course of time at various granularities. The maps can be exported to animated GIFs or MP4s.

1. Select roads

XD segments from INRIX

Roads **Route** Region List of TMC codes Saved TMC sets

Select a start, end, and waypoint segments on the map to generate a route. [Tutorial](#)

Clear All

- Northbound Segment A
- Eastbound Segment B

Starting segment: Northbound Segment A

Ending segment: Eastbound Segment B

Calculating

+ Add Route

2. Select one or more time periods to analyze

Day(s) Month(s) Year

A maximum of 7 days is allowed within a single date range

08/16/2016 - through - 08/16/2016

Create a single time period for this range

Limit to specific days of week

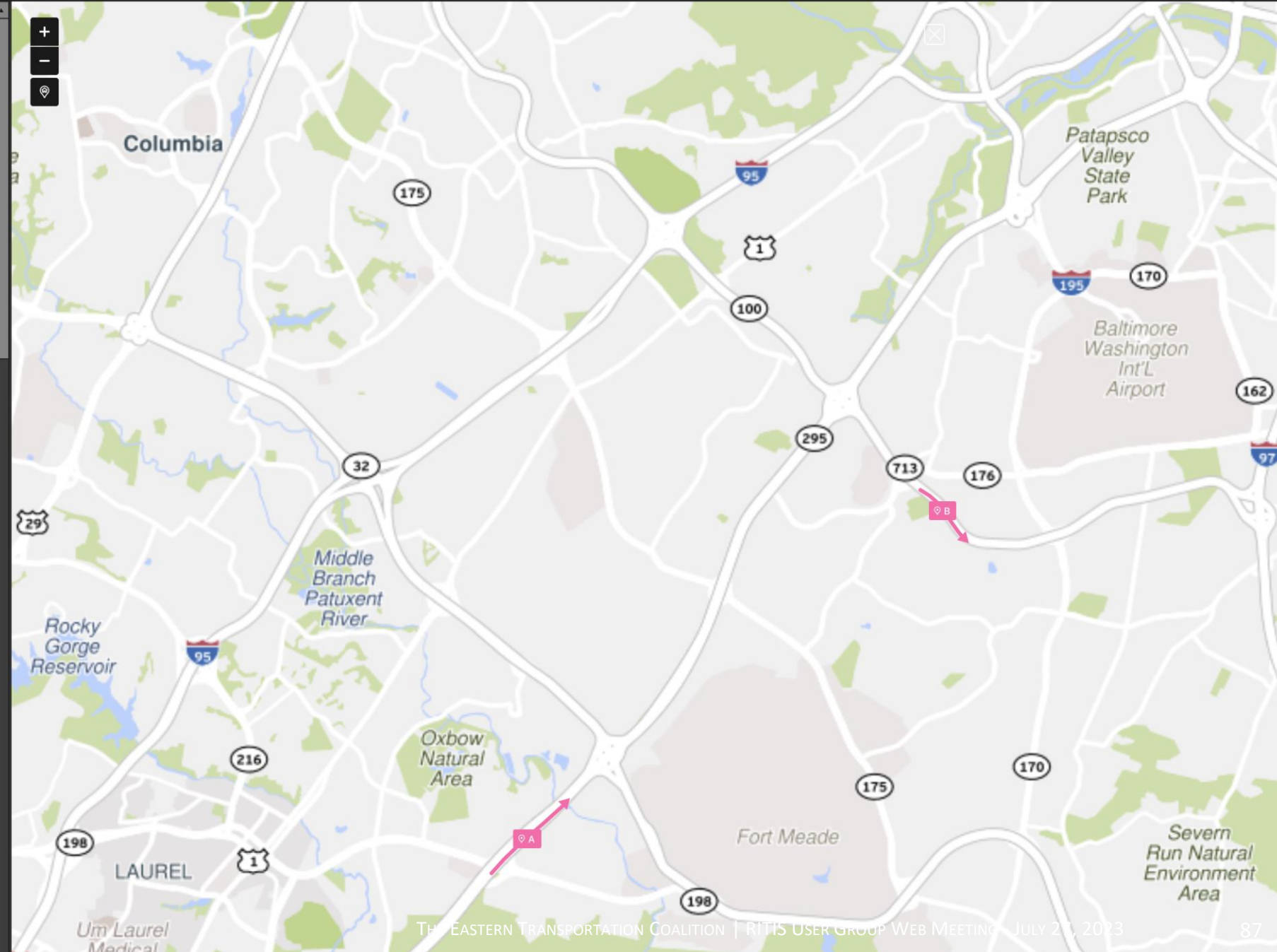
Sun Mon Tue Wed Thu Fri Sat

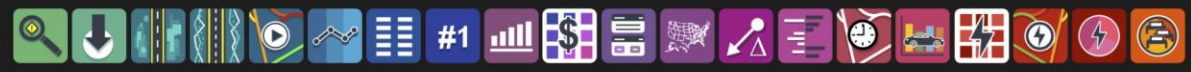
Create a time period for each day within this range

+ Add time period

3. Select data sources

- DITTLab
- HERE
- INRIX





Trend Map

The Trend Map allows you to create animated maps showing changes in congestion over the course of time at various granularities. The maps can be exported to animated GIFs or MP4s.

1. Select roads

XD segments from INRIX

Roads **Route** Region List of TMC codes Saved TMC sets

Select a start, end, and waypoint segments on the map to generate a route. [Tutorial](#)

✕ Clear All

- 📍 A :: Northbound Segment A ✕
- 📍 B :: Eastbound Segment B ✕

Starting segment 📍 A > X miles < 📍 B Ending segment

Northbound Segment A Eastbound Segment B

+ Add Route

2. Select one or more time periods to analyze

Day(s) Month(s) Year

A maximum of 7 days is allowed within a single date range

08/16/2016 - through - 08/16/2016

Create a single time period for this range

Limit to specific days of week

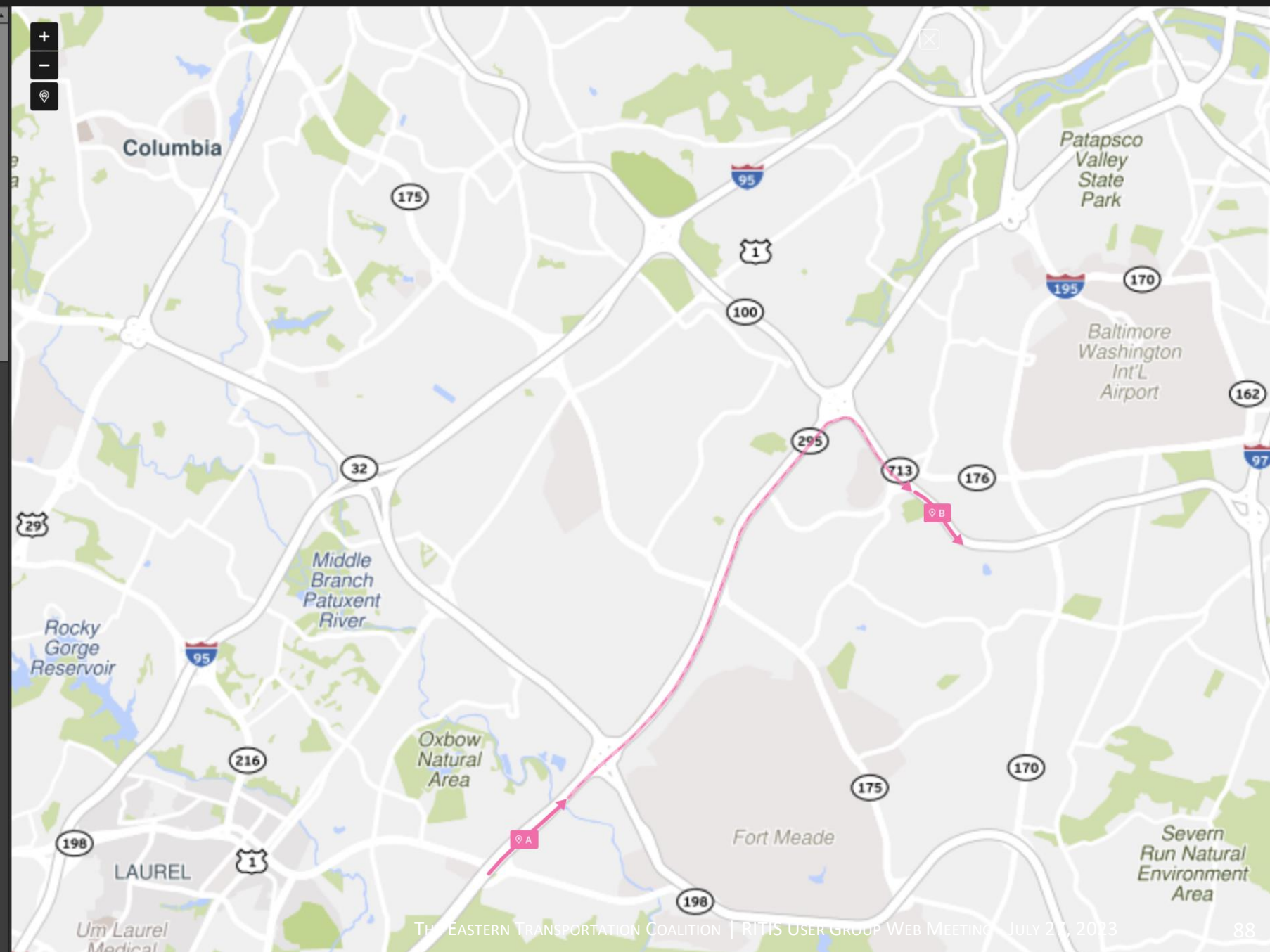
Sun Mon Tue Wed Thu Fri Sat

Create a time period for each day within this range

+ Add time period

3. Select data sources

- DITTLab
- HERE
- INRIX



Corridor Speed Bins

Deployed

Probe Data Analytics Suite

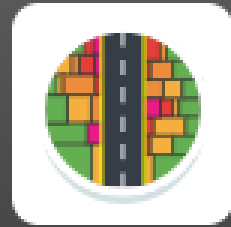
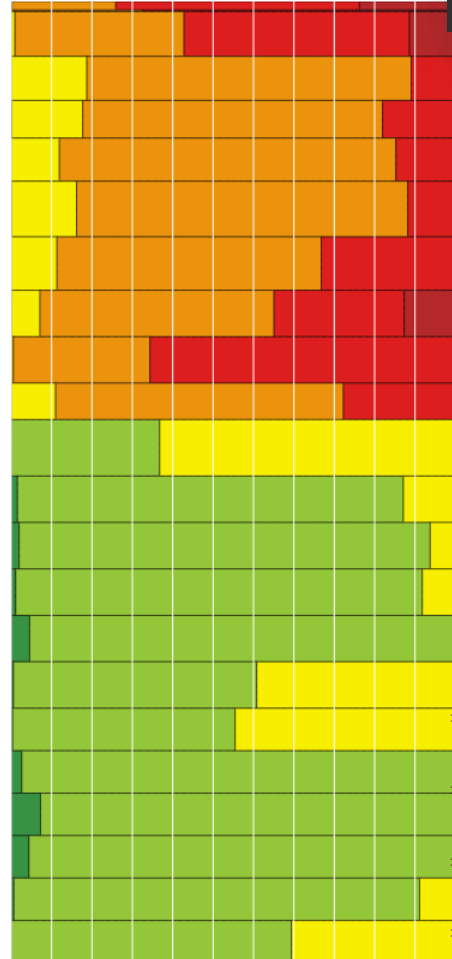
Corridor Speed Bins - Using INRIX XD

Vermont US-7 NB and SB near Burlington

Data type: Speed (mph)

Display hours as: Totals P

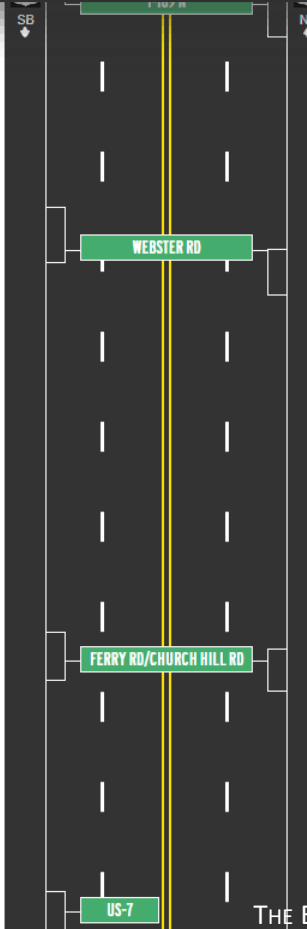
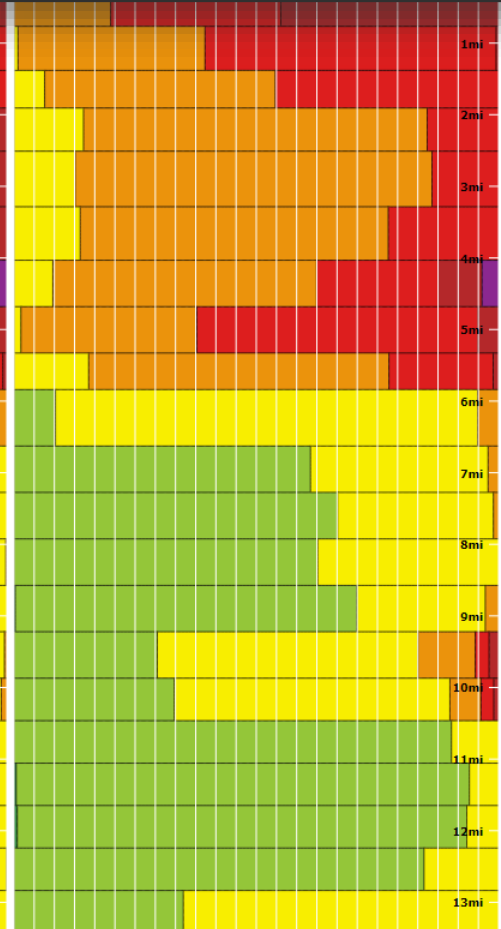
May 22, 2023 through May 26, 2023 - Time spent at different speeds



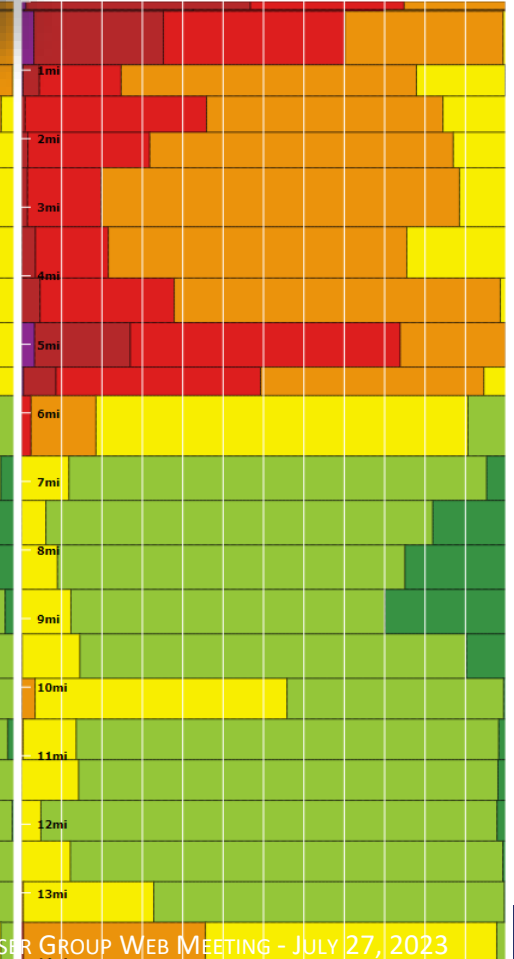
CORRIDOR SPEED BINS

Visualize congestion measures by time spent at each speed on a stretch of road.

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



May 22, 2023 through May 26, 2023 - Time spent at different speeds



Police Crash Data (safety analytics) in EQT



[NEW SEARCH](#)

CO 99 Randolph Road and US 29 Columbia Pike Montgomery County (1.00 mile radius) 01/01/22 - 01/10/22 SMTWTFS 12:00 AM - 11:59 PM

Crashes: 3 People: 5 Vehicles: 5

 Expand all

 Display values as: Plain Text Codes


	REPORT	COUNTY #	MUNICIPALITY	ROUTE TYPE	ROUTE #	ROUTE SUFFIX	FINAL LOG MILE	REFERENCE ROUTE SUFFIX	REFERENCE ROUTE #	REFERENCE ROUTE TYPE	REFERENCE ROUTE NAME
Showing 14 of 121 columns	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter
	0610588571	15	000	CO	99		2.50	US	29		Columbia Pike
	0610588571	-	-	-	-		-	-	-		-
	0610588571	-	-	-	-		-	-	-		-
	0610588571	-	-	-	-		-	-	-		-
	0610588571	-	-	-	-		-	-	-		-
	0610689933	15	000	CO	99		2.50	US	29		Columbia Pike
	0610689933	-	-	-	-		-	-	-		-
	0610689933	-	-	-	-		-	-	-		-
	0811684876	15	000	US	29		6.81	CO	99		Randolph Road
	0811684876	-	-	-	-		-	-	-		-
	0811684876	-	-	-	-		-	-	-		-
	0811684876	-	-	-	-		-	-	-		-
	0811684876	-	-	-	-		-	-	-		-

NEW SEARCH **US 29 Columbia Pike Howard and Montgomery County (51 Miles and 31 Intersections) 01/01/22 - 03/31/22 SMTWTFSS 12:00 AM - 11:59 PM**

Crash Counts Per Mile

 Increment:

CRASH COUNT	START AT MILE MARKER	END AT MILE MARKER
Type to filter	Type to filter	Type to filter
85	0.00	0.00
69	0.10	0.10
90	0.20	0.20
58	0.30	0.30
59	0.40	0.40
41	0.50	0.50
37	0.60	0.60
41	0.70	0.70
54	0.80	0.80
55	0.90	0.90
58	1.00	1.00
58	1.10	1.10
36	1.20	1.20

Hot Intersections

 Radius:

CRASH COUNT	MILE MAKER	ROUTE TYPE	ROUTE NUMBER
Type to filter	Type to filter	Type to filter	Type to filter
85	0.00	US	106
69	0.10	US	128
90	0.20	US	991
58	0.30	US	1161
59	0.40	US	1317
41	0.50	US	1318
37	0.60	US	1424
41	0.70	US	1582
54	0.80	US	1807
55	0.90	US	2129
58	1.00	US	2724
58	1.10	US	2857
36	1.20	US	2859

Bubble Chart

 Crashes Per Log Miles Crashes Per Intersection

 US 29
@ Blair RD

Select Report Type: General Crash Summary

Crash Summary

 By: User
 On: Mon Feb 13, 2023

Query: Corridor Dates: 01/01/23 - 03/31/22 County: Howard and Montgomery County

Road: US 29 Columbia Pike

Total Crash Count
321
Total People Involved Count
623
Harmful Event 1 List

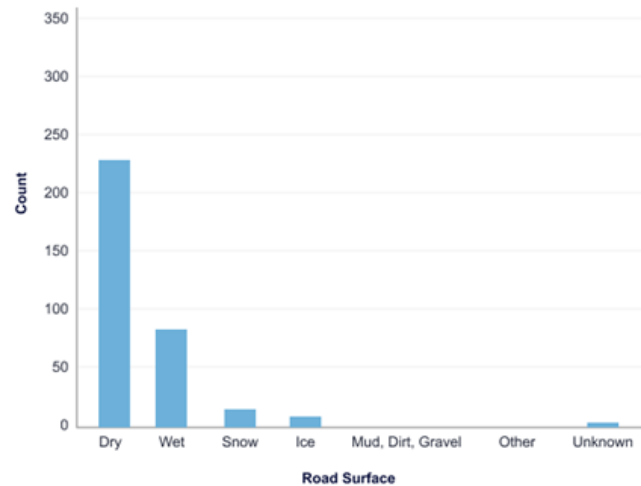
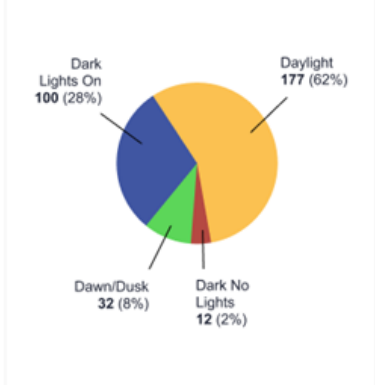
Animal	0	Other Conveyance	0	Parked Vehicle	6
Bicycle	0	Other Non Collision	0	Pedestrian	1
Fixed Object	40	Other Object	1	Railway Train	0
Jackknife	0	Other Pedalcycle	1	Spilled Cargo	0
Off Road	1	Other Vehicle	265	Units Separated	0
Other	0	Overtum	4	Unknown	2

Vehicle Occ. by Injury

Injury	Fatal Injury
142	7

Pedestrians by Injury

Injury	Fatal Injury
8	0

Road Surface Conditions

Crash by Light Conditions

Crashes by Hour of the Day
Crashes by Collision Type

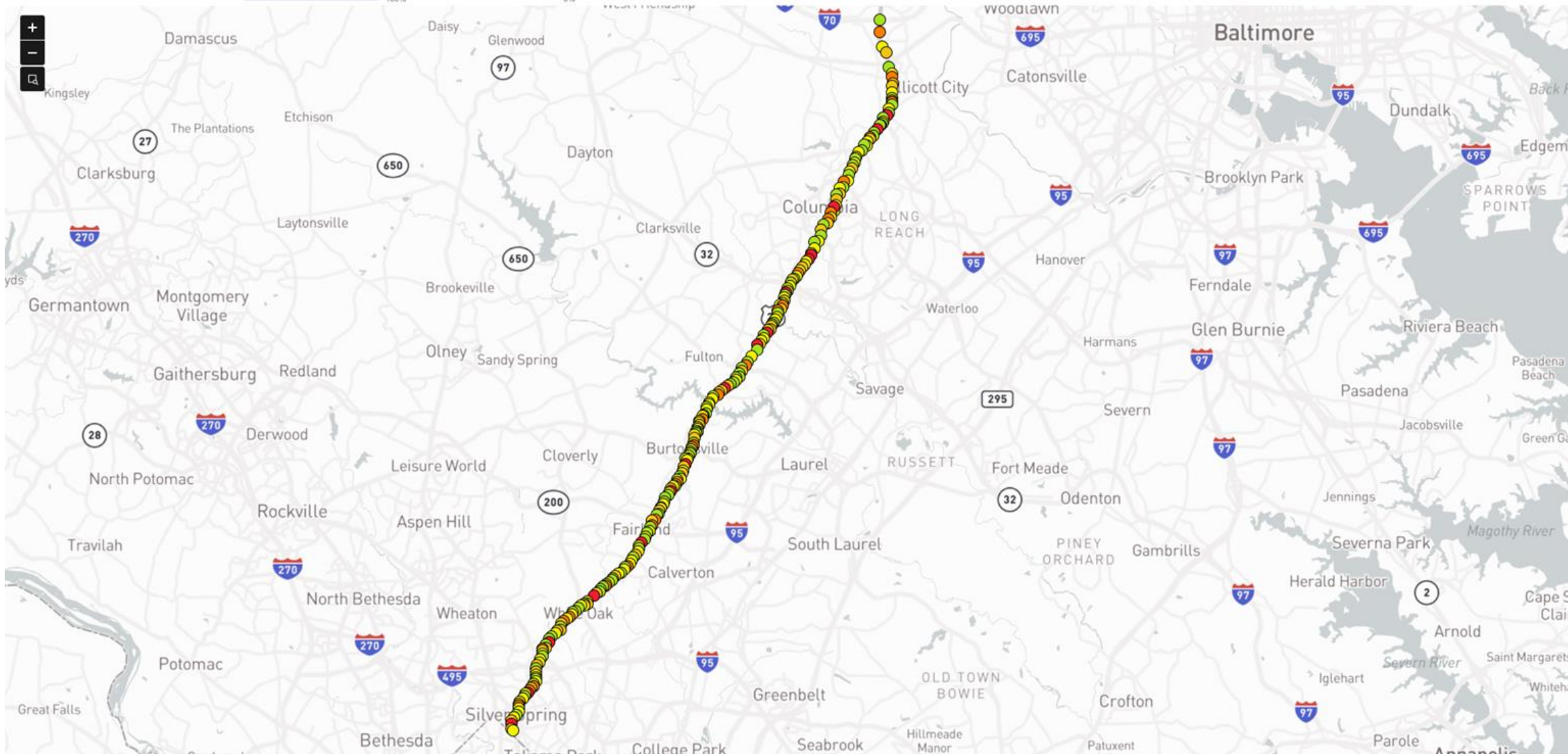
Head on	13
Head on Left Turn	36
Same Direction Rear End	182
Same Direction Rear End Right Turn	3
Same Direction Rear Edn Left Turn	6

NEW SEARCH **US 29 Columbia Pike Howard and Montgomery County (51 Miles and 31 Intersections) 01/01/22 - 03/31/22 SMTWTF 12:00 AM - 11:59 PM**

Crashes: 321 People: 623 Vehicles: 473

Regular

Transparency

 Color by injury
 No injury Non-incapacitating Poss. incapacitating Incapacitating Fatal Unknown

In-development. Deploys expected this fall.



Welcome new RITIS States!



Arizona



PROBE DATA
ANALYTICS SUITE

PDA Suite Performance Reporting Working Group



John Allen
Faculty Assistant, Outreach & Education
UMD CATT Lab

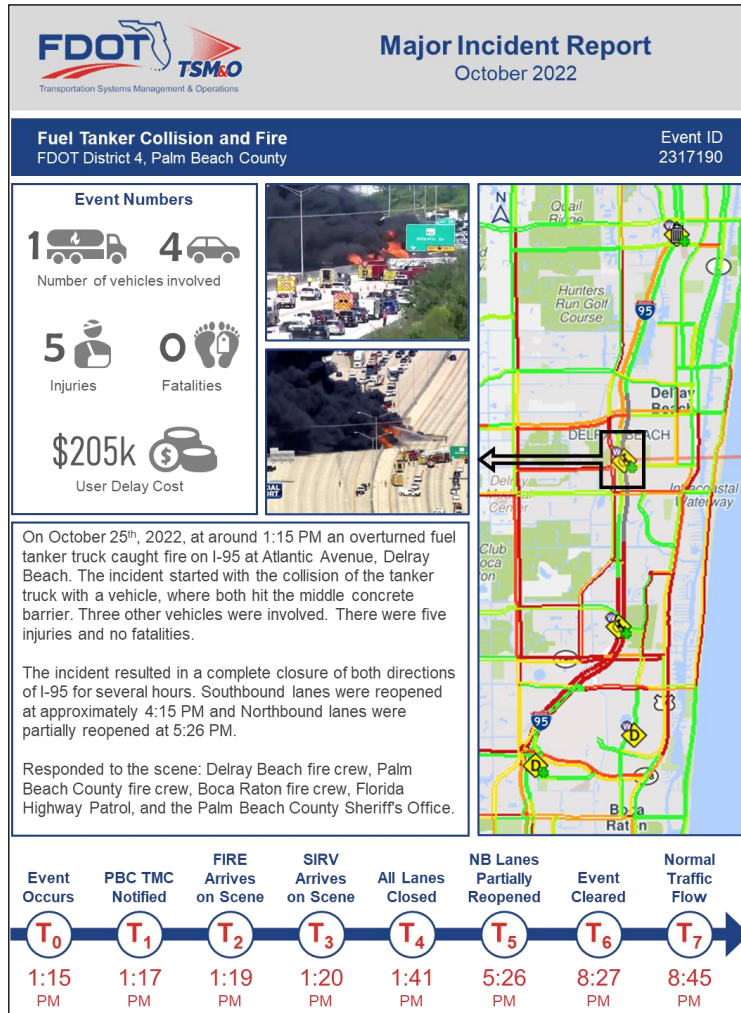


Performance Reporting Templates

FDOT used RITIS results and an AAR (customized) template to develop this report

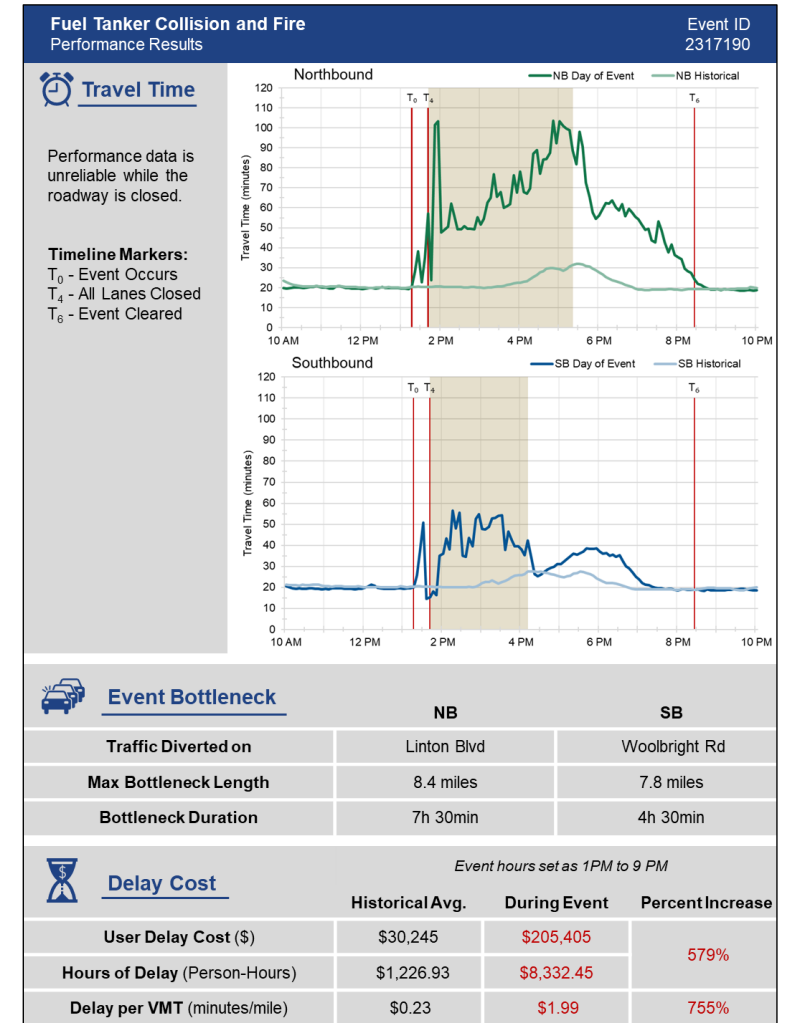
Incident Overview

- › By the Numbers infographic
- › Incident Images
- › Location Map w/Network Impacts
- › Event Summary
- › Timeline of Traffic Incident Elements*



Performance Results

- › Travel Time Impacts
- › Event Bottlenecks
 - Max queue length
 - Duration
- › Delay Cost
 - In dollars
 - Hrs. of Delay
 - Per VMT
 - Compared to Historical Avg.
 - % Increase



* For more information on FHWA's Traffic Incident Management Gap Analysis Primer, click [here](#)



Performance Reporting Templates



TxDOT posted Holiday Travel Forecasts for this year's 4th of July on social media for major interstates crisscrossing the state

4th of July Holiday Travel Forecast*
I-10 (New Mexico to Louisiana) • June 30th to July 5th, 2023

Day	Forecast	Delays / Notes
FRI 6/30	Delays Possible	12 PM – 7 PM in these areas: San Antonio Houston Beaumont Orange (5 PM-7 PM)
SAT 7/01	Expect Some Delays	in these areas: San Felipe to Katy (9 AM to 3 PM) Orange (12 PM to 7 PM)
SUN 7/02	Normal Travel Conditions	(for a typical Sunday, throughout the day)
MON 7/03	Lighter than Normal Travel Conditions	Possible delays in downtown Houston (2 PM to 5 PM)
TUE 7/04	Lighter than Normal Travel Conditions	(but be aware of Houston's Freedom over Texas celebration, 4 PM – 10 PM)
WED 7/05	Expect Some Delays	2 PM – 6 PM in these areas: San Antonio Houston Beaumont

*: Based on previous years' data and travel trends



TxDOT @TxDOT · Jun 30
Traveling over this 4th of July weekend? Check out these travel forecasts for major interstates across Texas before you head out. Visit [DriveTexas.org](https://www.drive-texas.org) for the latest travel information across the state. #IH10 #IH20 #IH35 #IH40
#BeSafeDriveSmart #4thOfJuly

TxDOT El Paso @txdotelp · Jun 30
PLAN AHEAD IF YOU'RE DRIVE INCLUDES I-10!
I-10 West after Hawkins, @EPTXFire working clean up , right TWO lanes remain closed, backup to Yarbrough, clearing time until further notice.



INTERSTATE 10 (880 mi)

INTERSTATE 20 (636 mi)

INTERSTATE 35 (504 mi)

INTERSTATE 45 (285 mi)

Source: TxDOT

Performance Reporting Templates

Social media alerts and updates help minimize incident impact / provide intel for After-action Reviews



Sources: TxDOT / EPFD

11:30 AM

Tractor-trailer spill along Interstate 10W, near the Hawkins Exit. **Hazmat on scene.**

2:47 PM

Clean up operations on I-10W and Hawkins have been upgraded to a Hazmat Condition 3 incident. No injuries reported at this time. PIO at the scene.

6:07 PM

Crews continue working on clean up. Clearing time is now 2 hours approximately. **Two lanes are now open on I-10W.**

1:25 PM

Clean up continues, **right TWO lanes remain closed**, backup to Yarbrough, clearing time until further notice.

3:16 PM

Hazmat crews are working on a hot sauce spill leaking from a semi. **Traffic on I-10W at Hawkins reduced to ONE lane.** Recommended to look for alternate routes. No injuries reported.

11:36 PM

I-10 and frontage lanes now open.



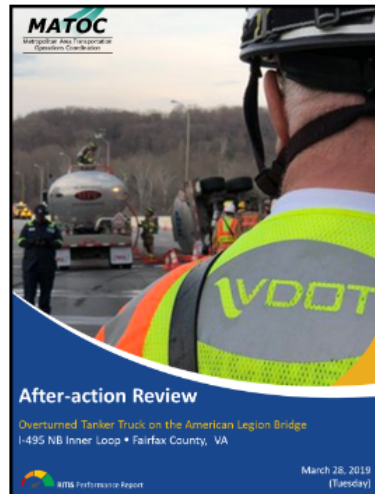
Performance Reporting Templates

Both reporting examples will be added to the RITIS Templates pages soon

After Action Review

Use this template package along with RITIS tool results and your agency's content to create an after-action review report, including front and back covers, an event high-level summary page and an impact evaluation page that graphically depicts mainline and regional impacts, delay costs, vehicle hours of delay, key takeaways, and more. There are also several use case examples with varying levels of event complexities and some more technically-oriented report examples.

Overview



1. Click to download the PowerPoint template to create an after action review of a major incident.

Download Template

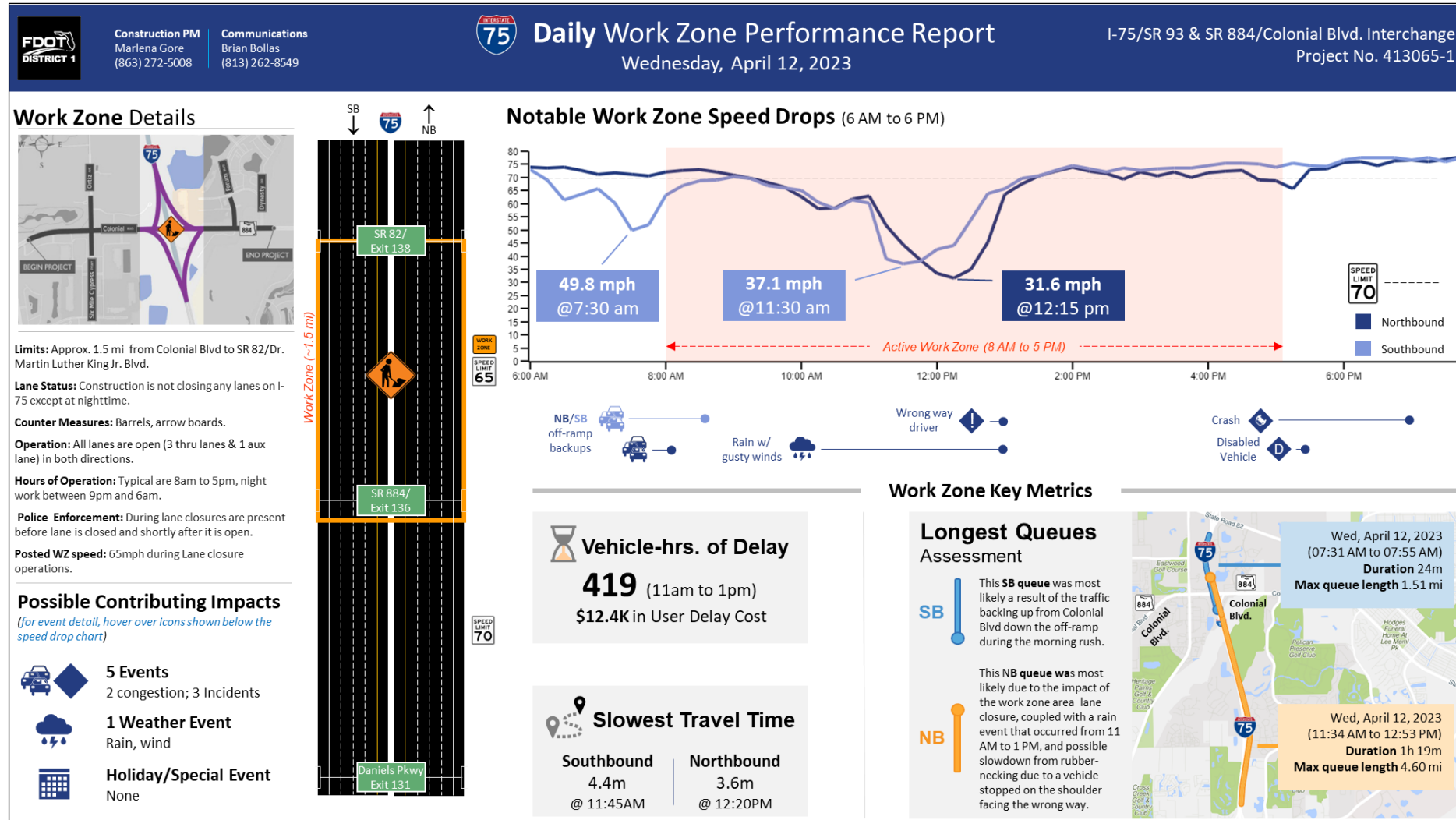
Download Design Resources

2. Download Agency Use Case examples below to see how other agencies have used these templates or have created similar reports using content from RITIS:

- MATOC Overturned Tanker Truck on the American Legion Bridge (using this template)
- GDOT I-75 Pedestrian Fatality (executive-level template)
- MATOC Vehicle Collision and Truck Fire on the Woodrow Wilson Bridge (1 technical, 3 executive templates)
- massDOT Truck Bridge Strike I-95 SB at Exit 30B (includes Trend Map animation)
- massDOT Vehicle Collision on WB I-290 (executive-level template)
- FDOT Fuel Tanker Collision and Fire on I-95 (Major Incident Report)

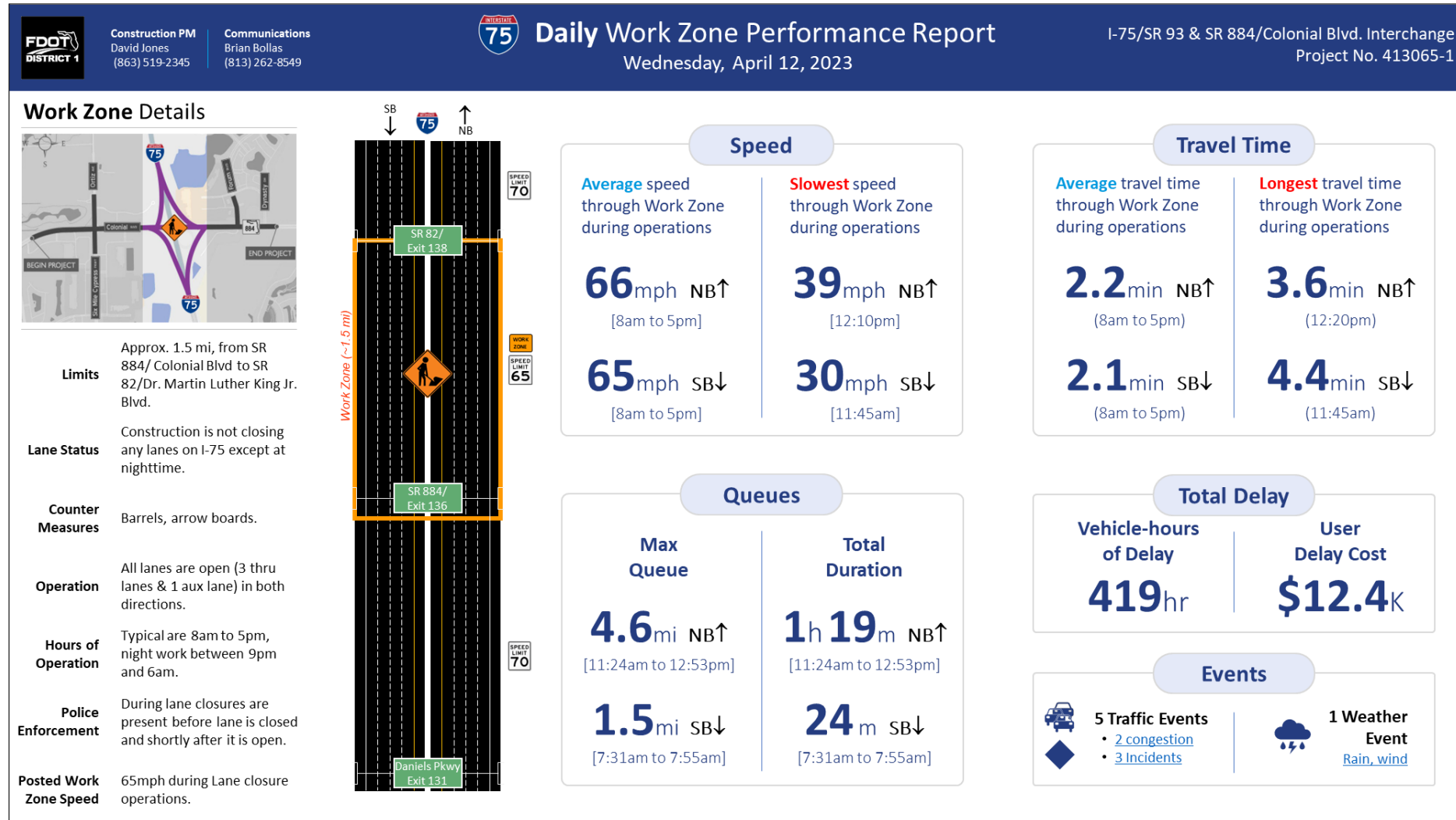
Work Zone Performance Reporting Templates

We're working on WZ report layouts and formats for daily and multi-day reporting



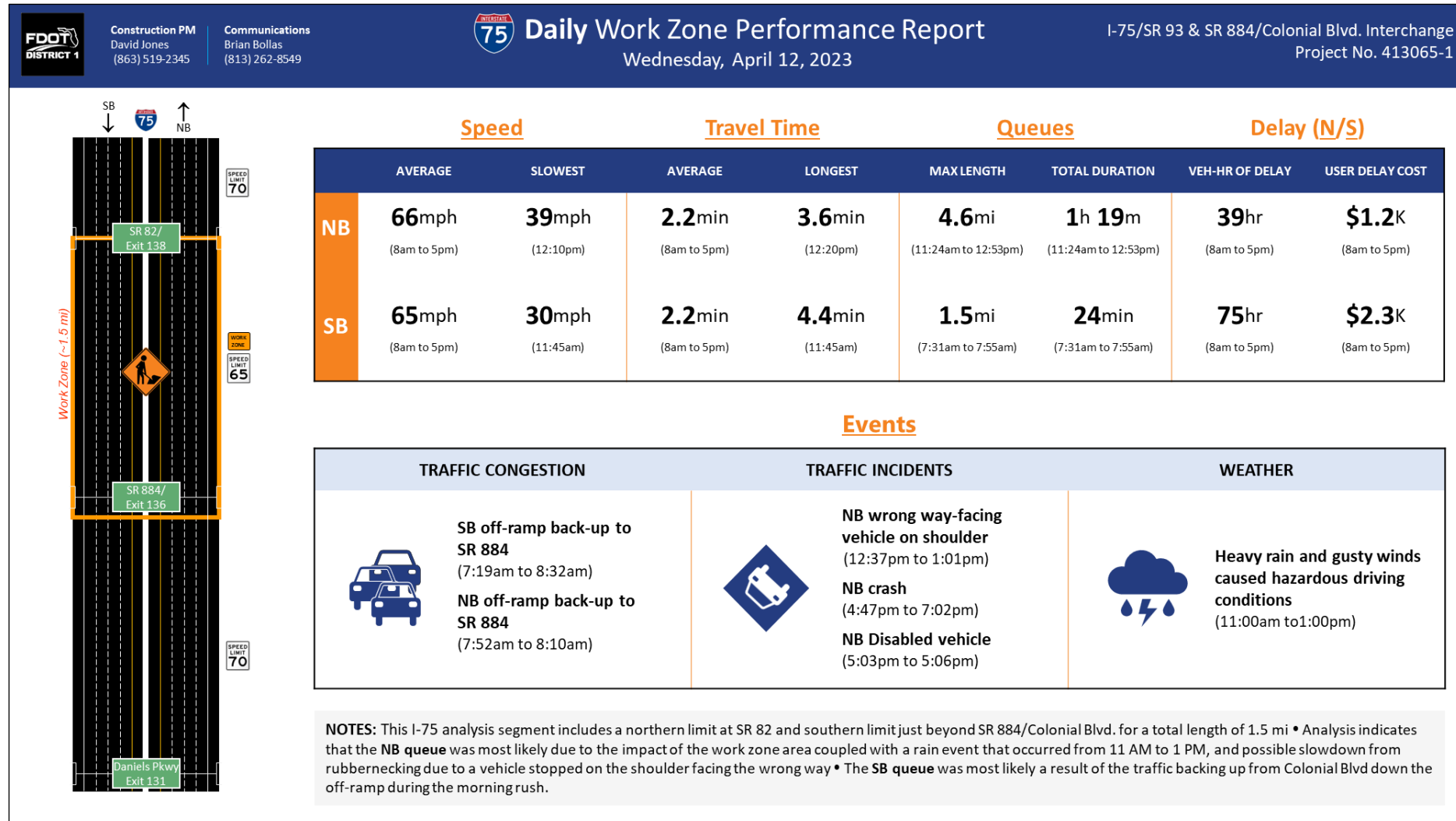
Work Zone Performance Reporting Templates

We're working on WZ report layouts and formats for daily and multi-day reporting



Work Zone Performance Reporting Templates

We're working on WZ report layouts and formats for daily and multi-day reporting



Work Zone Performance Reporting Templates

We're working on WZ report layouts and formats for daily and multi-day reporting

Construction PM
David Jones
(863) 519-2345

Communications
Brian Bollas
(813) 262-8549

Daily Work Zone Performance Report
Wednesday, April 12, 2023

I-75/SR 93 & SR 884/Colonial Blvd. Interchange
Project No. 413065-1

Work Zone Details

Limits Approx. 1.5 mi, from SR 884/ Colonial Blvd to SR 82/Dr. Martin Luther King Jr. Blvd.

Lane Status Construction is not closing any lanes on I-75 except at nighttime.

Counter Measures Barrels, arrow boards.

Operation All lanes are open (3 thru lanes & 1 aux lane) in both directions.

Hours of Operation Typical are 8am to 5pm, night work between 9pm and 6am.

Police Enforcement During lane closures are present before lane is closed and shortly after it is open.

Posted Work Zone Speed 65mph during Lane closure operations.

Speed

Travel Time

Queues

Delay (N/S)

	AVERAGE	SLOWEST	AVERAGE	LONGEST	MAX LENGTH	TOTAL DURATION	VEH-HR OF DELAY	USER DELAY COST
NB	66mph <small>(8am to 5pm)</small>	39mph <small>(12:10pm)</small>	2.2min <small>(8am to 5pm)</small>	3.6min <small>(12:20pm)</small>	4.6mi <small>(11:24am to 12:53pm)</small>	1h 19m <small>(11:24am to 12:53pm)</small>	39hr <small>(8am to 5pm)</small>	\$1.2K <small>(8am to 5pm)</small>
SB	65mph <small>(8am to 5pm)</small>	30mph <small>(11:45am)</small>	2.2min <small>(8am to 5pm)</small>	4.4min <small>(11:45am)</small>	1.5mi <small>(7:31am to 7:55am)</small>	24min <small>(7:31am to 7:55am)</small>	75hr <small>(8am to 5pm)</small>	\$2.3K <small>(8am to 5pm)</small>

Events

TRAFFIC CONGESTION	TRAFFIC INCIDENTS	WEATHER
 SB off-ramp back-up to SR 884 <small>(7:19am to 8:32am)</small> NB off-ramp back-up to SR 884 <small>(7:52am to 8:10am)</small>	 NB wrong way-facing vehicle on shoulder <small>(12:37pm to 1:01pm)</small> NB crash <small>(4:47pm to 7:02pm)</small> NB Disabled vehicle <small>(5:03pm to 5:06pm)</small>	 Heavy rain and gusty winds caused hazardous driving conditions <small>(11:00am to 1:00pm)</small>

NOTES: This I-75 analysis segment includes a northern limit at SR 82 and southern limit just beyond SR 884/Colonial Blvd. for a total length of 1.5 mi • Analysis indicates that the **NB queue** was most likely due to the impact of the work zone area coupled with a rain event that occurred from 11 AM to 1 PM, and possible slowdown from rubbernecking due to a vehicle stopped on the shoulder facing the wrong way • The **SB queue** was most likely a result of the traffic backing up from Colonial Blvd down the off-ramp during the morning rush.

The Eastern Transportation Coalition | RITIS User Group Web Meeting | July 27, 2023

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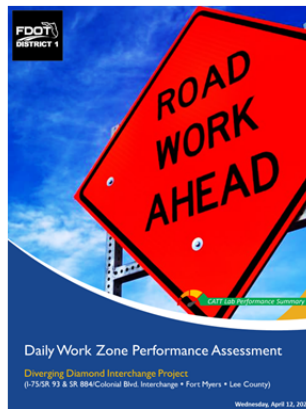
Work Zone Performance Reporting Templates

The WZ Reporting Package – Templates, Design Resources, Agency Use Cases and How-to Guide – is coming soon

Work Zone Performance Report

Use this template package along with RITIS tool results and your agency's content to create a work zone performance report, including a front cover, project description page, a performance report pages (key metrics, operational impact assessment, etc.) There are layouts and formats for a daily and weekly reports and some agency use case examples using other reporting layouts to give you maximum flexibility in choosing the report style that best suits your needs. We've also included a Design Resources package that contains various elements – such as icons, custom graphics and instructions on making the report interactive – so that you can more clearly and more effectively communicate the results to your audience.

Overview



1. Click to download the PowerPoint template to create a report that presents a Performance Report for Work Zones along a roadway. Additional design resources are also available to make building a report faster and easier.

Download Template

Download Design Resources

2. Download Agency Use Case examples below to see how other agencies have used these templates or have created similar reports using content from RITIS:

- [FDOT Diverging Diamond Interchange \(Daily WZ performance 2-pager, and 1-pager options\)](#)
- [MDTA Rehabilitating the Baltimore Harbor Tunnel \(portrait/full report, “weather forecast”-style\)](#)
- [ODOT Oregon 217 WZ Monitoring and Performance Measurements \(RITIS training example report\)](#)

3. Scroll down to learn how to create this report or click on the 'How To Create Report' in the navigational menu.

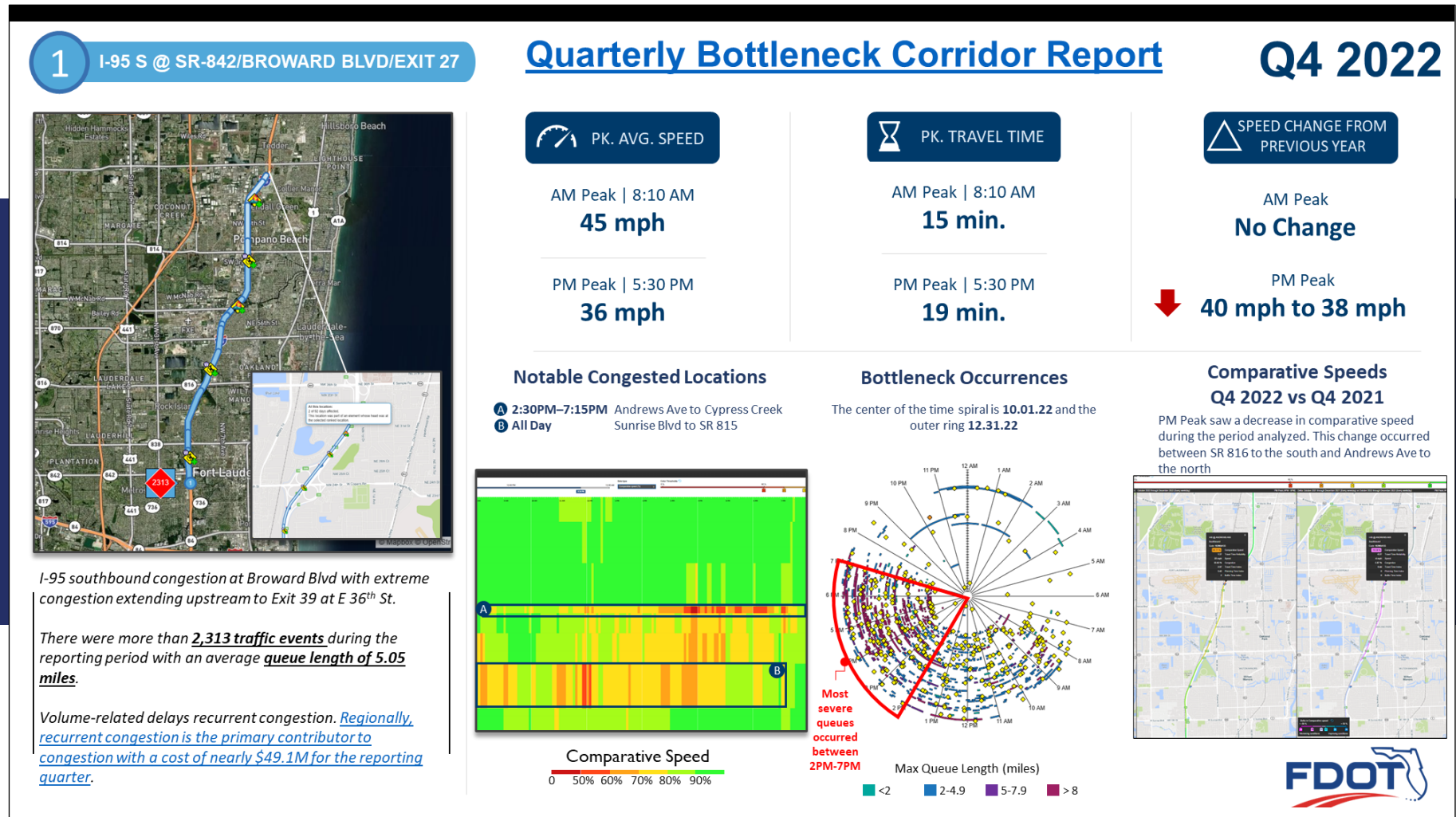
On-going RITIS Reporting Training

Schedule a training session and receive expert guidance on running RITIS, getting results and building a report

States in discussion for on-site RITIS training with integration of operations and planning report templates:

- Arizona
- Louisiana
- Michigan
- New Jersey
- Missouri
- Vermont

(If you'd like on-site or remote training for your organization, please contact Rick Ayers rayers@umd.edu)



Thank you!

ENGINEERING BUILDING



John C. Allen
Outreach & Education
University of Maryland CATT Laboratory
jaallen35@umd.edu | <https://ritis.org>



PROBE DATA
ANALYTICS SUITE

Agency Input Session

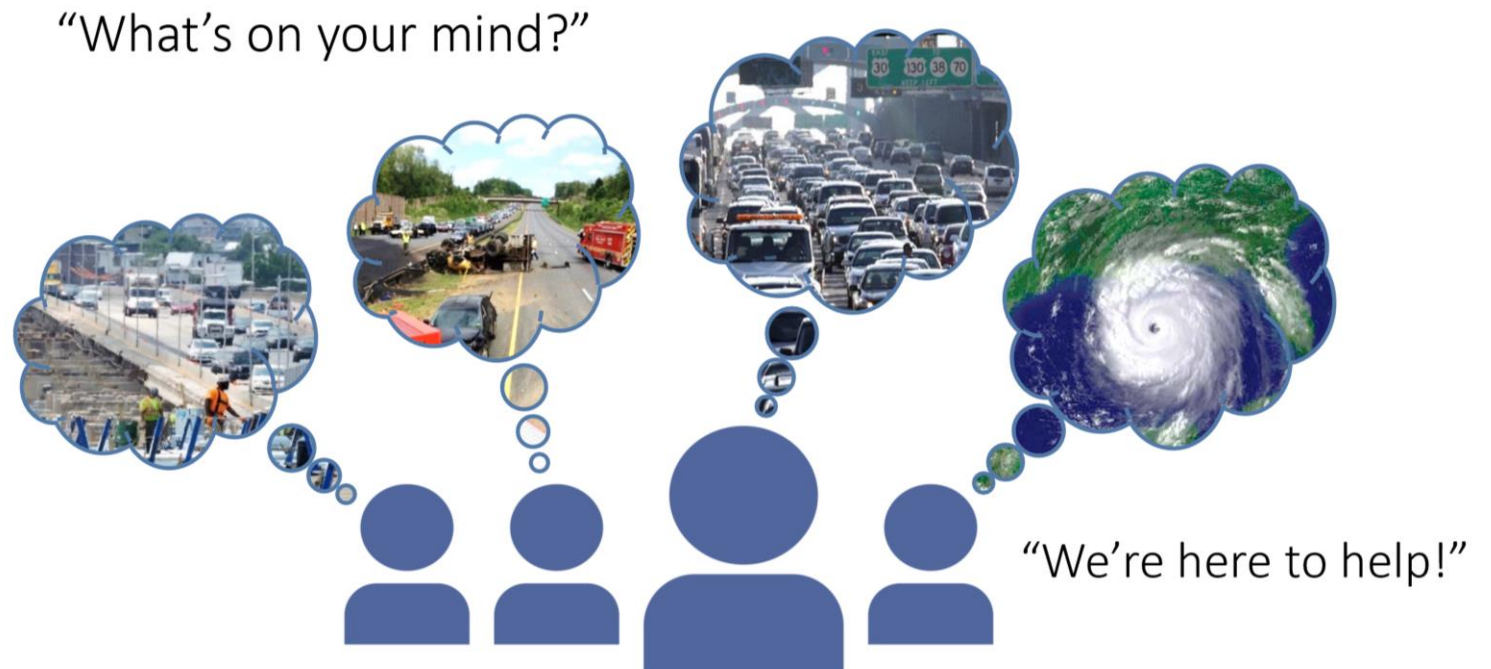


Michael Pack
UMD CATT Lab
Director



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

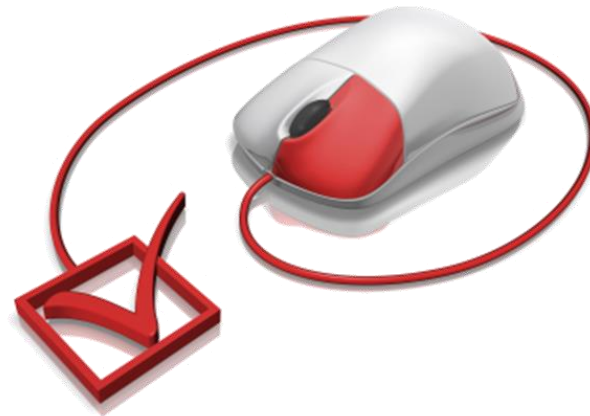


Agency Input – Polling and Open Discussion

Please type your answers under each 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 - What features or functionality, if added to RITIS, would make your life easier?



Wrap Up



Matt Glasser

National TSMO Account Lead
Arcadis
RITIS User Group Co-chair



Questions?



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518.852.4083

Joanna Reagle (Logistics)

jreagle@kmjinc.com

610.228.0760

Michael Pack (CATT Lab)

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RITIS Tech Support

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