CATT LABORATORY

# RITIS User Group

Web Meeting | July 15, 2021

In collaboration with THE EASTERN TRANSPORTATION COALITION

# Welcome!

- We are using Zoom **Webinar**
- **AUDIO (Computer):** Use your computer speakers and microphone by clicking the “Join Audio” button at the bottom left of the screen.  You will be muted.
- **Alternate Audio (Phone):** Call into the meeting by dialing the phone number based on your location (provided in the confirmation email) and enter the Meeting ID at the prompt.  You will be muted.
- **This web meeting is being recorded.**
- **Questions** with the audio or web? Please contact Esther directly via the chat box or email (ekleit@kmjinc.com)


# Using the Q&A box and Chatbox

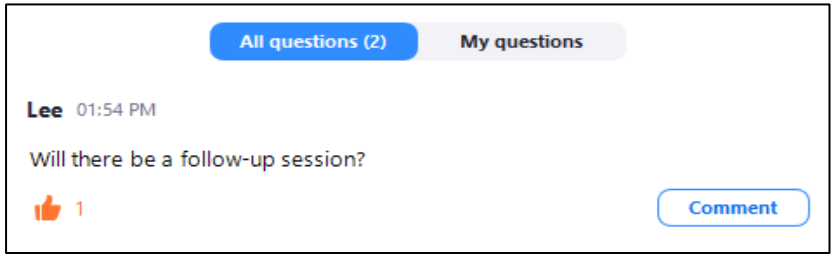

- Use the **Q&A box** to ask presenters questions
- Ex. “How accurate is the captured data?


- Use the **Chatbox** for technical issues or to contact Coalition staff
- Ex. “I can’t hear the presenter”

# 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

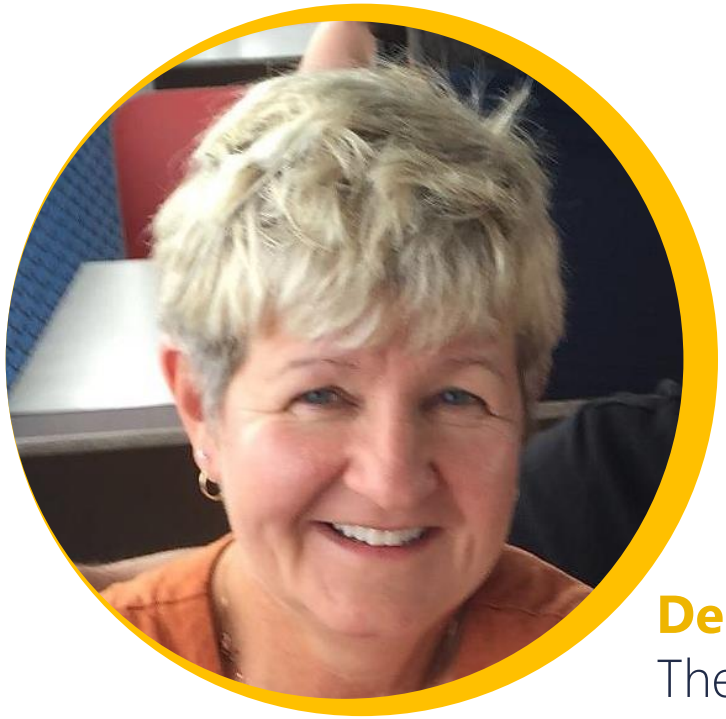


# Asking Questions Verbally

- 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 asking a question**

# Coalition Update



THE EASTERN TRANSPORTATION COALITION

CONNECTING FOR SOLUTIONS

**Denise Markow**
The Eastern Transportation Coalition
*TSMO Director*

# Coalition Update

## RECENT

- ✓ **Coalition-wide Strategic Planning Web Workshop** - June 8, 2021
- ✓ **WAZE Technical Bi-Annual Working Group** - June 15, 2021
- ✓ **VPP-Traffic Data Marketplace State POC Meeting** - June 22, 2021

## UPCOMING

- ➢ **Traffic Data Marketplace - RFP Evaluation Kick-off Meetings** - August 17-18, 2021
- ➢ **Data Driven Webinar: Best Practices for Conflation Data Sets** - August 19, 2021
- ➢ **Travel Info Web Meeting on Work Zone Data Exchange** - September 9, 2021 *(tentative)*
- ➢ **Mapping Technical Meeting** – October 7, 2021 *(member invite only)*
- ➢ **RITIS User Group Web Meeting –** October 2021

# Welcome & Introductions

Georgia Department of Transportation

**Matt Glasser**
Assistant State Traffic Engineer, Georgia DOT
RITIS User Group Co-chair

# Today's Meeting

| | |
|---|---|
| Welcome and Introductions | Matt Glasser, Georgia DOT & User Group Co-chair |
| Spotlight Presentation: Update on the Transportation Disruption and Disaster Statistics – Phase 2 | Mark Franz, UMD CATT Lab |
| Spotlight Presentation: Ranking Intersections Statewide in Georgia using RITIS | Landon Perry, Georgia DOT |
| RITIS Product Enhancement Working Group Update | Matt Glasser, Georgia DOT |
| PDA Suite Performance Measures Working Group Update | John Allen, UMD CATT Lab |
| New RITIS Tools and Recent Enhancements | Michael Pack, UMD CATT Lab |
| Agency Input Session | Michael Pack, UMD CATT Lab |
| Wrap Up and Remaining Questions | Matt Glasser, Georgia DOT |

# Today's Speakers

**Michael Pack**
UMD CATT Lab
*Director*

**Landon Perry**
Georgia DOT
*District 7 Preconstruction Engineer*

**Matt Glasser**
Georgia DOT
*Assistant State Traffic Engineer*

**Mark Franz**
UMD CATT Lab
*Lead Transportation Analyst*

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

# Meeting Participants

| Agencies | | | | | | | |
|---|---|---|---|---|---|---|---|
| AECOM | Connecticut DOT | Gannett Fleming | Kingsport MTPO | Maryland Transportation Authority | MWVCOG | Office of Intermodal Planning and Investment | Southwestern Pennsylvania Commission |
| Arcadis | Denver Regional Council of Governments | Georgia DOT | KISNN Assoc | Massachusetts DOT | National Renewable Energy Laboratory | Ohio DOT | State of Rhode Island - Division of Statewide Planning |
| Atkins Global | District DOT | Georgia DOT (CHA) | Kittelson & Associates | McLean County Regional Planning Commission | New Jersey DOT | Oregon DOT | Tennessee DOT |
| Atlanta Regional Commission | DVRPC | Georgia Environmental Protection Division | KMJ Consulting Inc | Mead & Hunt | New Jersey Institute of Technology | Pennsylvania DOT | Texas AM Trans Inst. |
| Baltimore Metropolitan Council | East Central Intergovernmental Association | Grand Valley Metro Council | Knoxville Regional TPO | Michigan DOT | New Jersey Sports & Exposition Authority | Pennsylvania Turnpike Commission | Springfield-Sangamon County |
| Cabarrus-Rowan MPO | Federal Highway Administration | Gresham Smith | Louisiana DOTD | Mid-America Regional Council | New York City DOT | Pioneer Valley Planning Commission | The University of North Carolina at Charlotte |
| Capital Area MPO (CAMPO-Raleigh) | FEMA | Indiana DOT | Lumin8 Transportation | Minnesota DOT | New York State DOT | Rhode Island DOT | TRANSCOM |
| Central Texas Regional Mobility Authority | Florida DOT | Illinois DOT | Maricopa Association of Governments | Montachusett Regional Planning Commission | NJTPA | Richmond Regional Planning Agency | University of Maryland CATT Lab |
| City of Concord, NC | Florida's Turnpike Enterprise | INRIX | Maryland DOT | Montgomery County Planning Department | North Carolina DOT | SANDAG | Vermont AOT |
| City of Sandy Springs, Georgia | Forward Pinellas | Jacobs Engineering (Formerly Maryland SHA) | Maryland DOT-SHA | MWCOG | North Central PA Regional Planning & Development Commission | South Jersey Transportation Planning Organization | Virginia DOT |

# Update on the Transportation Disruption and Disaster Statistics (TDADS) Phase 2 – *Identifying and Quantifying the Causes of Congestion*

*Mark Franz*
UMD CATT Lab
*Lead Transportation Analyst*

# Transportation Disruption and Disaster Statistics (TDADS)

## Identifying and Quantifying the Causes of Congestion

PHASE 2 UPDATE

JULY 15, 2021

# Today's topics

- Phase 2 TDADS Work
  - Updates on Tasks 4 & 7

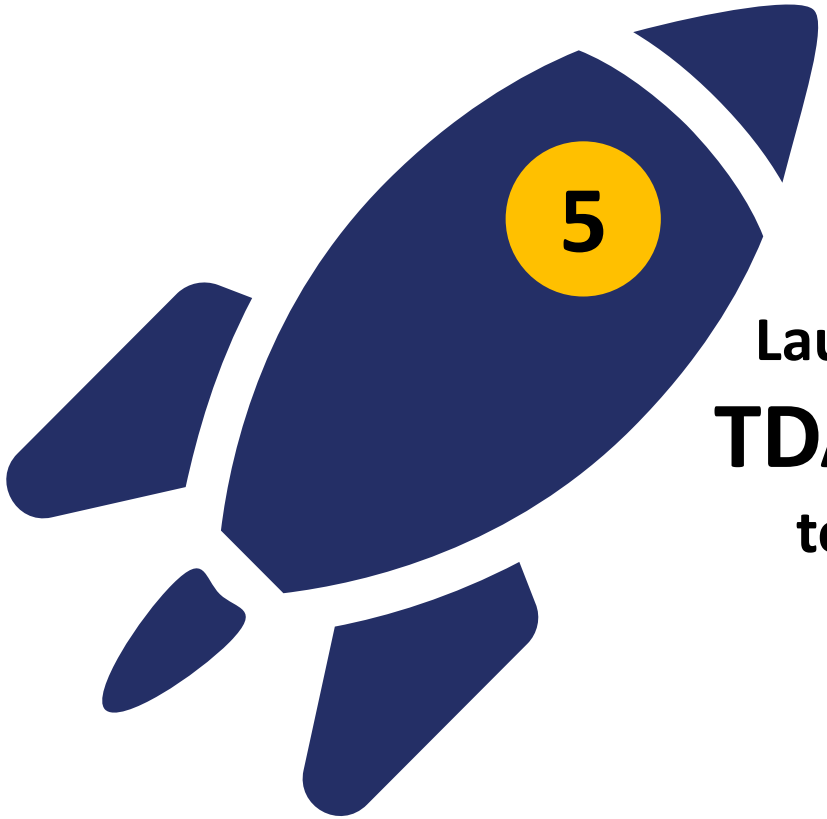
# TDADS Phase II tasks

1. Project Management
2. TDADS Steering Committee
3. Procure INRIX data
4. **Process disruption statistics nationally**
5. Production deployment of the TDADS website
6. National Webinar: Showcase the TDADS tool & its functionality
7. **Implement geographic improvements to TDADS**
8. Scope Development & Requirements for Deep-dive Analytics
9. Signal Congestion Attribution
10. Special Event Impact Analysis Scoping

# TDADS Phase II process

**Continue engagement of the Steering Committee for guidance throughout the Phase II process**

1. **Procure 1-min probe data from INRIX**
   (Produce national & state charts)
2. **Implement Geographic & Temporal Improvements**
   (County & monthly level)
3. **Develop Requirements**
   (For deep-dive analytics)
4. **Conduct a National Webinar**
   (Showcase the TDADS tool)




**Launch TDADS tool**

# Demo

RITIS Congestion Causes for the National Highway System (NHS)

Time Aggregation: Year | 2019

View: County | Broward, Florida

Sort By: County Name | A to Z

## Sources of Disruption Nationwide 2019

- Total UDC
- Vehicle Hours of Delay

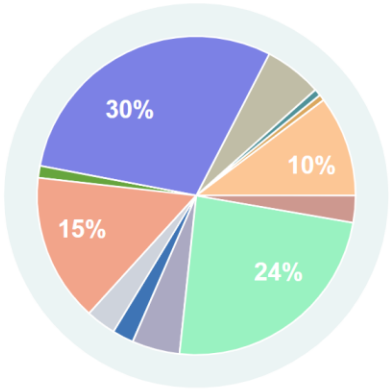
Data coming soon

- Recurrent
- Incident
- Weather
- Work Zone
- Signals
- Holiday
- Incident & Weather
- Signal & Weather
- Incident & Workzone
- Recurrent & Incident
- Other Multiple Causes
- Unclassified

## Florida 2019

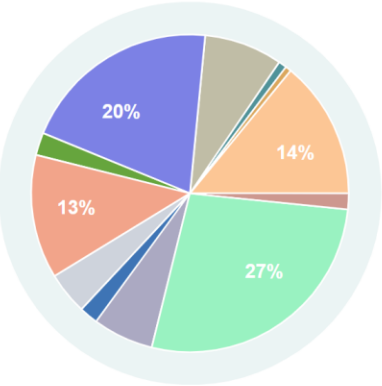
View States

**$2.87b** Total UDC (24.8% of US)
**109.68m** Vehicle Hours of Delay



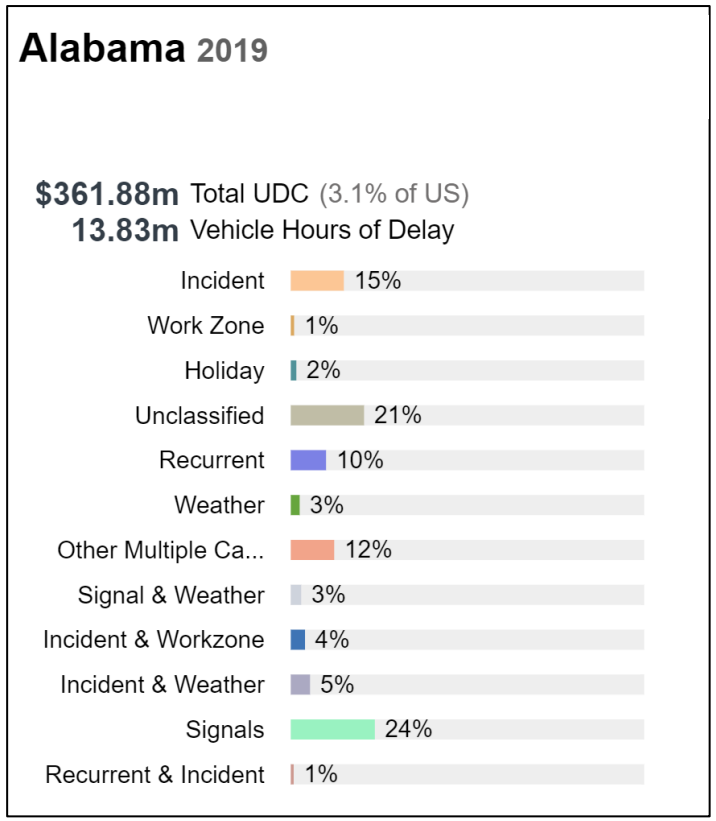

## Broward, FL 2019

**$305.91m** Total UDC (10.7% of FL)
**11.69m** Vehicle Hours of Delay

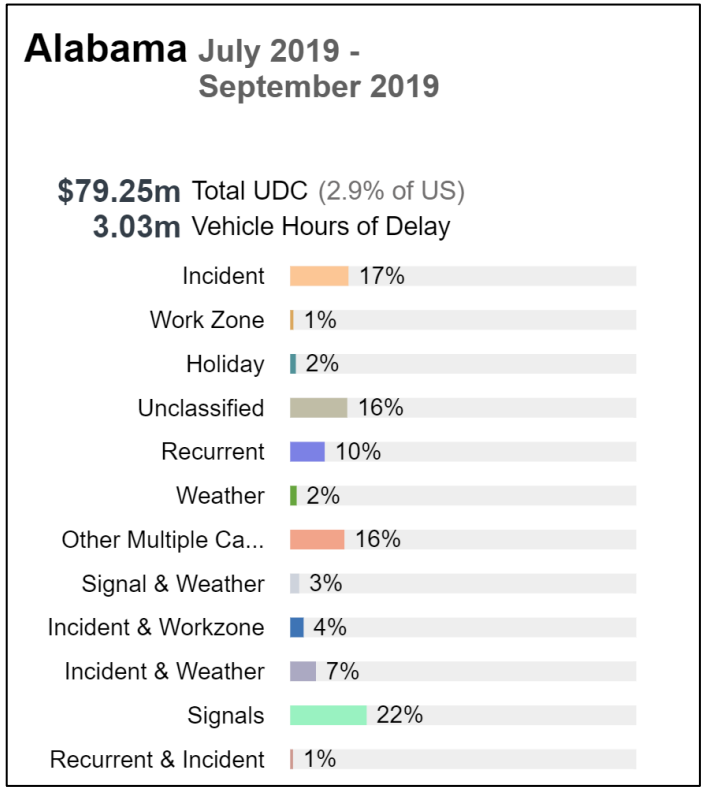


# Results-Alabama Statewide

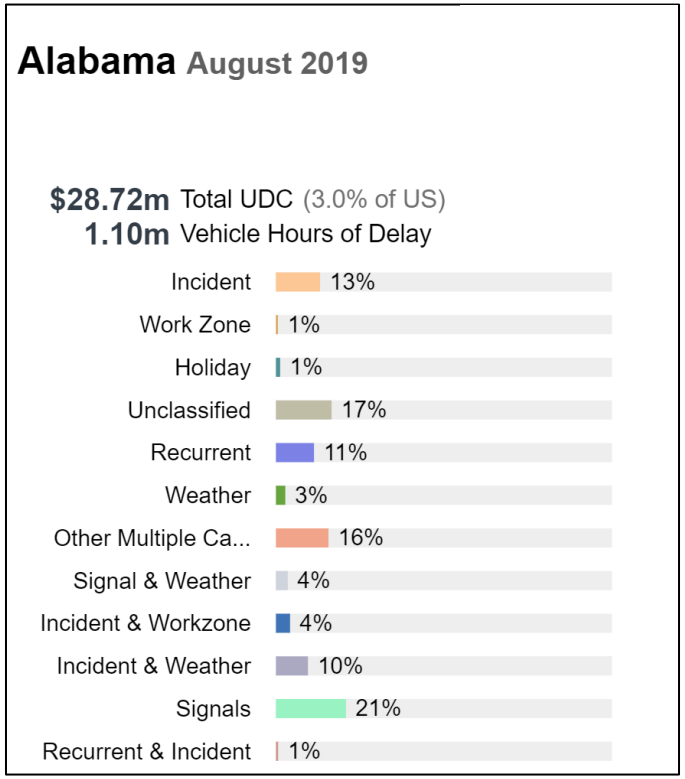
## Annual - 2019




## July–Sept 2019



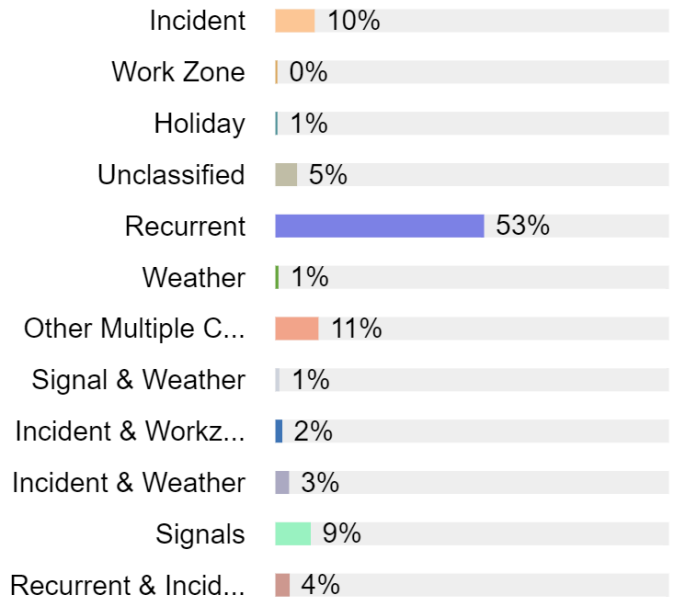

## Aug 2019



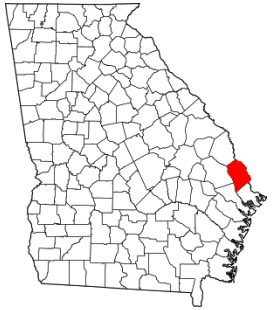
# Results-Georgia Urban vs Rural Counties (2019)

## Fulton, GA 2019

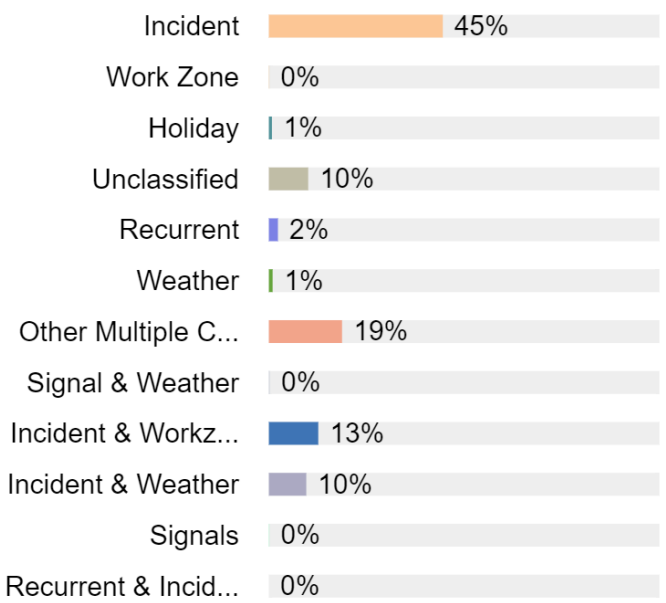
**$499.46m** Total UDC (30.9% of GA)
**19.09m** Vehicle Hours of Delay



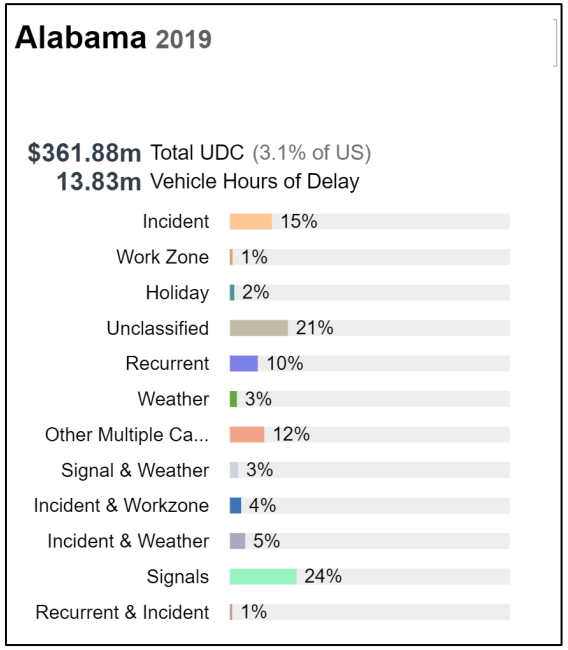

## Effingham, GA 2019

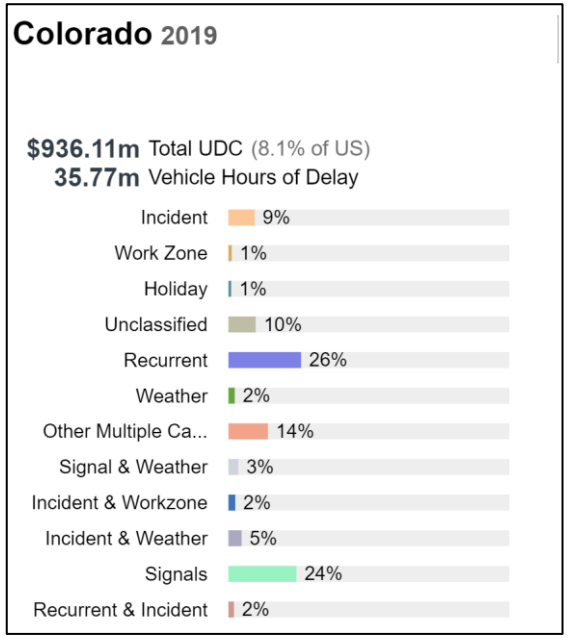


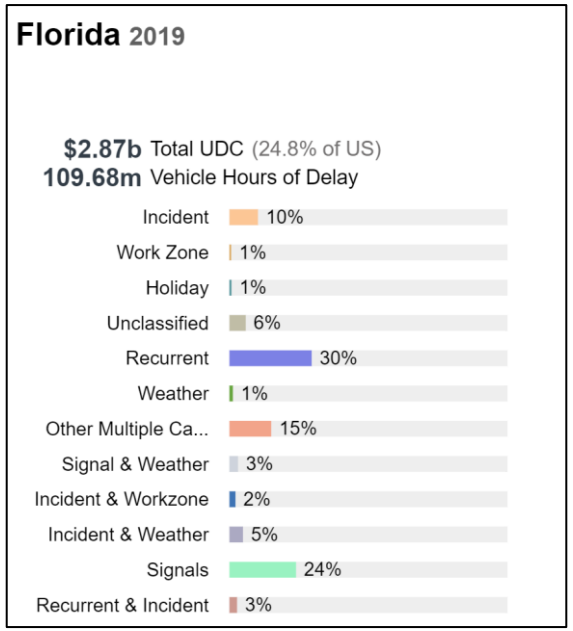
**$2.36m** Total UDC (0.1% of GA)
**90.34k** Vehicle Hours of Delay

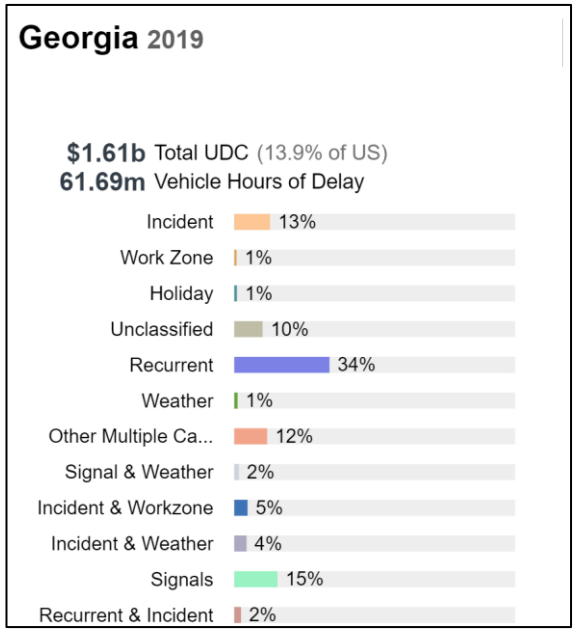


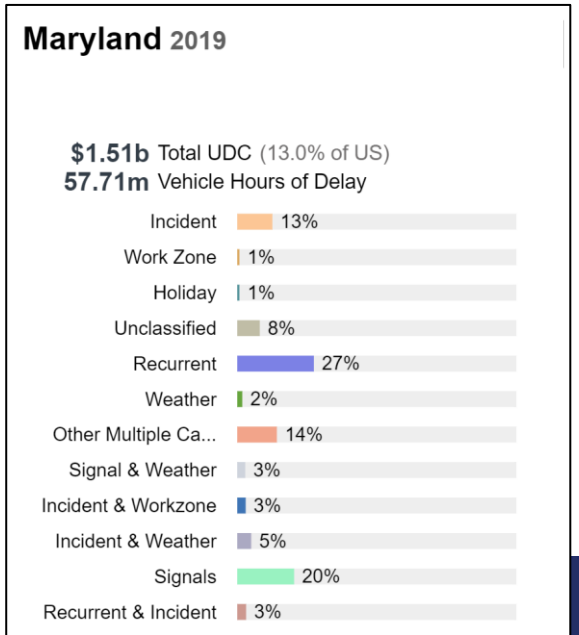

# Results- Annual 2019 Multistate Comparison

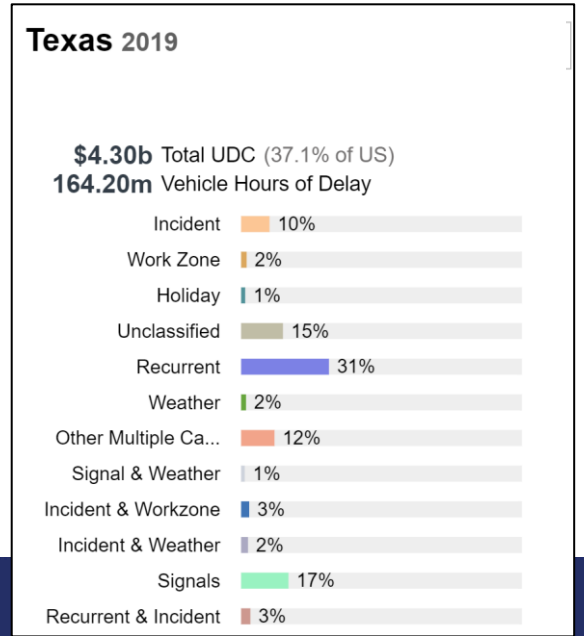


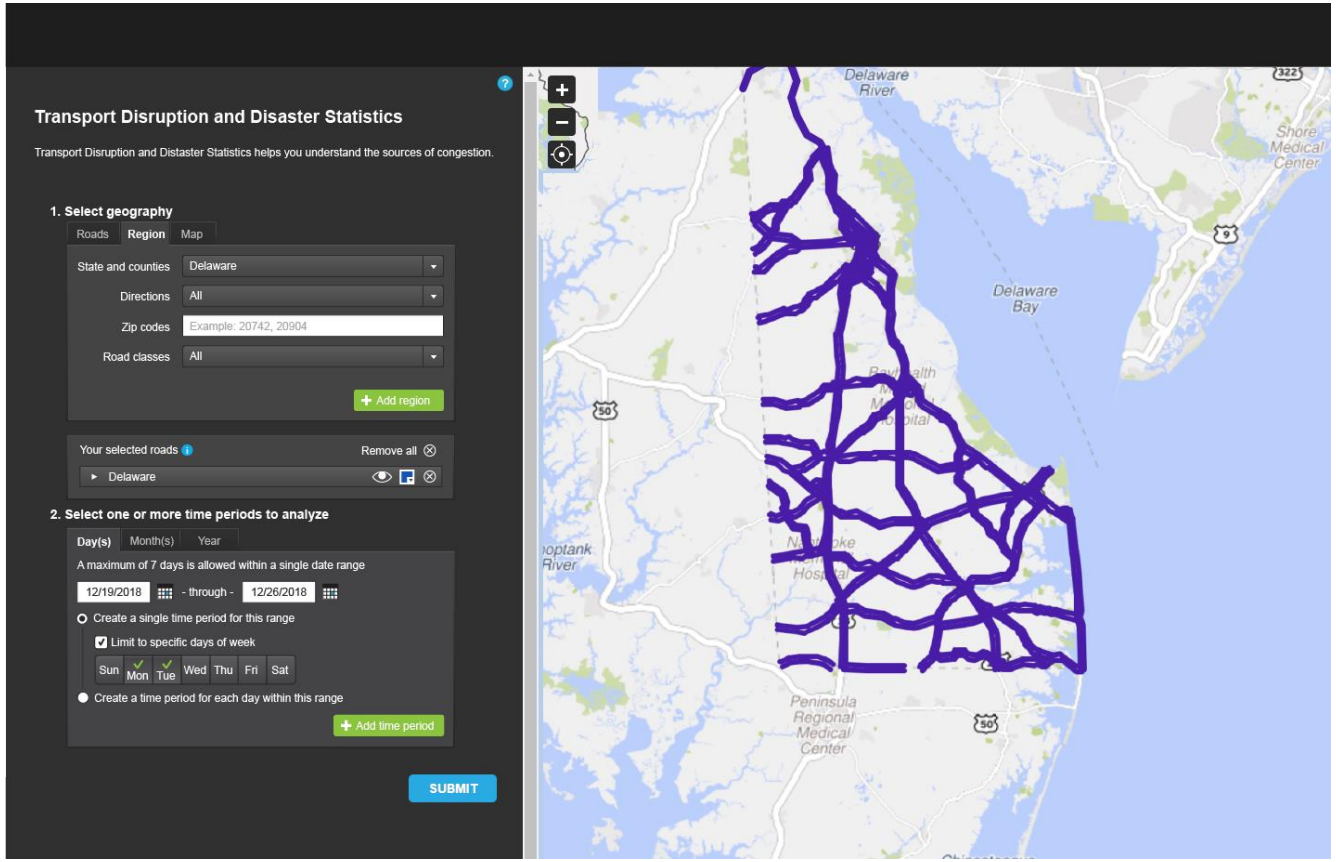



# Next Steps through Sept 2021

1. Continue processing data for the Phase 2 online tool
2. Integrate results into online tool
3. **Develop requirements for Deep-Dive Tool**
4. **Conduct a National webinar**



# Questions?

Denise Markow
dmarkow@tetcoalition.org

Mark L. Franz
mfranz1@umd.edu

# Ranking Intersections Statewide in Georgia using RITIS

*Landon Perry*
Georgia DOT
*District 7 Preconstruction Engineer*

GDOT
Georgia Department of Transportation

# Ranking Intersections in Georgia Using RITIS

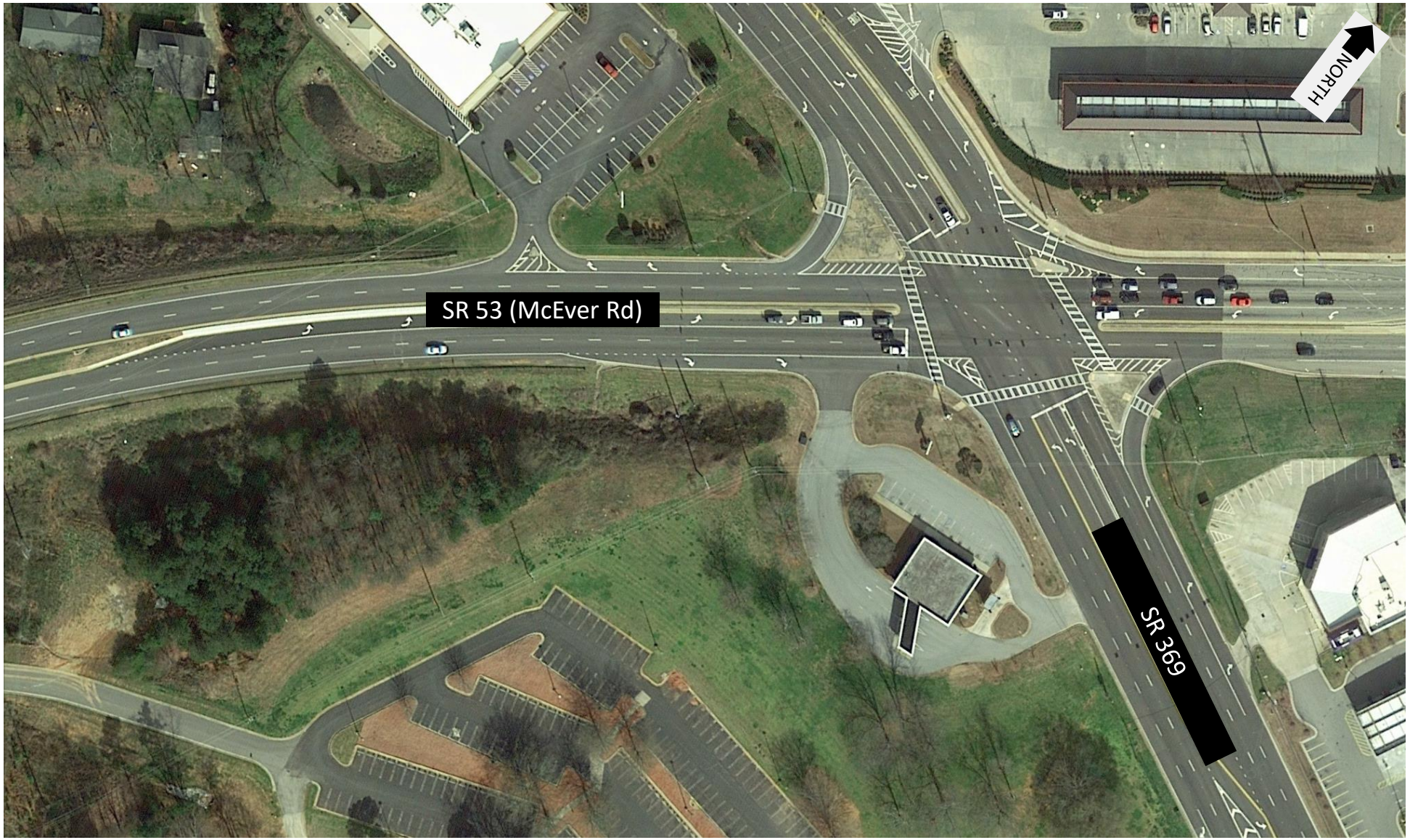

GDOT Georgia Department of Transportation

Landon Perry, PE, PTOE
State Traffic Operations Manager

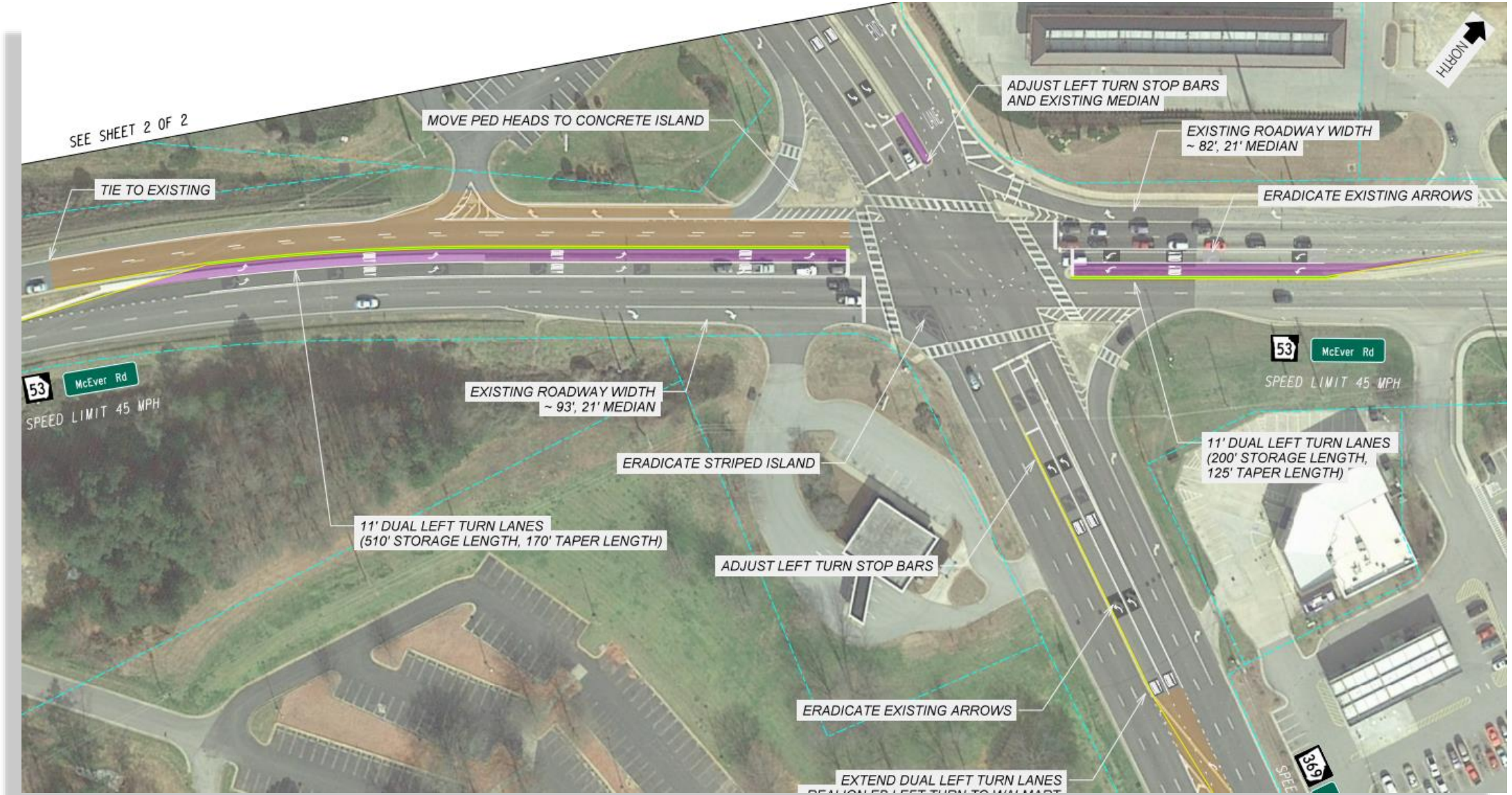
# GDOT OPERATIONAL IMPROVEMENT PROGRAM OVERVIEW

- Funding through agreement between GDOT and FHWA
- Funding Sources:
  - Federal: $12M/yr
  - State (HB170): $18M/yr
- Surgical Improvements
  - Turn Lanes
  - Roundabouts
  - Median U-Turns/Restricted Crossing U-Turn
  - Existing Footprint Optimization
- Project Cost
  - Majority under $1M
  - Funding for Negotiated Bid Projects (<$200K)

# TYPICAL PROJECT TYPE – BEFORE CONDITION



# TYPICAL PROJECT TYPE – AFTER Ops IMPROVEMENT



# TYPICAL PROJECT PRIORITIZATION CRITERIA

- ✓ Operational B/C
- ✓ Based on User Delay Cost
- ✓ 20-Year Life Cycle for Benefits
- ✓ Cost is Based on GDOT Expense

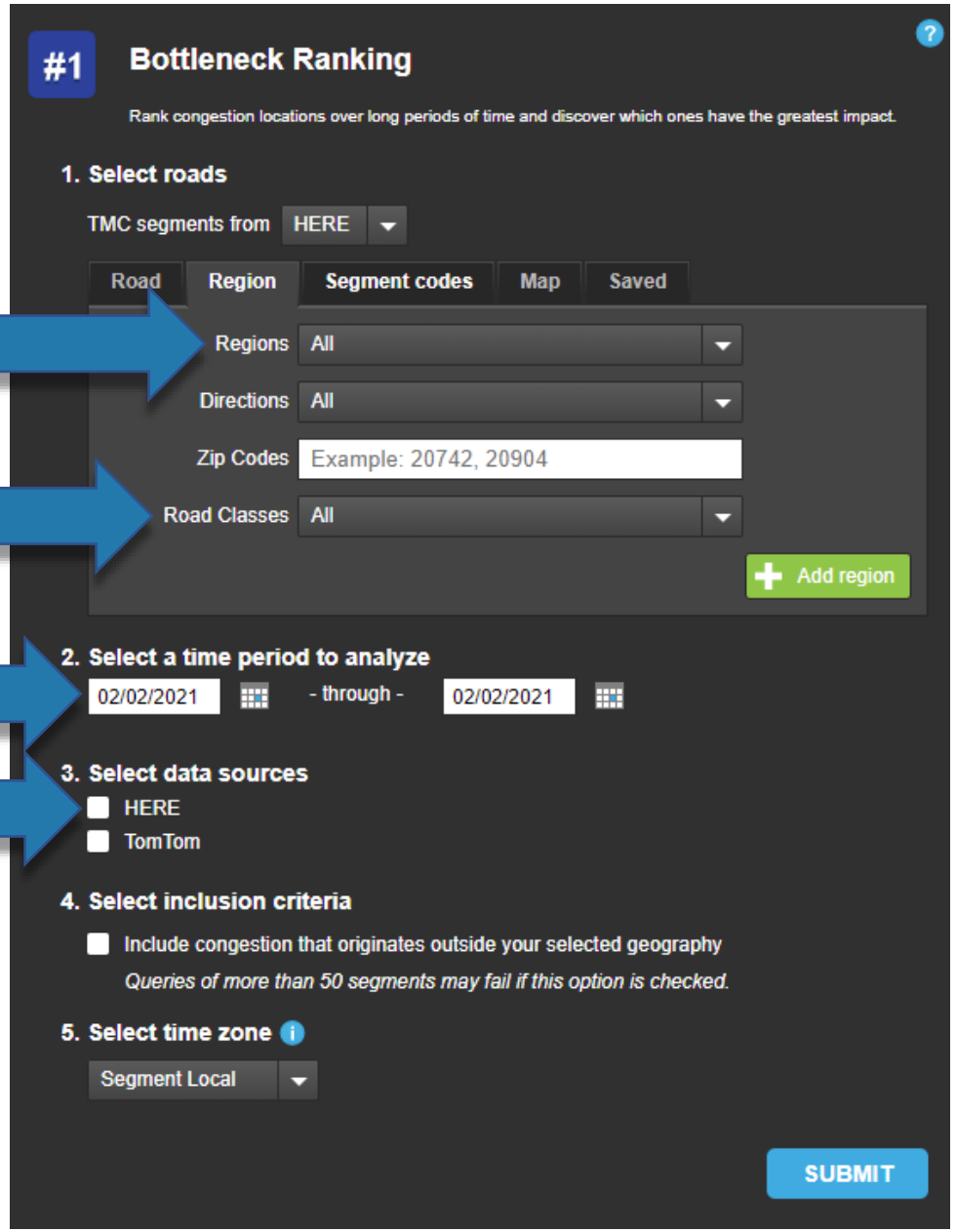
# BOTTLENECK INPUTS

GDOT Districts

All

February and March 2021

HERE Speed Data



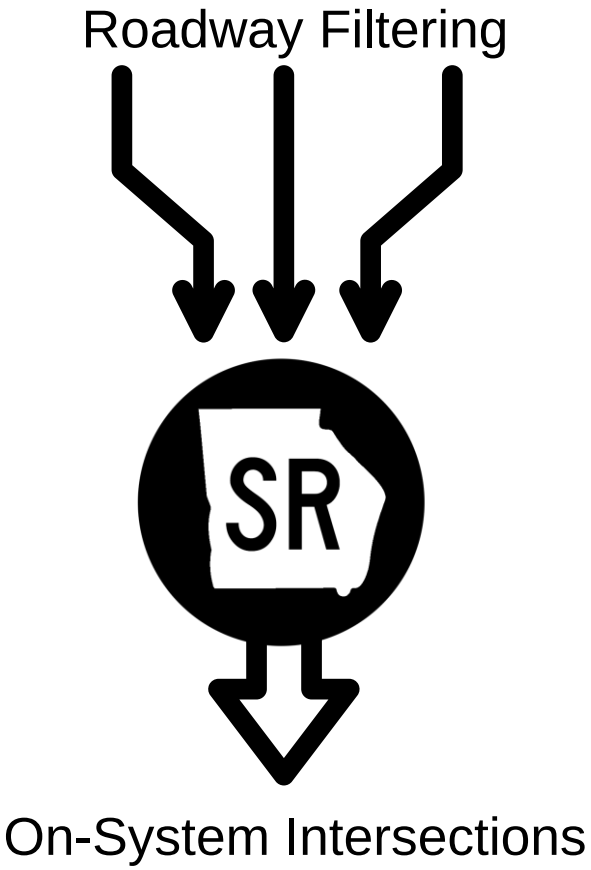
# BOTTLENECK OUTPUTS

| Base Impact | TOTAL DELAY |
|---|---|
| 11,149 | 4,579,010 |
| 19,492 | 4,131,036 |
| 8,522 | 4,109,820 |
| 6,237 | 3,751,757 |
| 11,302 | 3,518,677 |
| 6,831 | 2,914,589 |

**30,000**

**TMC exports**

# OFFLINE DATA PROCESSING




## Analysis Excluded:

Arterial intersections without state route or US highway involved, or

The merge or diverge points of freeway mainline and ramps.

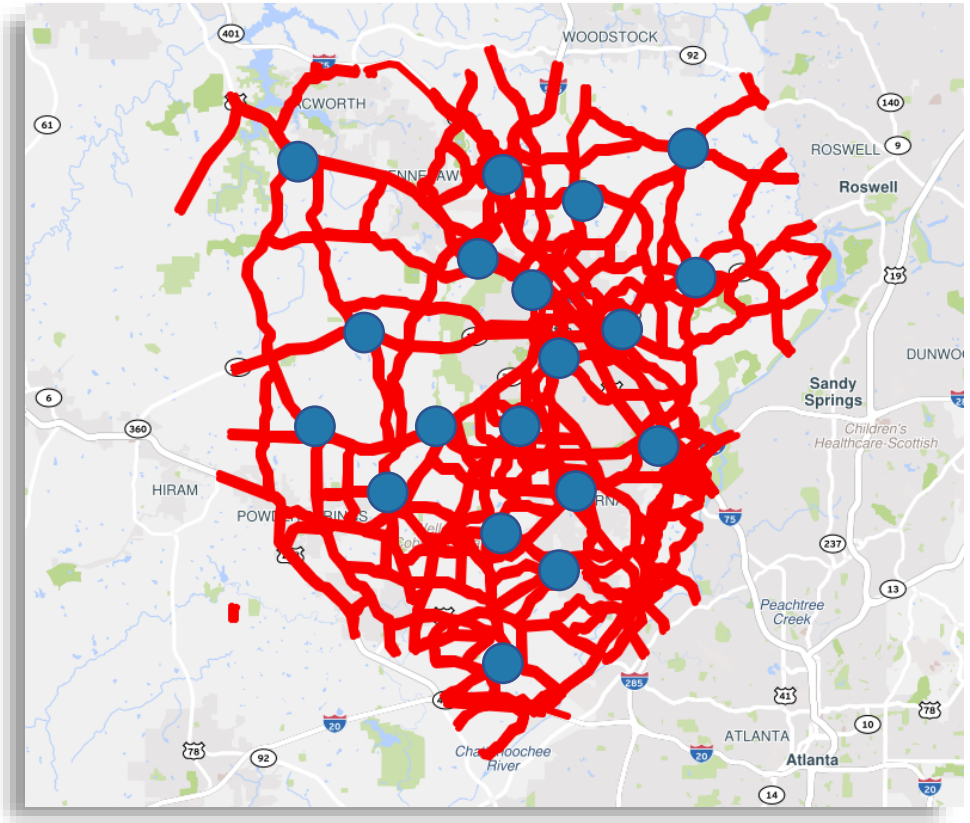
# OFFLINE DATA PROCESSING

## Aggregation Completed:

TMC Codes

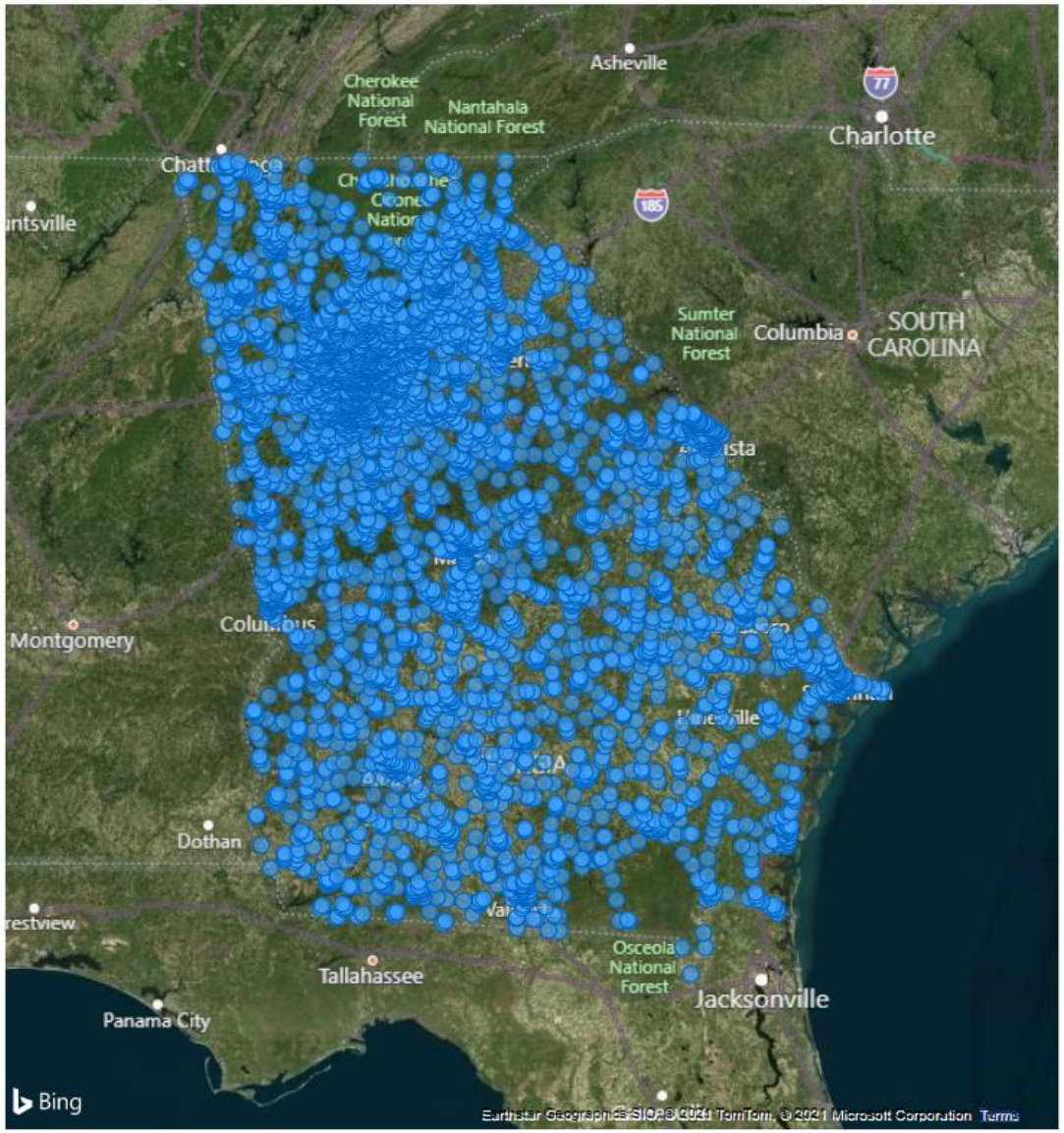
TMC Head Locations (+/- 0.0002)

Intersection Aggregation



# Customized Dashboard

Bottleneck Intersections Ranking List




RITIS

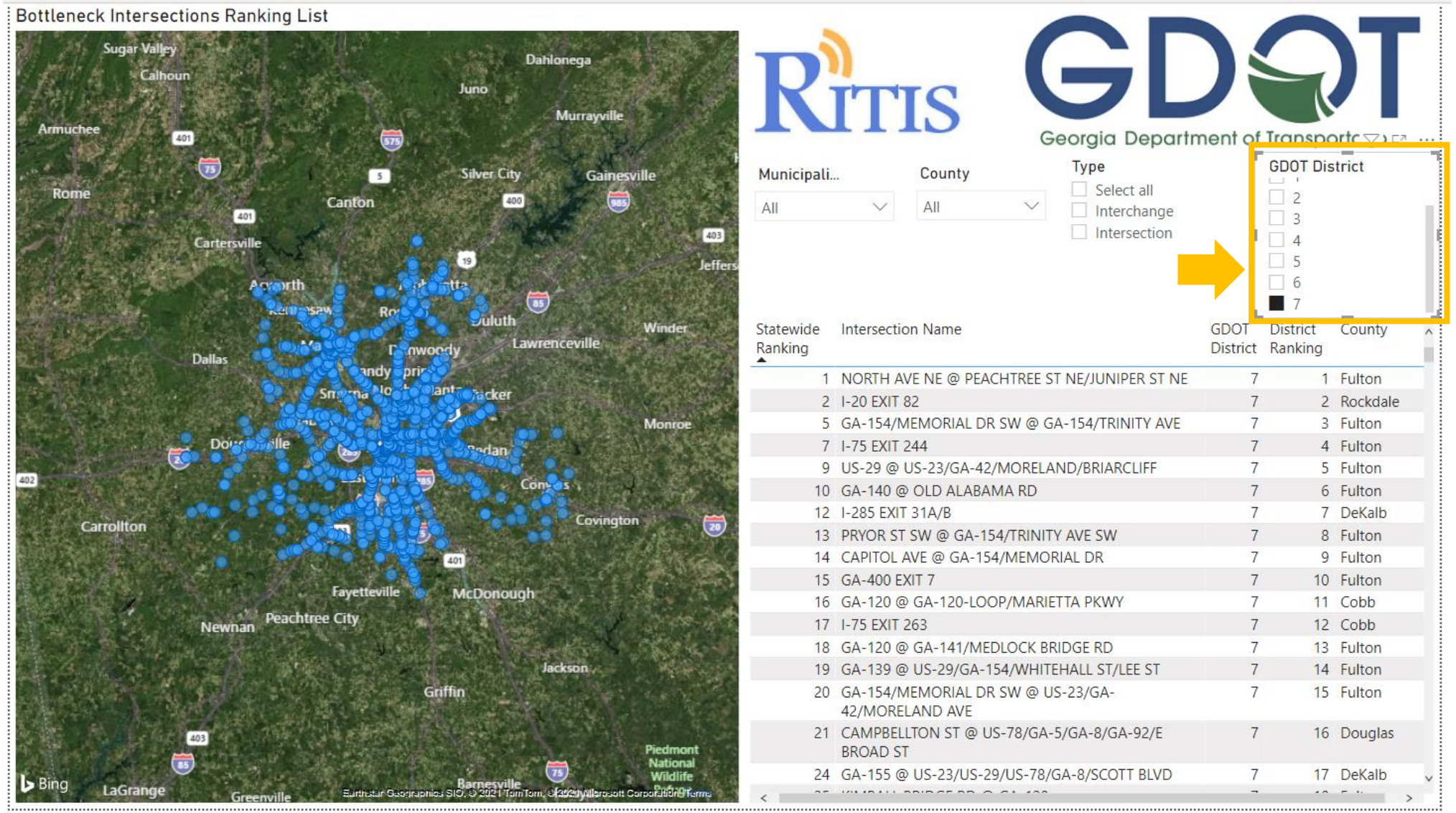
GDOT Georgia Department of Transportation

Municipali... All | County All | Type: Select all, Interchange, Intersection | GDOT District: Select all, 1, 2, 3, 4, 5

| Statewide Ranking | Intersection Name | GDOT District | District Ranking | County |
|---|---|---|---|---|
| 1 | NORTH AVE NE @ PEACHTREE ST NE/JUNIPER ST NE | 7 | 1 | Fulton |
| 2 | I-20 EXIT 82 | 7 | 2 | Rockdale |
| 3 | I-75 EXIT 218 | 3 | 1 | Henry |
| 4 | I-85 EXIT 99 | 1 | 1 | Gwinnett |
| 5 | GA-154/MEMORIAL DR SW @ GA-154/TRINITY AVE | 7 | 3 | Fulton |
| 6 | GA-124 @ US-78/GA-10/MAIN ST SW | 1 | 2 | Gwinnett |
| 7 | I-75 EXIT 244 | | | |
| 8 | US-23 @ GA-20/GA-81/COURTHOUSE SQ | | | |
| 9 | US-29 @ US-23/GA-42/MORELAND/BRIARCLIFF | | | |
| 10 | GA-140 @ OLD ALABAMA RD | | | |
| 11 | GA-21 @ GA-204/ABERCORN ST | | | |
| 12 | I-285 EXIT 31A/B | | | |
| 13 | PRYOR ST SW @ GA-154/TRINITY AVE SW | 7 | 8 | Fulton |
| 14 | CAPITOL AVE @ GA-154/MEMORIAL DR | 7 | 9 | Fulton |
| 15 | GA-400 EXIT 7 | 7 | 10 | Fulton |
| 16 | GA-120 @ GA-120-LOOP/MARIETTA PKWY | 7 | 11 | Cobb |
| 17 | I-75 EXIT 263 | 7 | 12 | Cobb |
| 18 | GA-120 @ GA-141/MEDLOCK BRIDGE RD | 7 | 13 | Fulton |
| 19 | GA-139 @ US-29/GA-154/WHITEHALL ST/LEE ST | 7 | 14 | Fulton |

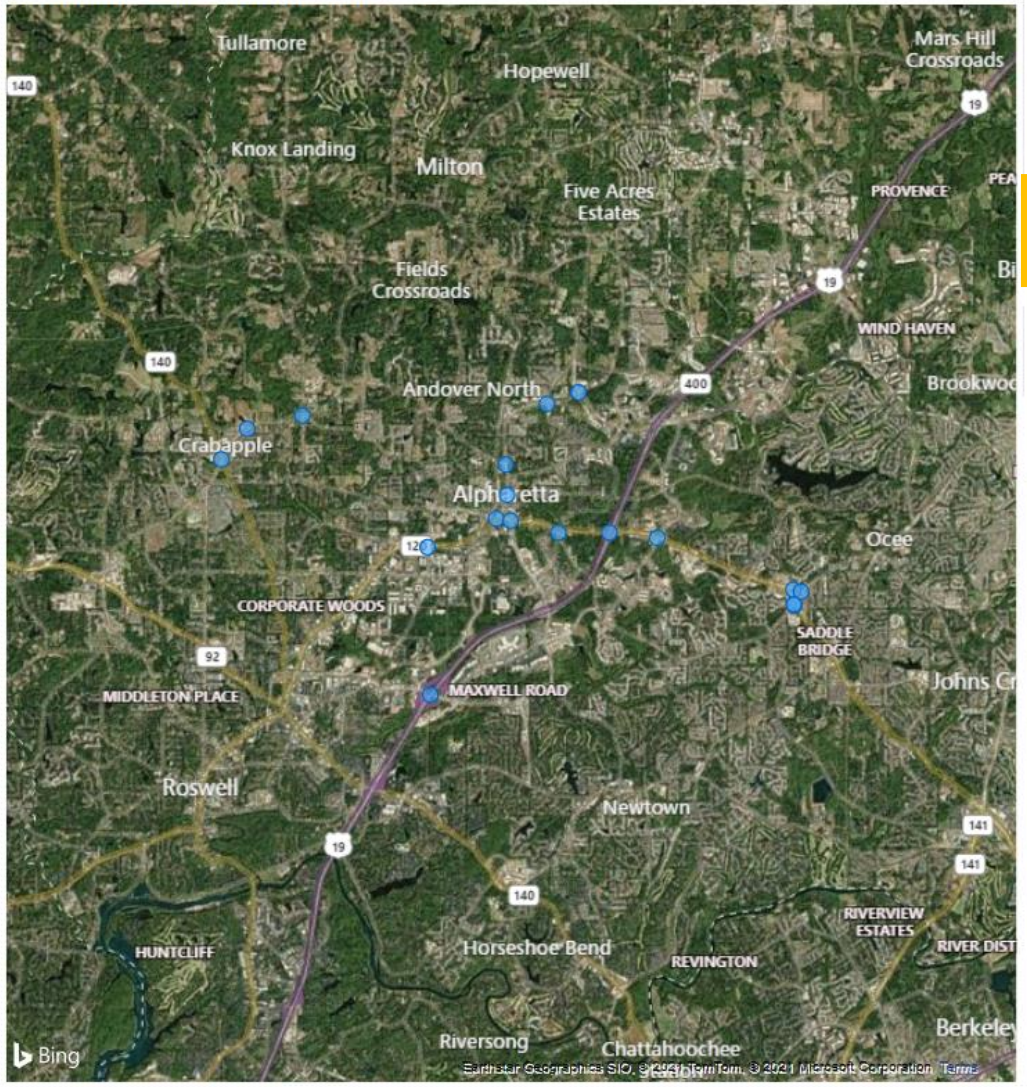
**Numerous filtering and sorting options available.**

# Customized Dashboard



# Customized Dashboard

Bottleneck Intersections Ranking List




RITIS

GDOT Georgia Department of Transportation

Municipali... Alpharetta

County All

Type
- Select all
- Interchange
- Intersection

GDOT District
- Select all
- 7

| Statewide Ranking | Intersection Name | GDOT District | District Ranking | County |
|---|---|---|---|---|
| 25 | KIMBALL BRIDGE RD @ GA-120 | 7 | 18 | Fulton |
| 46 | HARDSCRABBLE RD @ GA-140/ARNOLD MILL RD/HOUZE RD | 7 | 28 | Fulton |
| 208 | GA-400 EXIT 10 | 7 | 118 | Fulton |
| 217 | GA-120 @ MADDOX ST/OLD MILTON PKWY | 7 | 124 | Fulton |
| 598 | ACADEMY ST @ GA-9/N MAIN ST | 7 | 291 | Fulton |
| 662 | GA-9 @ WINDWARD PKWY W | 7 | 308 | Fulton |
| 673 | MAYFIELD RD @ GA-9/N MAIN ST | 7 | 312 | Fulton |
| 751 | STATE BRIDGE RD @ GA-120/KIMBALL BRIDGE RD | 7 | 339 | Fulton |
| 840 | HAYNES BRIDGE RD @ GA-120/MADDOX ST/OLD MILTON PKWY | 7 | 369 | Fulton |
| 1127 | NORTH POINT PKWY @ GA-120/OLD MILTON PKWY | 7 | 462 | Fulton |
| 1673 | GA-9 @ COGBURN RD | 7 | 556 | Fulton |
| 3491 | MANSELL RD @ US-19/TURNER MCDONALD PKWY | 7 | 624 | Fulton |
| 3776 | WILLS RD @ GA-9/GA-120/S MAIN ST/ALPHARETTA HWY | 7 | 746 | Fulton |
| 3897 | BROADWELL RD @ GA-372/CRABAPPLE RD/MAYFIELD RD | 7 | 795 | Fulton |
| 3929 | KIMBALL BRIDGE RD @ GA-120/STATE BRIDGE RD | 7 | 805 | Fulton |
| 4002 | WESTSIDE PKWY @ GA-120/OLD MILTON PKWY | 7 | 833 | Fulton |

# DATA DRIVEN IDENTIFICATION

| Rank | Screen | Result: |
| --- | --- | --- |
| **4859** | **750** | **X** |
| Intersections | Intersections | Projects |

**3,457**
**Total delay (volume component)**

**1,402**
**Base impact RITIS ranking**

## THE BENEFITS

- Data Backed
- Proactive
- Prioritizes Requests

# LOOKING AHEAD

## Before vs. After Validation

## Additional Probe Data Integration

Annual Updates to be Completed

Additional Data Attributes to be Included

# Q&A


#2
#5
Pizza
Walgreens
Main St
High School Dr
United Methodist Church
ATM

RITIS | Probe Data Analytics suite

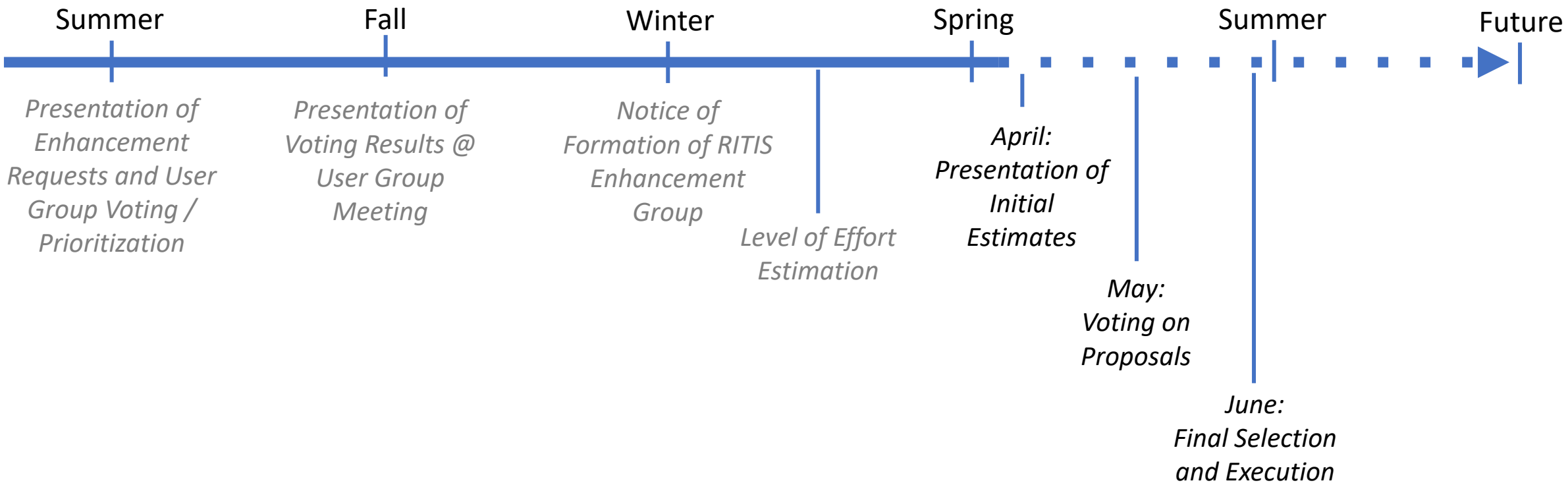
# RITIS Enhancement Working Group

**Matt Glasser**
Assistant State Traffic Engineer
Georgia DOT

# Purpose and Goal

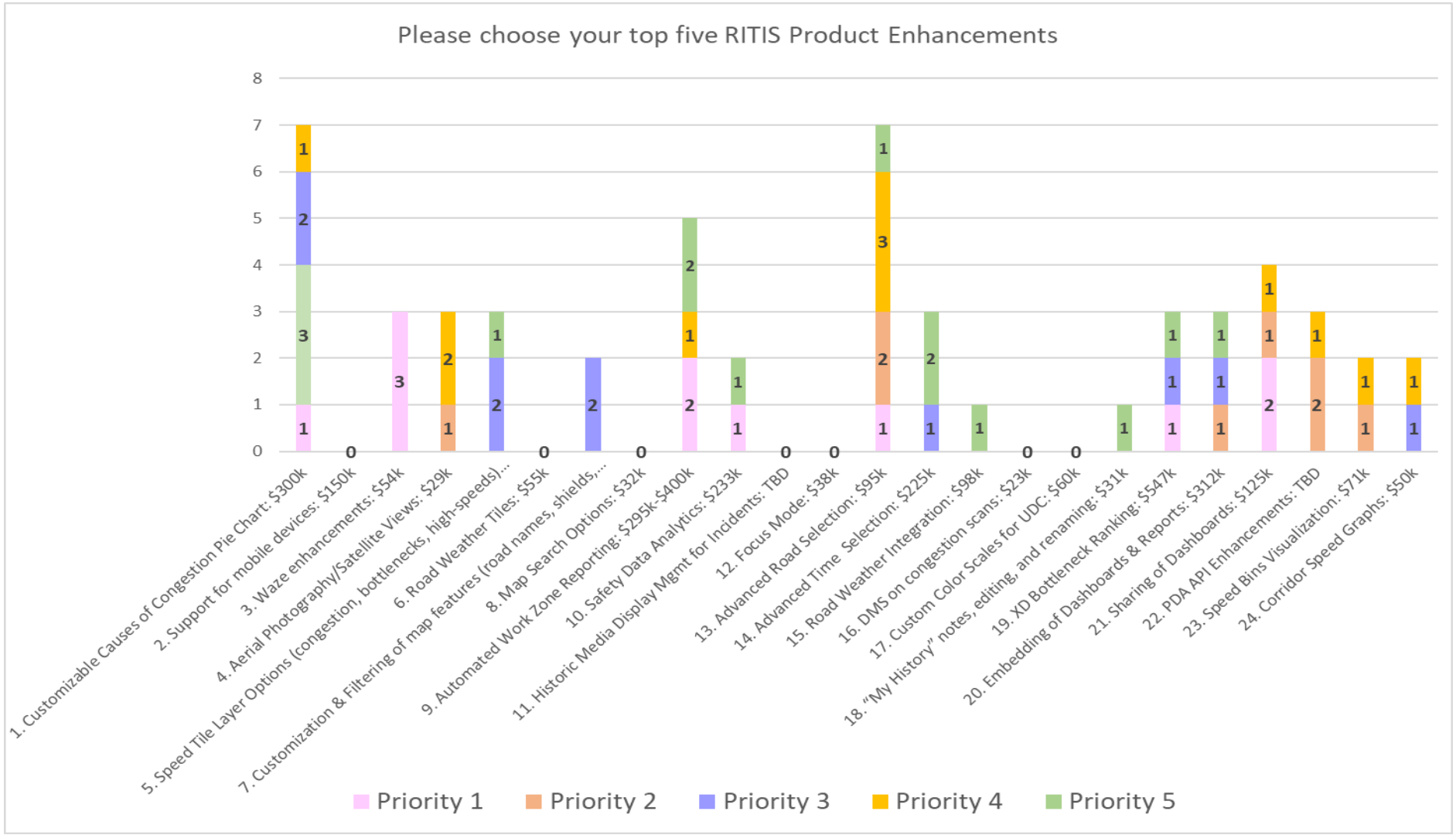
- Form a nimble “pooled fund” like group to:
  - Fund RITIS Enhancements
  - Assist with prioritization efforts for the CATT Lab
- Provide stable, annualized funding
- Connect Agencies with similar needs

# Getting to Today

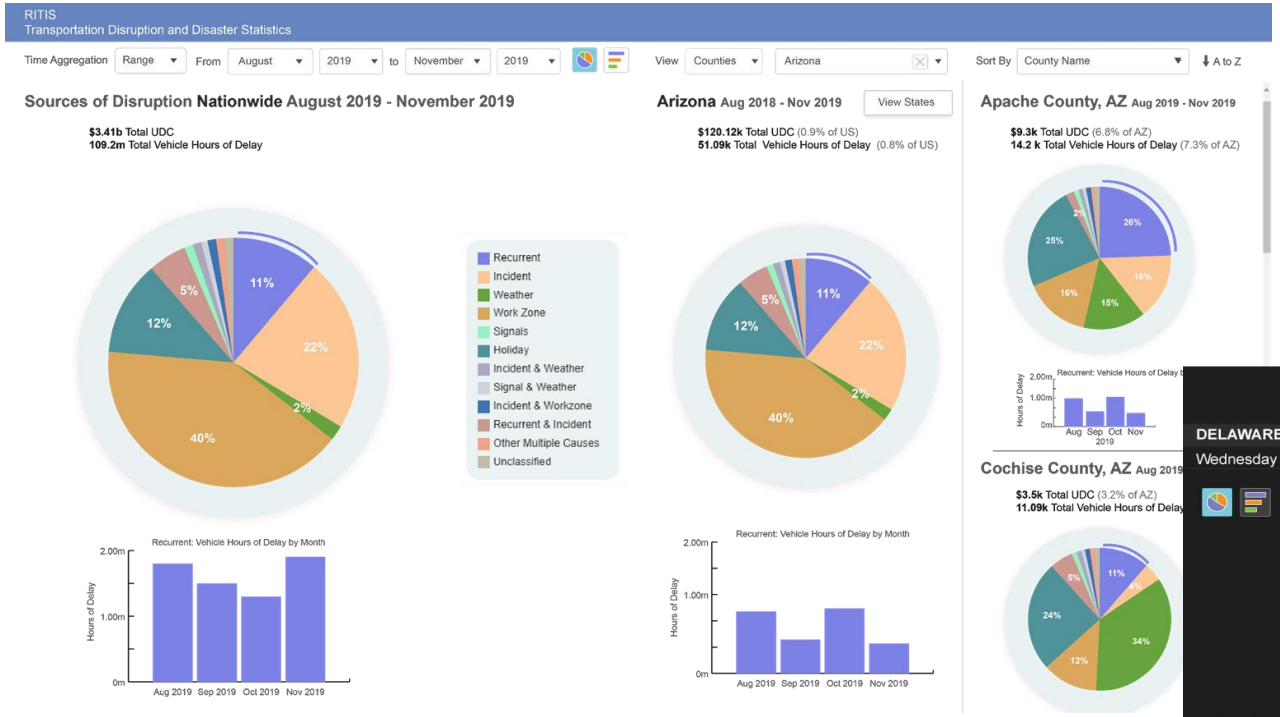


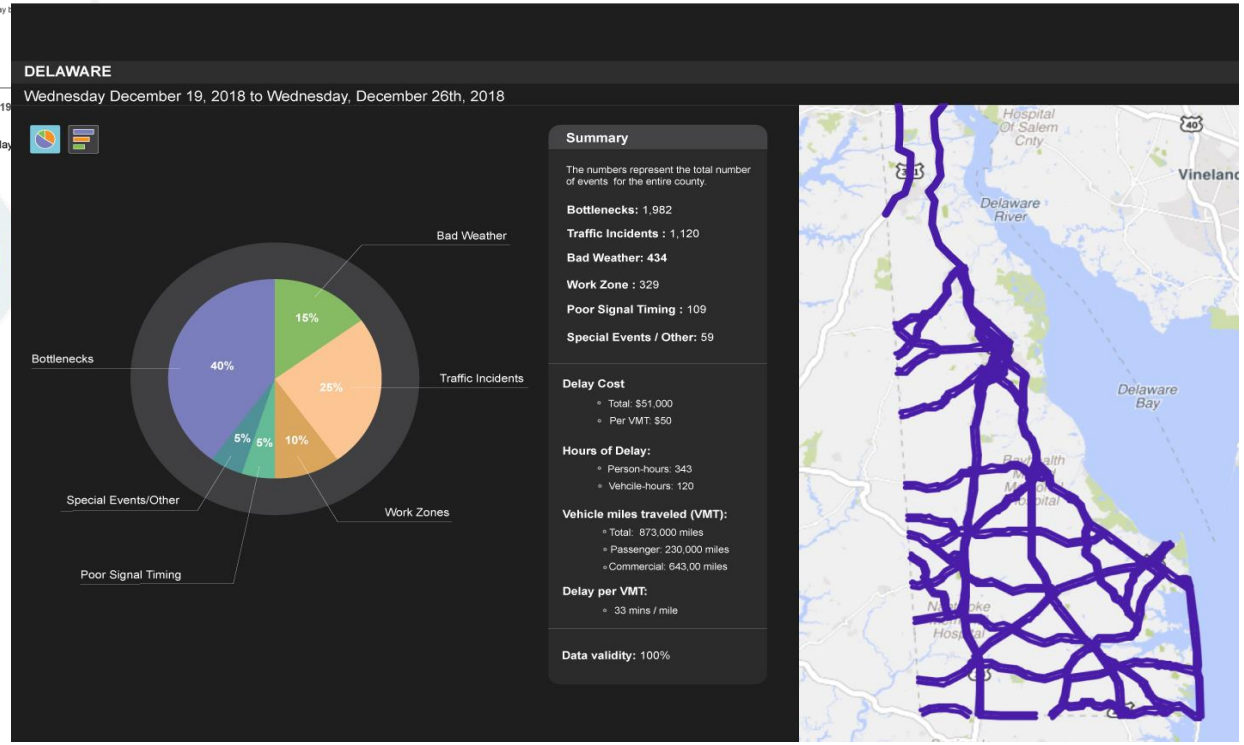
# High-level Overview

DVRPC
**Georgia DOT**
Massachusetts DOT
**Michigan DOT**
MWCOG
New Jersey DOT
North Carolina DOT
**Oregon DOT**
Pennsylvania DOT
Rhode Island DOT
**Virginia DOT**



# Causes of Congestion Pie Charts

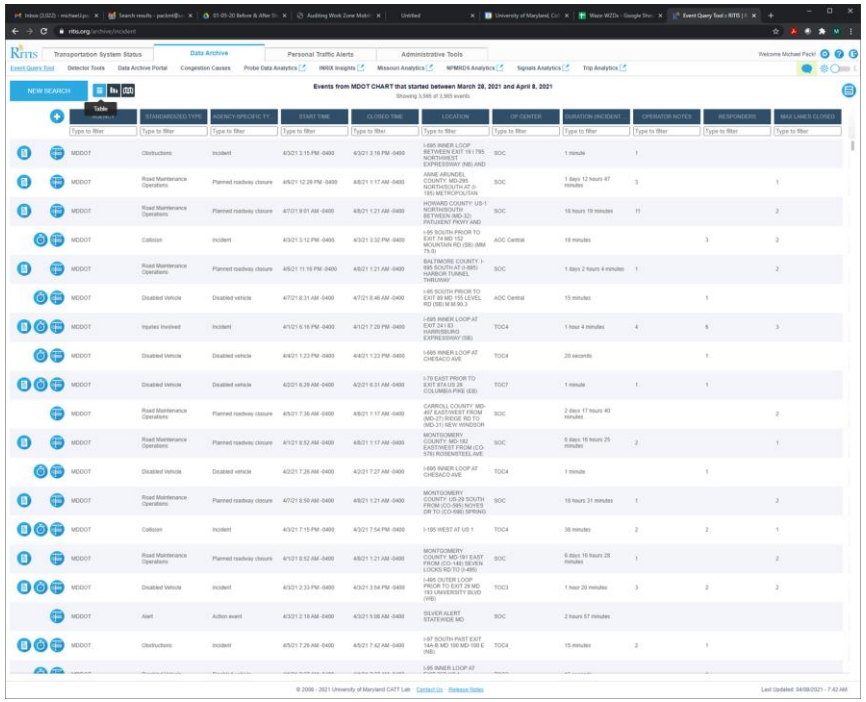


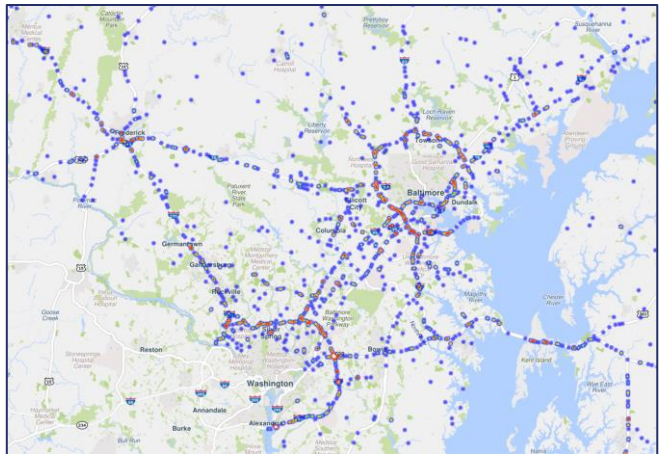



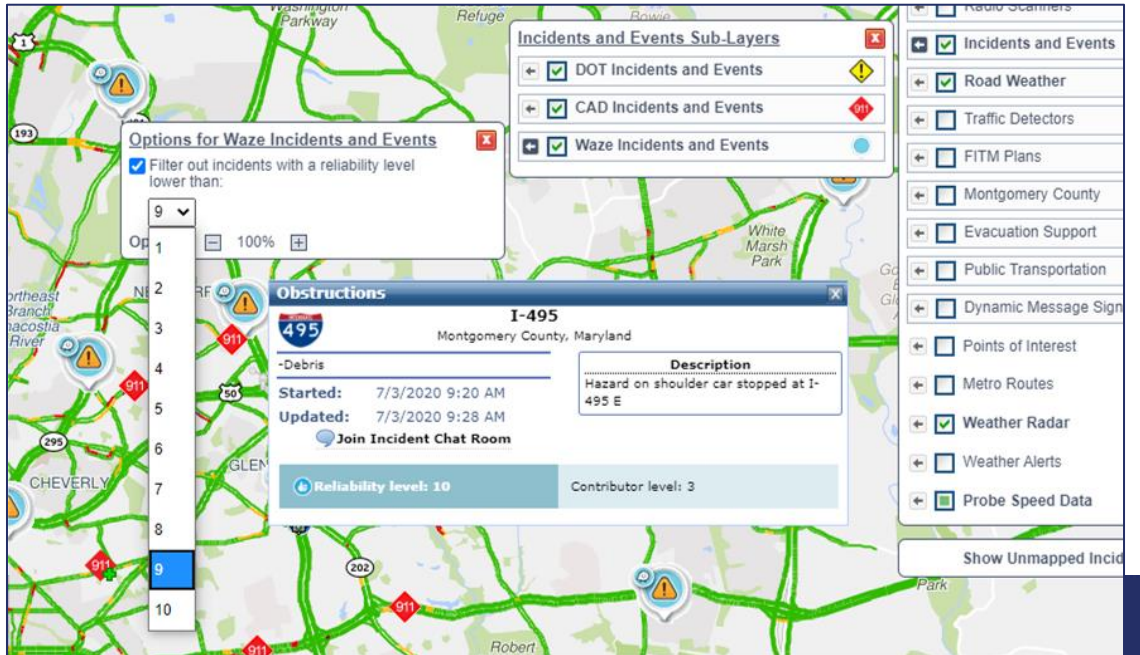
# But wait, there's more…

# Various Waze enhancements

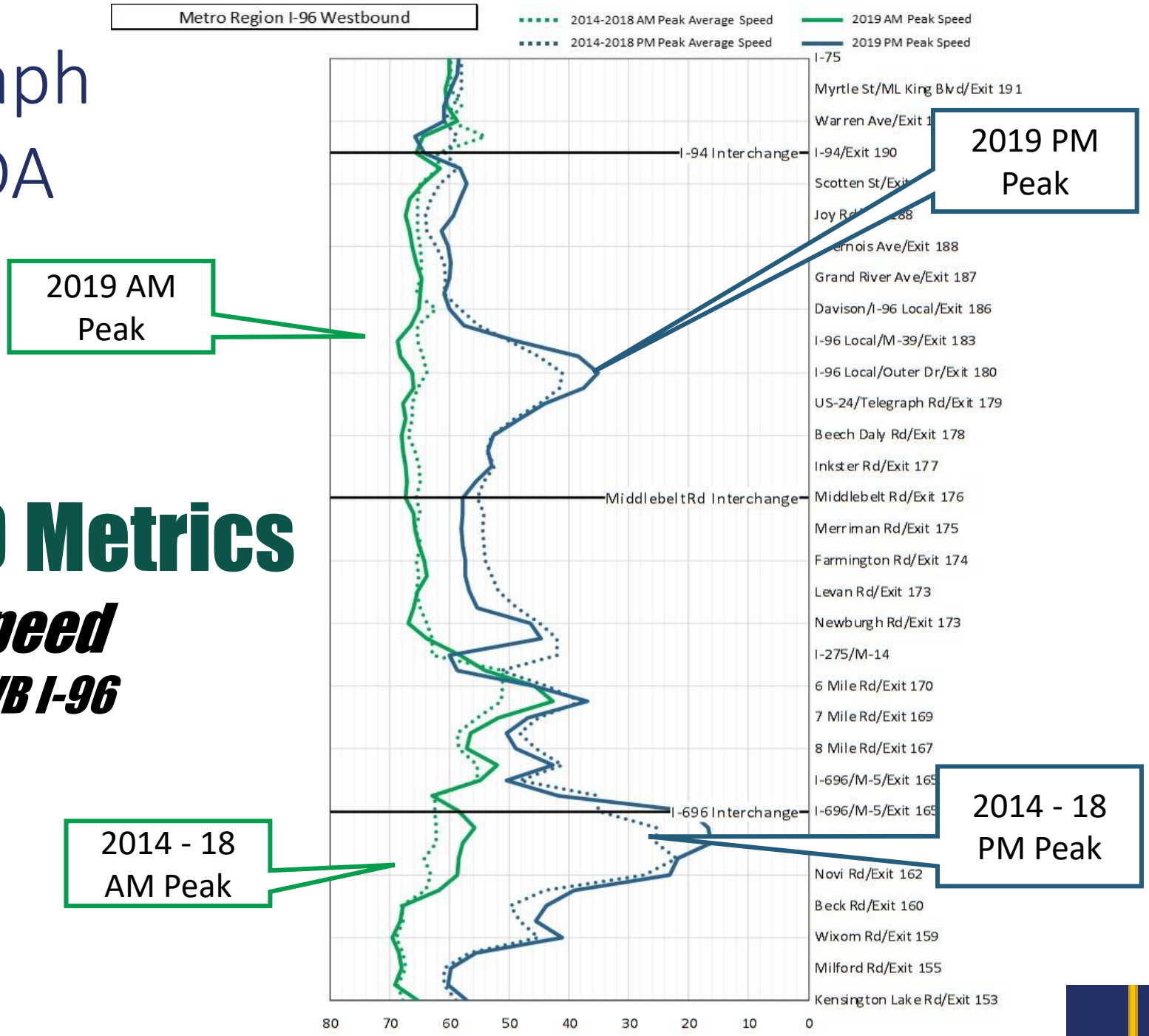
- Additional filtering options by event type, geography, road class, etc.
- Add Waze data downloads and analysis to the Event Query Tool
- Scalability to handle increased load and browser limitations





# Corridor Speed Graph Visualizations in PDA




## 2019 Metrics

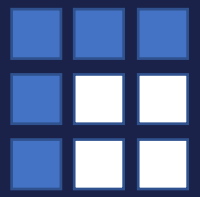
### *Avg Speed*

### *Metro WB I-96*

RITIS | PROBE DATA ANALYTICS SUITE

# PDA Suite Performance Measures Working Group

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



# Template Matrix

# RITIS Performance Reporting Template Matrix

- Helps users choose the right template for the job

| Discipline \ Template | After Action Review | Before & After Study | Corridor Performance | Holiday Travel | Monthly Congestion | TSMO Tracking | Work Zones |
|---|---|---|---|---|---|---|---|
| **Planning** | | ● | ● | | ● | | |
| **Traffic Ops** | ● | | ● | | | ● | ● |
| **Travel Info** | | | ● | ● | ● | | ● |
| **Research** | ● | ● | ● | ● | ● | ● | ● |

● Most likely use of the available templates

# Event Summary Report Walk-through

 Complete Team Meeting | June 17, 2021

# **Roadmap** for building the I-75 NB event summary report

Provided with GDOT's STIMS I-75 NB Incident Review slides (including some RITIS results)

Selected a RITIS Incident Timeline template as a base

Developed "dual-purpose" & TIM* Timeline Options

BEGIN

END

Gathered intel of the accident from the web and used Google Maps for location map; ran PDA Suite tools for additional performance results

Added to the template:

- Header
- Incident Summary
- Location Map
- Incident Timeline
- Timeline Detail
- Traffic Impact photo w/caption
- Performance Chart
- Congestion Scan
- Gears/NaviGAtor incident data
- Trip Time graphic w/caption

* - Learn more about Traffic Incident Management by visiting FHWA's Office of Operations Gap Analysis Primer page https://ops.fhwa.dot.gov/publications/fhwahop15007/chapter1.htm

# AAR completed "dual-purpose" timeline template (front)

**Header** (GDOT)

**Summary** (Media)

**Timeline** (GDOT)

**Timeline Detail** (GDOT)

**Location Map** (Google Maps)

**Traffic Impact** (Media)

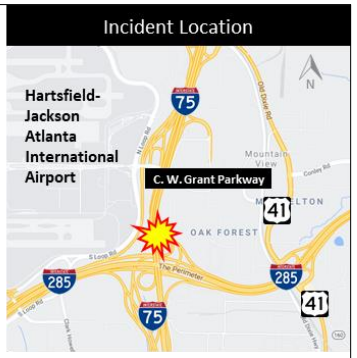
GDOT Georgia Department of Transportation

## Event Summary

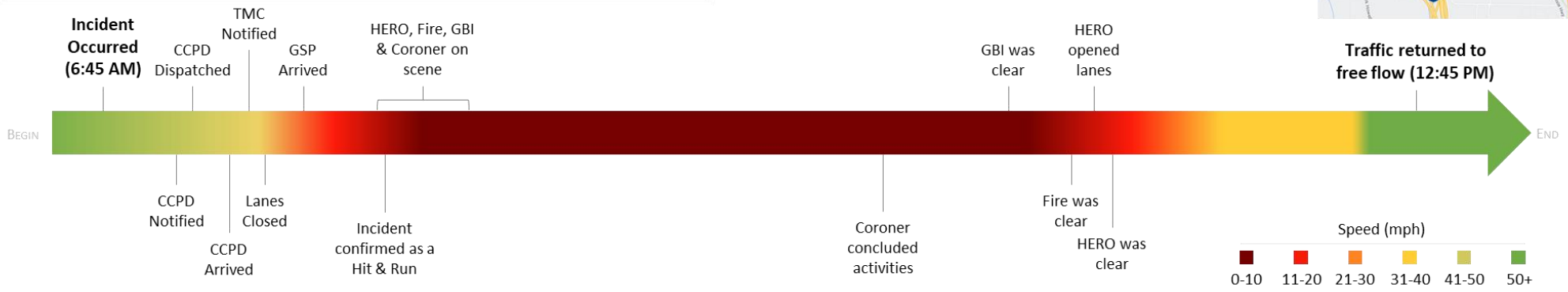
## Pedestrian Hit & Run

I-75 NB near Exit 239 (CW Grant Pkwy.) | December 9, 2019

On Monday morning, December 9, 2019, a pedestrian was struck and killed on I-75, resulting in four hours of road closures and gridlock through the Southside. The northbound lanes were shut down at C.W. Grant Parkway about 7:30 AM for authorities to conduct an investigation. Traffic began flowing again about 11:30 AM. Tough delays remained out of Morrow through the lunch hour.




## Incident Timeline | Total Elapsed Time: 6 hours




## Timeline Detail

**7:05 AM** Clayton Police first received a report of a pedestrian struck by a motor vehicle

**7:19 AM** Clayton PD arrived on scene

**7:26 AM** TMC was advised of incident from Clayton PD and found a camera visual

**7:30 AM** All lanes were blocked; confirmed fatality

**7:36 AM** Traffic was diverted to I-285, messages posted

**7:41 AM** Georgia State Patrol (GSP) on scene and assisting with traffic control

**8:06 AM** Incident confirmed as a hit & run; GSP, Clayton PD, the Fire Department, GBI, HERO, and the Coroner are all on scene

**10:26 AM** Coroner removed the deceased from the scene

**11:06 AM** GBI is clear

**11:20 AM** Fire clears scene

**11:25 AM** HERO opens lanes to traffic

**12:45 PM** Traffic returned to normal flow

## Traffic Impact

During the investigation, major delays stretched back more than six miles. At their worst, the trip from Mt. Zion Boulevard to I-285 clocked in at nearly four hours.

# AAR completed template (back)

**Header** (GDOT)

**Performance Charts** (RITIS)

**Trip Time Graphic** (Media)

**Congestion Scan** (RITIS)

**GEARS/ NaviGAtor** (GDOT)

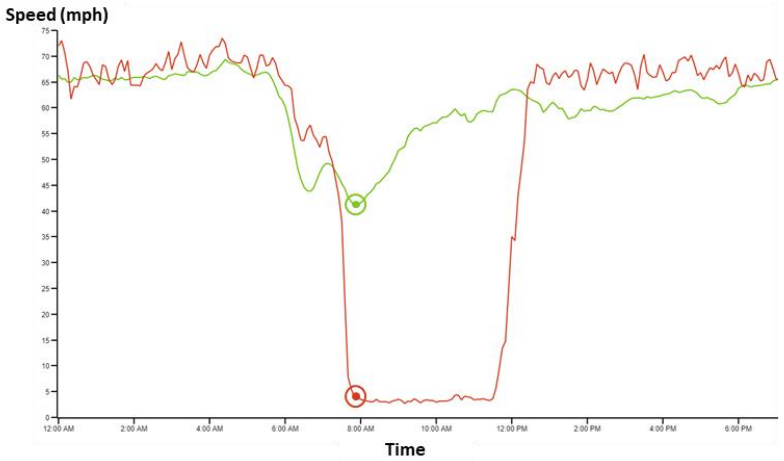
GDOT Georgia Department of Transportation

## Performance Impacts

### Pedestrian Hit & Run

I-75 NB near Exit 239 (CW Grant Pkwy.) | December 9, 2019

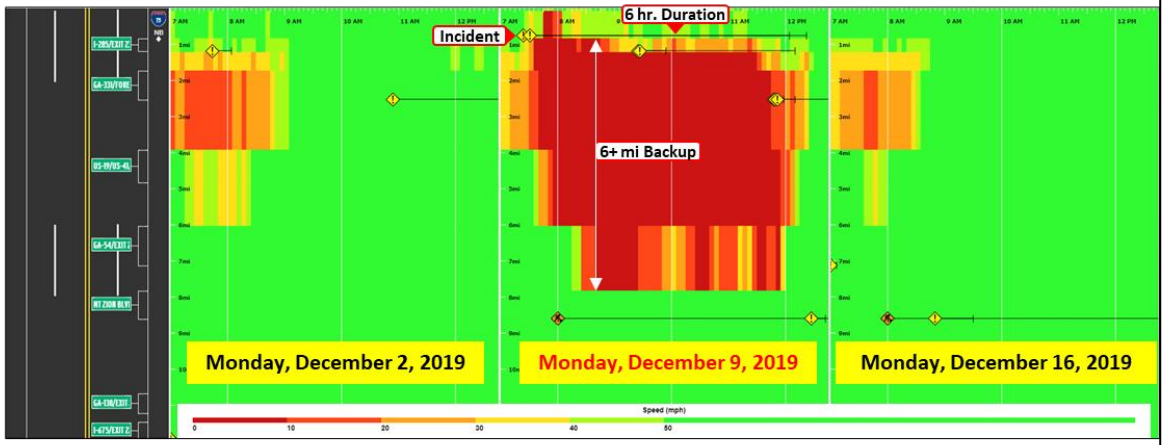
**Performance Chart for I-75 NB**
between Cleveland Ave/Exit 241 and I-675/Exit 227




(Above) At 7:55 AM, weekday speeds for the year averaged **41.2 mph**, while during the course of the investigation, speeds dropped to **3.9 mph**.

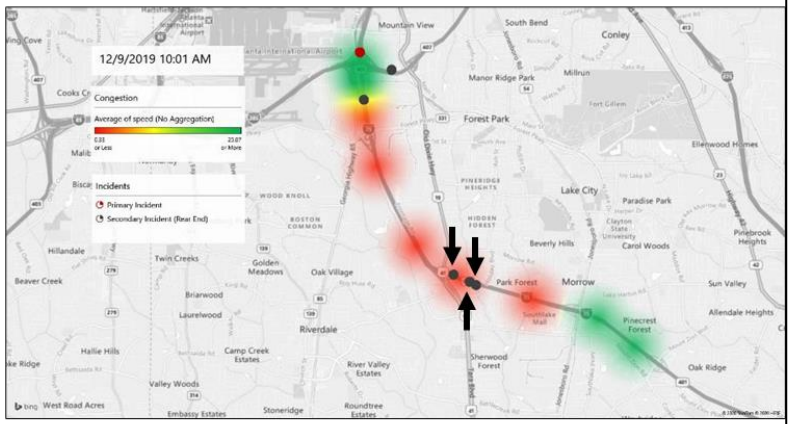
(Right) Those stuck in the backups were eventually turned around and diverted off the interstate onto I-285 East. Commuters were crowding onto I-675, Old Dixie Highway and Jonesboro Road throughout the morning drive.


**Congestion Scan for I-75 NB**
between I-285/Exit 238 and I-675/Exit 227




(Above) Comparisons between the incident date and the Monday before and Monday after show dramatic speed reductions and traffic queuing differentials due to the investigation.

(Right) Data from GEARS and NaviGAtor show the primary (red dot) and secondary (black dots) incidents that occurred. Note the three secondary incidents that occurred between 9 a.m. and 10:00 a.m. at the back of the queue (black arrows).



# How long did this take to build?

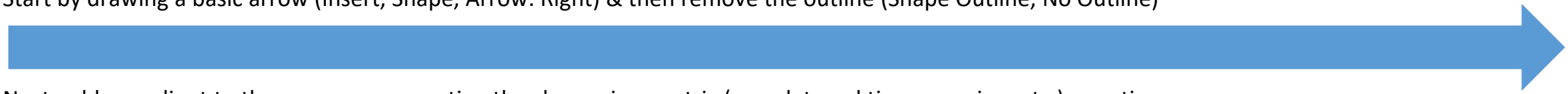
| | |
|---|---|
| Assemble Information | ~ 1 hr. |
| Create front page | ~ 3 hr. |
| Create back page | ~ 2 hr. |
| **Total** | **~ 6 hr.*** |

* (included dual-purpose/TIM timeline development & other PDA runs/results)

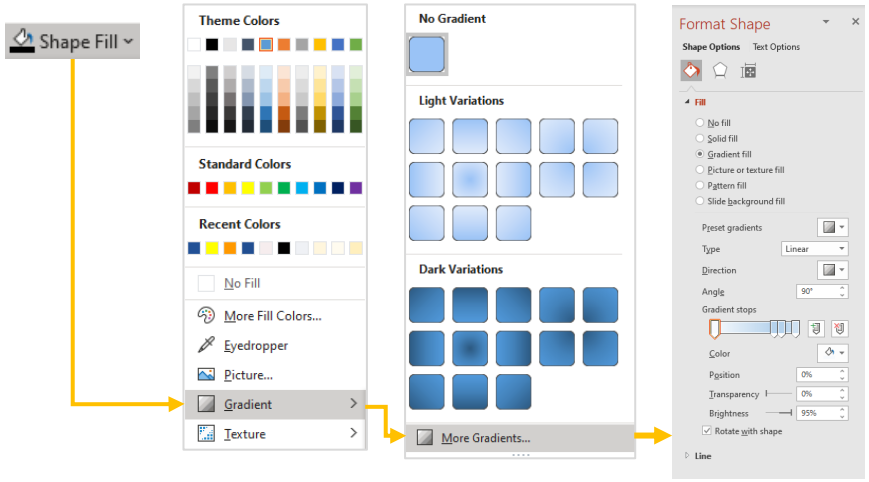
# **New** how-to & design resources

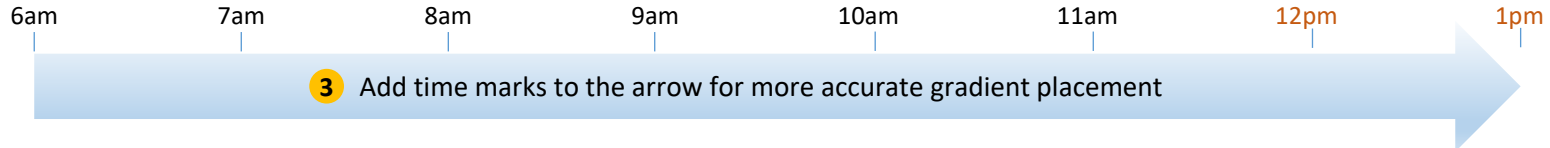
# Making the "dual-purpose" timeline (in MS PowerPoint®)

1. Start by drawing a basic arrow (Insert, Shape, Arrow: Right) & then remove the outline (Shape Outline, No Outline)

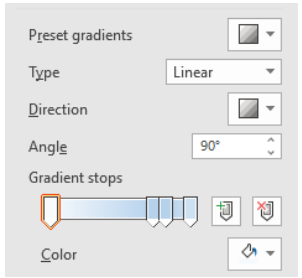


2. Next, add a gradient to the arrow, representing the change in a metric (speed, travel time, queuing, etc.) over time



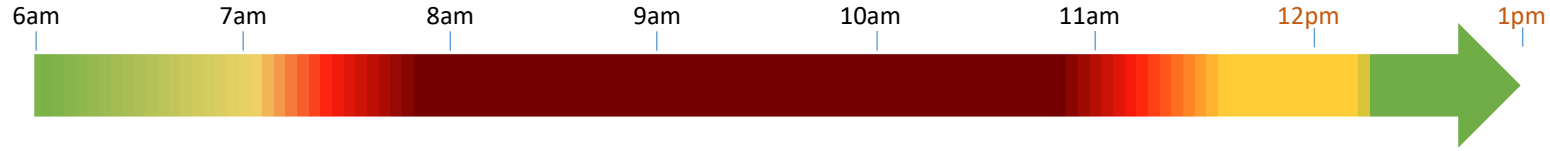




4. Choose a **Linear** Type and **Right** Direction. Add additional stops by clicking on the stops line.

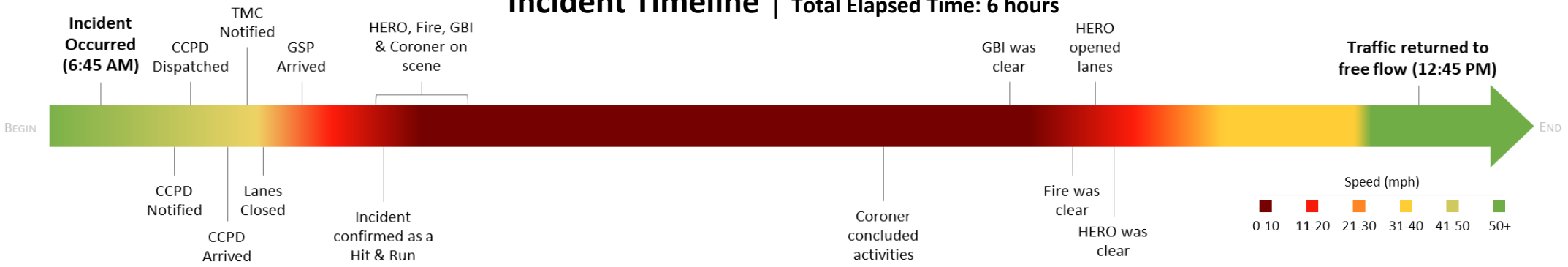



5. Color the stops according to the RITIS color thresholds, and slide to the proper time positions.


(Note: to remove stops, click and hold the left mouse button and drag off the stops bar)



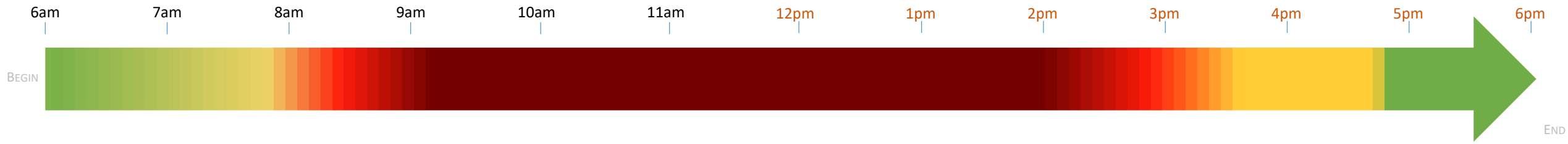

6. Add a header, BEGIN and END, descriptors at key traffic incident times and a legend for metric thresholds.



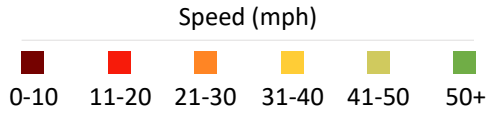
# Incident Timeline

This graphic was constructed in PowerPoint® to give it a certain look, and each element is editable. Simply click on each element to change size, shape, location, color, content, etc. To maintain scale and easily resize when adding to your report, group all elements together, right-click the table, click copy, then in your report, right click a location, then choose Picture under Paste options.

## Incident Timeline | Total Elapsed Time: x hours xx minutes



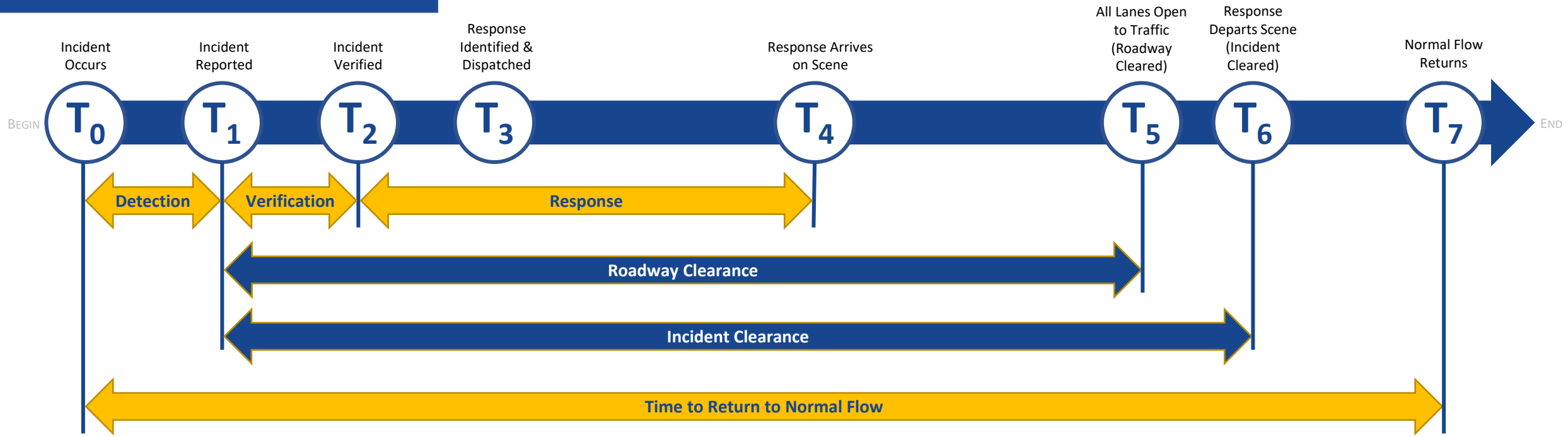

Use these incident action text boxes and connector lines to add incident elements to your specific example, then align to the Incident Timeline, alternating between top and bottom (center the time indicators on the timeline, to help place the incident elements more accurately)


- Use this basic shape to create a simple incident “dual-purpose” timeline graphic
- Adjust the time indicators by editing, adding or removing them, then align horizontally to get them evenly spaced
- Slide the gradient stops that correspond to an incident action (incident occurred, police notified) at a specific point in time, then remove the time indicators
- Add a legend for your specific metric (speed, travel time, queue length)

# TIM Element Timeline*

This graphic was constructed in PowerPoint® to give it a certain look, and each element is editable. Simply click on each element to change size, shape, location, color, content, etc. To maintain scale and easily resize when adding to your report, group all elements together, right-click the table, click copy, then in your report, right click a location, then choose Picture under Paste options.



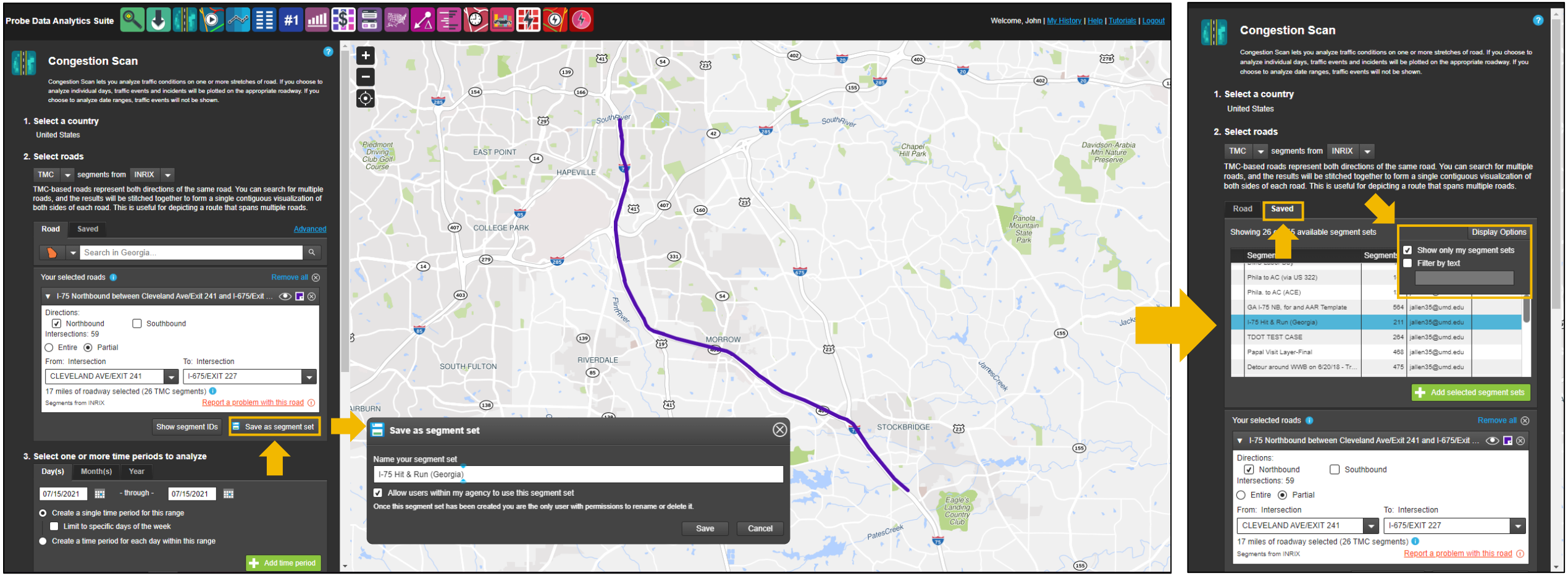

| Measure | Definition |
|---|---|
| **Detection Time**<br>**T1 – T0** | Time between the incident occurring and the incident being reported. Detection time is not typically reported due to the fact that the actual time the incident occurred is often unknown. |
| **Verification Time**<br>**T2 – T1** | Time between incident being reported and the incident being verified. TMCs can typically assist with verification through use of their CCTV cameras. |
| **Response Time**<br>**T4 – T2** | Time between the incident being verified and the first responder arriving on scene. Law enforcement may not always be the first party to arrive on scene. |
| **Roadway Clearance Time (RCT)**<br>**T5 – T1** | Time between the first recordable awareness of the incident by a responsible agency and the first confirmation that all lanes are available for traffic flow. |
| **Incident Clearance Time (ICT)**<br>**T6 – T1** | Time between the first recordable awareness of the incident by a responsible agency and the time at which the last responder has left the scene. |

*** Source: FHWA's Traffic Incident Management Gap Analysis Primer: https://ops.fhwa.dot.gov/publications/fhwahop15007/chapter1.htm**

# Two Quick Reminders…

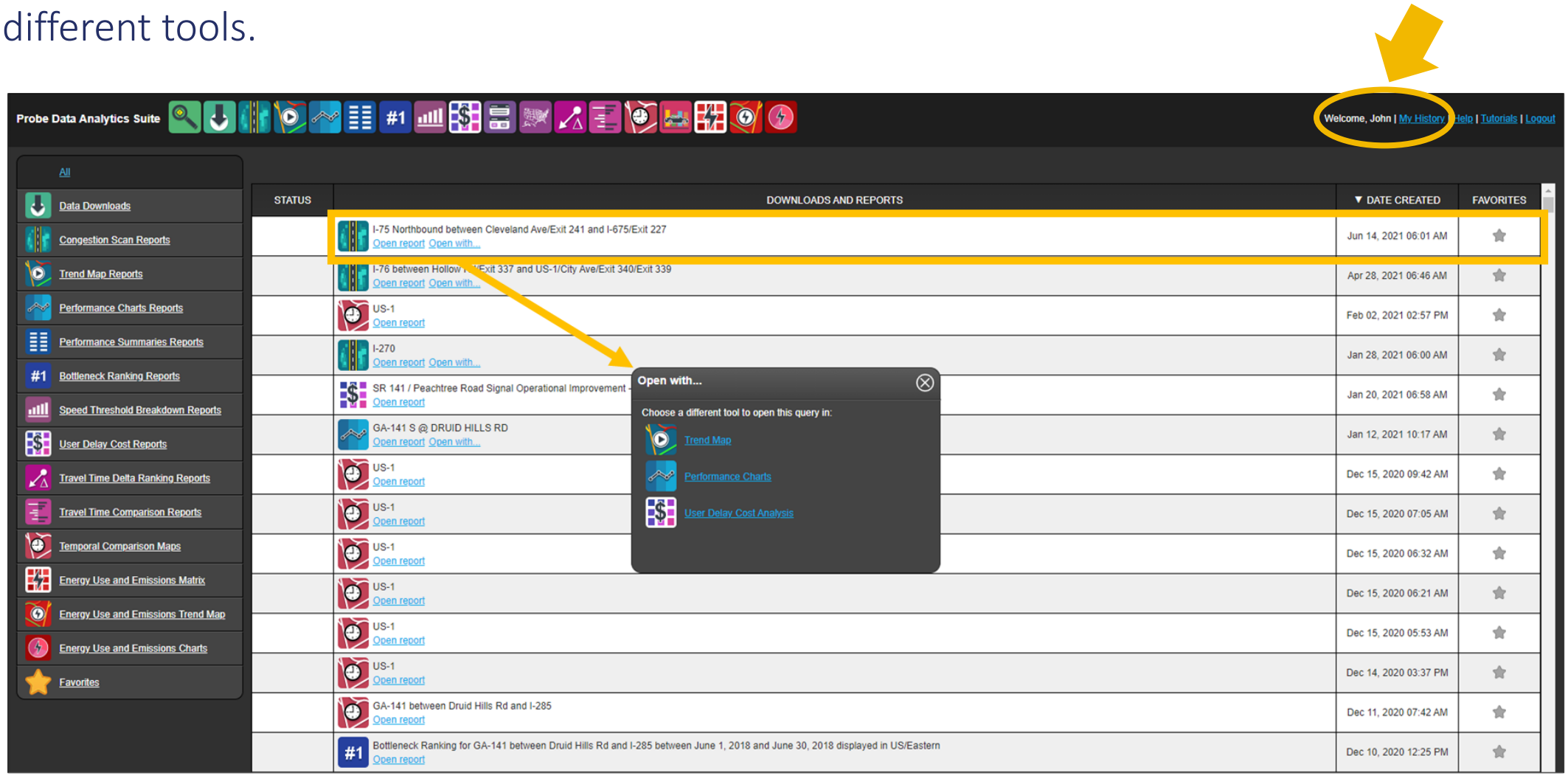
# **Save** your TMC sets!

Helps you quickly and easily access ALL your past roadway or network query info, so you don't have to recreate it. It can also be shared within your agency.



# Use My History!

Helps you quickly and easily access ALL your past downloads and reports, AND open results in different tools.



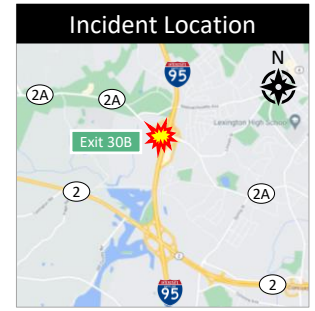
massDOT Massachusetts Department of Transportation

# **Truck** Bridge Strike

massDOT
Massachusetts Department of Transportation

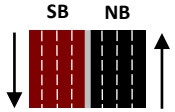
# Event Summary Truck Bridge Strike

Occurred on the I-95 SB at Exit 30B in Lexington, MA • Tuesday, June 15, 2021




**The incident occurred** at about 8:15 AM, with traffic back to normal about 11:00 AM.

**A flatbed truck** traveling under Rt 2A overpass struck the bridge and lost part of its load.




**The I-95 SB lanes** were closed for over 2 hours.

**MSP, first responders and MassDOT engineers** actively participated in this operation.


Massachusetts State Police were first on the scene.

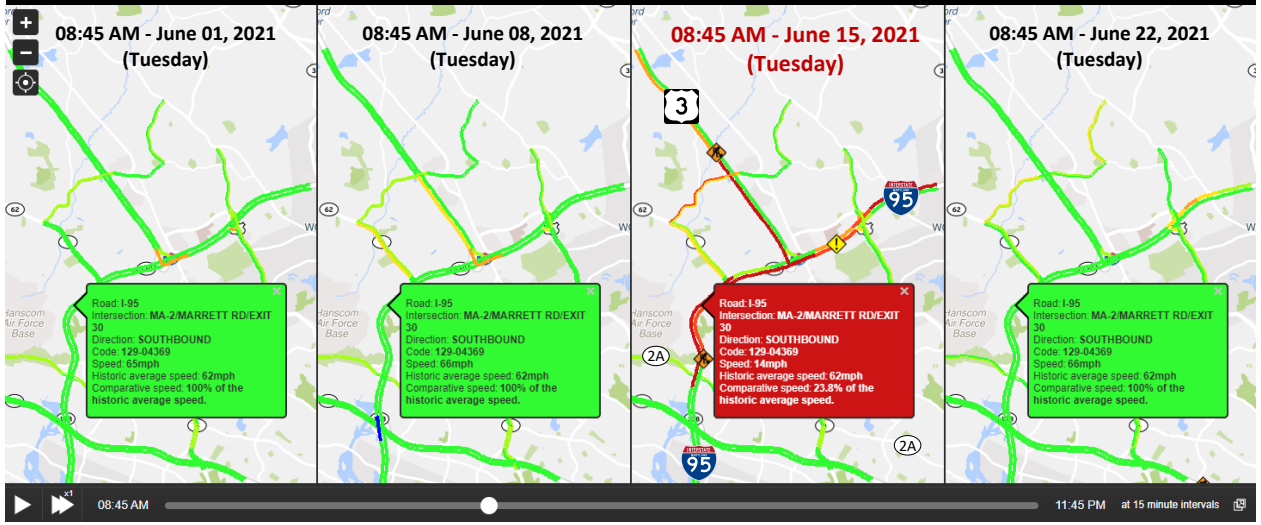
An injured driver was taken to the hospital with non-life-threatening injuries.

Traffic backups persisted for 2+ hours during the lanes' shutdown.

## Trend Map showing congestion at time of incident

(click here to view full animation of travel conditions throughout the day)

**79% Speed Reduction** @ 8:45am due to incident (vs other June Tuesdays)




**15%**

**Increase in travel time** on alternate routes for the day of the accident vs typical free-flow conditions.

**1840h – 3400h**
(+85%)

**Increase in vehicle-hours of delay** for the region on the day of the accident vs normal June Tuesdays.

**$55k - $102k**
(+84%)

**Increase in delay cost** for the region on the day of the accident vs normal June Tuesdays.

# Trend Map Quick Start Guide

## PDA Trend Map
### Quick Start Guide

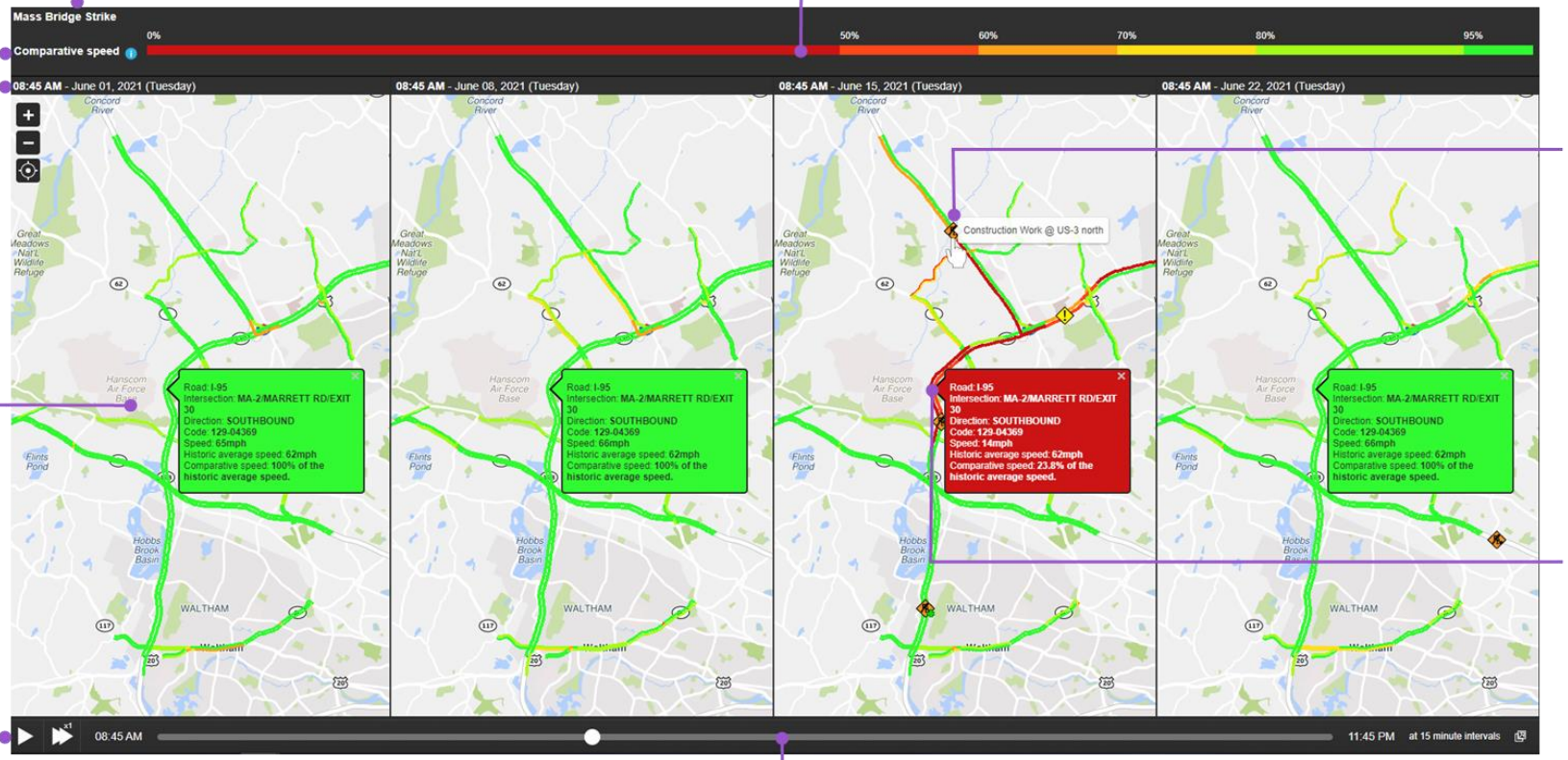
Clicking on the Trend Map itself - or the text link in the Trend Map header - will open the PDA Trend Map for this incident. The PDA Trend Map is fully interactive such that you can zoom in or out (using mouse wheel or map controls in the upper-left corner of the map frame) on any of the map panels to explore more details. You can click on any of the colored road segments to view a pop-up with more detailed statistics regarding traffic flow at that moment in time. Users can also animate the traffic conditions as they changed over the course of a day for the selected time periods by clicking the play button in the lower-left corner of the Trend Map.

**Analysis Name**

**Metric Performance Scale**

**Performance Metric of Map**

**Time Periods**




**Left-click (and hold) on a map to move it to a different location – once you release the button, all maps will recenter on your new location.**

**Hover over any event icon (roadwork, incident, etc.) to see more detail.**

**Hover over any road segment to view detailed information across all time periods. Single-click on the road segment to lock the pop-up in place (good for taking screenshots to compare performance across various road segments).**

**Play/Pause/FF (Playback Bar)**

**You can click and drag the time slider anywhere on the playback bar (at your pre-selected time intervals) or just click on the playback bar to move the slider.**
**(Note: once tooltips are locked in place on a TMC, clicking play or moving the slider will show any metric changes in the pop-ups over time)**

For more information on the full-featured Trend Map tool - including a video tutorial - go to: https://pda.ritis.org/suite/help/#trend-map

# Performance Reporting Working Group

# **Performance Reporting** Working Group

- Meet sometime after the summer
- Review of new materials to improve, test-drive, etc.
- Feedback on latest versions (content, structure, etc.) of RITIS templates page
- Help develop a virtual training program for RITIS users

**John Allen**
UMD CATT Lab

**Jesse Buerk**
DVRPC

**Matt Glasser**
GDOT

**Charles Lattimer**
UMD CATT Lab


**Keith Miller**
NJTPA

**Zoe Neaderland**
VAOT

**Ed Stylc**
BMC

**Kelly Wells**
NCDOT

# **Recent** Organization Tutorials

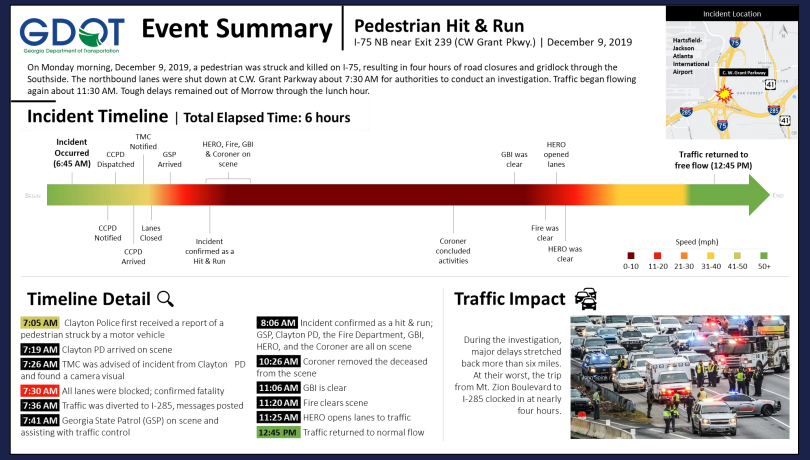
## Complete Team

ITSGA Performance Reporting Workshop

(December 10, 2020)

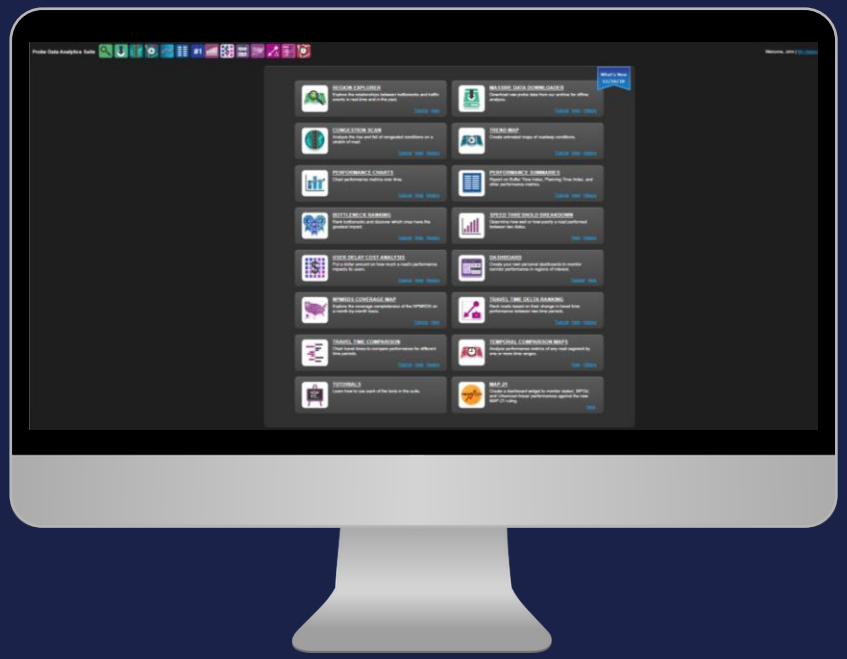

I-75 NB Event Summary Walk-through

(June 17, 2021)




RITIS Incident/Accident Evaluation Workshop

(July 1, 2021)



# RITIS User Group

## Virtual Performance Reporting Workshops?

# User Poll

**Q1** Would you be interested in a workshop to learn how to develop performance reports, using RITIS templates?

- Yes, definitely
- Maybe, but I need to know more
- No thanks

# User Poll

**Q2** Which template would you be most interested in for the workshop to cover?

- After Action Reviews
- Before & After Studies
- Corridor Performance
- Holiday Travel
- Monthly Congestion

RITIS | PROBE DATA ANALYTICS SUITE

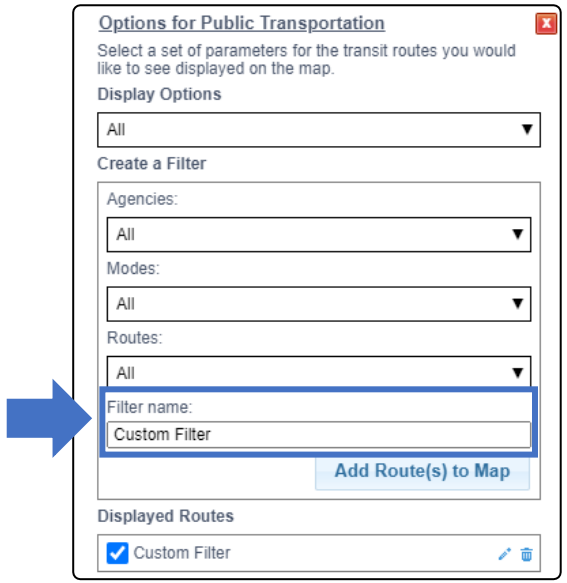
# New RITIS Tools and Recent Enhancements

**Michael Pack**
UMD CATT Lab
*Director*

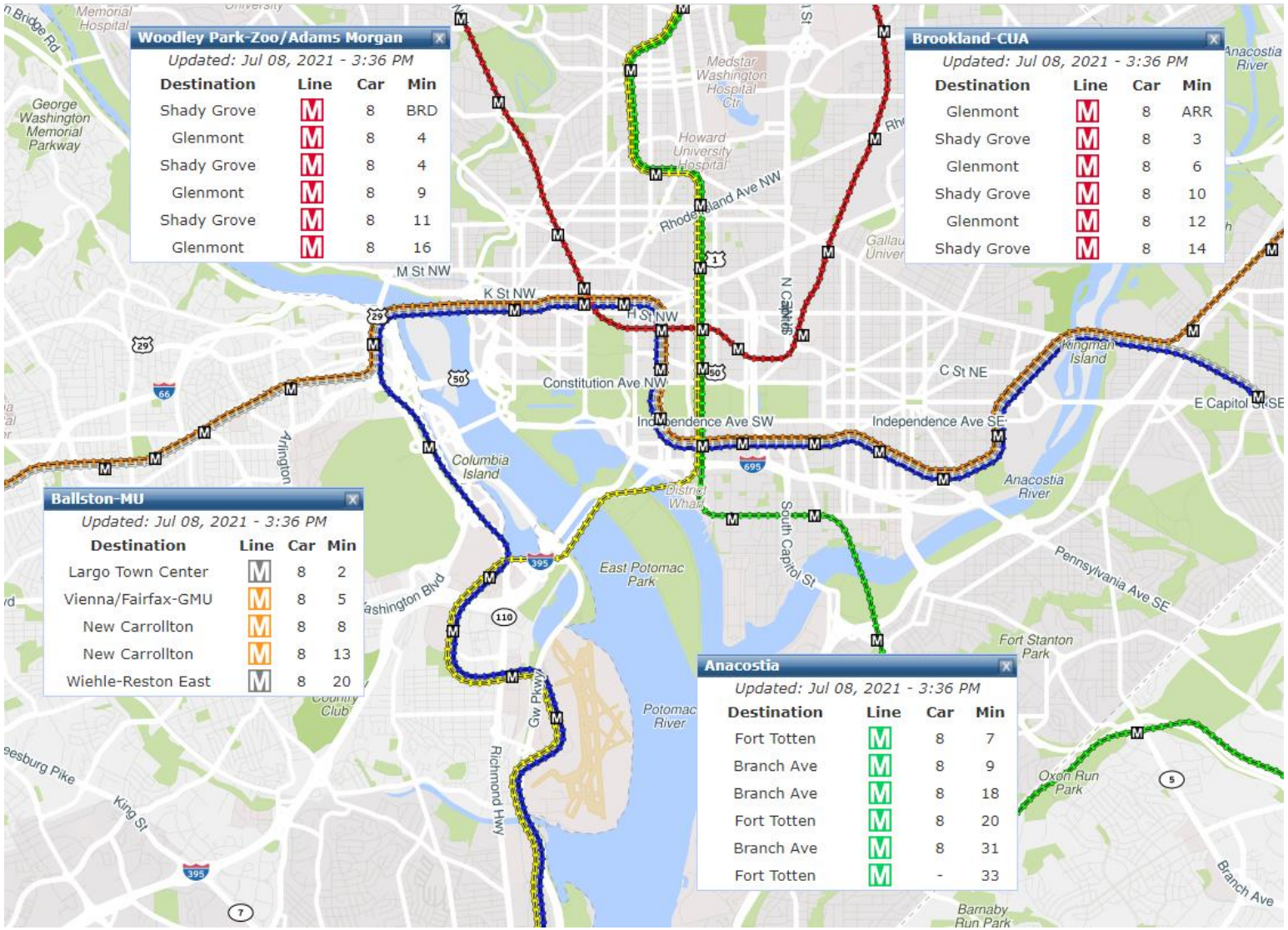

RITIS

# RITIS latest updates

❶ Added a default filter name in the **RITIS Traffic Map - Public Transportation Layer** when creating a new transit route filter.



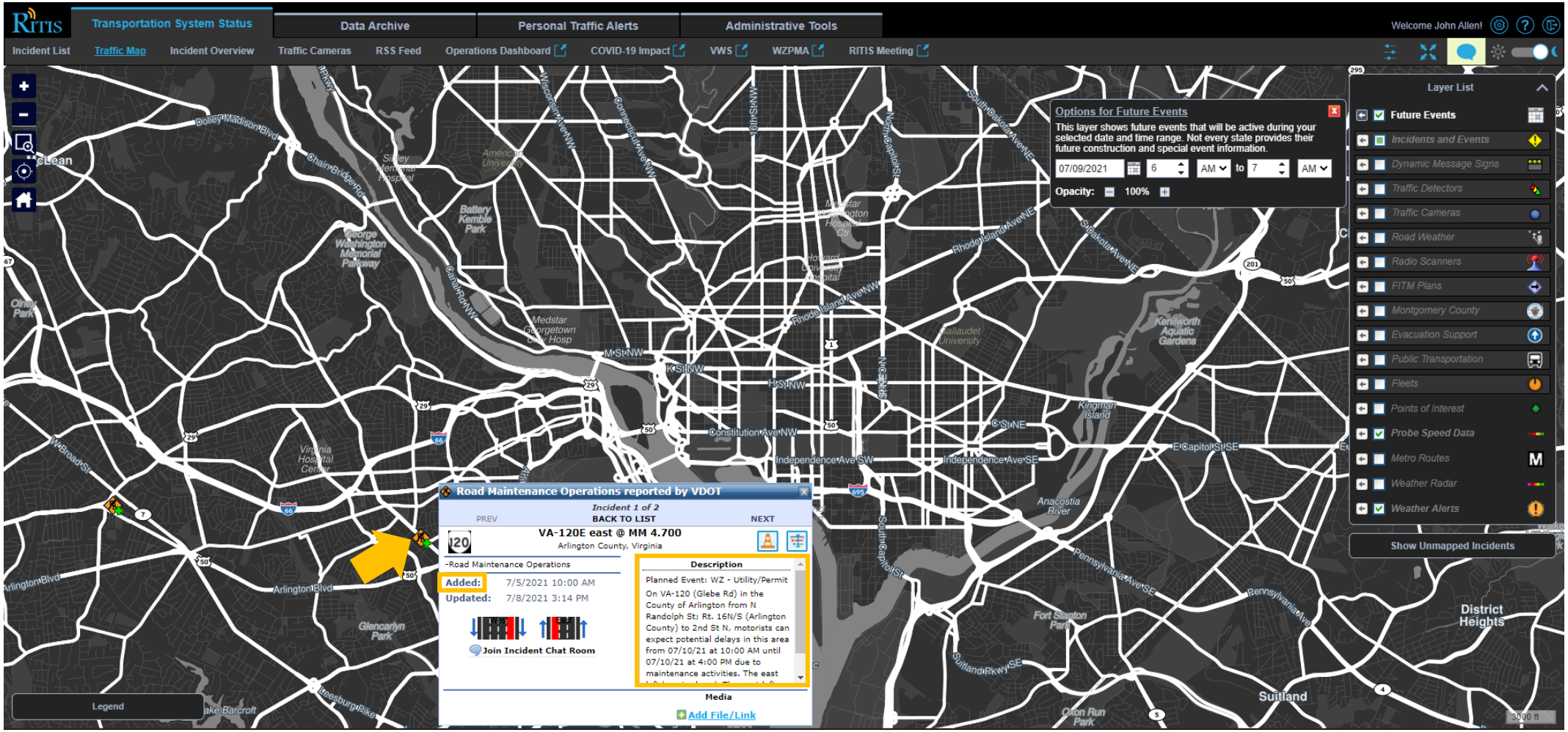

❷ Improved performance loading **RITIS Traffic Map - Public Transportation Layer** route lines.




https://ritis.org/release_notes

# RITIS latest updates

❸ Changed the label on the RITIS Traffic Map - Future Events Layer popups from "Started" to "Added" to clarify when the data was added since the event hasn't yet started.




https://ritis.org/release_notes

# RITIS latest updates

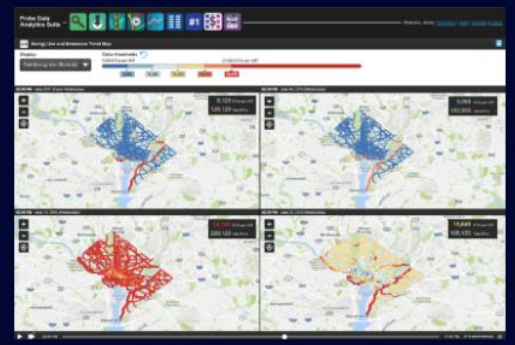
❹ Improved formatting on the Tool Catalog to enhance readability.

## PDA - Energy Use and Emissions Matrix

Energy Use and Emissions Matrix creates a color-coded matrix of aggregated energy use and emissions estimates for all roads for each hour within a customized analysis period. In the resulting matrix, you can switch between energy use from two models as well as CO2, NOX, PM2.5, PM2.5NOX precursor, and VOC emissions. Totals across the hour, day, and each date within the query range are provided as well as the overall total. This tool is recommended for analysts interested in estimating aggregate hourly sustainability metrics to discover patterns or abnormalities.


## PDA - Energy Use and Emissions Trend Map

Energy Use and Emissions Trend Map creates hourly animations of energy use and emissions on selected roads and date ranges. The output map provides estimates of energy use and emissions for each selected segment as well as the aggregate. Results are normalized by VMT to assist in identifying segments with abnormal sustainability performance. Similar to the original Trend Map, you can select up to seven time ranges to create synchronized map animations to discover differences in sustainability metrics from the driving mode. As with the other energy use and emissions tools, you can switch between energy use from two models, as well as CO2, NOX, PM2.5, PM2.5NOX precursor, and VOC emissions. This tool is recommended for analysts seeking to evaluate segment-level and aggregate hourly sustainability metrics on a time-stepped map-based visualization.




https://ritis.org/release_notes

# RITIS latest updates

## ❺ Corrected Issues

- Subscription Alerts
- Chat Menu
- Traffic Map

https://ritis.org/release_notes

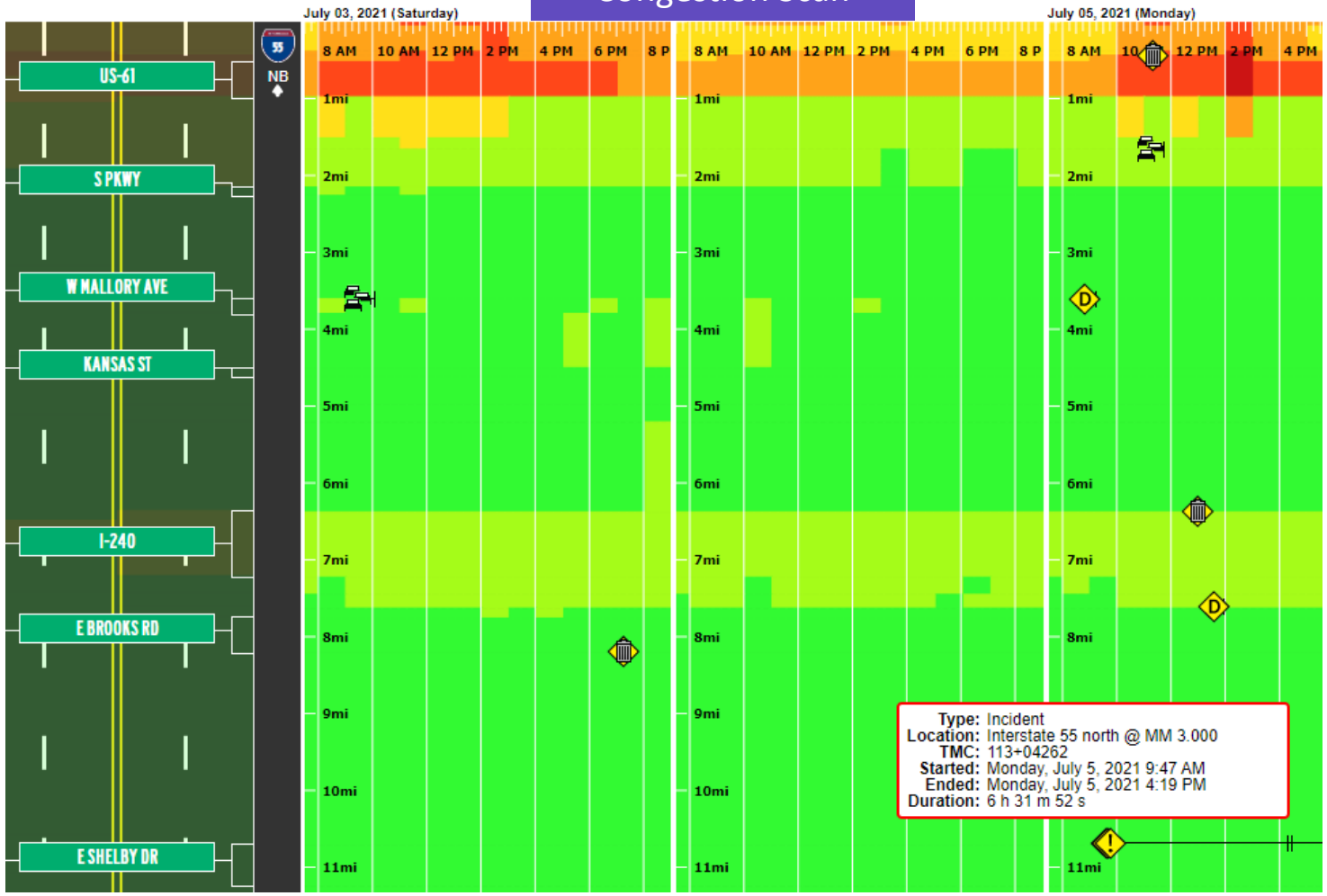
# Probe Data Analytics Suite

# PDA Suite latest updates

1. Event data from Tennessee DOT is now available in all tools that support event data

RITIS Traffic Map


Congestion Scan




https://pda.ritis.org/suite/updates/

# PDA Suite latest updates

❷ Excel exports from Trend Map now include a column for the segments' road names

**Speed for I-76, NJ-42, and US-322 between NJ-42/Black Horse Pike/Glassbo and Captain John A O'donnell Pkwy using INRIX data**

**June 30, 2019 through July 05, 2019**

| Segment ID | Road | Intersection | Miles | 12:00 AM | 1:00 AM | 2:00 AM | 3:00 AM | 4:00 AM | 5:00 AM | 6:00 AM | 7:00 AM | 8:00 AM | 9:00 AM | 10:00 AM | 11:00 AM | 12:00 PM | 1:00 PM | 2:00 PM | 3:00 PM | 4:00 PM | 5:00 PM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103+09624 | NJ-42 | CR-689/CROSS KEYS BERLIN RD | 2.523842 | 48.18 | 46.5 | 46.7 | 47.02 | 47.2 | 48.82 | 50.04 | 50.48 | 51.75 | 48.52 | 48.48 | 47.32 | 45.79 | 45.08 | 46.17 | 44.57 | 45.29 | 45.0 |
| 103P09628 | NJ-42 | US-322/SICKLERVILLE RD | 0.091530 | 33.07 | 33.23 | 34.51 | 33.99 | 35.77 | 34.04 | 31.28 | 32.12 | 34.36 | 35.54 | 35.74 | 37.06 | 33.56 | 33.87 | 37.72 | 27.96 | 32.65 | 27.9 |
| 103+09625 | NJ-42 | TUCKAHOE RD/STAGECOACH RD | 0.898171 | 43.56 | 41.67 | 41.52 | 42.46 | 43.5 | 45.72 | 41.54 | 43.0 | 39.19 | 36.15 | 36.3 | 35.94 | 36.06 | 34.28 | 33.54 | 38.1 | 38.47 | 38.49 |
| 103+09626 | NJ-42 | FRIES MILL RD | 1.392264 | 45.3 | 42.58 | 42.03 | 40.46 | 42.74 | 46.57 | 47.02 | 46.36 | 44.68 | 43.93 | 41.81 | 40.9 | 38.96 | 39.74 | 39.38 | 39.92 | 41.48 | 40.49 |
| 103+09627 | NJ-42 | GANTTOWN RD | 0.385422 | 32.68 | 31.91 | 33.85 | 32.59 | 30.66 | 28.87 | 33.14 | 31.73 | 30.04 | 26.84 | 25.19 | 25.76 | 25.52 | 24.99 | 22.37 | 15.6 | 15.68 | 15.38 |
| 103+04295 | NJ-42 | NJ-168/ATLANTIC CITY EXPY | 0.870263 | 38.0 | 35.21 | 37.4 | 37.47 | 38.85 | 38.18 | 32.84 | 34.11 | 32.79 | 30.68 | 28.87 | 29.46 | 27.78 | 28.38 | 25.35 | 29.69 | 29.83 | 29.47 |
| 103P04295 | NJ-42 | NJ-168/ATLANTIC CITY EXPY | 0.917756 | 54.41 | 53.84 | 54.53 | 55.83 | 56.3 | 58.52 | 54.3 | 54.38 | 54.19 | 52.67 | 52.45 | 52.74 | 51.7 | 51.78 | 50.24 | 54.06 | 54.61 | 42.07 |
| 103+15548 | NJ-42 | COLLEGE DR/BLACK HORSE PIKE | 0.642040 | 66.14 | 66.04 | 66.24 | 67.46 | 68.43 | 70.16 | 61.18 | 63.77 | 70.24 | 68.81 | 67.75 | 67.55 | 66.26 | 64.59 | 61.17 | 64.86 | 58.2 | 41.49 |
| 103+04296 | NJ-42 | CHURCH ST | 0.948460 | 68.52 | 67.55 | 68.56 | 69.4 | 70.59 | 72.16 | 59.76 | 47.87 | 67.91 | 69.5 | 69.52 | 69.3 | 67.76 | 54.4 | 65.23 | 53.75 | 33.66 | 23.2 |
| 103P15548 | NJ-42 | COLLEGE DR/BLACK HORSE PIKE | 0.148131 | 67.17 | 66.78 | 66.63 | 68.58 | 69.25 | 71.07 | 59.38 | 58.16 | 70.42 | 69.31 | 68.23 | 68.21 | 66.7 | 60.48 | 64.56 | 63.64 | 41.64 | 26.5 |
| 103P04296 | NJ-42 | CHURCH ST | 0.206745 | 67.59 | 67.24 | 68.36 | 69.94 | 69.31 | 72.0 | 57.53 | 42.9 | 48.93 | 63.23 | 69.45 | 69.01 | 67.09 | 53.35 | 65.23 | 50.98 | 29.57 | 24.35 |
| 103+04297 | NJ-42 | COLES RD | 0.461400 | 66.96 | 66.6 | 67.17 | 69.04 | 69.1 | 71.27 | 58.6 | 44.53 | 44.42 | 61.26 | 67.58 | 67.34 | 64.77 | 52.95 | 64.28 | 50.93 | 42.85 | 37.17 |
| 103+04298 | NJ-42 | NJ-168/BLACK HORSE PIKE | 0.343936 | 67.73 | 67.58 | 67.54 | 69.16 | 70.24 | 71.72 | 58.8 | 43.25 | 41.95 | 60.6 | 68.13 | 67.97 | 64.91 | 52.23 | 66.4 | 60.4 | 62.82 | 59.83 |
| 103P04298 | NJ-42 | NJ-168/BLACK HORSE PIKE | 0.171130 | 67.59 | 67.52 | 68.01 | 69.35 | 70.03 | 72.28 | 57.54 | 41.68 | 38.83 | 60.06 | 69.15 | 68.97 | 66.18 | 50.05 | 67.73 | 64.3 | 61.43 | 63.03 |
| 103+04299 | NJ-42 | LOWER LANDING RD/EXIT 10B | 0.922645 | 66.64 | 66.68 | 66.68 | 68.01 | 69.25 | 71.58 | 53.94 | 37.12 | 35.74 | 56.37 | 67.62 | 66.7 | 63.52 | 47.65 | 65.47 | 53.21 | 51.75 | 57.73 |
| 103+04300 | NJ-42 | NJ-41/HURFFVILLE RD | 0.459670 | 64.16 | 64.43 | 64.39 | 65.95 | 67.25 | 69.58 | 52.82 | 35.65 | 37.51 | 54.89 | 64.11 | 63.35 | 60.8 | 55.24 | 61.95 | 45.51 | 50.4 | 53.4 |
| 103P04300 | NJ-42 | NJ-41/HURFFVILLE RD | 0.357785 | 66.55 | 65.45 | 65.78 | 68.38 | 68.82 | 70.95 | 52.73 | 33.52 | 33.13 | 54.71 | 67.11 | 66.5 | 63.4 | 63.73 | 64.85 | 22.77 | 45.87 | 53.36 |
| 103+04301 | NJ-42 | CLEMENTS BRIDGE RD/EXIT 12 | 0.209601 | 67.02 | 65.82 | 66.26 | 69.36 | 68.91 | 71.44 | 54.02 | 36.21 | 36.84 | 55.12 | 67.21 | 67.44 | 63.0 | 65.86 | 65.45 | 22.56 | 47.1 | 51.92 |
| 103P04301 | NJ-42 | CLEMENTS BRIDGE RD/EXIT 12 | 0.229161 | 66.92 | 66.62 | 66.18 | 69.18 | 68.82 | 71.33 | 56.95 | 39.49 | 37.84 | 55.86 | 64.97 | 66.65 | 61.84 | 66.15 | 65.14 | 21.94 | 47.49 | 52.88 |
| 103+04302 | NJ-42 | NJ-55/EXIT 13 | 0.720785 | 67.32 | 67.3 | 67.17 | 70.4 | 69.1 | 71.61 | 61.36 | 49.38 | 43.08 | 59.14 | 58.34 | 63.33 | 62.1 | 65.56 | 61.76 | 23.43 | 54.85 | 58.22 |
| 103+04303 | NJ-42 | LEAF AVE | 0.878632 | 63.49 | 64.26 | 63.6 | 65.98 | 65.41 | 67.59 | 61.09 | 51.38 | 45.33 | 59.77 | 49.98 | 58.23 | 59.67 | 59.92 | 52.29 | 32.92 | 57.3 | 58.81 |
| 103P04303 | NJ-42 | LEAF AVE | 0.076669 | 61.72 | 61.48 | 60.97 | 64.08 | 63.02 | 66.31 | 60.88 | 51.57 | 45.28 | 59.53 | 54.79 | 58.36 | 59.04 | 58.7 | 49.79 | 38.64 | 57.02 | 57.96 |
| 103+04304 | NJ-42 | I-295/I-76/EXIT 26 | 0.222188 | 59.23 | 59.42 | 58.63 | 62.66 | 62.02 | 64.56 | 59.96 | 49.59 | 43.22 | 57.71 | 55.47 | 56.68 | 56.72 | 56.89 | 51.26 | 46.17 | 55.02 | 55.96 |
| 103P04304 | NJ-42 | I-76/I-295/EXIT 1 | 0.290290 | 61.6 | 61.78 | 61.71 | 64.97 | 65.93 | 67.61 | 62.67 | 47.62 | 41.2 | 61.05 | 60.67 | 59.63 | 60.81 | 60.62 | 59.79 | 57.77 | 59.21 | 59.46 |
| 103+04305 | NJ-42 | US-130 | 0.226059 | 61.03 | 60.83 | 61.25 | 63.78 | 64.67 | 66.59 | 61.43 | 49.77 | 45.05 | 59.13 | 60.1 | 59.16 | 59.19 | 59.31 | 59.32 | 58.66 | 58.56 | 58.21 |
| 103P04305 | NJ-42 | US-130 | 0.274752 | 61.61 | 61.66 | 61.94 | 63.76 | 65.15 | 67.45 | 62.97 | 53.69 | 49.31 | 59.69 | 61.09 | 60.38 | 60.14 | 60.1 | 60.54 | 60.24 | 59.98 | 59.63 |

https://pda.ritis.org/suite/updates/

# PDA Suite latest updates

❸ Performance Summaries results that span less than a week will now show values in the "Weekday" and "Weekend" columns for the subset of those time periods that are covered by the days in your selection, instead of displaying N/A.

**Performance Summaries** - Using INRIX TMC data

Open with...

July 01, 2021 through July 04, 2021 Northbound | July 01, 2021 through July 04, 2021 Southbound

Northbound segments from I-270 between I-495/MD-355 and Shady Grove Rd/Exit 8 using INRIX data

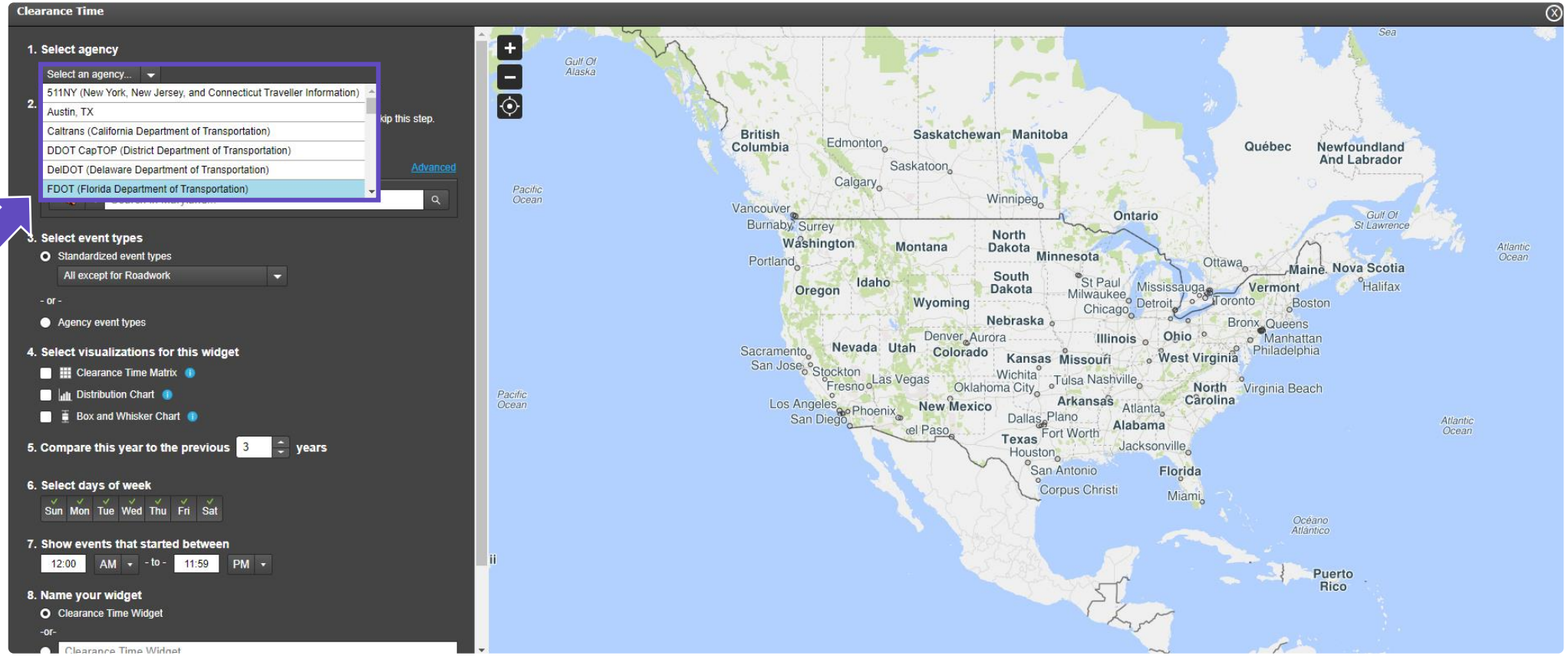
July 01, 2021 through July 04, 2021

| | | Speed (mph) | Buffer time (minutes) | Buffer index | Planning time (minutes) | Planning time index | Travel time (minutes) | Travel time index | |
|---|---|---|---|---|---|---|---|---|---|
| | | 12:00 AM - to - 12:00 AM | 12:00 AM - to - 12:00 AM | 12:00 AM - to - 12:00 AM | 12:00 AM - to - 12:00 AM | 12:00 AM - to - 12:00 AM | 12:00 AM - to - 12:00 AM | 12:00 AM - to - 12:00 AM | |
| X | Mon | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Mon |
| X | Tue | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Tue |
| X | Wed | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Wed |
| 7/1 | Thu | 61.92 | 1.47 | 0.18 | 9.83 | 1.20 | 8.37 | 1.02 | Thu |
| 7/2 | Fri | 64.65 | 0.38 | 0.05 | 8.65 | 1.06 | 8.02 | 0.98 | Fri |
| | Weekdays | 63.26 | 1.09 | 0.13 | 9.41 | 1.15 | 8.20 | 1.00 | Weekdays |
| 7/3 | Sat | 65.43 | 0.56 | 0.07 | 8.66 | 1.06 | 7.92 | 0.97 | Sat |
| 7/4 | Sun | 67.00 | 0.08 | 0.01 | 8.29 | 1.01 | 7.74 | 0.94 | Sun |
| | Weekends | 66.21 | 0.32 | 0.04 | 8.48 | 1.03 | 7.83 | 0.96 | Weekends |
| | All Days | 64.70 | 0.76 | 0.09 | 8.99 | 1.10 | 8.01 | 0.98 | All Days |

https://pda.ritis.org/suite/updates/

# PDA Suite latest updates

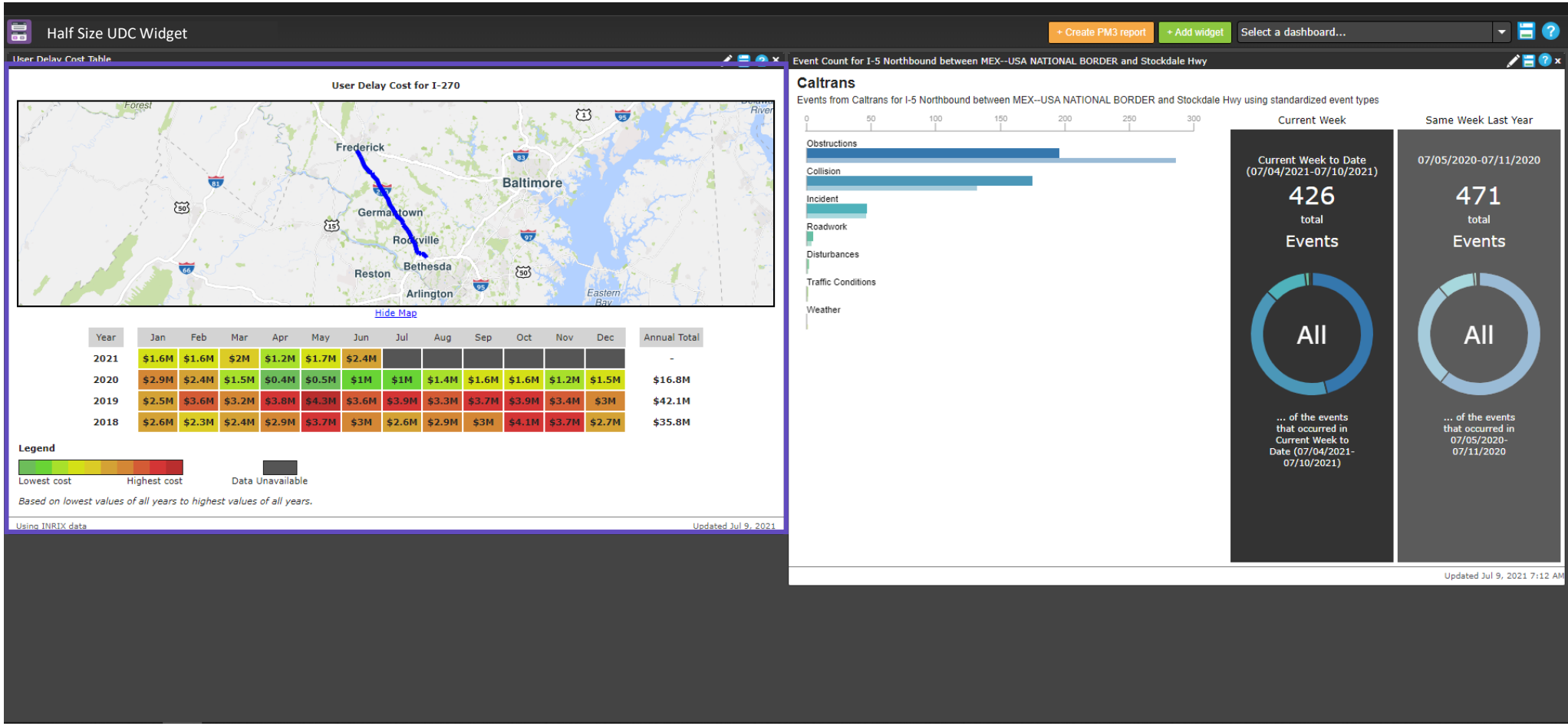
❹ The agency lists in the Event Count Widget and the Clearance Time Widget are now alphabetized.




https://pda.ritis.org/suite/updates/

# PDA Suite latest updates

❺ The UDC widget can now be resized down half the width of the Dashboard. Previously it could not be shrunk below two-thirds of the Dashboard's width.




https://pda.ritis.org/suite/updates/

# PDA Suite latest updates

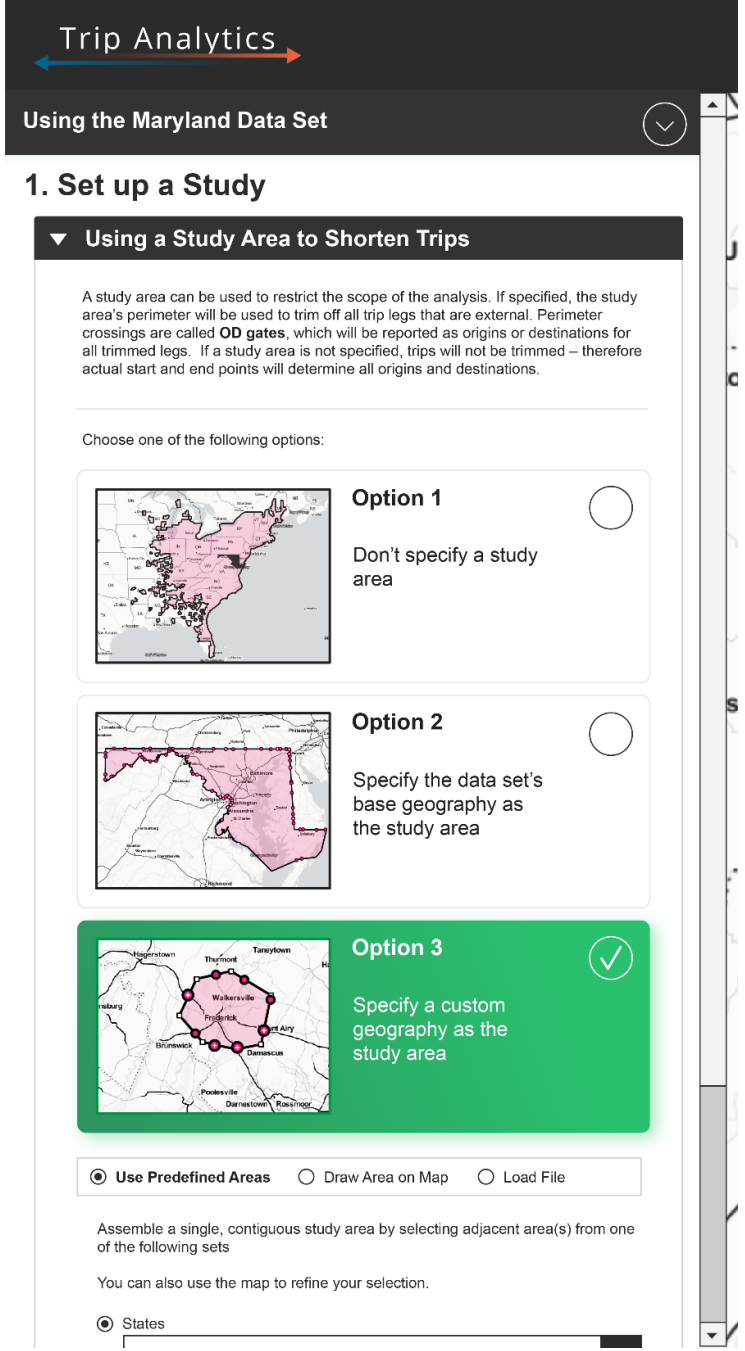
## Various bug fixes

https://pda.ritis.org/suite/updates/

# Trip Analytics

# Trip Analytics latest updates

Significant progress towards Trips Analytics Version 4




https://trips.ritis.org/new

# 3 options for setting up origins and destinations: Option 1 – Don't specify a study area

Using the Maryland Data Set

## 1. Set up a Study

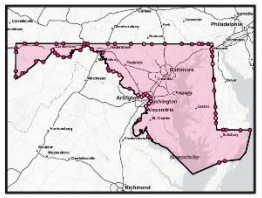
### Using a Study Area to Shorten Trips

A study area can be used to restrict the scope of the analysis. If specified, the study area's perimeter will be used to trim off all trip legs that are external. Perimeter crossings are called **OD gates**, which will be reported as origins or destinations for all trimmed legs. If a study area is not specified, trips will not be trimmed – therefore actual start and end points will determine all origins and destinations.

Choose one of the following options:

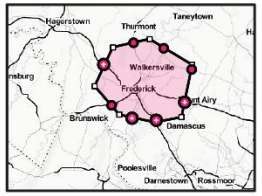
**Option 1**

Don't specify a study area



**Option 2**

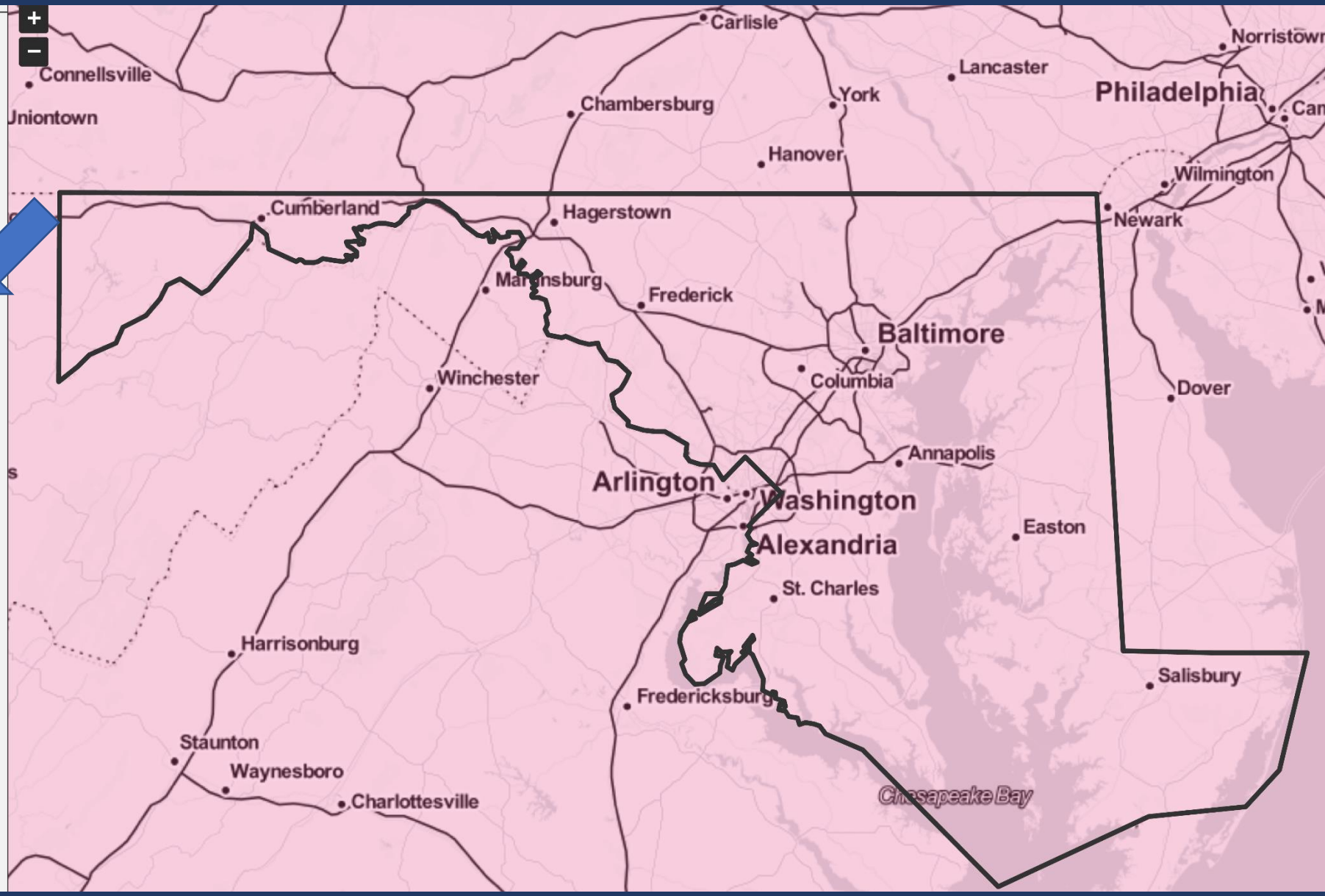
Specify the data set's base geography as the study area



**Option 3**

Specify a custom geography as the study area

NEXT




If a study area is not named, all of map space is regarded as the study area, and zones will define all origins and destinations

# Option 2 – Use the data set's base geography as the study area

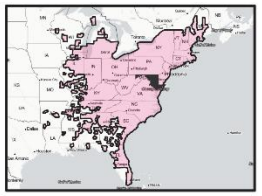
**Using the Maryland Data Set**

## 1. Set up a Study

**Using a Study Area to Shorten Trips**

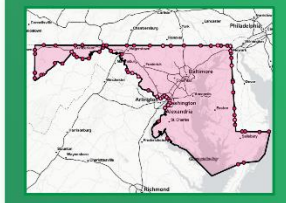
A study area can be used to restrict the scope of the analysis. If specified, the study area's perimeter will be used to trim off all trip legs that are external. Perimeter crossings are called **OD gates**, which will be reported as origins or destinations for all trimmed legs. If a study area is not specified, trips will not be trimmed – therefore actual start and end points will determine all origins and destinations.

Choose one of the following options:



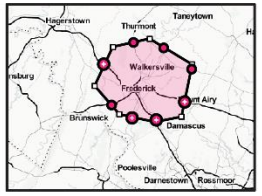
**Option 1**

Don't specify a study area



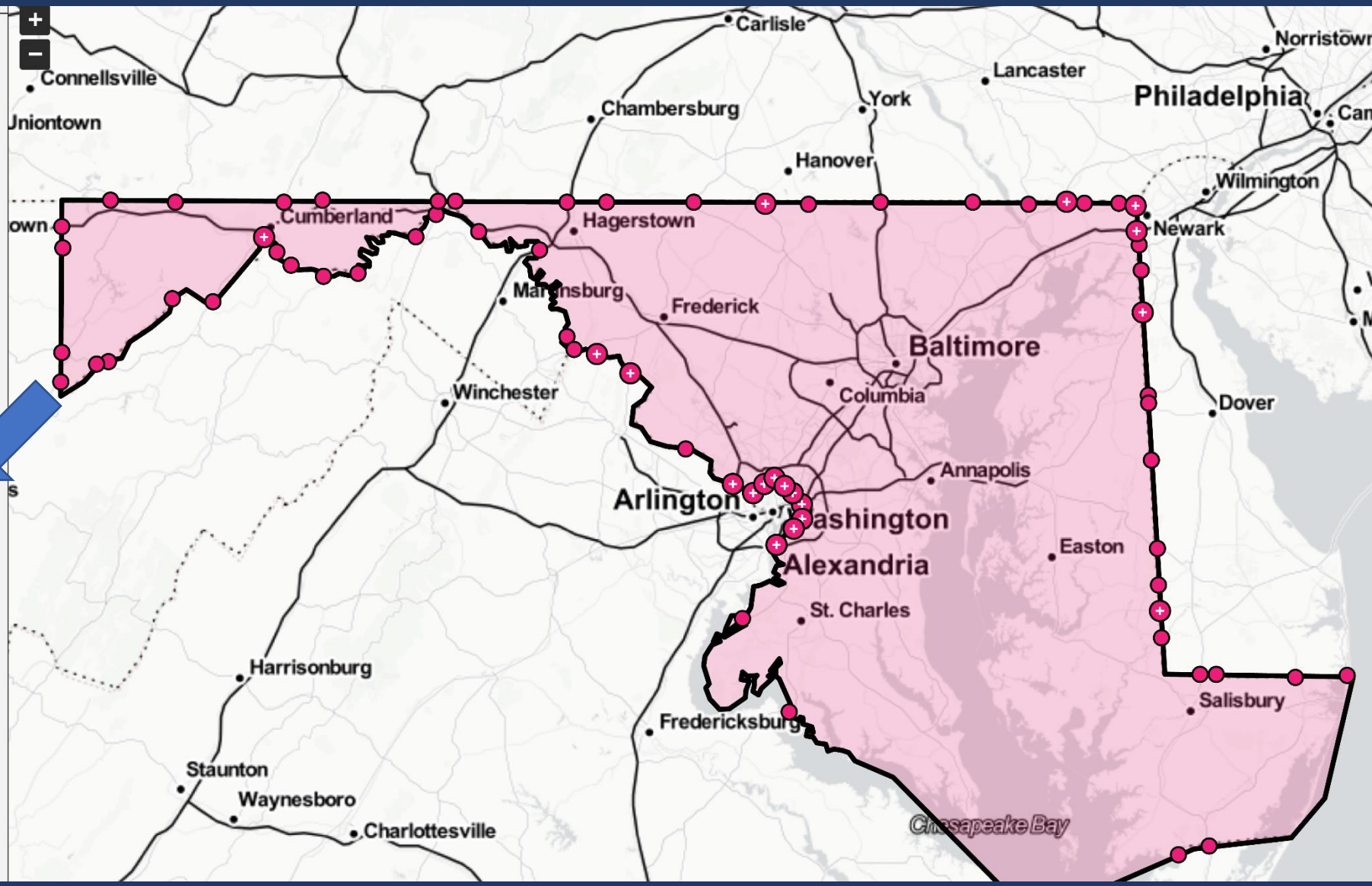
**Option 2**

Specify the data set's base geography as the study area



**Option 3**

Specify a custom geography as the study area




A specified study area divides map space into internal and external regions; external legs are trimmed off, and the trimmed locations (red/pink dots called OD gates) are reported as origins or destinations for those legs.

# Option 3 – Specify, load or create a custom study area

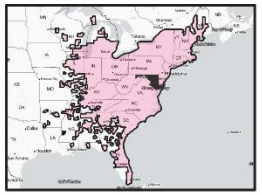
Using the Maryland Data Set

## 1. Set up a Study

### Using a Study Area to Shorten Trips

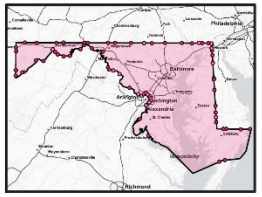
A study area can be used to restrict the scope of the analysis. If specified, the study area's perimeter will be used to trim off all trip legs that are external. Perimeter crossings are called **OD gates**, which will be reported as origins or destinations for all trimmed legs. If a study area is not specified, trips will not be trimmed – therefore actual start and end points will determine all origins and destinations.

Choose one of the following options:



**Option 1**

Don't specify a study area



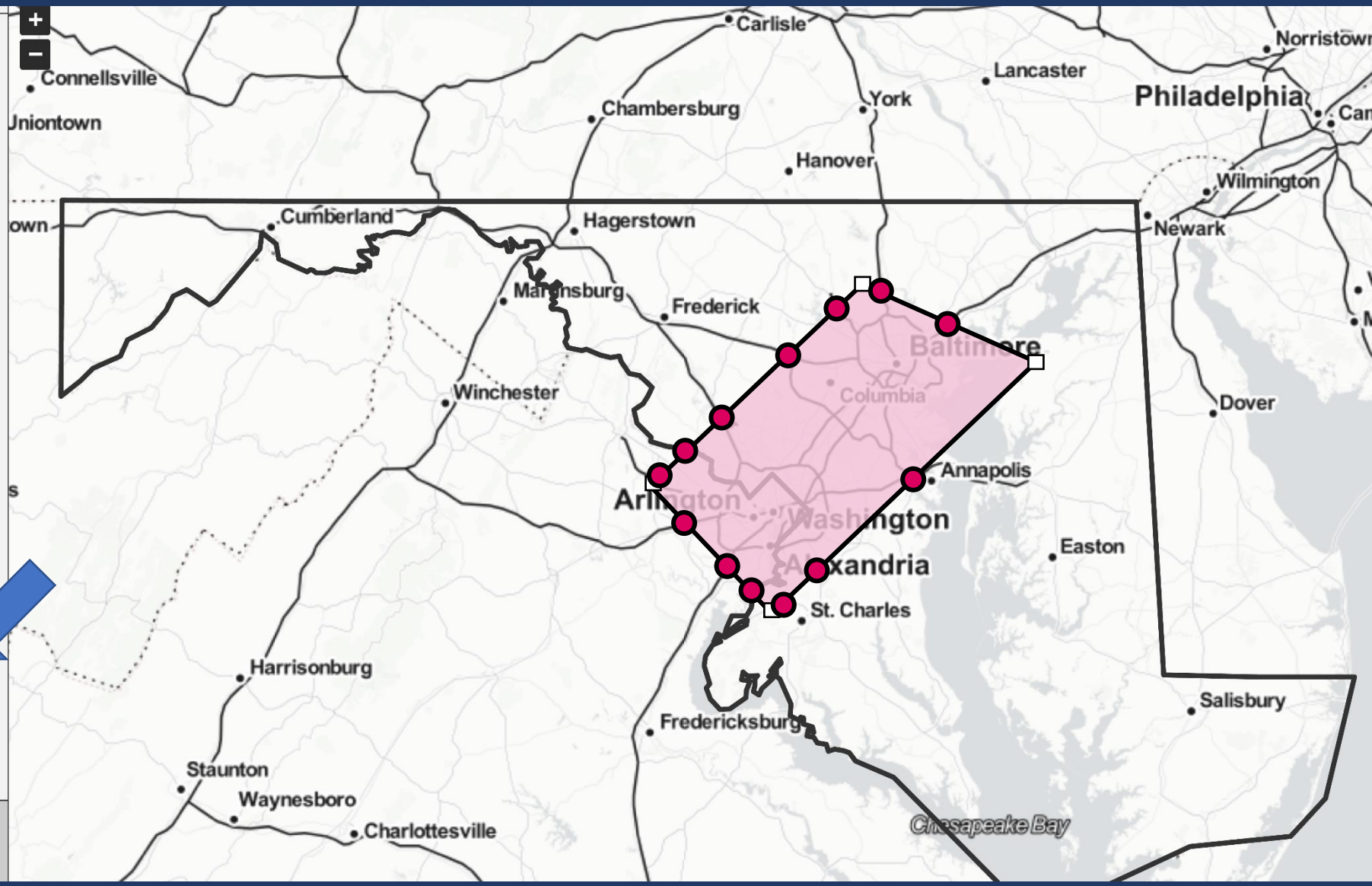
**Option 2**

Specify the data set's base geography as the study area

**Option 3**

Specify a custom geography as the study area

Use Predefined Areas | Draw Area on Map | Load File




A specified study area divides map space into internal and external regions; external legs are trimmed off, and the trimmed locations (red/pink dots called OD gates) are reported as origins or destinations.

# Choosing a zone layer for reporting untrimmed or internal origins and destinations

Using the Maryland Data Set

## 1. Set up a Study

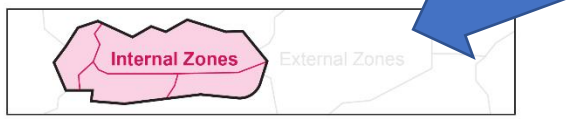
**Using a Study Area to Shorten Trips**

Option 2: **Use base geography as a study area**

Number of study area OD gates: **1324**

**Specify Internal Zones for Origins and Destinations**

Internal zones will be used to report origins and destinations inside the study area. You may specify a predefined zone layer (e.g. counties or zip codes), draw zones on a map, or load a zone file in geoJSON format.



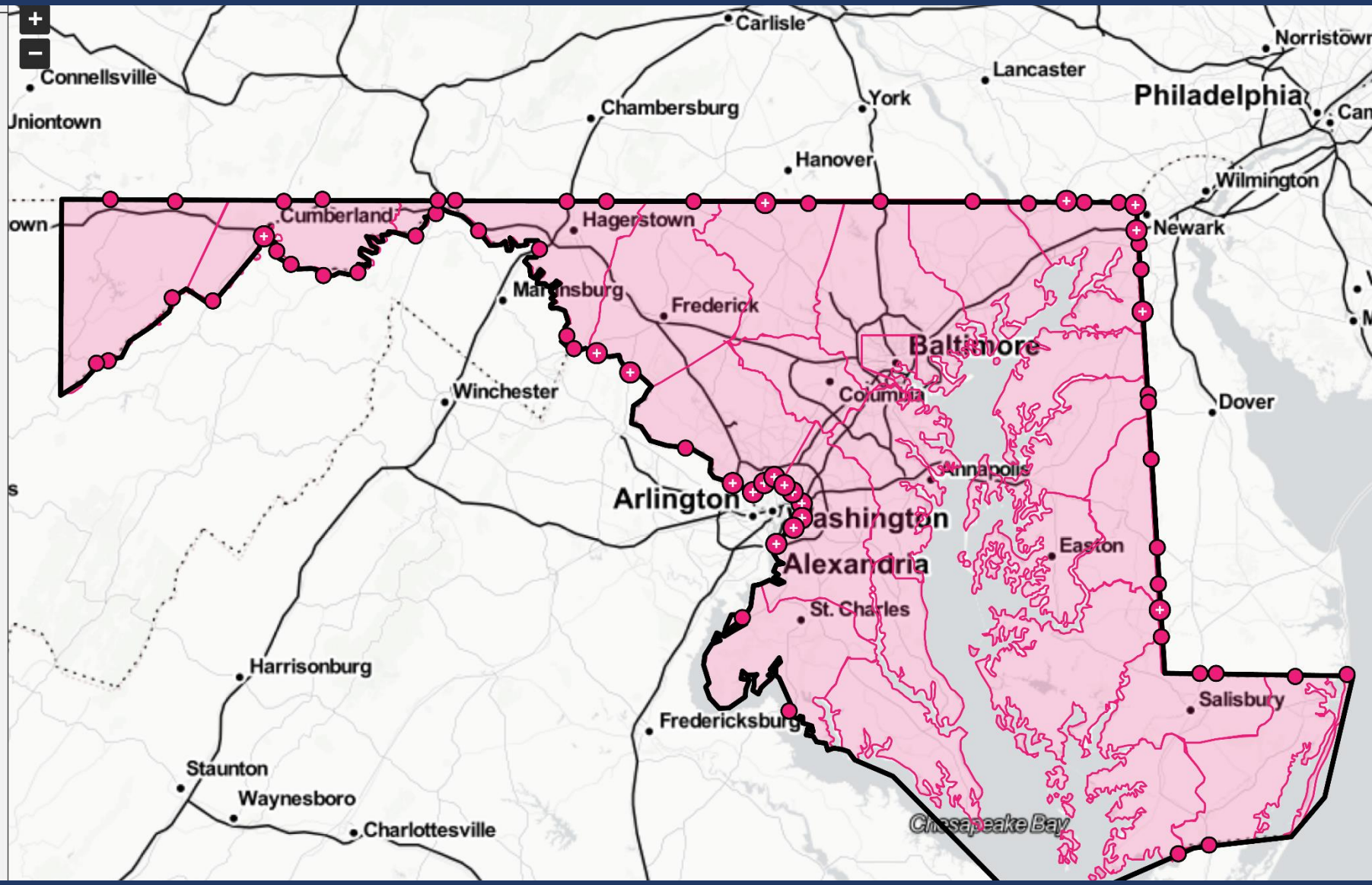

Use Predefined Zones | Draw Zone on Map | Load File

Counties

Specify External Zones

Name Study

SAVE STUDY AND PROCEED TO FILTERS




The internal zone layer will define origins and destinations of all trip legs that have not been trimmed off.

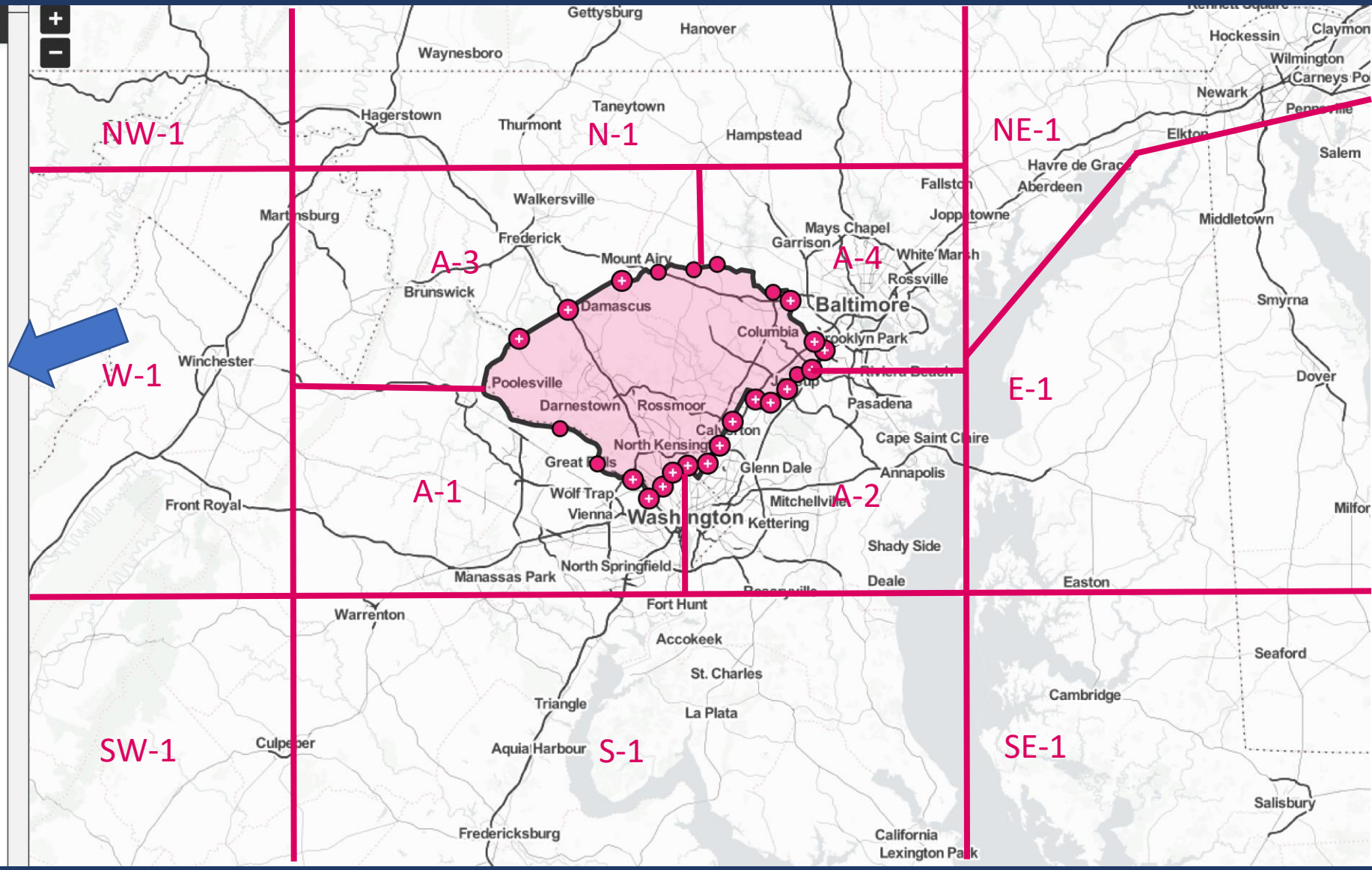
# Choosing an external zone layer for optional analysis of external origins or destinations (switch on/off as needed)

Using the Maryland Data Set

1. Set up a Study

- **Using a Study Area to Shorten Trips** ✓
  - Option 3: **Use custom geography as a study area**
  - Predified areas: **2 Maryland Counties**
  - Number of study area OD gates: **252**
- **Specify Internal Zones for Origins and Destinations** ✓
  - **Counties**
- **Specify External Zones** ✓
  - Custom shape file
- **Name Study**

SAVE STUDY AND PROCEED TO FILTERS




By specifying an external zone layer, user will have the option later to view external origins and destinations (toggle on/off)

# Naming and saving the study to complete set-up

**Using the Maryland Data Set**

## 1. Set up a Study

**Using a Study Area to Shorten Trips**

Option 3: **Use custom geography as a study area**

Predified areas: **2 Maryland Counties**

Number of study area OD gates: **252**

**Specify Internal Zones for Origins and Destinations**

**Counties**

**Specify External Zones**

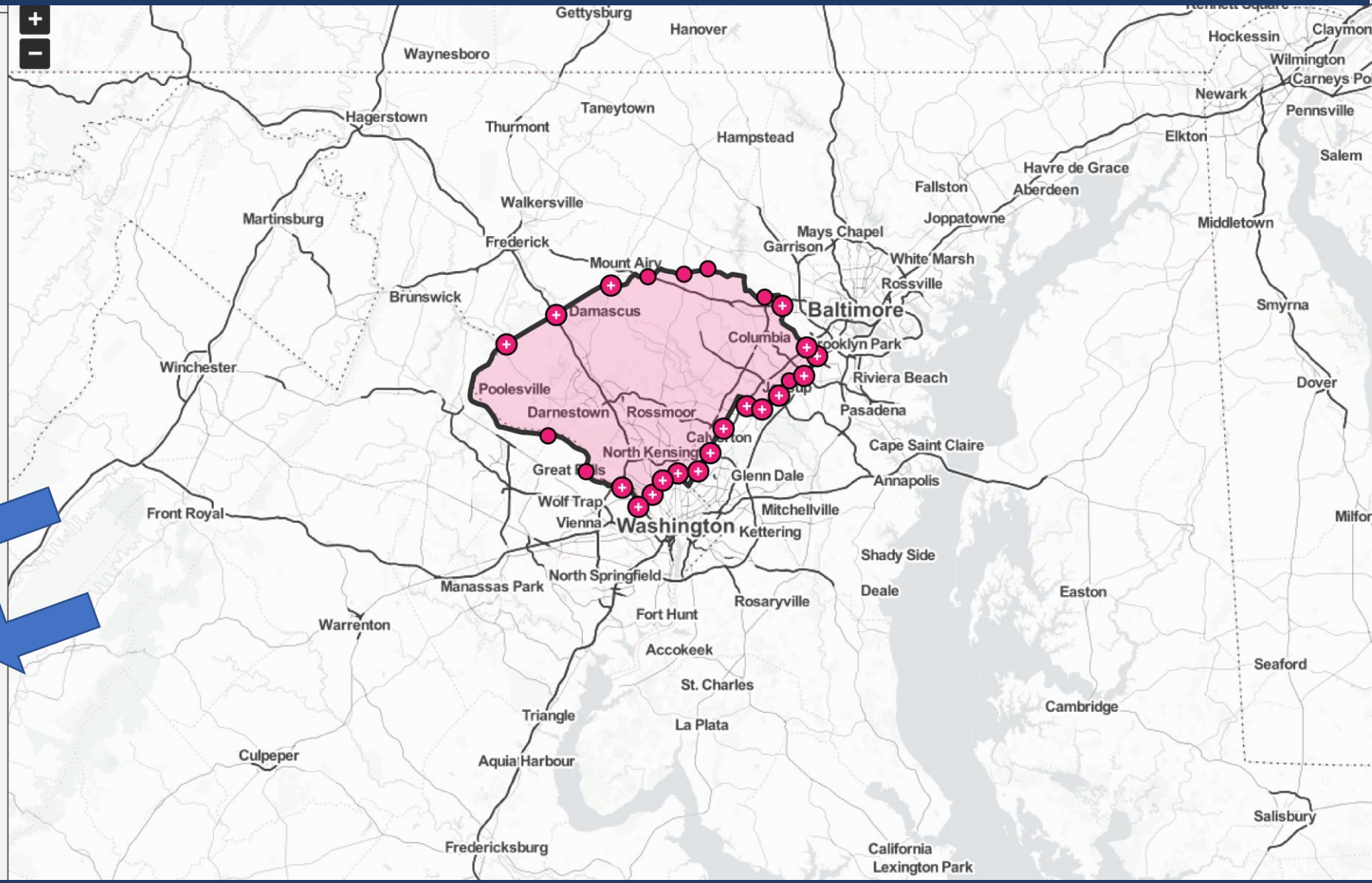
Custom shape file

**Name Study**

The study name will keep related analyses together for easy retrieval in My History.

Montgomery and Howard County Study V2.0

SAVE STUDY AND PROCEED TO FILTERS




After naming and saving the study structure, user may proceed to setting trip filters and submitting queries

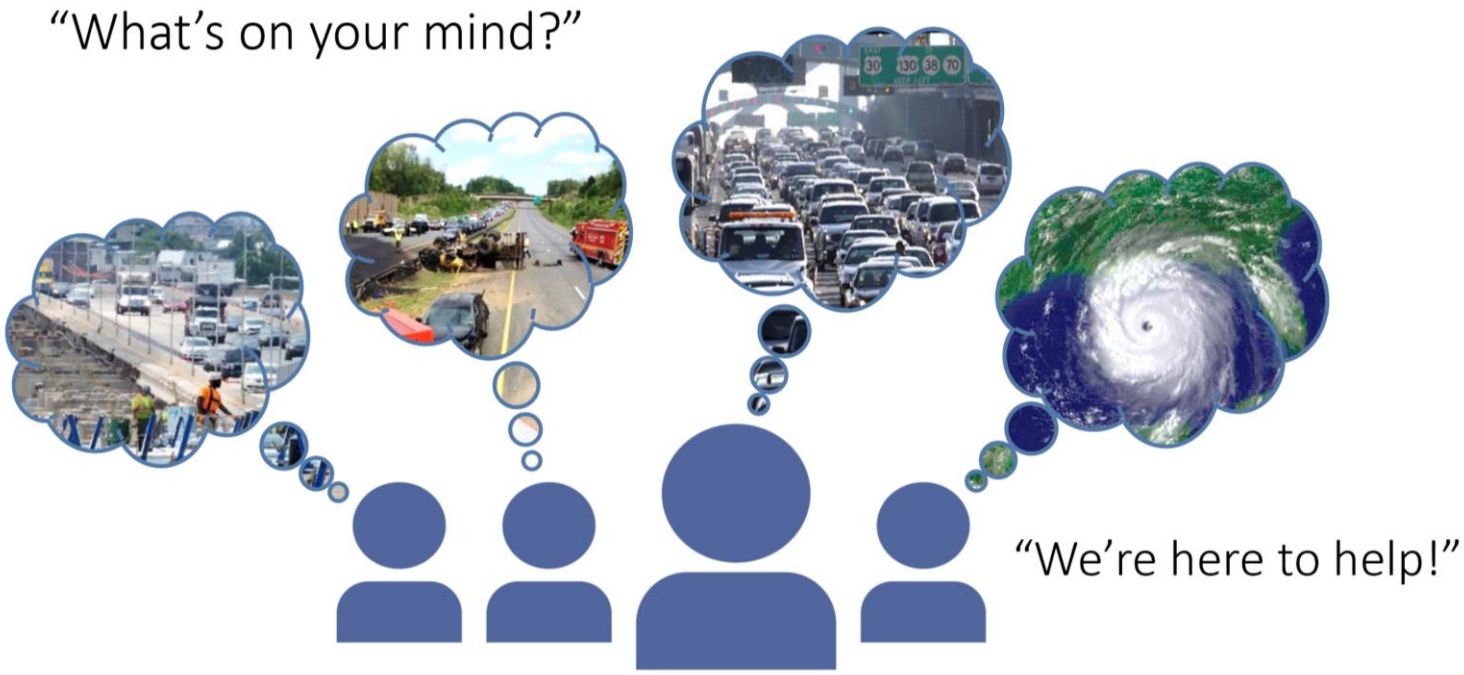
RITIS | PROBE DATA ANALYTICS SUITE

# 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 chat box below, or with an email to support@ritis.org



# Wrap Up

Georgia Department of Transportation

**Matt Glasser**
Assistant State Traffic Engineer, Georgia DOT
RITIS User Group Co-chair

# Questions?



| | | |
|---|---|---|
| **Denise Markow (TETC)** | dmarkow@tetcoalition.org | 301.789.9088 |
| **Joanna Reagle (Logistics)** | jreagle@kmjinc.com | 610.228.0760 |
| **Michael Pack (CATT Lab)** | PackML@umd.edu | |
| **RITIS Tech Support** | support@ritis.org | |
| **PDA Suite Tech Support** | pda-support@ritis.org | |

# Thank you!

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