

# MATOC

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Metropolitan Area Transportation  
Operations Coordination

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## MATOC Overview for MWCOG NCR Winter Weather Briefing

**Mr. Taran Hutchinson**  
MATOC Facilitator

October 31, 2024



# MATOC Mission and Operations

- A joint operations program between **DDOT, MDOT, VDOT, & WMATA** to improve **inter-agency** information sharing and coordination
  - Focuses on DOT **Operations** and Traffic Incident Management
- MATOC's mission is to provide **situational awareness** of day-to-day transportation operations in and around the National Capital Region (NCR)
  - Specifically during the **weekday morning and afternoon rush hour** periods
- **Develop tools and processes** that enables operating agencies and the traveling public to make better decisions
- The MATOC Program is governed by a Steering Committee and supported by several committees and working groups covering specific DOT topic areas;
  - Roadway Operations, Transit Operations, Information Systems
  - **Maintenance / Severe Weather**
  - Construction / Planned Events
- MATOC is **not command and control**, it is **advisory in nature** and serves as a decision support function

## MATOC's Area of Interest

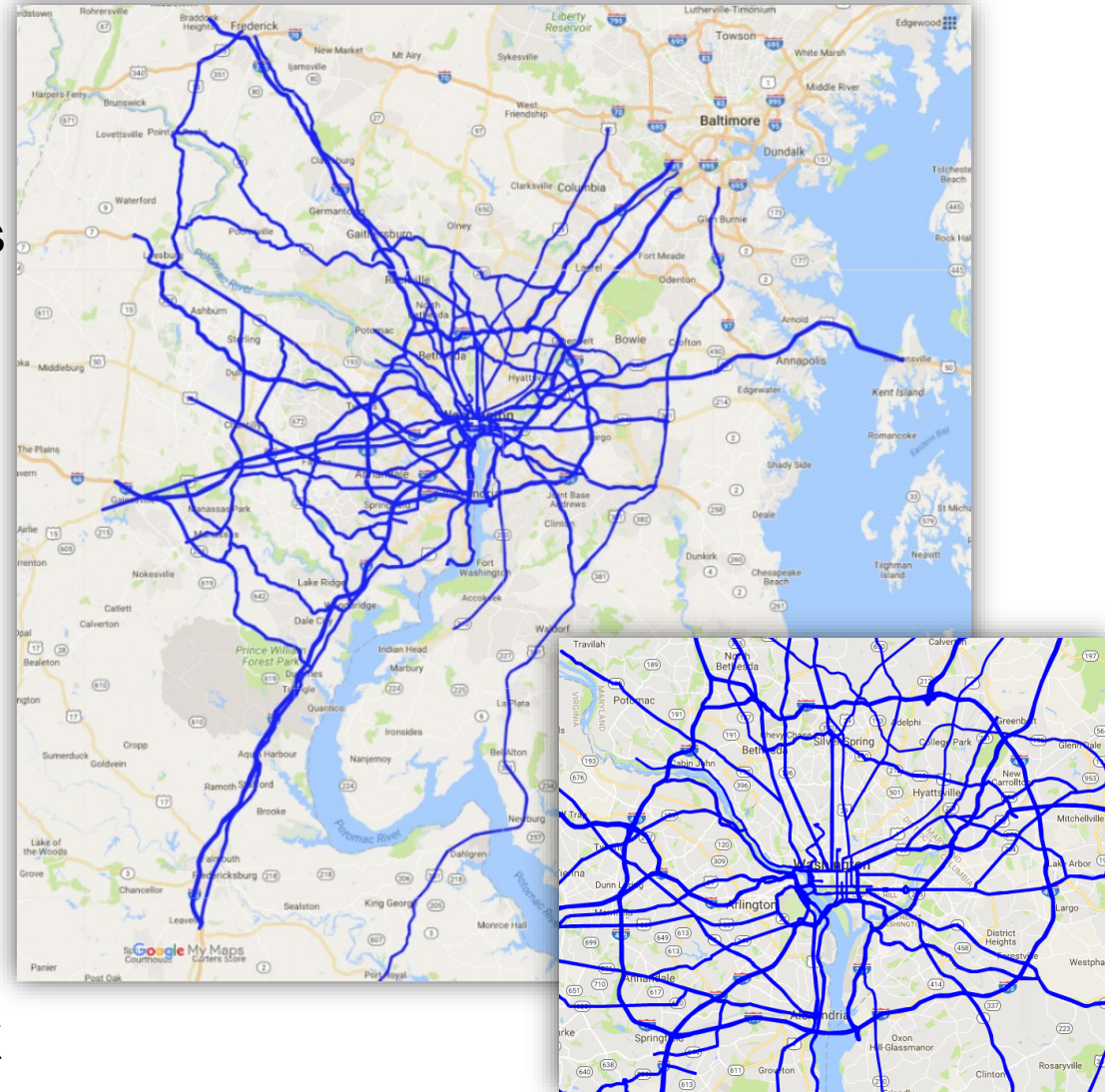
- **Area of Interest**

- National Capital Region "+1"
- Roadway network defined by MATOC Operations Subcommittee
- Expands and contracts based on travel patterns

- **Focus Areas**

- Interstates and major arterials
- Jurisdictional borders and river crossings
- Incidents or events that may impact multiple jurisdictions or transportation modes
- Special events and seasonal hotspots and bottlenecks

- **MATOC has tools to monitor this network**



## MATOC Operations Center

- **Normal Operations**

- Monday-Friday, 4:30am-8:00pm
- On-Call after hours and weekends; rotating schedule
- Able to ramp up to 24/7 coverage
- Five staff; two frontline operators and three in support roles

- **Operational Posture**

- **Normal Operations:** Focus on weekday AM/PM rush
- **Enhanced Operations:**
  - Planned/Special Events – July 4<sup>th</sup>, Inaugurations, etc.
  - **Severe Weather** – Winter storms, derechos, hurricanes, etc.

- Serves as a **transportation watch desk / information clearing house / resource desk** for its stakeholders

- “Detect, Verify, Evaluate, Elevate/Notify, Re-evaluate” (Goal: 15 minutes or less)

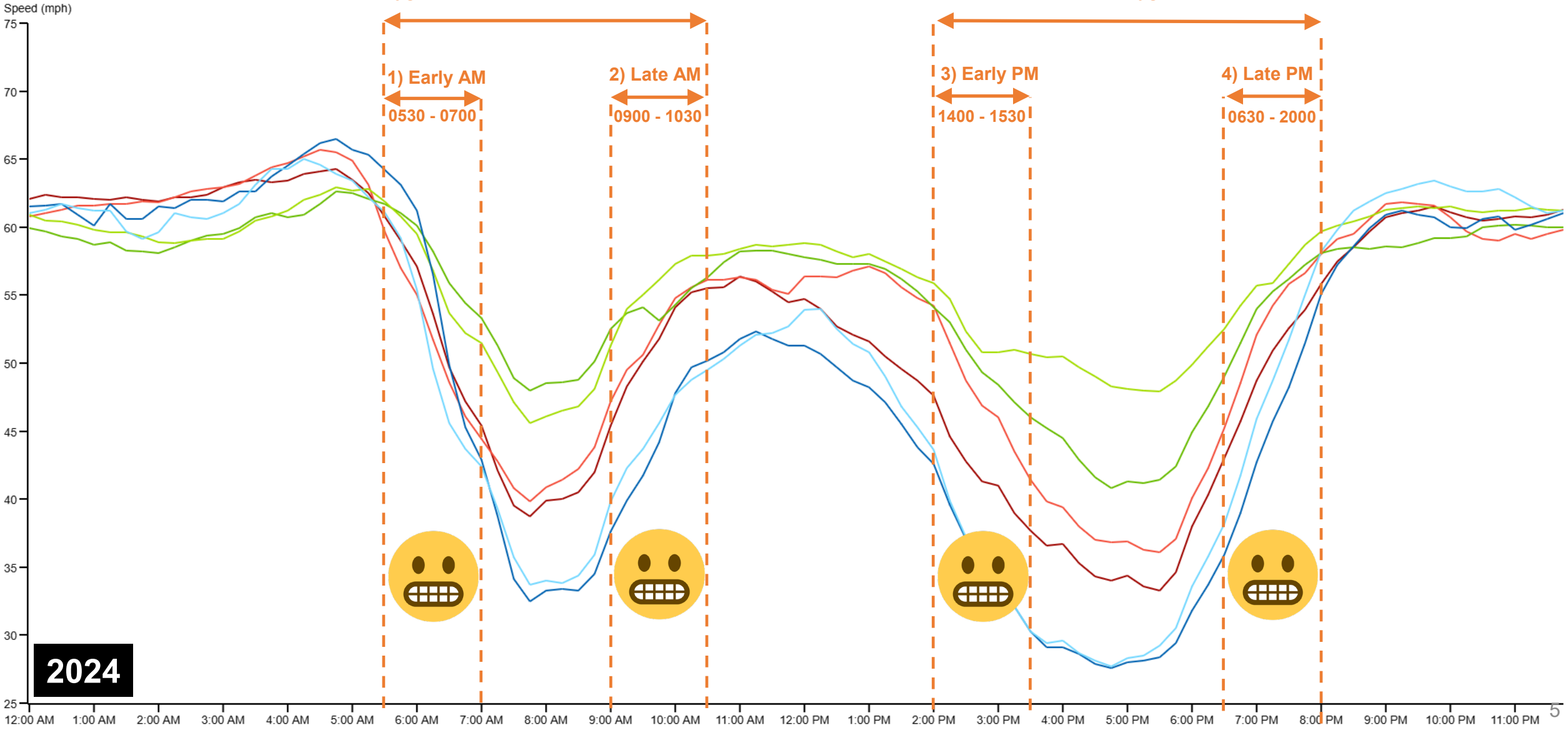


# Performance Chart: AM & PM Rush

## NCR Freeway Speeds (2024)

Averaged per fifteen minutes

September 2 - October 25, 2024 (Weekdays Only)



Speed: The current estimated harmonic mean speed for the roadway segment in miles per hour.

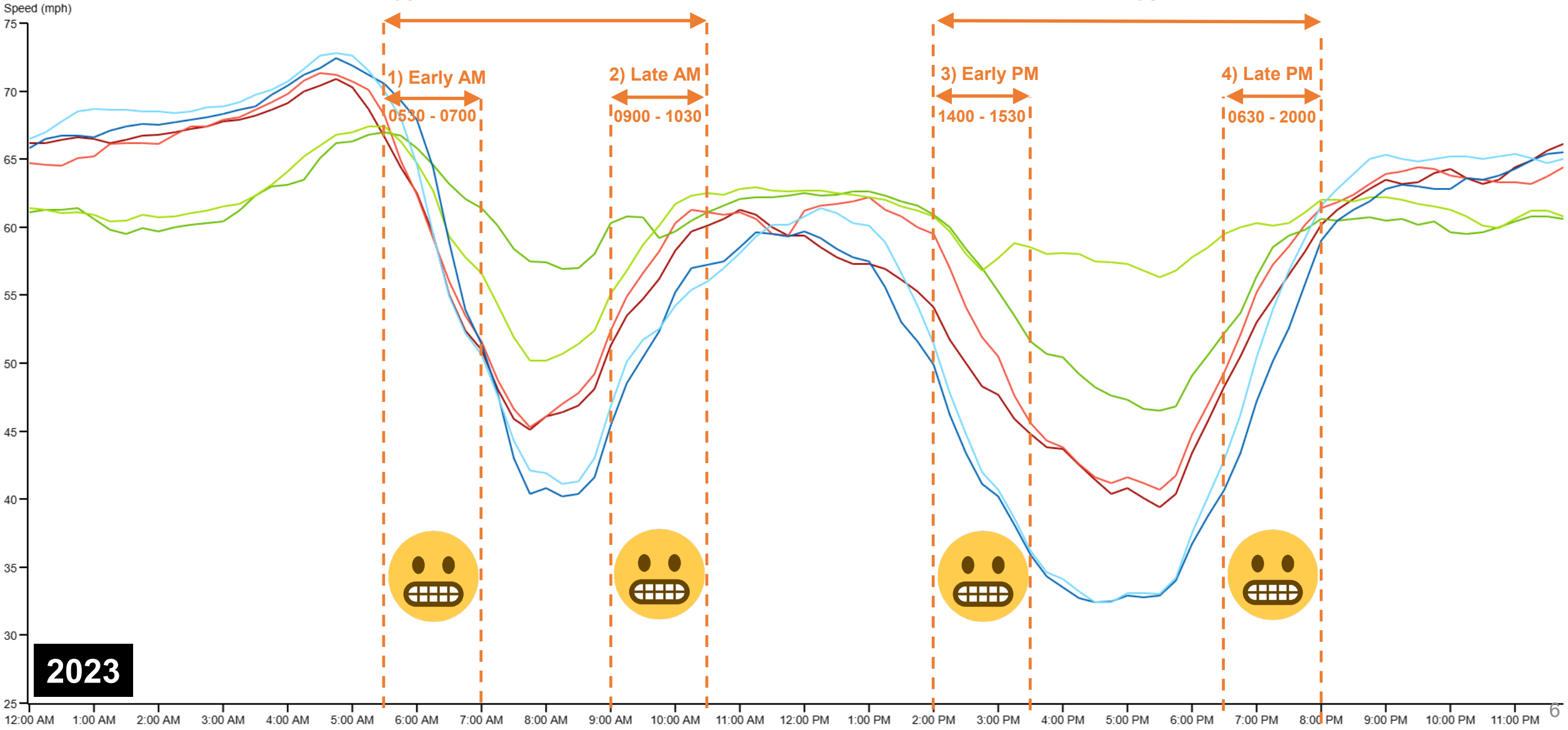
■ Clockwise - INRIX   
 ■ Counterclockwise - INRIX   
 ■ Eastbound - INRIX   
 ■ Northbound - INRIX   
 ■ Southbound - INRIX   
 ■ Westbound - INRIX

# Performance Chart: AM & PM Rush

## NCR Freeway Speeds (2023)

Averaged per fifteen minutes

September 4 - October 27, 2023 (Weekdays Only)



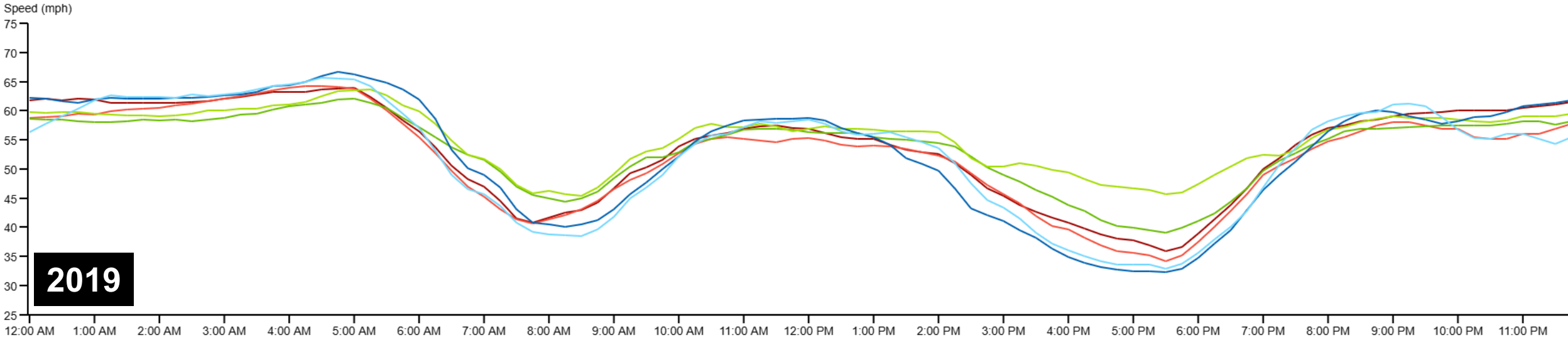
# Performance Chart: AM & PM Rush

## NCR Freeway Speeds: Comparison (2024 vs 2019)

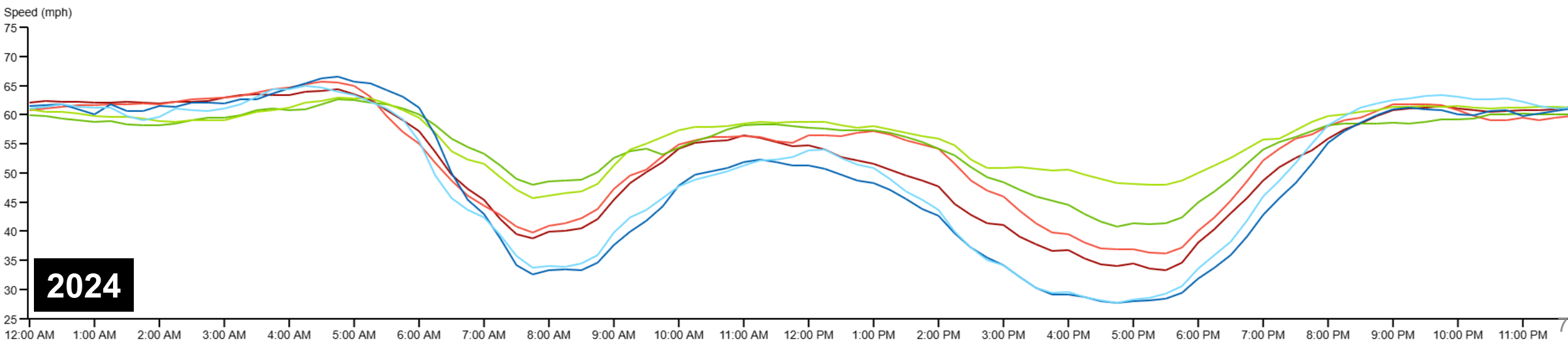
Averaged per fifteen minutes

September 2 - October 25, 2019 (Weekdays Only)

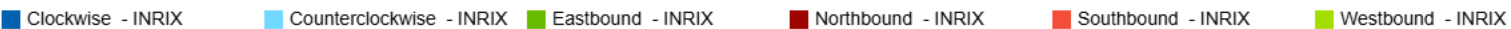
PROBE DATA  
ANALYTICS SUITE



September 2 - October 25, 2024 (Weekdays Only)



Speed: The current estimated harmonic mean speed for the roadway segment in miles per hour.

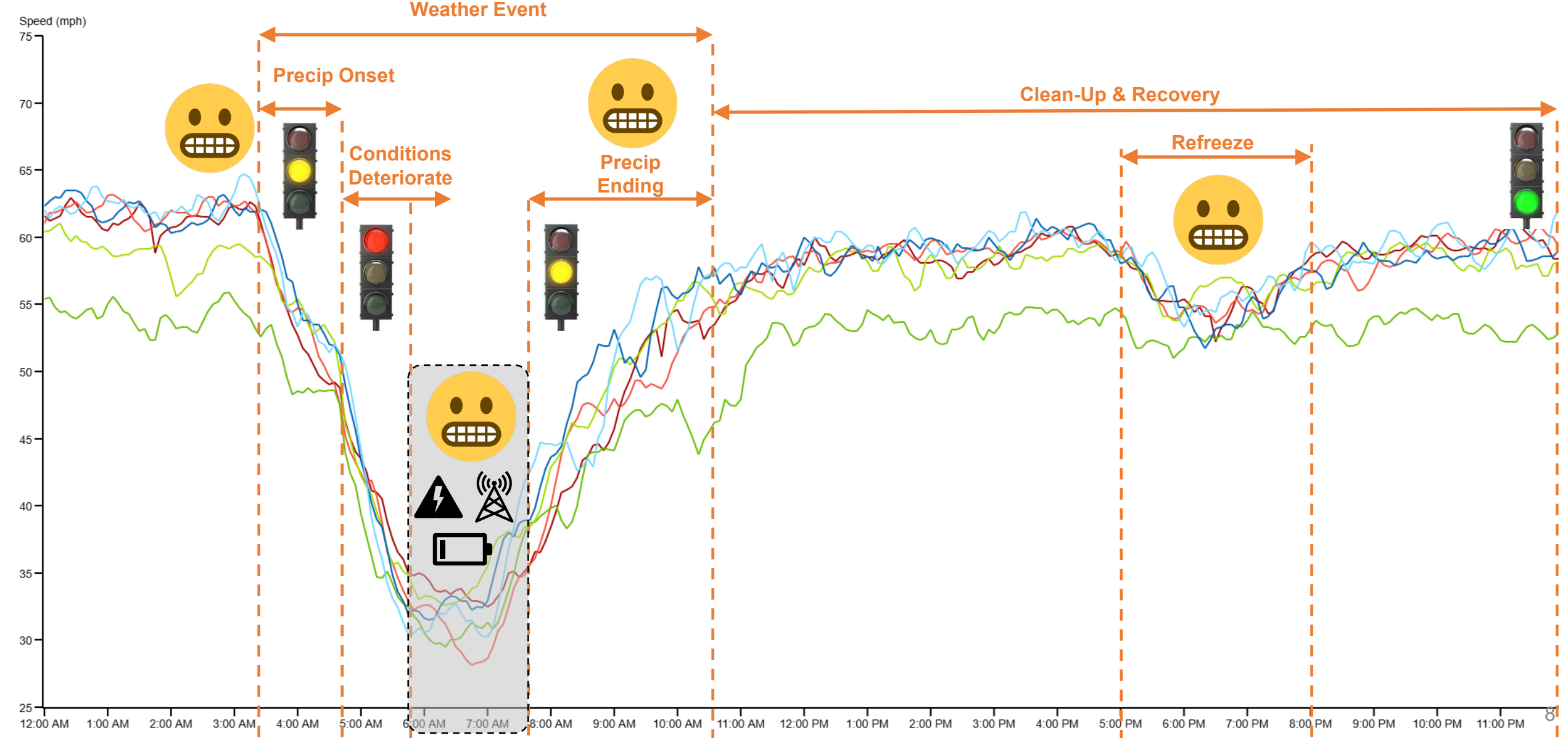


# Performance Chart: Weather Event

## NCR Freeway Speeds: Winter Weather Event

Averaged per five minutes

Friday, January 19, 2024



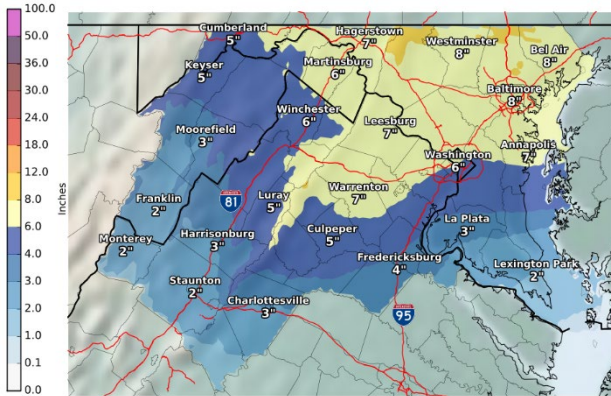
Speed: The current estimated harmonic mean speed for the roadway segment in miles per hour.

- Clockwise - INRIX
- Counterclockwise - INRIX
- Eastbound - INRIX
- Northbound - INRIX
- Southbound - INRIX
- Westbound - INRIX

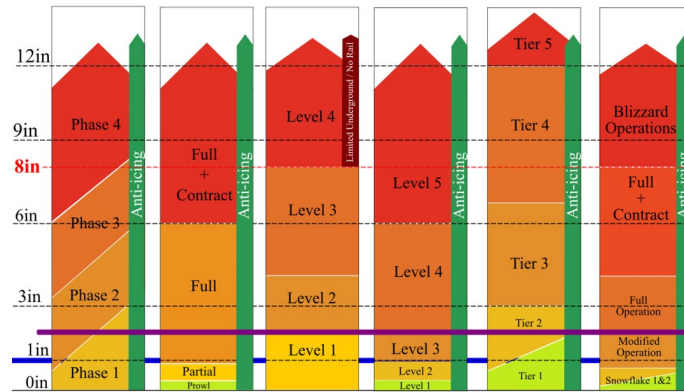


# Focus Area: Winter Operations

- **MATOC Severe Weather Coordination Working Group (SWCWG)** serves as a forum for select DOT maintenance representatives to share/discuss mobilization and recovery plans before, during and after widespread severe weather events
- **MATOC Transit Task Force (TTF)** is a forum for regional/local transit operators to discuss service coordination issues related to unplanned and planned events



Weather Forecast



Agency Mobilization Plans

Transportation System Status Levels		Suggested terminology and PIO templates
<b>Road Condition 5: IMPASSABLE/ DANGEROUS/ TREACHEROUS</b>	Some roads could be temporarily impassable. This may be the result of severe weather (low visibility, etc.) or road conditions (drifting, excessive unplowed snow, glare, ice, accidents, stranded vehicles, etc.) Skeletal transit services. Limited above-ground rail service if more than 8" of accumulation. Lane drops in certain sections.	"treacherous", "impassable", "dangerous" Be where you need to be before the weather gets bad. Stay where you are.
<b>Road Condition 4: ICY/SNOW PACKED</b>	The pavement surface is covered with packed snow and/or ice. There may be loose snow on top of the icy or packed snow surface. Transit lifeline services only with significant delays for rail and bus. Refreeze possible. Lane drops in certain sections.	"unsafe", "impassable" "major delays" Be where you need to be by 45mins. Avoid or postpone travel for next 4 hours. Stay at the office an extra 4 hours, or leave early, to avoid travel during a winter storm.
<b>Road Condition 3: SNOW AND/OR SLUSH COVERED</b>	The pavement surface has continuous stretches of packed snow with or without loose snow on top of the packed snow or ice. Core bus services only. Delays in rail services. Lane drops on certain sections of roadways.	"caution", "passable" Avoid being stranded at bus stops Avoid or postpone travel for next 4 hours. Stay off the roads. Stay at the office an extra 4 hours, or leave early, to avoid travel during a winter storm.
<b>Road Condition 2: SNOW / SLUSH COVERED W/ WHEEL TRACKS EXPOSED</b>	Accumulations of loose snow or slush up to 2 inches are found on the pavement surface. Packed and bonded snow and ice are not present. Regular transit services with some minor exceptions and detours for buses. Drifting snow.	"passable" Avoid discretionary travel. Road crews engaged in clearing activities. Curtail "selective" travel. Avoid unnecessary travel.
<b>Road Condition 1: CLEAR WET/DRY</b>	Clear and wet/dry pavement surface is the general condition. There are occasional areas having snow or ice accumulations resulting in drifting, sheltering, cold spots, frozen melt-water, etc. Transit operations per schedules.	"passable"

Road Conditions  
Anticipated/Observed

# Road Conditions Table

Transportation System Status Levels		Suggested terminology and <i>PIO templates</i>
<p><b>Road Condition 5: IMPASSABLE/ DANGEROUS/ TREACHEROUS</b></p> <p>Some roads could be <b>temporarily impassable</b>. This may be the result of severe weather (low visibility, etc.) or road conditions (drifting, excessive unplowed snow, glare, ice, accidents, stranded vehicles, etc.) Skeletal transit services. Limited above-ground rail service if more than 8" of accumulation. Lane drops in certain sections.</p>		<p>"treacherous", "impassable", "dangerous" <i>Be where you need to be by &lt;time&gt;.</i>  <i>Get where you need to be before the weather gets bad.</i>  <i>Stay where you are.</i></p>
<p><b>Road Condition 4: ICY/SNOW PACKED</b></p> <p>The pavement surface is <b>covered with packed snow and/or ice</b>. There may be loose snow on top of the icy or packed snow surface. Transit lifeline services only with significant delays for rail and bus. Refreeze possible. Lane drops in certain sections.</p>		<p>"unsafe", "impassable" "major delays" <i>Be where you need to be by &lt;time&gt;.</i> <i>Avoid or postpone travel for next &lt;hours&gt;.</i>  <i>Stay at the office an extra &lt;hour&gt;, or leave early, to avoid travel during a winter storm.</i></p>
<p><b>Road Condition 3: SNOW AND/OR SLUSH COVERED</b></p> <p>The pavement surface has continuous stretches of packed snow with or without loose snow on top of the packed snow or ice. Core bus services only, delays in rail services. Lane drops on certain sections of roadways.</p>		<p>"caution", "passable"  <i>Avoid being stranded at bus stops</i>  <i>Avoid or postpone travel for next &lt;hours&gt;.</i>  <i>Stay off the roads.</i>  <i>Stay at the office an extra &lt;hour&gt;, or leave early, to avoid travel during a winter storm.</i></p>
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<p><b>Road Condition 1: CLEAR WET/DRY</b></p> <p>Clear and wet/dry pavement surface is the general condition. There are occasional areas having snow or ice accumulations resulting in drifting, sheltering, cold spots, frozen melt-water, etc. Transit operations per schedules.</p>		<p>"passable"</p>

## Typical brief out

- "Currently our interstates are at Condition 2, closer to Condition 3 in our western region. Our primaries are at Condition 3. We have started on our secondary roads and subdivision but they are both at Condition 4"
- "If the forecast holds, we should be able to get our interstates and primaries to Condition 1 by 8am. Secondary roads should be at Condition 2 by noon. We expect subdivisions to remain at a Condition 3 until mid afternoon."

# MATOC Operations

## Severe Weather/Special/Short or No Notice Events

### 1) Pre-Event

- Monitor weather forecasts and **DOT mobilization plans**
- Consult with the **MATOC Severe Weather Coordination Working Group (SWCWG)**
- Participate in and monitor regional communications:
  - MATOC SWCWG Calls/Listserv
  - MATOC Transit Task Force Calls/Listserv
  - MWCOG Severe Weather Calls
- Ramp up to Enhanced/Severe Weather Operations 2-3 hours prior to the event entering NCR
- Two 2-person teams work in shifts filling Operations & Support roles

### 2) During Event

- Monitor core systems as well as other storm related resources
- Provide hourly reporting of major transportation incidents, road closures, and changes in transit (bus & rail) service levels
- Check in with the DOT Operations, RITIS Support team, MATOC SWCWG, MATOC Transit Task Force as needed

### 3) Post-Event

- Return to Normal Operations & Reporting as recovery operations begin to wind down

# Tools for your Toolbox

- **Regional Integrated Transportation Information System (RITIS)** – Automated data integration and dissemination system that provides real-time and archived information on the status of the transportation network. Limited to public sector access

- **TrafficView** – Public version of RITIS



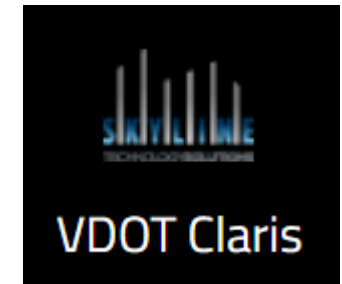
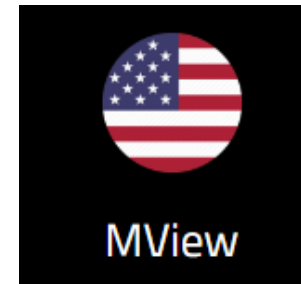
- Video Sharing Systems

- **MVIEW** – MCAC’s Regional CCTV sharing platform for public safety partners and first responders (DC, DE, MD, NJ, PA, VA)

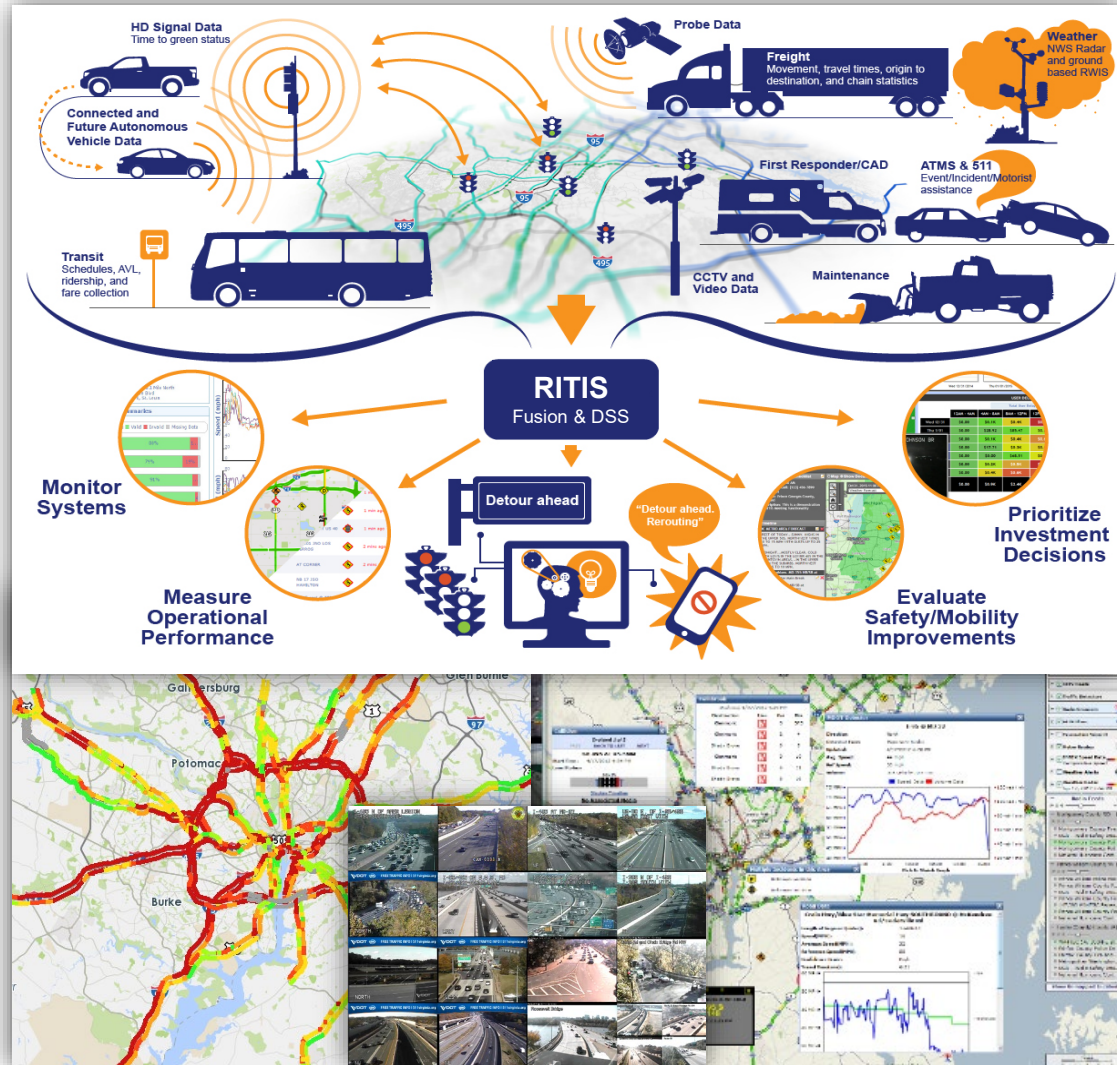
- **VDOT Claris** - VDOT’s Traffic CCTV sharing platform for public sector partners

- **NCR Watch Desk HSIN Operations Connect Room**

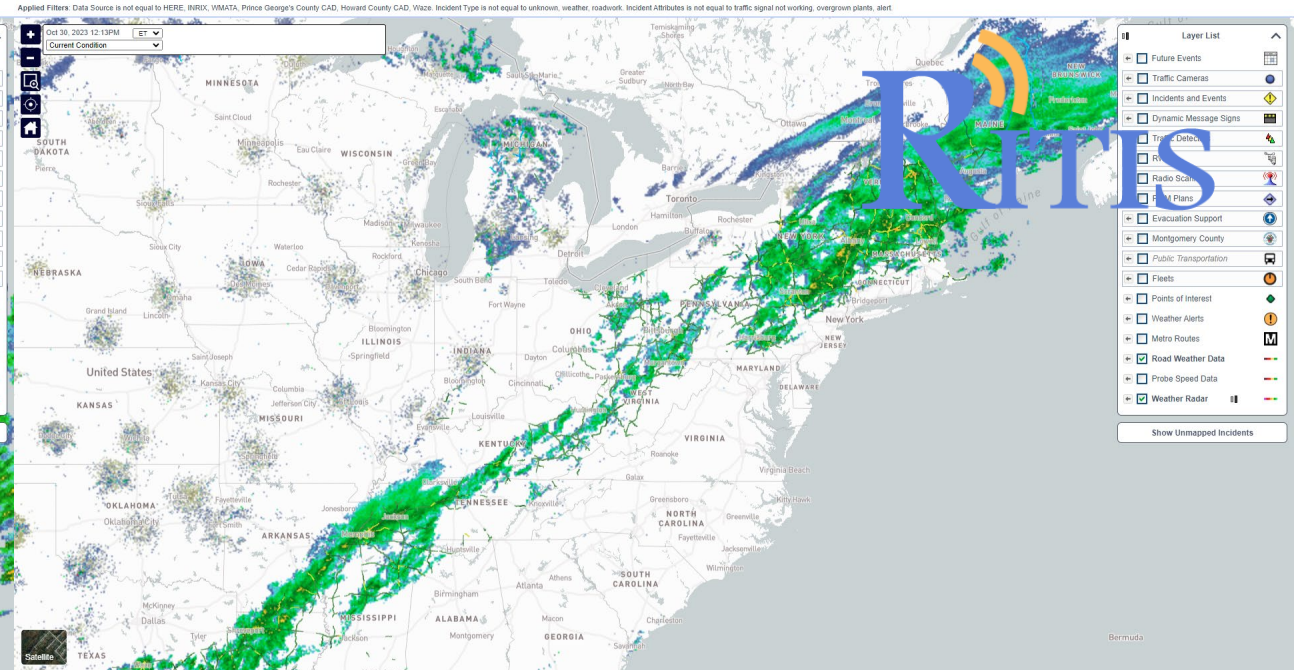
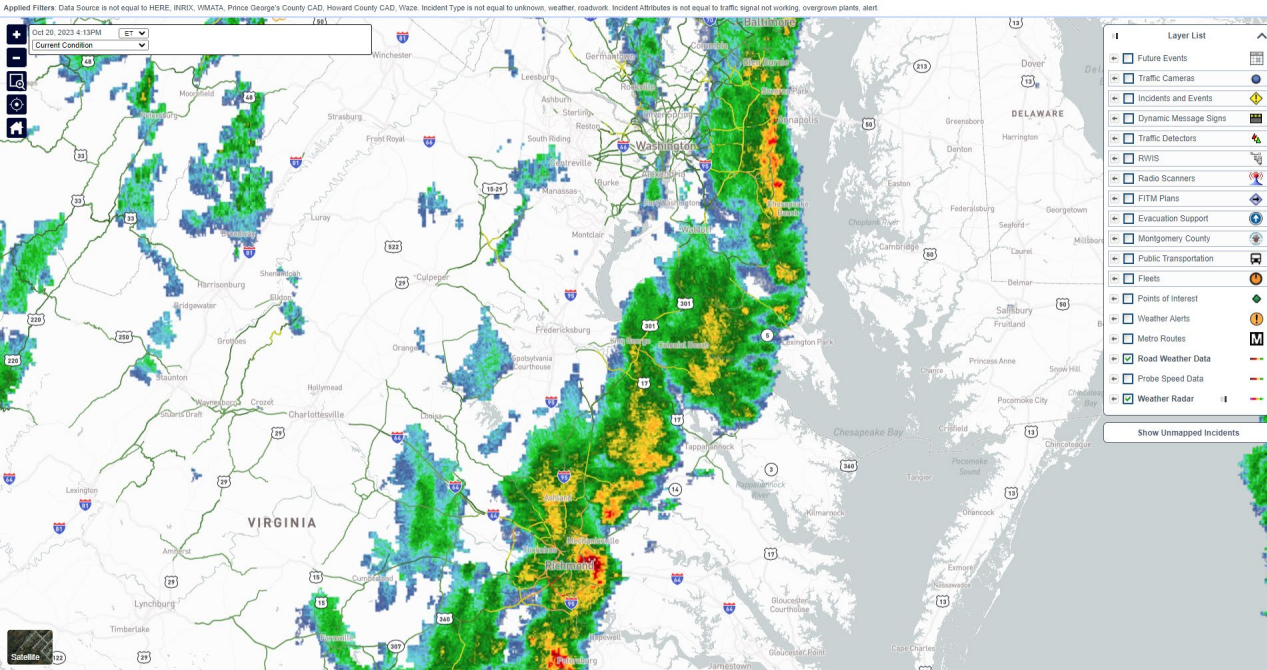
- Situational Awareness Chat Room for the NCR



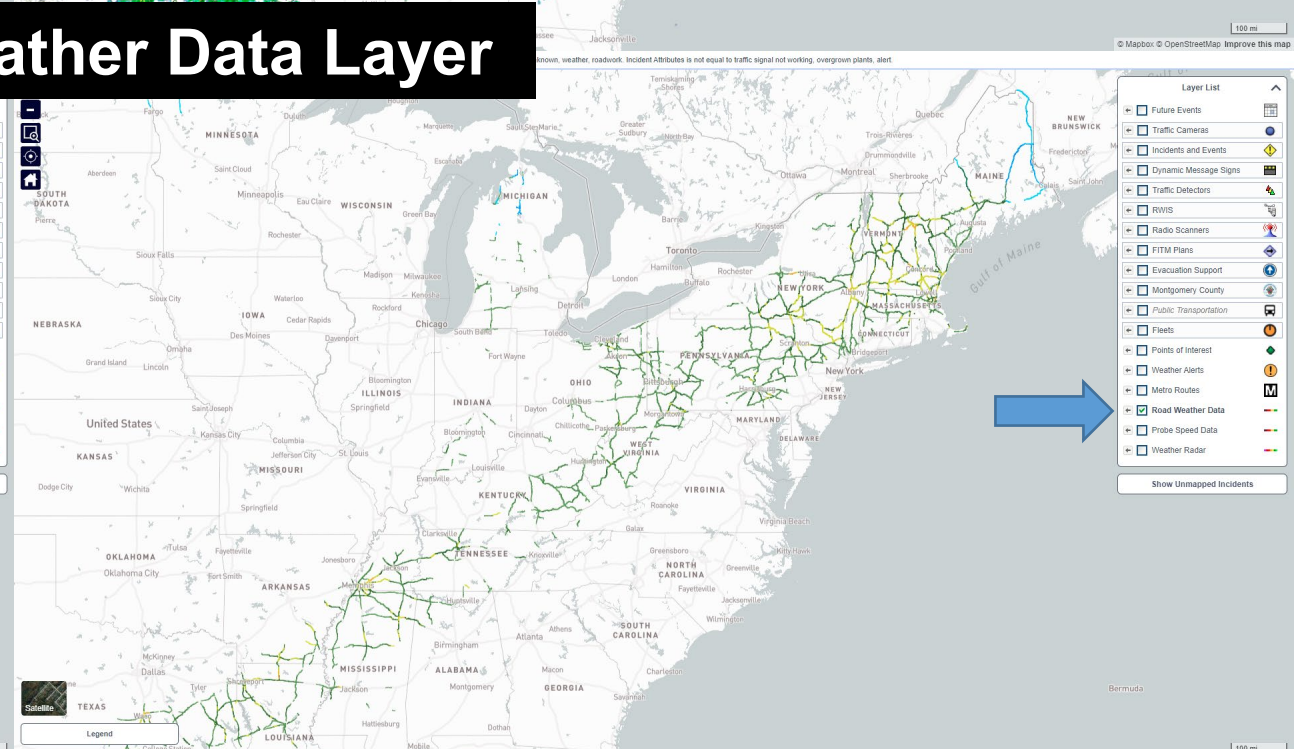
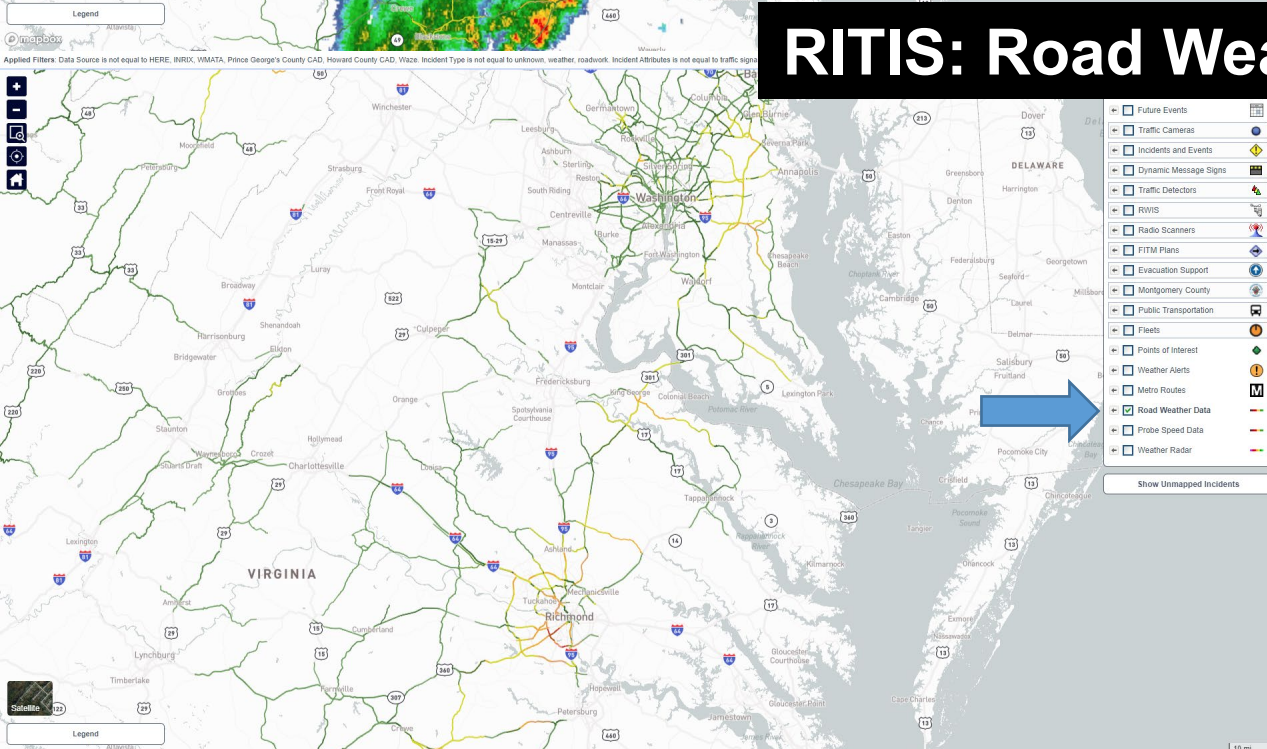
# Regional Integrated Transportation Information System



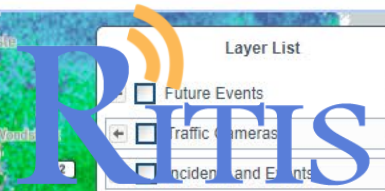
- Serves as MATOC's **common operating picture** to monitor the transportation network in and around the National Capital Region
- **Limited to public sector agencies**
- Approximately **15,000 RITIS users** from around the nation representing various disciplines
- Gives users a **common operating picture** of a region's surface transportation network
- **RITIS Training Available**
  - RITIS 101 – For Operations Centers & Staff
  - Webinar: Fri, Nov 22 @10:00AM EST
  - [www.matoc.org/training](http://www.matoc.org/training)
  - Training requests: [training@matoc.org](mailto:training@matoc.org)



# RITIS: Road Weather Data Layer



# RITIS: Road Weather Data Layer



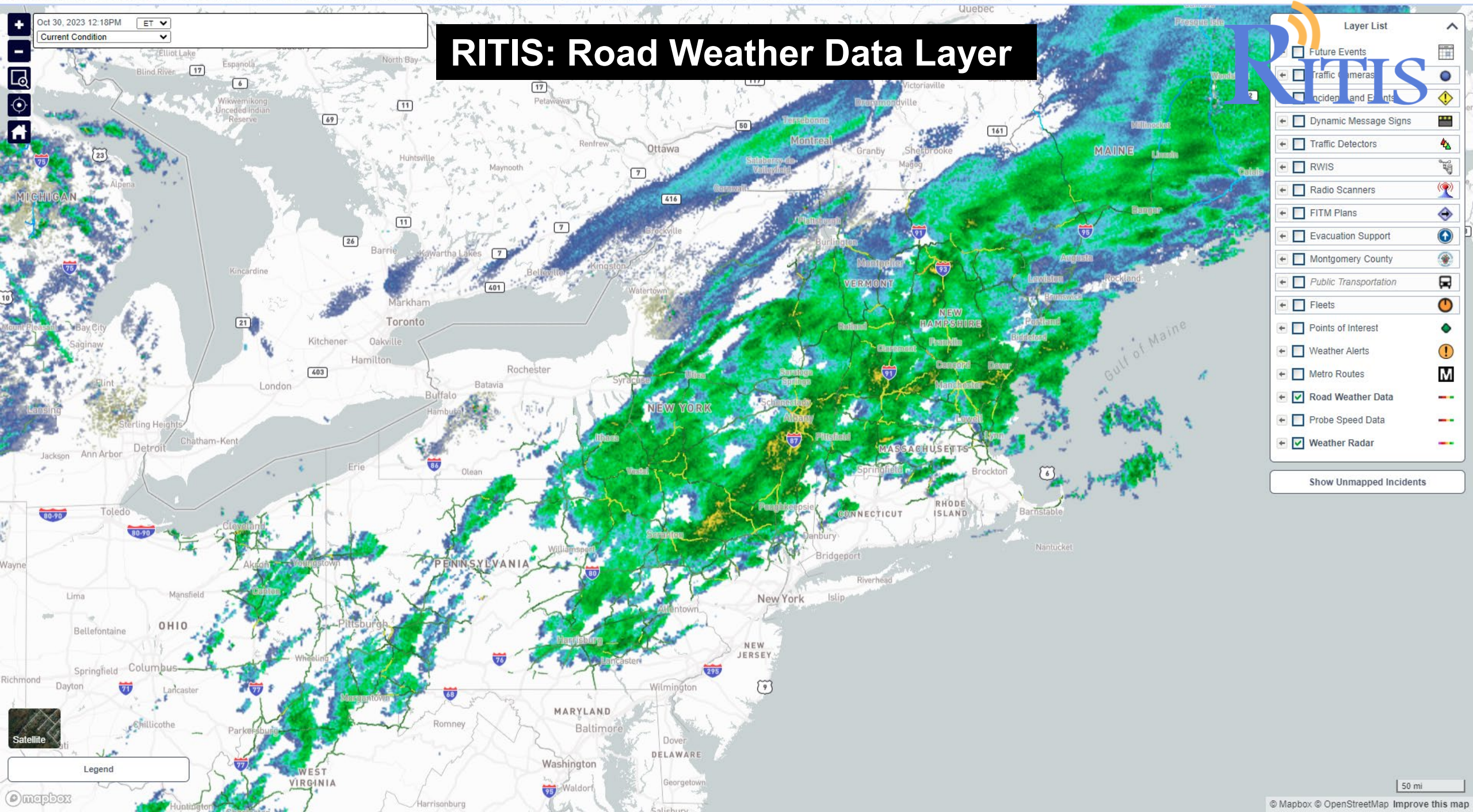
Oct 30, 2023 12:18PM ET  
Current Condition

A set of standard map navigation controls including a plus sign for zoom in, a minus sign for zoom out, a magnifying glass for search, a circular arrow for refresh, and a home icon.

### Layer List

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

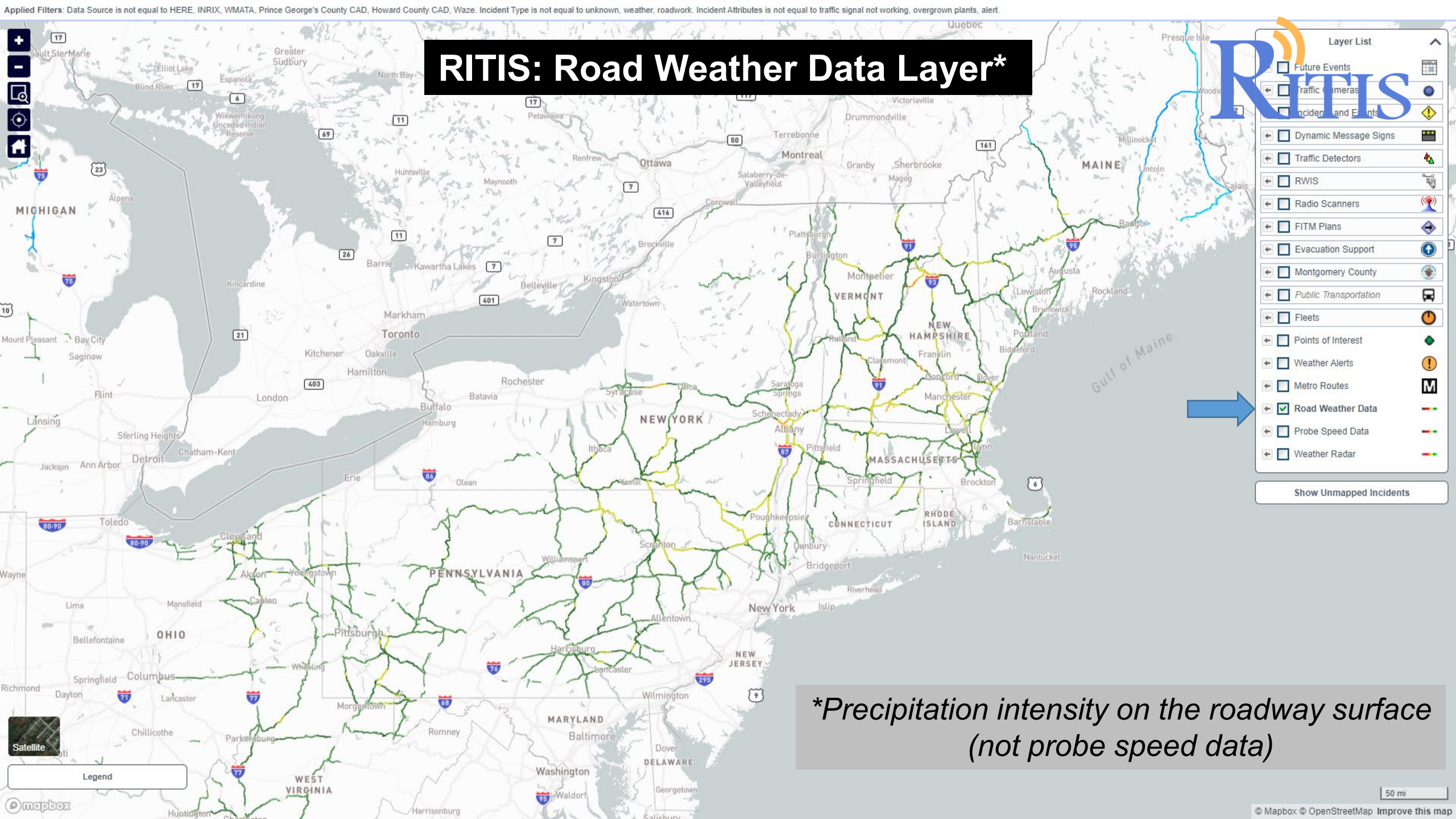
Show Unmapped Incidents



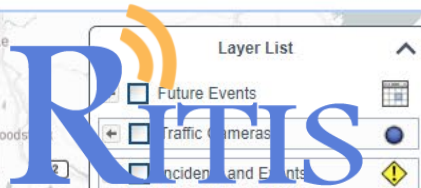
Satellite

Legend

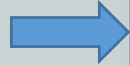
The Mapbox logo, consisting of the word "mapbox" in a lowercase, sans-serif font.



# RITIS: Road Weather Data Layer\*



- Future Events
- Traffic Cameras
- Incident and Events
- Dynamic Message Signs
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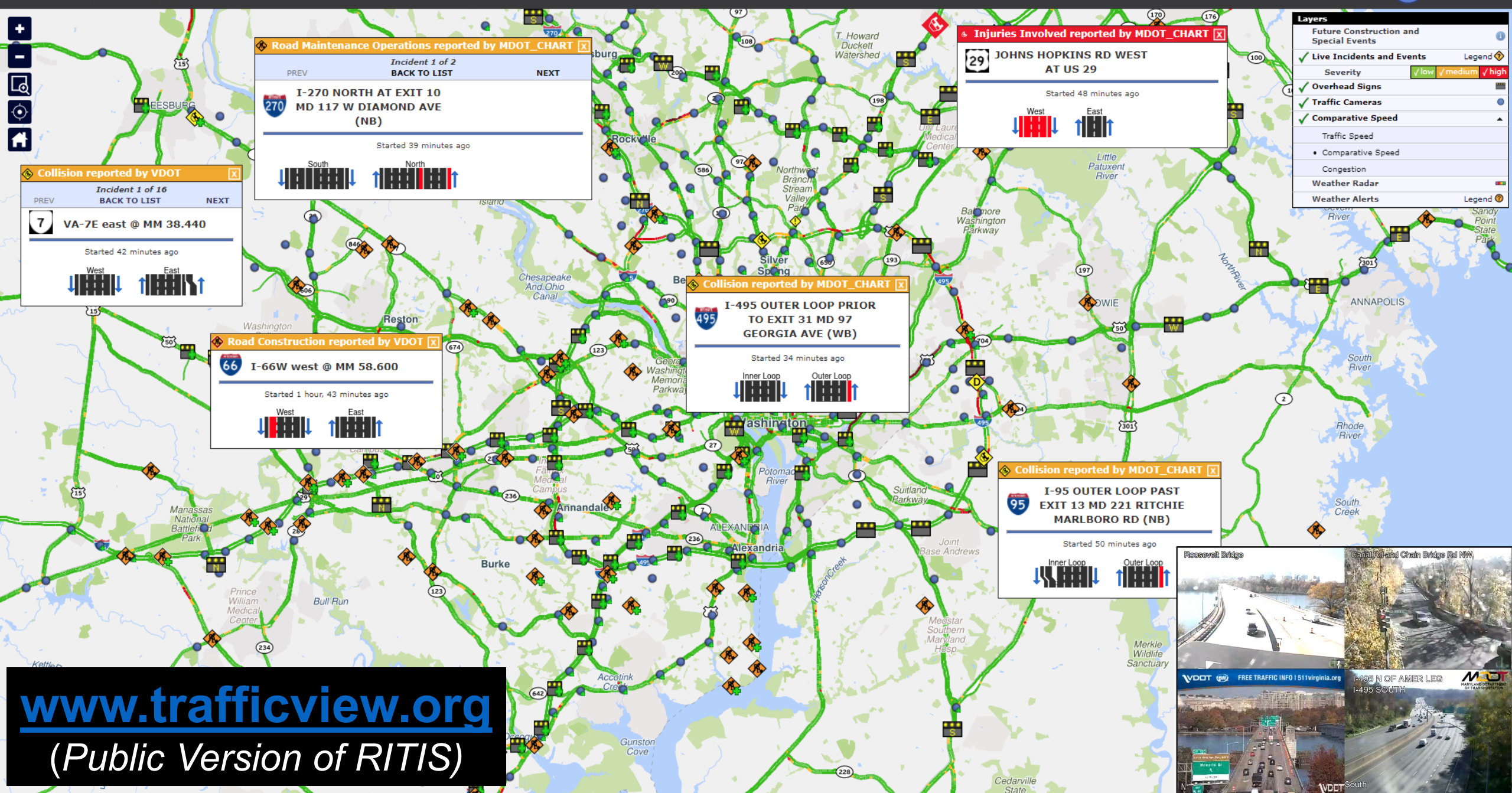
*\*Precipitation intensity on the roadway surface (not probe speed data)*



Legend

50 mi





# Questions

**Mr. Taran Hutchinson**

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**RITIS Information:** [www.ritis.org/intro](http://www.ritis.org/intro)

**MATOC Website:** [www.matoc.org](http://www.matoc.org)

**Twitter:** @MATOC

**RITIS Training Opportunities:** [www.matoc.org/training](http://www.matoc.org/training)