

The Eastern Transportation Coalition Travel Information Web Roundtable

November 19, 2020



Housekeeping Information

- Audio Please follow the audio instructions listed at the top of the meeting room
- Giving Your Update -
 - 1. We are going in alphabetical order (with transit related agencies at the end)
 - 2. You will need to unmute your audio to give your update
 - 3. We will move your slides for you just say "next"
 - 4. Lots to hear today please keep your update to 3-4 minutes (Denise is the time keeper)
- Questions for other agencies? Please use the CHAT Box
- Please mute your phone line or computer audio when you are not speaking
- This web meeting is being recorded
- Questions with the audio or web? Please contact Justin



Make Comments & Ask Questions

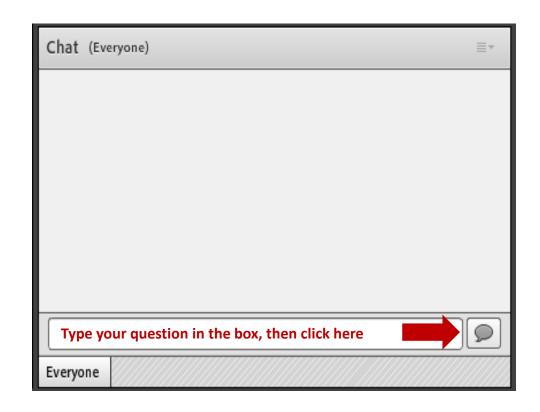


We encourage EVERYONE to share

USE THE CHAT BOX

- The questions in the chat box will be monitored
 - If time permits, we will have the speakers respond

 please direct the question to the speaker (@Jane Doe).
 - Given the time constraints, speakers may respond to questions in the chat box- for example use (@John Smith).



While you are not speaking....
Please confirm you are MUTED

Mute your phone line &

Mute your computer

Thank You!





Welcome from the Co-Chairs



Kelly Wells

State Traveler Information

Engineer

North Carolina DOT



Mary Ameen
Executive Director
NJTPA



Participating Agencies

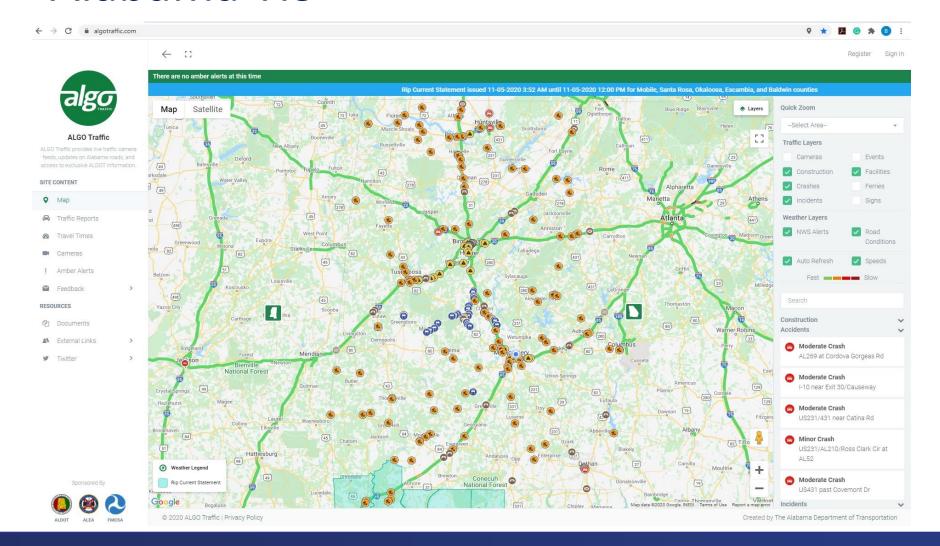
	Ager	ncies	
Alabama DOT	Massachusetts DOT	Pennsylvania DOT	Tennessee DOT
Connecticut DOT	MTA	Pennsylvania Turnpike Commission	Vermont AOT
Georgia DOT	New Jersey DOT	Port Authority of NY & NJ	Virginia DOT
Maine DOT	New York State DOT	Rhode Island DOT	
Maryland DOT - SHA	North Carolina DOT	South Carolina DOT	



Alabama DOT













SR-150 E



US 78 W

US 31 S

← ::

TUS

Show Special Events



9:15



- Huntsville, AL
 algotraffic.com
- Joined March 2017

51 Following 3,052 Followers



Followed by Chris Hilyer and Alabama



Tweets Tweets & replies Media Likes



ALGO Huntsville @algo_hvl 32m > Moderate Crash on US231/431 NB @ MP 344.1 near Catina Rd in Meridianville. Expect moderate delays. More details:













Tweets from the ALGO Traffic System, a service of the Alabama Dpt. of Transportation. Follow for construction, incident, and alert updates!

- III Joined September 2016

74 Following 4,176 Followers



Followed by James Spann, Chris



Hilyer, Governor Kay Ivey, and...

ALGO Birmingham @algo... · 17m ×

Moderate Crash on I-20/59 WB @

MP 129 at Exit 129: Messer Airport

Hwy in Jefferson County. Expect

minor delays. More details:

ALGO Birmingham @algo...



5GE

algo Moderate Crash on AL269 NB @

delays. More details:

Tweets from the ALGO Traffic System, a

Transportation. Follow for construction,

Tuscaloosa, AL & algotraffic.com

ALGO Tuscaloosa

service of the Alabama Dpt. of

incident, and alert updates!

Joined September 2016

59 Following 1,426 Followers

@algo_tus



Followed by NWS Birmingham,

Brian Hastings, James Spann, an...

ALGO Tuscaloosa @algo... · 43m ×

MP 26.2 at Cordova Gorgeas Rd in

Walker County. Expect moderate

Tweets Tweets & replies Media Likes Tweets Tweets & replies Media Likes

ALGO Montgomery

service of the Alabama Dpt. of

incident, and alert updates!

III Joined September 2016

69 Following 2.019 Followers

@algo_mgm

Tweets Tweets & replies Media Likes

Tweets from the ALGO Traffic System, a

Transportation. Follow for construction,

Montgomery, AL & algotraffic.com

ALGO Montgomery @algo... ·5m > **algo** Moderate Crash on US231/Eastern Blvd both dir. @ MP 139.5 before I-85 in Montgomery. Expect moderate delays. More details: algotraffic.com/Events/Details..

Birmingham, Camp ASCCA, and...











ALGO Mobile

algo

Tweets from the ALGO Traffic System, a service of the Alabama Dpt. of Transportation. Follow for construction, incident and alert updates!

- Mobile, AL Salgotraffic.com
- Joined September 2016

12 Following 1,641 Followers

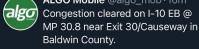


Followed by Chris Hilyer and CAPS



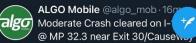
Tweets Tweets & replies Media Likes

ALGO Mobile @algo_mob · 16m







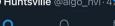






























ALGO Tuscaloosa @algo..































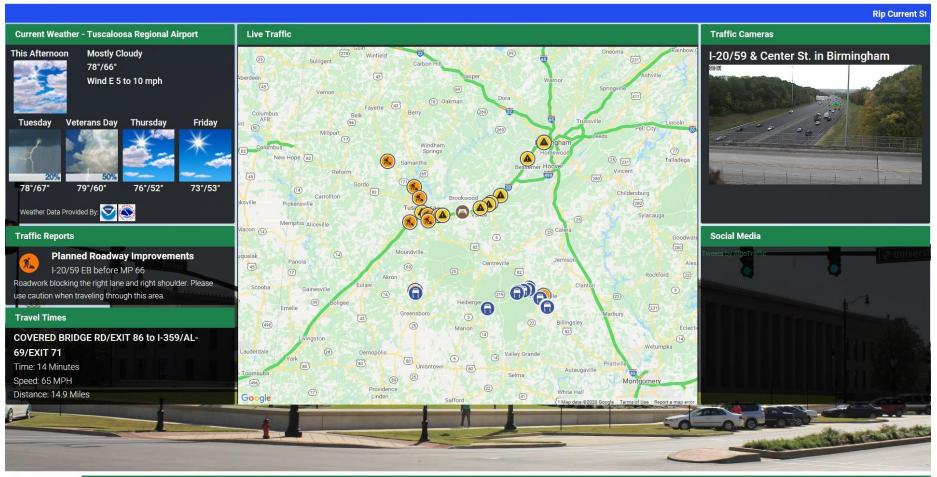








Monday November 9, 2020 1:41:55 PM





USA TODAY

Storm Eta soaks South Florida after making landfall on Florida Keys, could approach Gulf Coast later this week. Did you see it? Northeast residents saw a fiery meteor streak across the sky Sunday. ShowBiz Minu



Alabama DOT

For more information, contact:

Brett Sellers

334-242-6885

sellersb@dot.state.al.us





Connecticut DOT





Georgia DOT



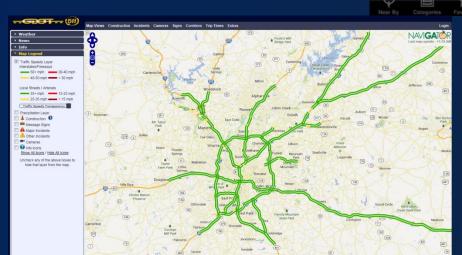
Primary Means of Distributing Info

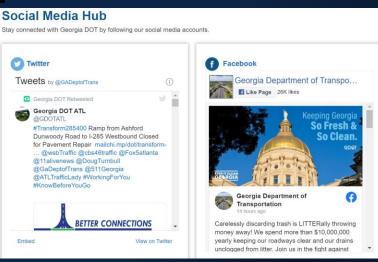




Apps For Android and iOS









Collecting Data with Optasense

Description

 Optasense provides an acoustic sensing device that converts existing GDOT roadside fiber into traffic sensors. A single sensor can cover 30 miles of roadway with one device depending on roadside fiber placement.

How it works

 A high frequency light sent from point A to point B on a single fiber optic strand senses vibrations in the roadway to provide volume and speed.

Results

- Initial results are still being compiled but clearly demonstrate the potential of a fiber optic sensing solution to deliver accurate and timely traffic flow information using existing roadside fiber as a traffic sensor.
- Installation and calibration of the system was completed within one month of the project start with zero highway closures or need for on-site construction.





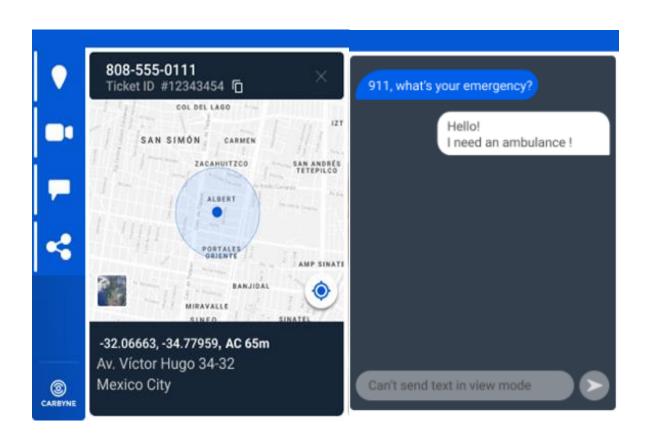
Collecting Location Data with Carbyne c-Lite

How it works

- When motorists call 511 requesting HERO or CHAMP assistance and are not sure of their location, an Operator can launch the c-Lite tool from their desktop.
- The 511 Operator will then ask if it's okay to send a link to the motorist cell phone to determine their exact location.
- When the motorist receives the link, they will click on it and be prompted to enable their location.
- If successful, within 10-20 seconds the 511 Operator will have the motorist exact location
- To communicate with callers who are unable to speak, shouldn't speak or who disconnected from the voice call unexpectedly, call-takers can use the Chat Function. NOTE: A chat window will automatically open when a caller sends a message.

Results

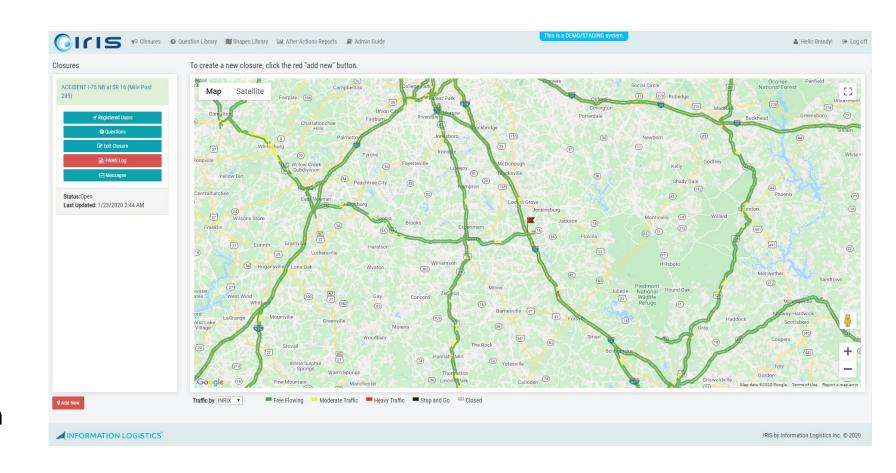
- Initially provided 6 licenses for testing and evaluation
- First weekend of use utilized the product 30 times only experiencing minor issues and callers being very open to the use of the product
- At the moment we are averaging 13 uses a week
- An additional 10 licenses were provided through our partnership with Carbyne to complete a large use case pilot Phase 1 testing. This provides all operators in third shift access.





Preemptive Alerts with GA Alert (HELP)

- This product was originally created to efficiently push official messages to geotargeted customers.
- GDOT sees the benefit in this messaging but through our pilot is looking to expand the use case of this product and preemptively provide event details to motorists.
- If done correctly this will reduce the queue size seen at the event and decrease the possibility of secondary accidents





Preemptive Alerts with Drivewyze

Description

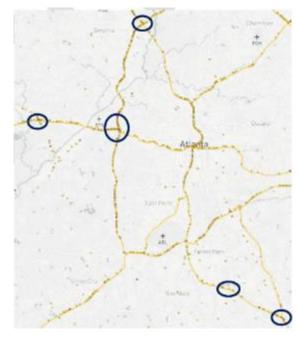
- GDOT is piloting an infrastructure-less safety solution with Drivewyze to provide in-cab alerts to truckers with targeted messaging (ex. Sharp Curve Ahead, Slow Down)
- GDOT identified 6 locations in the Metro Atlanta area that experience a higher than average number of commercial motor vehicle incidents resulting in injuries and fatalities.

How it works

- Geofenced areas are drawn on a digital map. When a truck with the Drivewyze app enters the area, a virtual message is sent to their in-cab system (ie ELDs) to provide an audible and visual alert
- Since the app is tied into ELDs, driver behavior, such as breaking or slowing, can be ascertained and analyzed

Results

- Initial Results: As of July 2020, 187,534 safety alerts have been sent to 27,062 unique vehicles
- Preliminary results showing an average 13 % decrease in hard braking activities since virtual messaging has gone live.
- Full report to determine driver behavior changes provided by December 2020.



Location No:	<u>Location</u>	<u>Message</u>
1	I-285 at I-75 (North side, all approaches) I-285 East to 75 North I-75 south to I-285 East I-75 North to I-285 West	CONGESTION AHEAD, PREPARE TO STOP
2	I-285 SB to I-20 WB	SHARP CURVE AHEAD, SLOW DOWN
3	I-20 EB at I-285 Merge	MERGING TRAFFIC AHEAD, RIGHT LANES USE CAUTION
4	I-20 WB at Thornton Rd (afternoon)	TRAFFIC SLOWED NEAR THORNTON ROAD, PREPARE TO STOP
5	I-75 SB near Jonesboro Rd (afternoon)	LIMITED VISIBILITY, PREPARE TO STOP High Accident Area
6	I-675 SB to I-75 SB (Closer to 75 merging traffic between 675 and 75 right hand median)	SHARP CURVE AHEAD, SLOW DOWN



For more information, please contact

Matthew Glasser
404.635.2838
mglasser@dot.ga.gov



Maine DOT





MAINE DOT TRAVELER INFORMATION

Stephen Landry

Stephen.Landry@maine.gov

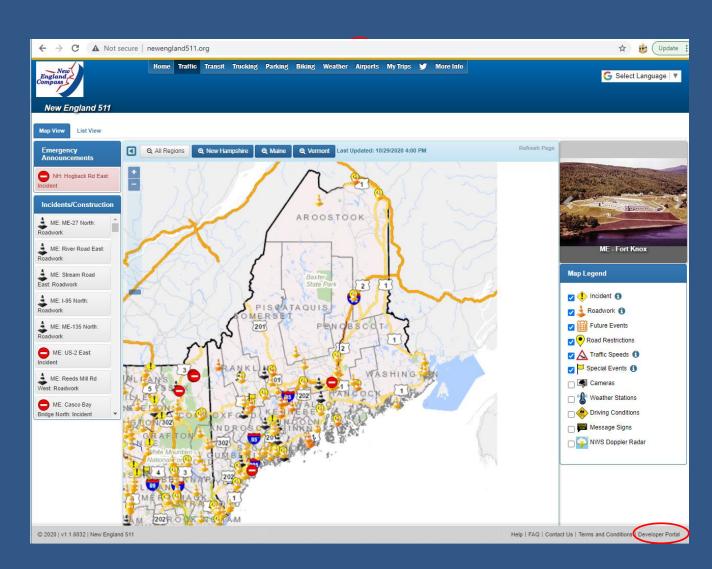
Colby Fortier-Brown

Colby.Fortier-brown@maine.gov



1) PROVIDING INFORMATION

- Message boards using CompassATM
- Compass Events to Waze
- New England 511(right)
 - MyTrips (emails and texts)
- Travel Time Signs
- Social Media through MaineDOT Creative Services



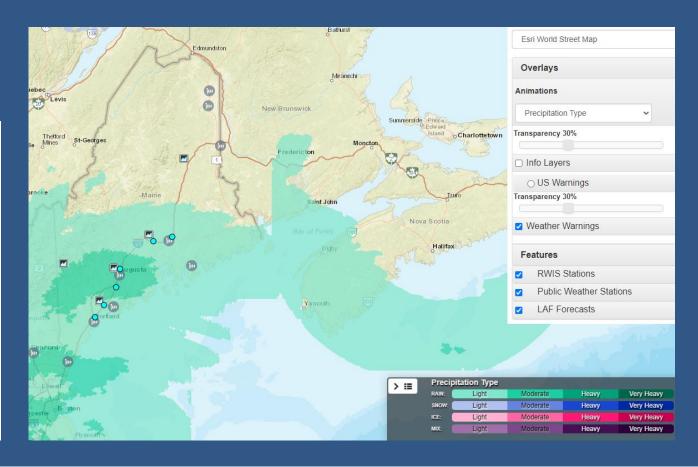


2,3,5) DATA AND EMERGING TECH. FOR WINTER MESSAGING

Manually Using WOOD/RWIS

- Message Boards Manually Activated
- ■Proactive Social Media

stands for Trace																																				
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Snow Showers																					Ш					Ш						П				
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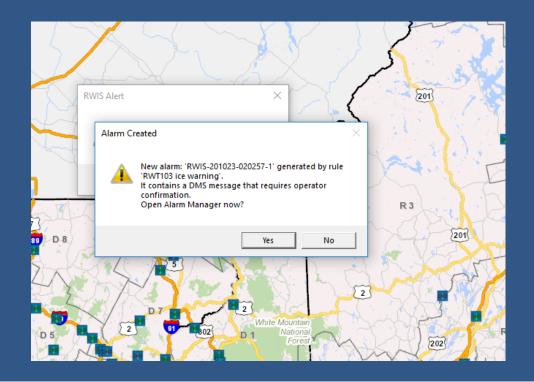


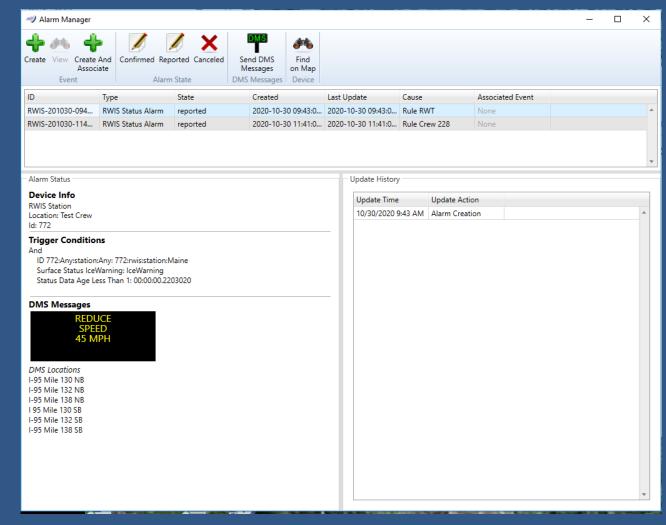


2,3,5) DATA AND EMERGING TECH. FOR WINTER MESSAGING

Automation from RWIS

- Message Boards Automatically Activated
 - Human in the loop
 - Currently only for Reduce Speed 45 signs based on Grip







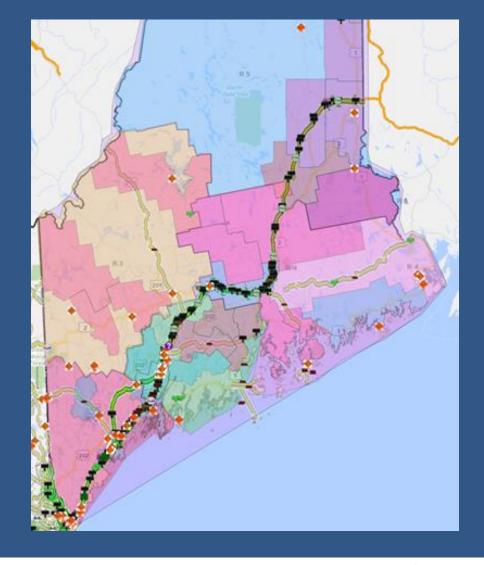
2,3,5) DATA AND EMERGING TECH. FOR WINTER MESSAGING

R(oad) W(eather) T(emperature)

- ■App Developed in 2018, Deployed 2020
 - Data Visualization for TMC and on NewEngland511
 - Automated alerts to surrounding crews (from NH too)
 - Certain reports restrict oversized loads













Stephen Landry

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Colby Fortier-Brown

Colby.Fortier-brown@maine.gov



4) HAS COVID PANDEMIC CHANGED TRAVELER INFORMATION?

We use pandemic-specific safety messages on our message boards



5) DATA FOR TRAVELER INFORMATION

- RWIS data, as explained
- Probe Data (TomTom) to automatically populate travel times
- TomTom in Compass, and through their platform for delays
- Waze App in our Mapviewer with Reports+Jams
 - Filterable to reduce information overload
- Google Maps
- Data Capable (platform that uses Al to geolocate crowdsourced datasets from social media +)



6) THIRD PARTY TRAVELER INFORMATION

- Compass events feed to Waze
- Other data providers get information from NewEngland511 Developer Portal



8) INCIDENT DURATION STRATEGIES

- TomTom/Waze/Google Maps to see if things are still happening
- Operators call out to Crew Supervisors, Safety Patrol, and State Police to check in
- Open funding request to develop a Crowdsourcing Module/Process that will aggregate datasets (including social media input about ongoing incidents), verify accuracy of reported incidents, organize reported incidents, link reported incidents to Compass events, and notify operators if compass events are still active and reports have gone away or have been reported to be gone in social media.





Maryland DOT-SHA



STATE HIGHWAY ADMINISTRATION



What are you doing to provide information to the

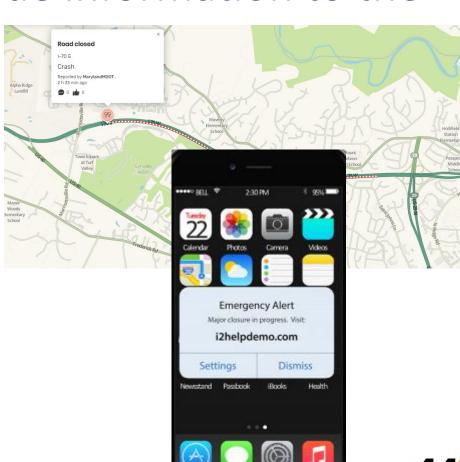
traveling public?

EXISTING:

- MD 511 (CHART) Website
- MD 511 Twitter
- DMS

NEW:

- Joined Waze for Cities program entering major closures manually
- Procured INRIX HELP Platform continuing setup phase







What type of information are you providing during winter weather conditions?

Severe Weather Information

Weather Related Road Conditions

Information on Interstate, Primary and Secondary Road Conditions

Local Weather Station Data

View current weather data from CHART System Weather Stations

Snow Emergency Plans

View the latest list of Snow Emergency Plans in effect

Traffic Incidents and Events

2

View reported traffic incidents, weather road closures, active construction and maintenance closures information

Live Cameras 🔊

View live traffic cameras throughout Maryland right in your browser.

MDOT SHA S.T.O.R.M.

Near real-time tracking of MDOT-SHA Winter Operation vehicles during winter weather events

Maryland State Office Closings

Click here to go to the latest list of Maryland State Office Closings (Offsite Link)

Federal Government Operating Status

Click here to go to the latest list of Federal Government Operating Status. (Offsite Link)

Emergency Truck Parking Map. (Offsite link)

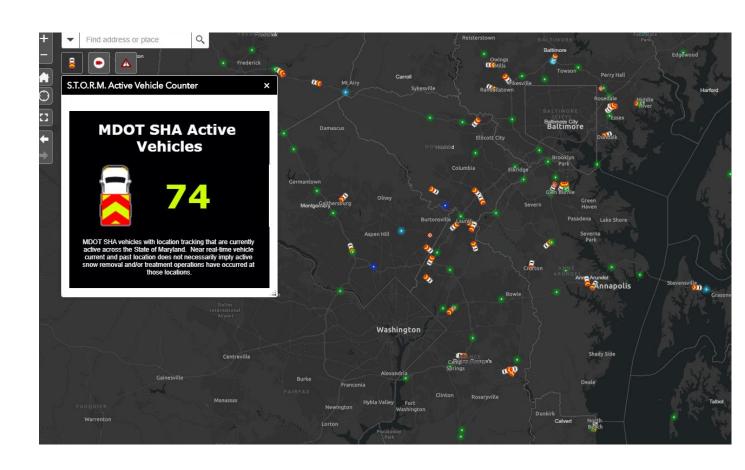
Get information about emergency truck parking.





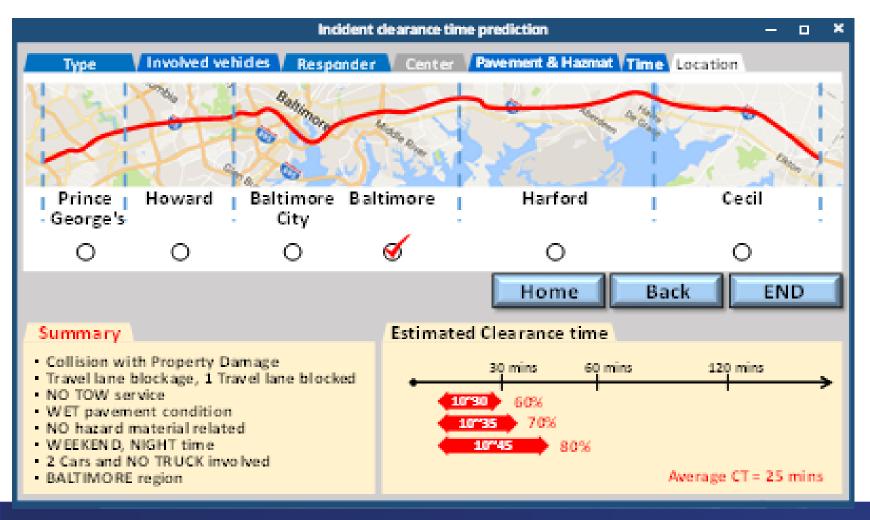
What type of information are you providing during winter weather conditions?

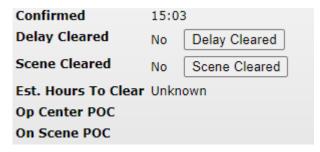
- Snowplow / Vehicle Locations
 - Only available "in season" (Nov April)
 - Displays vehicle's last 30-minutes of activity
 - Vehicles stationary for 10 minutes are removed
 - Extensive FAQ
- RWIS Data always available
- Separate web page to display only weather-related closures and equipment deployment totals (# of dump trucks, # pickups, # of loaders, # of snow blowers)





How are you dealing with unknown incident duration?





Using data analytics to enhance predictive capabilities





Madal	Training set	Test set	Additional datasets for model updates		
Model	2012~2015	2016	Apr. 2017	May. 2017	Jun. 2017
Before updates	79.1%	74.3%	67.7%	78.3%	79.3%
	(1549/1958)	(465/626)	(21/31)	(36/46)	(23/29)
After update with	80.0%	77.0%	87.1%	78.3%	79.3%
Apr. 2017	(1566/1958)	(482/626)	(27/31)	(36/46)	(23/29)
After update with	80.1%	77.2%	87.1%	93.5%	79.3%
May. 2017	(1569/1958)	(483/626)	(27/31)	(43/46)	(23/29)
After update with	80.2%	77.2%	87.1%	93.5%	<mark>93.1%</mark>
Jun. 2017	(1570/1958)	(483/626)	(27/31)	(43/46)	<mark>(27/29)</mark>



Maryland Department of Transportation – State Highway Administration

For more information, contact:

Jason Dicembre

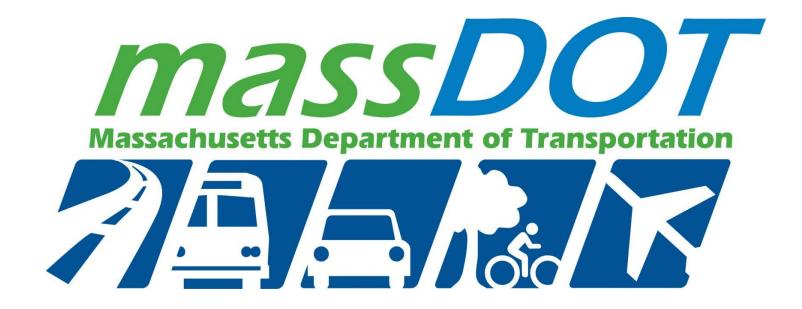
410-582-5678

jdicembre1@mdot.maryland.gov





Massachusetts DOT



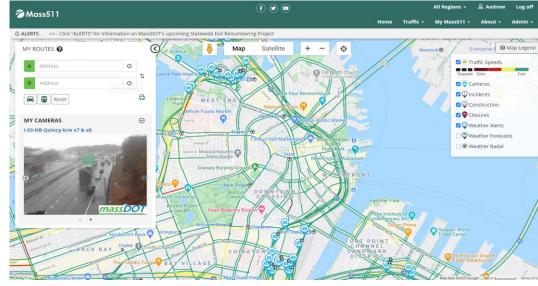


What are you doing as an agency to provide information to the traveling public?

- Sharing TIS via XML
- Mass511
 - Web UI
 - Mobile App



Mobile UI



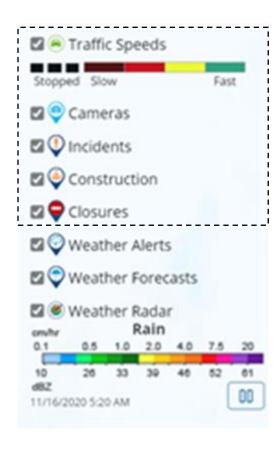
Web UI





What type of information are you providing to the public during winter weather conditions? And what platform(s) are you using to do it?

- On Web UI
- On Mobile UI
- Future
 - Exploring RWIS
 - Roadway temp
 - Grip (traction)
 - Winds
 - Roadway conditions



**Dashed line denotes what is currently visable to non-admin users





Is there a unique or emerging technology that you are using or considering using to provide Traveler Information to the public?

- Bike Share
- Parking Park & Ride
- Shared Travel
- COVID testing/vaccine sites
- Freight-Parking & Amenities

- Transit
- GoTime
- Ride Share
- Roadway conditions (weather)





Has the COVID pandemic changed the way you are providing Traveler Information to the public?

- Posted State COVID website link
- Considering posting COVID testing & vaccination facilities
- VMS PSA's





Are you using data to make decisions about Traveler Information?

- Reviewing User Stories
- Web/mobile

Suggestion	None	It would be VERY helpful to have a traffic/incident info sign on 90 west BEFORE exit 4 (preferably before the Connecticut River bridge), so we have the option of getting off on Exit 4 and avoiding a traffic jam between Exit 4 and Exit 3. Thank you so much!!	7/6/20, 9:32 PM
Question	None	Hi all, Several weeks back I submitted a request for a developer's API key. Could you check on the status of that request please? Regards, Mike Dekrell Sr Traffic Quality Manager HERE Technologies	7/1/20, 10:55 AM
Question	None	Hello. Yesterday (June 29th) I got into a car accident coming into I-91 NB right before the Connecticut River. It happened at around 6:20 PM. I'm wondering if any of the traffic cameras recorded the crash and if I could get a copy. Thank you.	6/29/20, 7:39 PM
Suggestion	None	Re: Route 2 Rotary new pavement markings Hello, I am concerned about a new marking in the left lane westbound on Route 2 entering the rotary. The marking is a straight and left arrow. It seems to indicate you could turn left onto the rotary, which would be opposite the proper direction. I am very concerned that someone will misunderstand and turn the wrong way. A straight only arrow might be a little less confusing. Thanks so much Ruth Henning	6/28/20, 9:34 AM





Are you using third party vendors to disseminate Traveler information and if so who and how are you doing it?

- We have public facing API/XML's
 - https://www.mass.gov/service-details/highway-data-for-developers
- Google
- Waze
- Working with Apple on API out of Mass511





How are transit operators coordinating and sharing traveler information especially in this new COVID environment?

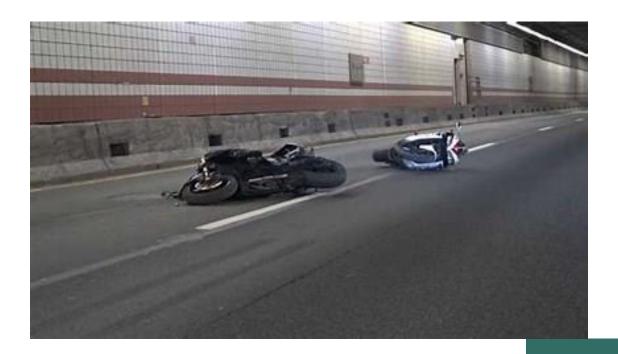
- Highway and Transit Ops Centers conduct center-center notifications
- HOC/TMC populates 511/3rd party API
- Mass511 seeks to support mode shift by providing enhanced TIS





How are states dealing with unknown incident duration - how do you handle incidents when you really don't know the end time?

 MassDOT conducts a full response to all events and does not predict or forecast event end times.







New Jersey DOT





New York State DOT





NYSDOT Response to Roundtable Discussion Topics/Questions:

- ❖ What are you doing as an agency to provide information to the traveling public?
 - Primarily we use our 511NY system (web, mobile, & IVR) to provide traveler information. A key component of providing information is via VMS messaging led by the Governor's office.
- What type of information are you providing to the public during winter weather conditions. And what platform(s) are you using to do it?
 - We show winter road conditions on 511NY (IBI product), manually updated by field personnel every 4 hours using this scale:
- Is there a unique or emerging technology that you are using or considering using to provide Traveler Information to the public?
 - Recently NYSDOT signed an agreement with Waze for Cities to use/show Waze information.





NYSDOT Response to Roundtable Discussion Topics/Questions:

- Has the COVID pandemic changed the way you are providing Traveler Information to the public?
 - We continue to use 511NY, phone, VMS messaging, public announcements, and social media such as Facebook, Twitter, etc. for getting out information.
- Are you using third party vendors to disseminate Traveler information and if so who and how are you doing it?
 - Through the 511NY mobile API we share data with TomTom, Garmin, Google, Apple, etc.



New York State Department of Transportation

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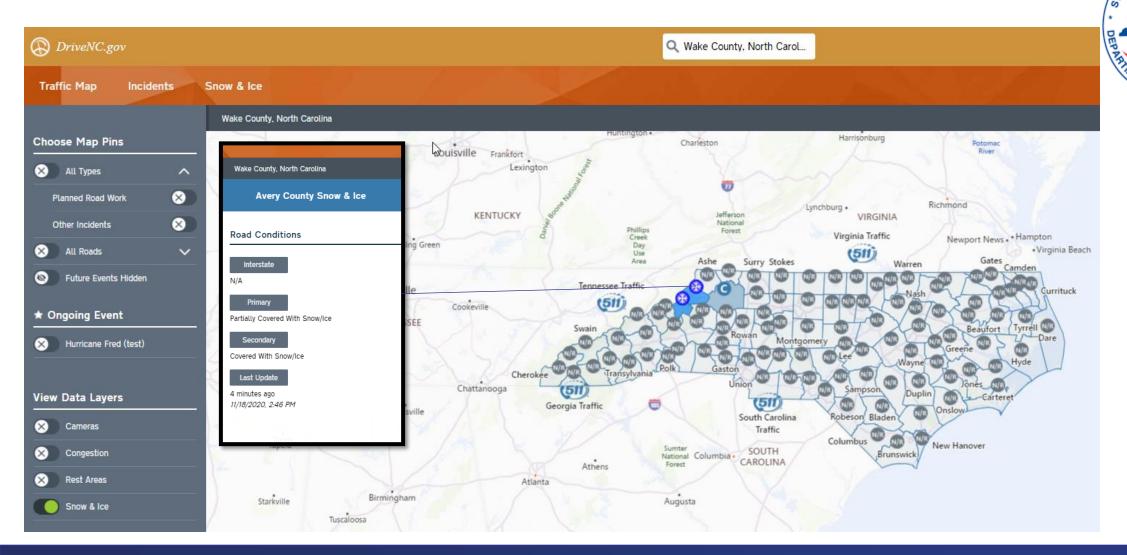


North Carolina DOT





1. Winter Weather Conditions on Website





3. Unique or emerging technology



Wireless Emergency Alert (WEA) is a one-way version of HELP

- a) Work thru state or local Emergency Mgmt. Agency
- b) Can push messages to a polygon
- c) We use for trapped queues



8. Trav Info for unknown incident duration

- 1. Every incident we put into our ATIS has a start time and end time; required fields.
- 2. End time is good for work zones and run of the mill crashes.
- 3. Becomes challenging in these cases when we honestly have no idea when road will re-open
 - 1. Big bad crashes when infrastructure is damaged
 - 2. Storms that make ocean over wash our only coastal highway (and people wait at barricades or cancel vacations based on this info)
 - 3. Hurricane and other flooding: no real way to know when riverine flooding will end when hurricane is moving slowly across our state. During Florence we chose "2099" and some were confused.
 - 4. Hesitant to put "unknown" b/c then we will have to always police all incidents to see if they have been orphaned in our system.

Does anyone have a way to handle "unknowns" for incident end times?



North Carolina DOT

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Pennsylvania DOT



PENNDOT TRAVELER INFORMATION UPDATE

- **511PA Joint Contract**
- **511PA Mobile Application and Regional Traffic Report on IVR**
- **PennDOT Developer Resources**
- **COVID Traveler Information Changes**
- Strategic ITS Deployment for Winter (Mobile Cameras and Changeable Message Signs)
- Winter Related Public Information (RWIS, Snowplow AVL, Road Conditions, Weather Forecast, Rest Facilities, etc....)
- **Performance Awareness during Holidays and Special Events**
- **Commercial Vehicle Restrictions Page**
- Future Traveler Information Updates



PENNDOT'S USE OF 3RD PARTY DATA?

Planning

Regional Traffic Operations Plans

Identification & Understanding of Roadway Deficiencies

Validating expected Performance of Projects

Partner Collaboration

Automated Work
Zone Speed
Enforcement

Design

Lane Use Determination

Calibration & Analysis

Benefit Cost

Scenario & Event Planning

Smart Work Zone Applications

Management and Operations

Early Event Detection

Situational
Awareness &
Event
Management

Advanced
Automation and
Notification

After Action Reviews (AARs) and Program Auditing

Performance Reporting

MAP-21 Reporting

Statewide Performance Reports

TSMO Detailed Reports

Public Use

511PA Real-Time Overlay

511PA Traffic Forecasting and Estimation of Travel Reliability

Travel Time Messaging

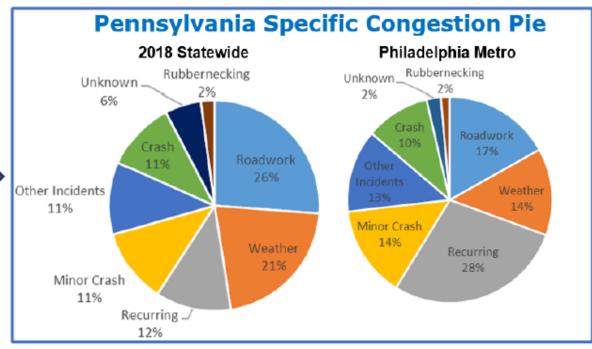
Traffic Slow Down & Back of Queue Information

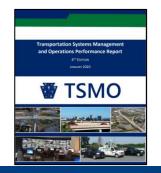


PERFORMANCE REPORTING

TSMO Analytics and Reporting





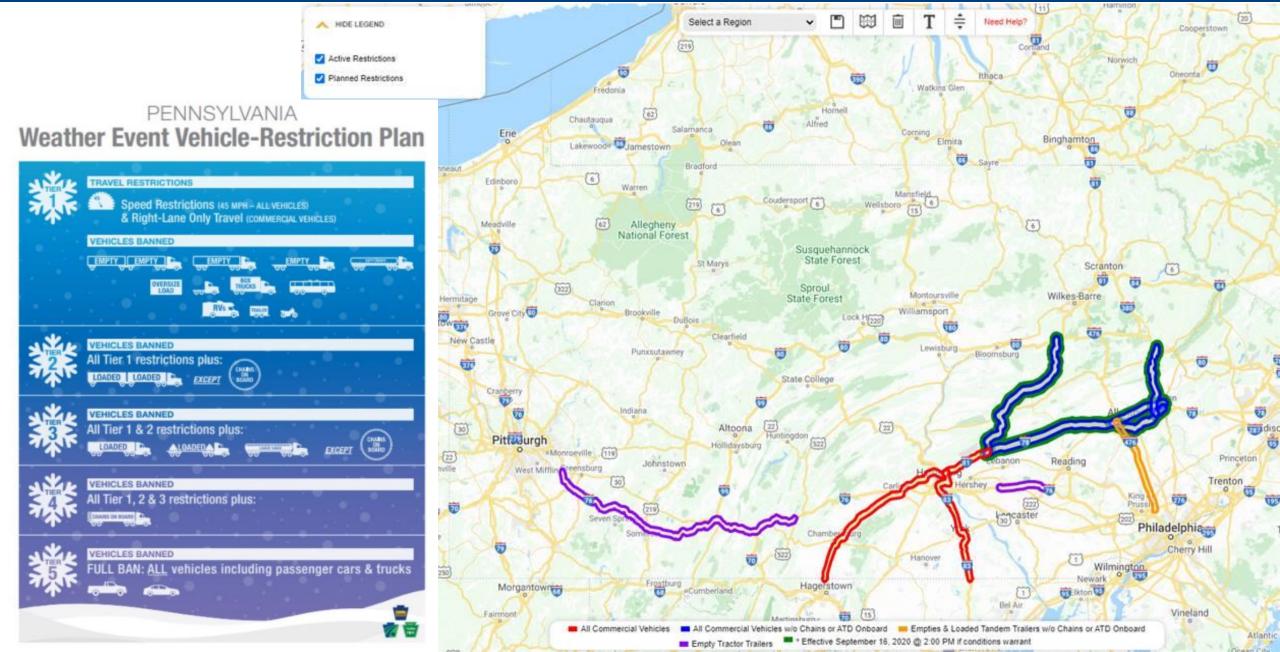


Performance Reports Located at:

https://www.penndot.gov/ProjectAndPrograms/operations/Pages/default.aspx or Google "PennDOT TSMO"

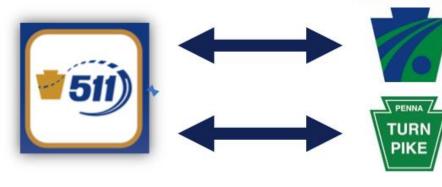


WINTER WEATHER RESTRICTIONS



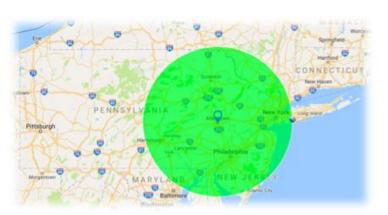
VIRTUAL HIGHWAY ADVISORY RADIOS

ATMS



511PA Website with voice

IVR – Priority Floodgate





Geofenced <u>DriveMode</u> Voice Alert

Geofenced **Push Notifications** with voice





Pennsylvania Turnpike Commission





ITS Devices

	Systemwide				
Device	Existing*	Design/ Construction	Total		
DMS-ML	99	36	135		
DMS-PE	65	36	96		
ссту	69	60	129		
RWIS	22	4	26		
HAR	REMOVED	0	0		

^{*} Includes devices that have passed OAT but still in construction









Data Sharing







Drivewyze®



FREIGHTWAVES

Data Sharing with 3rd parties

- INRIX
- Waze Connected Partner
- Google maps November 2020
- DriveWyse
- FreightWaves
- Coming soon.....Apple maps





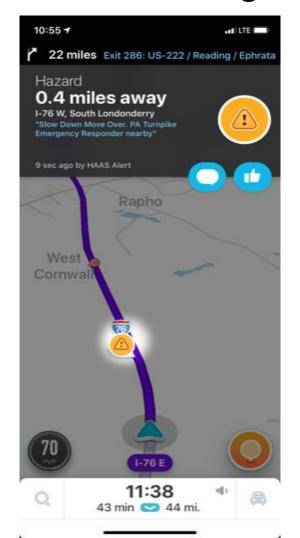
PTC uses Crowdsourcing

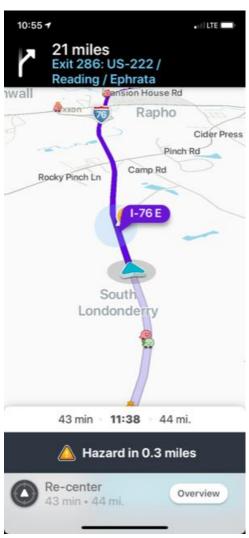
- Waze Connected Partner
 - Share incident and work zone data
 - Receives Waze data for our roadway
 - PTC can close a road in Waze
 - PTC can set speed limits and provide other safety messages and planned detours for Waze users
 - PTC will soon start dispatching via Waze



Connected Incident Mgmt. - HAAS Alerts

Digital Alerts that go to Waze to tell drivers to Move Over for emergency vehicles that are on scene on the roadway





- Activated with light bar
- 97 vehicles hardwired and 44 portable units
- ½ mile advanced alert
- Over 1.4 Million driver alerts in the first 9 months
- Approximately \$700/year a unit/1.95 a day
- HAAS portal
 - https://safetycloud.haasalert.com/#/ dashboard/things



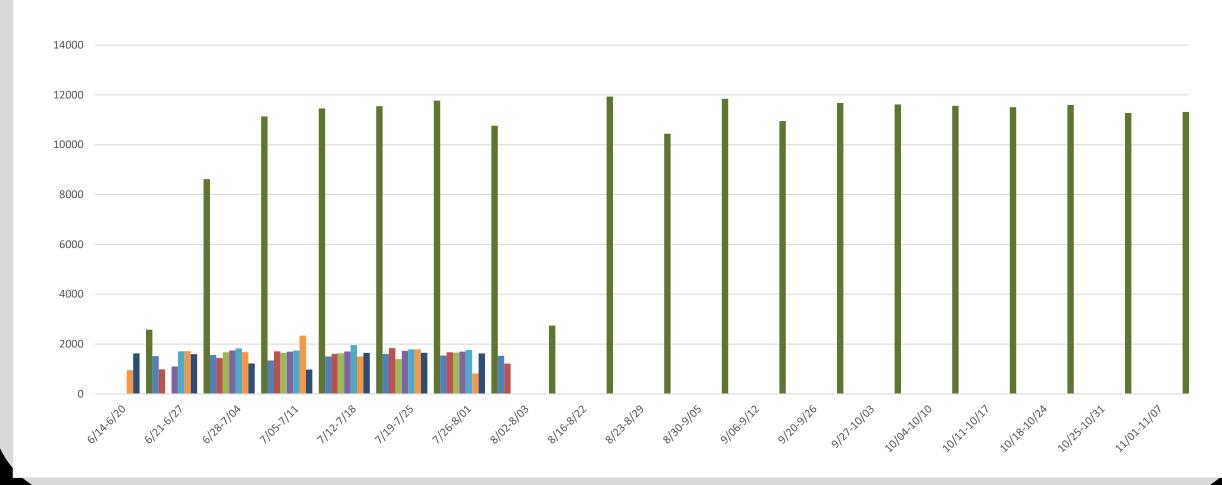
Radiolert Curve Warning System





RADIOLERT BROADCASTS



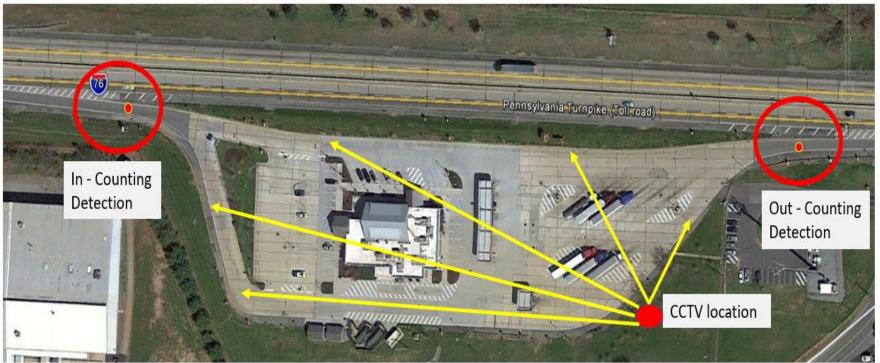




Truck Parking Management System (TPMS)



IN/OUT Detection



TPMS locations

SIDELING HILL SERVICE PLAZA

BLUE MOUNTAIN SERVICE PLAZA

HIGHSPIRE SERVICE PLAZA

LAWN SERVICE PLAZA

BOWMANSVILLE SERVICE PLAZA

PETER J. CAMIEL SERVICE PLAZA

VALLEY FORGE SERVICE PLAZA

KING OF PRUSSIA SERVICE PLAZA

ALLENTOWN SERVICE PLAZA

HICKORY RUN SERVICE PLAZA



PTC TPMS Contract

- Design/Build Request for Proposal
 - Base Contract: 3 4 years Design, Build, and Service/Performance Period
 - Service/Performance Period Vendor provides Software as a Service (SaaS), and maintains the detection sub-system to ensure performance requirements are met
 - Maintenance of Validation Cameras and Hybrid Message signs turned over to PTC upon final acceptance of those devices
 - Extensions: Service/Performance Period up to 3 years
 - Extensions to be considered based on success of the system and available funding (Fed funds and/or PTC funds)
- NTP was July 2020 with Construction beginning in January 2021
- Contract costs \$ 3M

Thank You!





Michael Pack

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Pennsylvania Turnpike Commission

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Rhode Island DOT





- RIDOT's Office of Communications and RIDOT's TMC (in Providence) utilize a multimedia approach for communicating traveler info to the public, and a dedicated customer service team facilitates rapid response to citizen questions/concerns
 - Websites: Travel Advisories (list of upcoming and ongoing scheduled lane/road closures), Current Incident list, Camera Images, Detour Maps/Routes, and Bridge Restrictions posted and updated as needed
 - Earned Media: Travel Advisories / press releases regularly published, and access to streaming TMC traffic camera images is enabled; both are routinely published / used by media
 - Social Media: RIDOT maintains/monitors accounts on Facebook & Twitter; real-time tweets are prompted by TMC Operator-entered incident info (provides 24/7/365 notification of lane blockages and other traffic impacts due to roadway incidents)
 - Paid Media: Normally used for safety campaigns, but occasionally used in conjunction w/ major projects
 - E-Mail Communications: With help of Constant Contact services, issues targeted weekly Travel Advisory e-mails outlining planned lane/road closures in the coming week
 - Electronic Changeable Message Signs (CMS): ~60 RIDOT CMS controlled by TMC; on projects Contractors supplement with portable CMSs as warranted
 - 511 System & HAR: Existing systems remain in place and operational, but being phased out as public relies more and more on web apps/services





- Any/all of the above means/methods used during ANY/ALL (adverse as well as "fair") travel conditions
 - For adverse weather/storms, advance notification of impending storm conditions is provided where/as appropriate (e.g., recommendations to avoid non-essential travel during a storm)
- COVID-19 has not significantly changed the way we provide Traveler Information to the public
 - RIDOT continues to employ all the means/methods noted above
 - Use of teleconferencing services/software has advanced





- How is data used to make decisions about Traveler Information?
 - For planned lane/roadway closures:
 - The Office of Communications considers traffic data/studies where available/warranted to help determine the extent of public outreach to provide on a particular project/operation
 - Per RIDOT's Work Zone Safety & Mobility Policy, project Designers and officials must consider what level/extent of Traveler (Public) Information strategies (e.g., a work zone ITS) are appropriate to call and/or arrange for via the project
 - Data RE: unplanned roadway events (incidents) is largely collected via TMC Operator manual entry of data into the RhodeWAYS incident management application/database (which prompts automated Twitter feeds, website updates, etc.)
 - CMS messages manually turned on/off and adjusted by TMC Operators as needed
 - No automated incident detection/notification/response algorithms in place, yet
 - RIDOT does a good job of recording and reporting on several TSMO-related performance measures, but to
 date such measures are typically "used" informally, without any formalized actions that are focused on
 improving the ways/means/methods with which RIDOT provides and/or facilitates Traveler Information





- Emerging technology / applications
 - Since ~2016, a Statewide CAD system (with RIDOT TMC tie-in) has been proposed & championed by police and others, but not in place yet (legislation stalled in 2020)
 - Since 2018, as a Waze partner RIDOT has posted travel times on select CMS using the free Waze data/feed
 - In mid-2020, RIDOT regained access to INRIX data and RITIS; these tools along with the Waze data/feed are prompting/helping us explore how we can/should improve our current processes to provide more public benefit (e.g., looking to improve efficiency via automation)
 - Exploring the use of various private vendors/firms as well as public agency partr (e.g., RIEMA) to help us improve our (A) situational awareness and/or (B) level of public engagement





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South Carolina DOT





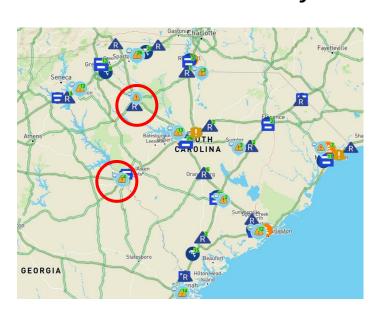


- 511 Update
 - Modern, updated look and feel
 - Integrated Waze data
 - Smart camera features
- Smart Work Zone Project





- 511 Update
 - Modern, updated look and feel
 - Integrated Waze data
 - Smart camera features









Smart Work Zone Project

- Rural, two lane section of Interstate in the middle of the state that was being resurfaced and had daytime lane closures
- SCDOT worked with the traffic control contractor to install a smart work zone system to alert drivers of slow/stopped traffic ahead and suggest an alternate route
 - Sensors placed every 0.5 miles to collect speed
 - Message boards placed prior to the lane closure and before the alternate route
 - ALL alternate routes were signed with static signs (9 intersections, 205 signs)





Taper Signs

DEFAULT		SLOW		STOP
		SLOW		STOPPED
		TRAFFIC		TRAFFIC
	###	XX MILES	###	XX MILES

Two signs before each lane closure – one 4-5 miles before and one 2-3 miles before

Alternate Route Signs

DEFAULT		$TT > 2 \times FF$
EXIT 60		STOPPED
8 MILES		TRAFFIC
YY MIN	###	AHEAD
		ALT
		ROUTE
	###	EXIT 54

Travel time thresholds were adjusted during the project





South Carolina Department of Transportation

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Tennessee DOT





Vermont AOT





Virginia DOT





TRAVEL INFORMATION ROUNDTABLE MEETING

VDOT Response

- o VDOT's Operations division is providing real-time traveler information through a public IVR, Customer Service Center 800 number, Website, mobile app collectively known as Virginia 511 and Waze, DMS /DDMS signage.
- o VDOT's communications team actively engages citizens through social media outlets such as YouTube, Twitter, Facebook, NextDoor and other project related outreach websites. VDOT provides community outreach and communications on many large projects such as the I-81 Improvement program and the HRBT expansion project. VDOT partners with local news agencies and has communications liaisons in each of the (9) VDOT districts / (5) Regional Transportation Operations Center (TOC) to assist with messaging management. VDOT utilizes local news and radio stations when needed to disseminate information about road closures, major traffic changes/projects and inclement weather effects.



Is there a unique or emerging technology that you are using or considering using to provide Traveler Information to the public?

- o VDOT is seeking innovation to the current Virginia 511 program through expanded communications directly with the public through the use of expanded app features:
 - Send out queue warnings when the public enters a geo-located zone.
 - Warning/ push notifications will provide particular messages that are relevant to that area.
 - Requiring hands free features of the new app to work with manufacturer infotainment systems. This requirement will satisfy multistate and locality laws/ordinances for hands-free phones down safety measures.
- o Other areas being evaluated within VDOT are improving Traveler Safety and information through:
 - Connected worker "Smart Vest" invention that has sensors and will connect to an app. The app will alert drivers
 entering a work zone that there are workers present through a push notification. This is a grant funded venture
 with several other partners: https://safed.vtti.vt.edu/wp-content/uploads/2020/07/03-
 050_FinalResearchReport_Final.pdf
 - I-Cone-integrating work zone data directly to navigation systems and in-dash of connected cars.



How is Virginia dealing with unknown incident duration - how do you handle incidents when you really don't know the end time

o VDOT Operations:

- 5 TOC operators maintain reporting in real-time.
- ATMS system requires a end time to close.
- All incidents are considered active until closed.
- Final notification may come from Safety Service Patrol (SSP) coverage and/or VSP integrated CAD feed
- Transmission of real time incident data 24/7
- Closing out the incident happens when we can confirm the scene is clear and traffic flow has returned to normal.
- After-action meetings are held on extended incidents. Performance measurements are developed tracking lane impact, scene impact (meaning, including the time it's on the shoulder) and then total impact (which includes residual delays).

Towing and Recovery Incentive Program (TRIP)

- "On December 15, 2017, VDOT's Richmond District began a pilot
- Tow companies receive a monetary bonus for clearing commercial vehicle crashes within 90 minutes.
- TRIP's key objective: facilitation of quick and safe clearance of commercial vehicle crashes through improved towing standards, procedures, and training.
- 2019 study showed
 - top 61 incidents in the before period vs. TRIP incidents were analyzed, the average roadway clearance time (RCT) showed a statistically significant improvement of 62 minutes per TRIP activation and the average towing response time (TRT) improved by 7 minutes per TRIP activation."

 http://www.virginiadot.org/vtrc/main/online_reports/pdf/20-r11.pdf



Additional Q/A

- Has the COVID pandemic changed the way you are providing Traveler Information to the public?
 - The pandemic has not had significant impacts to the way we provide Traveler Information to the public.
 We supported DMS messaging campaigns when statewide restrictions were in place.
- Are you using data to make decisions about Traveler Information?
 - Yes- Using INRIX data
 - Travel speed layer on our 511 website.
 - Statewide Directional DMS signs (DDMS) for comparable travel times (TT) for two different roadways to the same location
 - DMS signs providing travel times to a specific location.
 - INRIX analytics through the use of Maryland CATT Lab tools for research.
- Are you using third party vendors to disseminate Traveler information and if so who and how are you doing it?
 - Iteris is our current prime contractor for the Virginia 511 system:
 - 511 website, app, twitter accounts, SMS/ email subscription messages and IVR.



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Wrap Up



Denise Markow, TSMO Program Director The Eastern Transportation Coalition





THANK YOU!

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