

2019 Masite Annual Conference

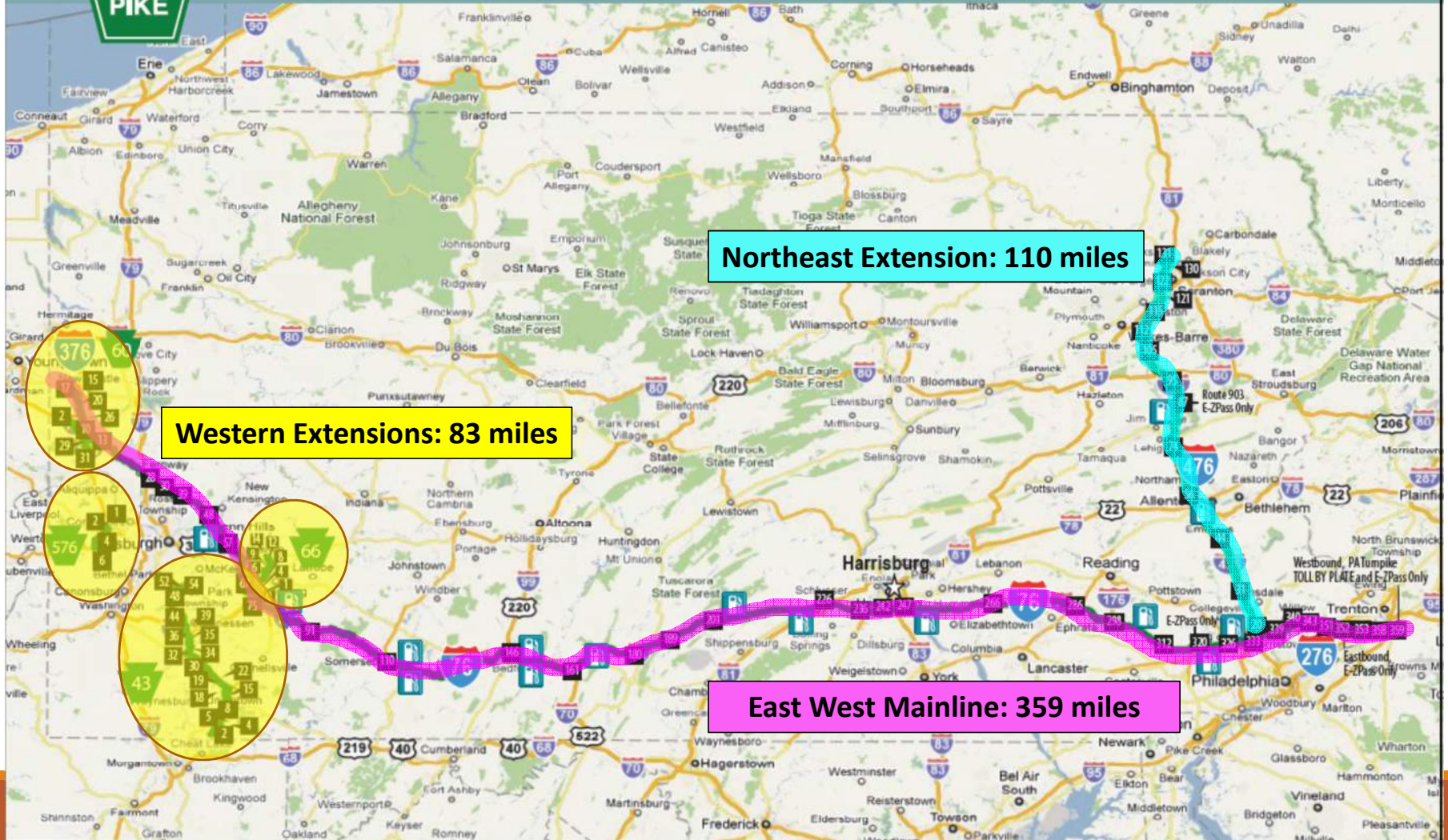
Current & Upcoming Safety Innovations in Traffic Operations



The Pennsylvania Turnpike System Map

Website: www.paturnpike.com

Customer Service: 800.331.3414



Northeast Extension: 110 miles

Western Extensions: 83 miles

East West Mainline: 359 miles

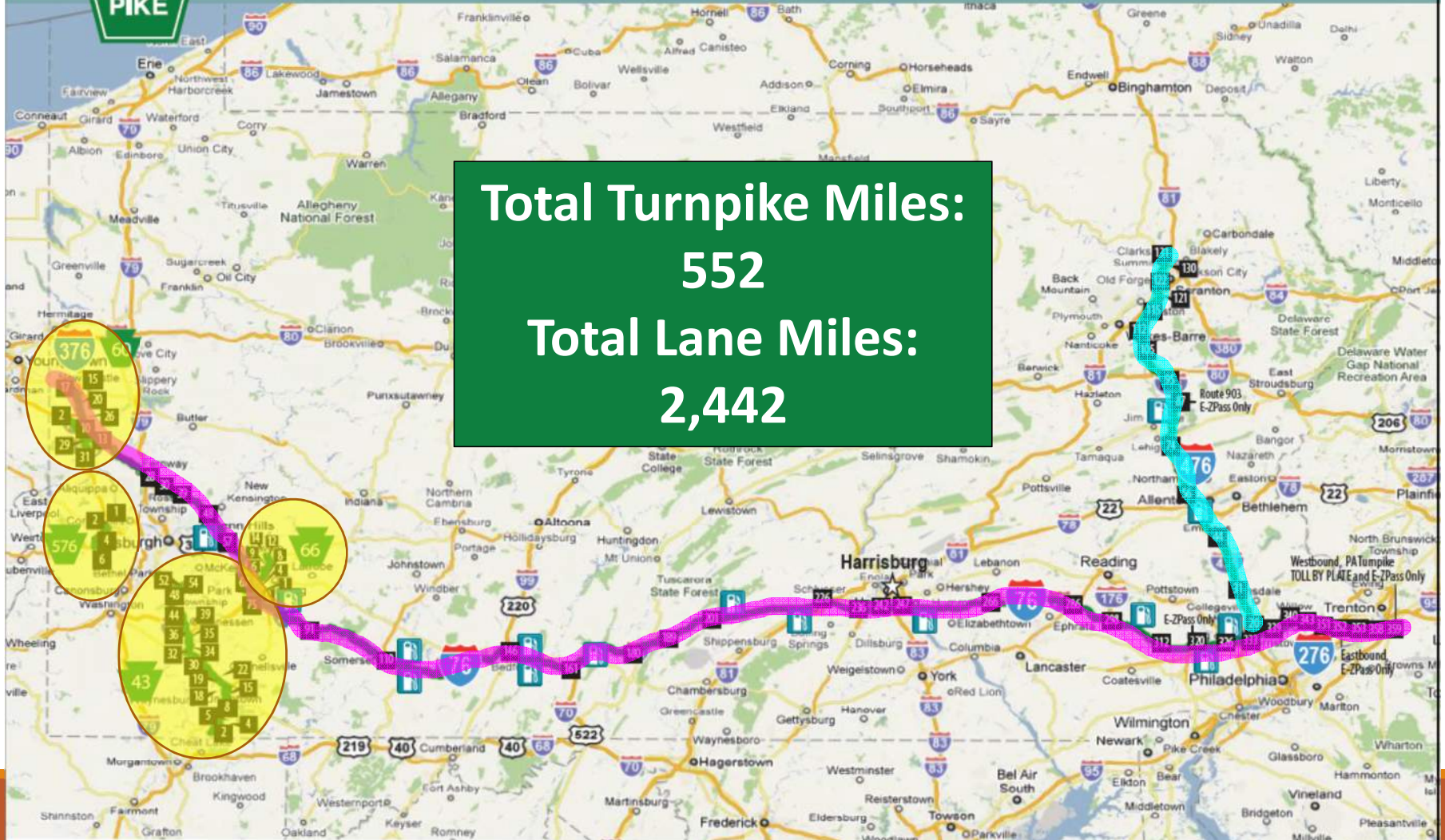


The Pennsylvania Turnpike System Map

Website: www.paturnpike.com

Customer Service: 800.331.3414

**Total Turnpike Miles:
552
Total Lane Miles:
2,442**



Our Work Force



552 miles
1/2 Million Customers/Day
24/7 operation
28 State Farm Safety Patrol
22 ASP providers
23 Maintenance Sheds
94,000 response calls a year

Our Traffic Incident Management Partners



Pennsylvania State Police - Troop T

- 9 State Police Barracks – 201 Uniformed Troopers

22 Contracted Towing Companies

- 5 Year Contract – Covers specific geographic area

110 Fire Companies

- \$225 per call - \$1000 per year stipend

67 Ambulance Companies

- \$100 per call - \$1000 per year stipend

Pennsylvania Crash Statistics

In 2017, there were 128,188 reportable traffic crashes in Pennsylvania resulting in 1,137 deaths and 80,612 injuries.

- 12th lowest total since 1950 when 113,748 crashes were reported. Last year, there were approximately 101.1 billion vehicle-miles* of travel on Pennsylvania's roads and highways.
- The 2017 fatality rate of 1.12 fatalities per hundred million vehicle-miles of travel* was the lowest ever recorded in Pennsylvania since the department started keeping records of this in 1935.

Pennsylvania Crash Statistics

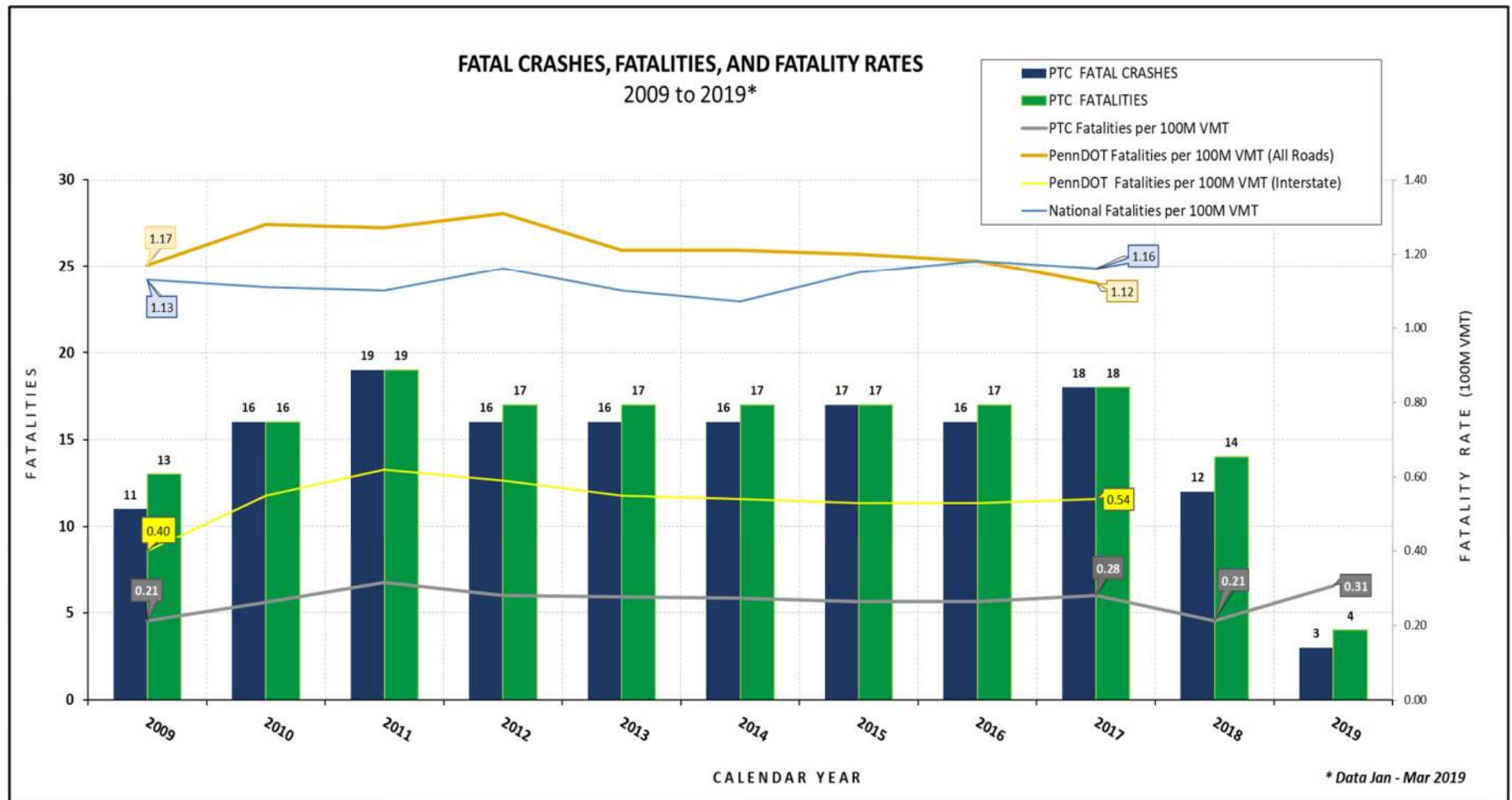
On Average in Pennsylvania:

- Each day 351 reportable traffic crashes occurred (about 15 crashes every hour).
- Each day 3 persons were fatally injured in reportable traffic crashes (one fatality every 8 hours).
- Each day 221 persons were injured in reportable crashes (about 9 injuries every hour).

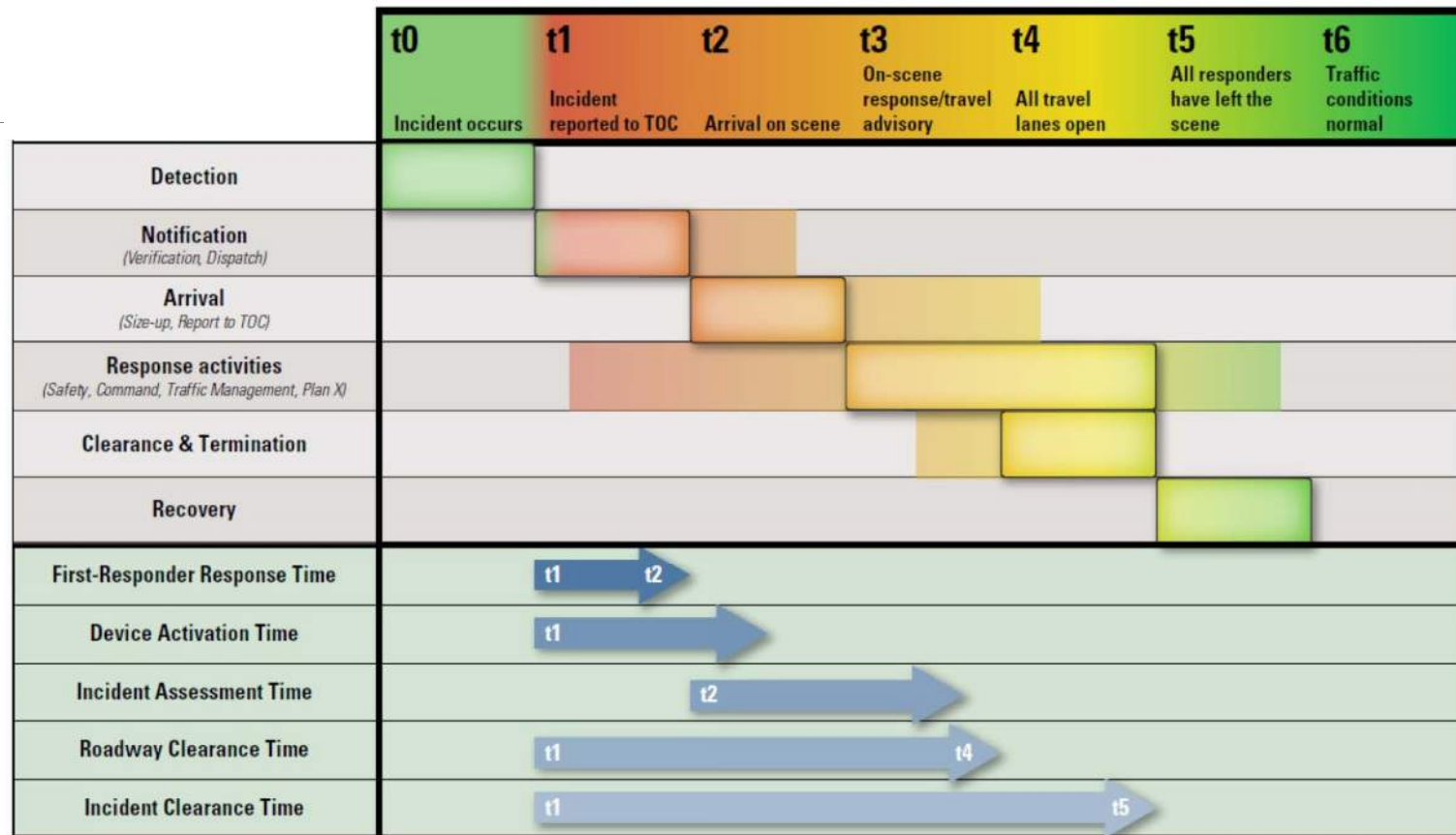
Based on Pennsylvania's 2017 population (12,805,537 people):

- 1 out of every 44 people was involved in a reportable traffic crash.
- 1 out of every 11,263 people was fatally injured in a reportable traffic crash.
- 1 out of every 159 people was injured in a reportable traffic crash.

Fatal Crashes, Fatalities, and Fatality Rates



PTC Traffic Incident Management Timeline



Secondary Crashes



Secondary Crashes

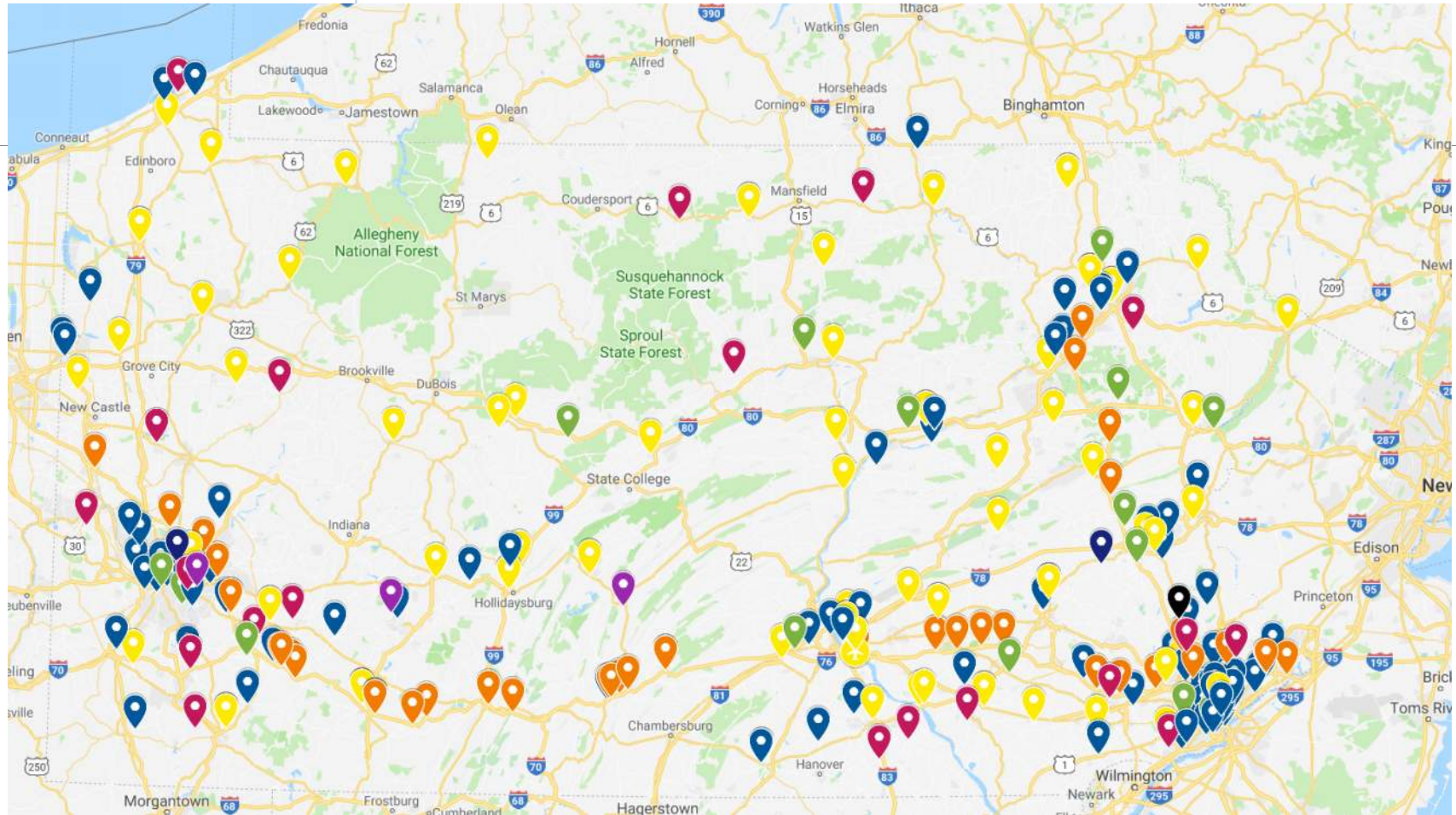


Pennsylvania Responder Struck-By Fatalities (All Time)

- 109 - Law Enforcement Officers
- 22 - Fire and Rescue Personnel
- 15 - Towing and Recovery Professionals
- 3 - EMS Workers
- 70 - PennDOT Workers
- 40 - PA Turnpike Workers



Pennsylvania Responder Struck-By Fatalities



MOVE OVER SLOW DOWN FOR STOPPED EMERGENCY VEHICLES

IT'S THE LAW

SAVING THE ROADS

EMERGENCY RESPONSES TO BLOWWAY INCIDENTS

100% RESPONSES TO BLOWWAY INCIDENTS

12,200 EMERGENCY RESPONSES IN 2014

2016

40,000 PEOPLE KILLED BY TRUCKS INVOLVED IN ALCOHOL, SPEEDING, & DISTRACTED DRIVING

NUMBER OF FIREFIGHTERS STRUCK & KILLED ON ROADWAYS SINCE 2006: 87

NUMBER OF FIREFIGHTERS & EMTs STRUCK & KILLED IN THE FIRST TEN MONTHS OF 2017: 14

PUT DOWN YOUR PHONE. SLOW DOWN AND MOVE OVER. NO Call, NO Text, NO

Home Page | Cashless Tolling | Learn Online - PTC Univ

ptcu.ptc.local/Home/LearnOnline

UNIVERSITY

Home | Learn Online | SAP Glossary | Tell Us!

Learn Online

PTC University's Online Learning gives you all of the eLearning wish to see by clicking on the appropriate link.

Want to be sure you receive credit for the course? Please READ the IMPORTANT information below.

If you are taking a course using a shared device on which you **you get credit!** When you click the link to access a for credit and by entering your network user name or your email address **Default the course!**

Just need to ask a question about an application or system? Click **HERE** to open the Service Know PTC Knowledge Base.

If you are taking a for credit course using a PTC device (for example, a PTC Max ID and Password), the PTC UI will automatically recognize you as the user. **HOWEVER,** if you are taking a for credit course using a shared PTC device, **credentials (your user ID and Password), the PTC UI will not recognize you, when you log in.** The completion of this course will be recorded on

- Active Shooter Training
- Cashless Tolling
- Compliance
- Desktop Applications
- Disaster and Incident
- Engineering
- Enterprise Training
- Enterprise Information System (EIS)
- Fate Collection
- Human Resources Soft Skills Courses
- Information Technology
- Legal
- Maintenance
- Risk Management
- Safety
- SAP - Basics
- SAP - Business Intelligence (BI)
- SAP - Electronic Document Management System (EDMS)
- SAP - Finance
- SAP - Human Resources (HRM)
- SAP - Information Risk Compliance (IRC)
- SAP - Maintenance Risk Management (MRM)
- SAP - Logistics
- SAP - Mobility (SAPM)
- SAP - Performance

Pennsylvania SHRP2 Traffic Incident Management Training

RESUME COURSE | DETAILS

TRAIN PA

DEPARTMENT OF HEALTH | EMERGENCY MANAGEMENT AGENCY

HOME | COURSE CATALOG | YOUR LEARNING | CALENDAR | RESOURCES | DISCUSSIONS

ADMIN | HELP

PA-TIM Traffic Incident Management Training

Back | History | Flagged | Print Certificate | Save For Later

Completed | Blended Learning Series | ID 1062046 | Skill Level: Intermediate

★★★★★ (110 Ratings)

Course Title: Pennsylvania Traffic Incident Management Training (v1.1)

Course Duration: Approximately 4 hours

Course Description: Effective traffic incident clearance is an important means of improving responder and

Show More

pavtn Training for officers by officers.

pa virtual training network

Powered by Pennsylvania Chiefs of Police Association

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Special Programs and Systems Training

This curriculum includes courses addressing special programs and system resources.

- Forensic Identification
- Fingerprinting and Booking
- Pennsylvania Traffic Incident Management (CLE01022)

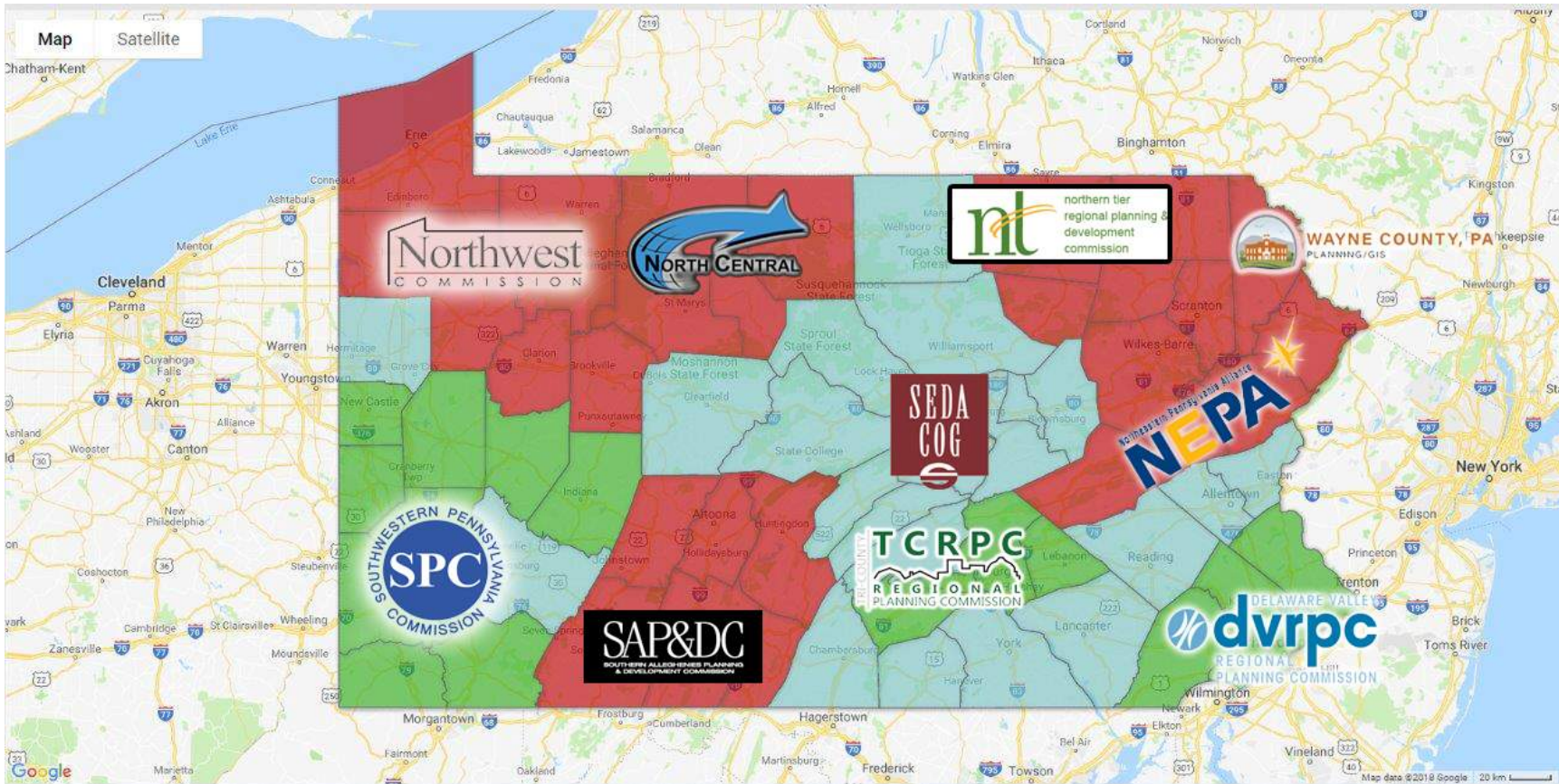
4 Credits

Effective traffic incident clearance is an important means of improving responder and motorist safety while simultaneously reducing congestion delays. This online training is designed to educate multidisciplinary groups of emergency responders across Pennsylvania in Traffic Incident Management (TIM) best practices, and represents the Commission's adherence of the Federal Highway Administration's 2007 TIM Training program.

This training aims to satisfy the three core goals of the National Unified Call for Traffic Incident Management which are: Responder Safety, Safe, Quick Clearance, and Prompt, Safe, Reliable, Interoperable Communications. The primary audiences for the training include Law Enforcement, Firefighters, EMS personnel, Training and

Computer Based – E-Learning

TIM Teams/Task Forces/Committees



PennTIME

Pennsylvania **T**raffic **I**ncident **M**anagement **E**nhancement.

Priority effort identified in TAC Study.

Formed after 2016 TIM Summit.

Quarterly meetings.



Statewide TIM practitioner network through closed Facebook page.

Real Time Situational Awareness PA Turnpike



[#GoOrangePA](#)

How the Turnpike is taking "Real Time" to the next step

Accident Photos /i911

STAR Mobile App

Telematics

HAAS Alert

EWD tool

Genetec Mobile App

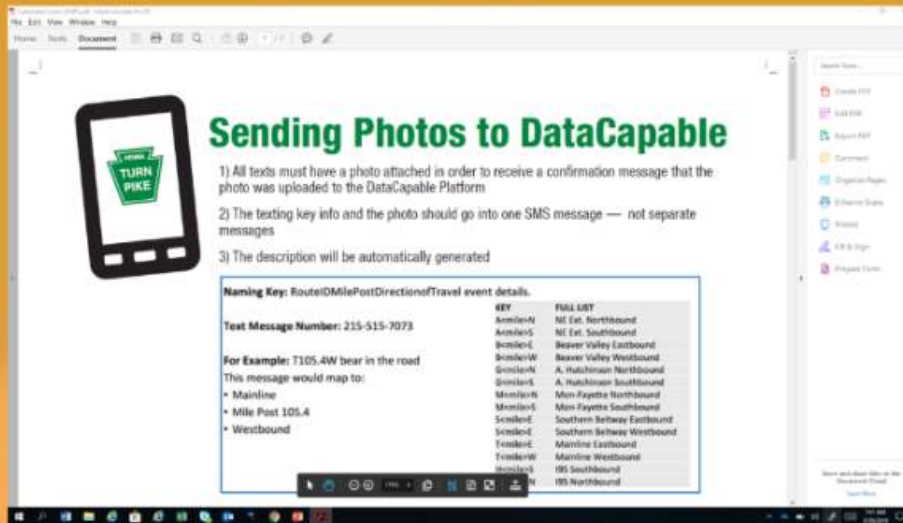
Push to Talk App

Ribbon Wall



Accident Photos

Taking photos



Sending Photos to DataCapable

- 1) All texts must have a photo attached in order to receive a confirmation message that the photo was uploaded to the DataCapable Platform
- 2) The texting key info and the photo should go into one SMS message — not separate messages
- 3) The description will be automatically generated

Naming Key: Route|DM|ePostDirection|Travel event details.

Text Message Number: 215-515-7073

For Example: T105.4W bear in the road
This message would map to:

- Mainline
- Mile Post 105.4
- Westbound

KEY	FULL LIST
Amrlen-N	NE Ext. Northbound
Amrlen-S	NE Ext. Southbound
Bcmbr-E	Beaver Valley Eastbound
Bcmbr-W	Beaver Valley Westbound
Bcmbr-N	A. Hutchinson Northbound
Bcmbr-S	A. Hutchinson Southbound
Mmbr-N	Mon-Fayette Northbound
Mmbr-S	Mon-Fayette Southbound
Scmb-E	Southern Belknap Eastbound
Scmb-S	Southern Belknap Westbound
Ycmbr-E	Mainline Eastbound
Ycmbr-W	Mainline Westbound
Ycmbr-S	IS Southbound
Ycmbr-N	IS Northbound



Live video Streaming from callers Cellphone





Sending Photos to DataCapable

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Naming Key: RouteIDMilePostDirectionofTravel event details.

Text Message Number: 215-515-7073

For Example: T105.4W bear in the road

This message would map to:

- Mainline
- Mile Post 105.4
- Westbound

KEY	FULL LIST
A<mile>N	NE Ext. Northbound
A<mile>S	NE Ext. Southbound
B<mile>E	Beaver Valley Eastbound
B<mile>W	Beaver Valley Westbound
G<mile>N	A. Hutchinson Northbound
G<mile>S	A. Hutchinson Southbound
M<mile>N	Mon-Fayette Northbound
M<mile>S	Mon-Fayette Southbound
S<mile>E	Southern Beltway Eastbound
S<mile>W	Southern Beltway Westbound
T<mile>E	Mainline Eastbound
T<mile>W	Mainline Westbound
H<mile>S	195 Southbound

65°

← DISABLE

1906000830

- WHT CHEVY MALIBU/FT
- OFF ROADWAY
- Lanes Blocked: Right Sho
- Weather: Sunny. Quite co

PTC: GB100, Unit has ar

PSP: None

EMS: None

FIRE: None

ASP: 8110, Unit is enrou

HAZ: None

** LOI search completed at 06/04/19 08:35:48 - 6/4/20..

Republic

83% 8:42

LTE

Tue, Jun 4

STAR • 1m

STAR Alert

Event: ACC - NOIB ** LOI search completed at 06/04/19 08:35:48 - 6/4/20..

Republic Wireless • 1h

On Cell

Connected to the cellular network

8:33

MAP

Use Only

New York

Harrisburg

Trenton

Philadelphia

Dover

Washington

Norfolk

A, U... Powered by Esri

Mobile Cameras

Installed on 24 vehicles

Full PTZ



Live camera view

24/7



On Road

Live on Road view

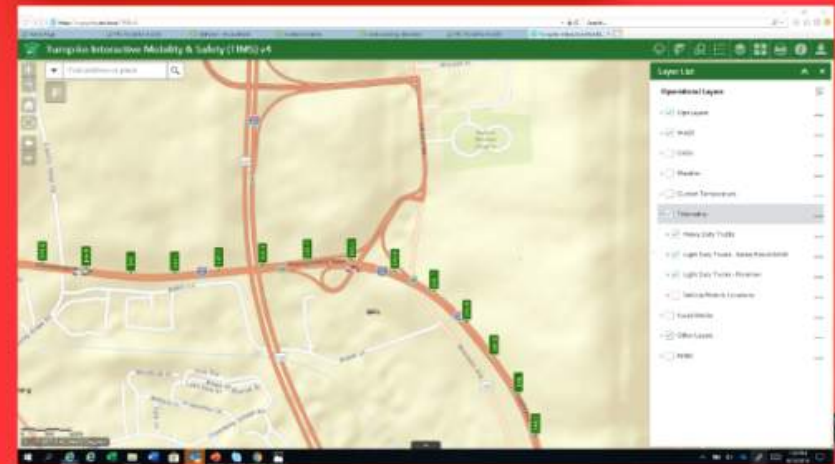
TOC view

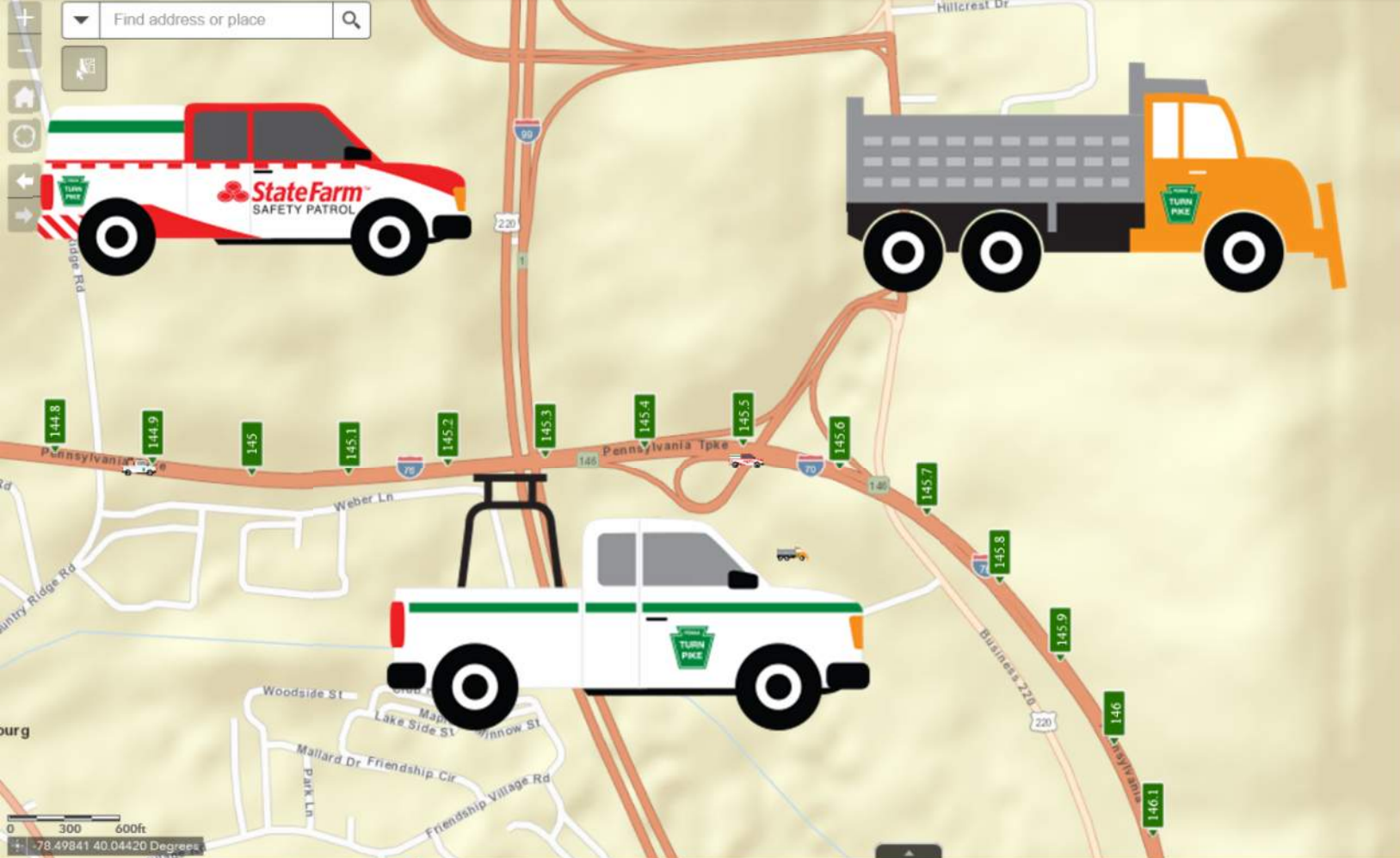
TOC control and view
all cameras



Telematics

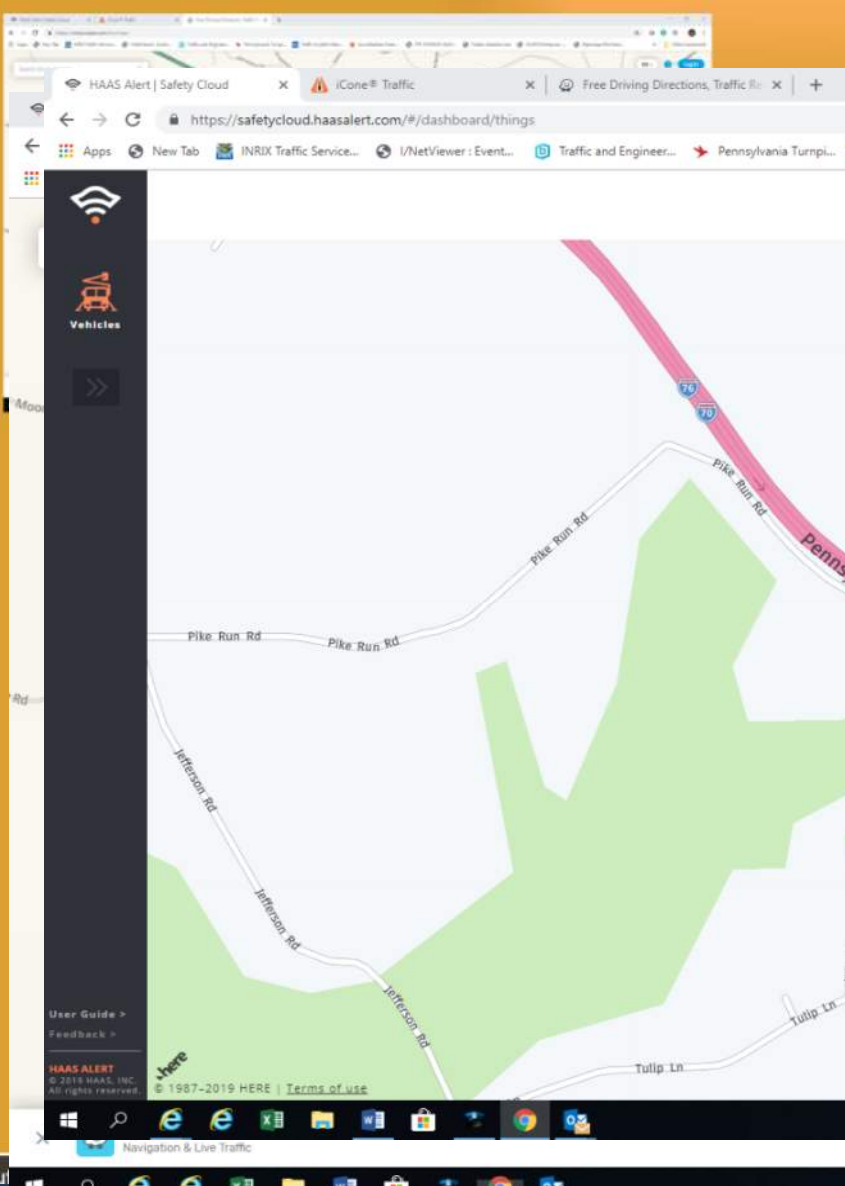
- 523 maintenance vehicles are equipped
- Verizon Connect software
- Helps with situational awareness/dispatch
- Snow train location for winter
- Assists in monitoring backlog





Layer List

- Operational Layers
 - Ops Layers
 - WAZE
 - CADs
 - Weather
 - Current Temperature
 - Telematics
 - Heavy Duty Trucks
 - Light Duty Trucks - Safety Patrol/MUW
 - Light Duty Trucks - Foreman
 - Vehicle Historic Locations
 - Social Media
 - Other Layers
 - INRIX



May 1 - May 28, 2019
YTD May 1 - May 28

PA Turnpike
Safety Cloud™ Report
Attention: Todd Leiss, John Parker

Driver Totals
Drivers Alerted
2,633

YTD 2,633

Incident Totals
Total Incidents
171

Avg Time On-Scene
15.4 min

YTD 171

YTD 15.4 min

Run Totals
Total Runs
134

Total Responding Time
381 min

Avg Time-to-Scene
2.8 min

YTD 134

YTD 381 min

YTD 2.8 min

Drivers Alerted
Total drivers alerted when vehicle/apparatus is on-scene, based on HAAS Alert enabled applications

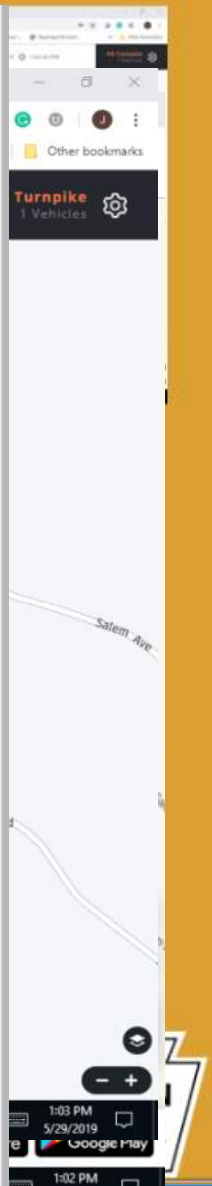
Total Runs
Total times a vehicle/apparatus was dispatched to an incident with lights engaged for at least 1+ minute

Total Incidents
Total number of times at least one vehicle/apparatus arrived on-scene with lights engaged for 2+ minutes

Total Responding Time
Total time vehicles/apparatus spent traveling to dispatched calls with lights engaged

Avg Time On-Scene
Average time duration per incident

Avg Time-to-Scene
Average time it took for dispatched vehicle /apparatus to arrive on-scene



Early Warning Detection tool

EWD

Active Watch Points

No.	State	Segment	Location	Speed	Waze	Weather	Update
1	MD	MD 202	100.1-100.2	0	0	0	10:00:00
2	MD	MD 202	100.2-100.3	0	0	0	10:00:00
3	MD	MD 202	100.3-100.4	0	0	0	10:00:00
4	MD	MD 202	100.4-100.5	0	0	0	10:00:00
5	MD	MD 202	100.5-100.6	0	0	0	10:00:00
6	MD	MD 202	100.6-100.7	0	0	0	10:00:00
7	MD	MD 202	100.7-100.8	0	0	0	10:00:00
8	MD	MD 202	100.8-100.9	0	0	0	10:00:00
9	MD	MD 202	100.9-101.0	0	0	0	10:00:00
10	MD	MD 202	101.0-101.1	0	0	0	10:00:00

Divides Road into 1/2 Segments to help monitor

Live CADS view

Time	Events	T...	Locati...	Lane Blocked
00:03:07	1900000064	RO	@722.4E	No Lane Blocked
00:03:28	1900000063	RO	@724.3E	Lane 2
00:20:33	1900000062	MED	@71.1E	No Lane Blocked
00:21:24	1900000061	PD	@729.1W	No Lane Blocked
00:26:11	1900000059	PD	@728E	No Lane Blocked
00:47:27	1900000058	FW	@735.0E	No Lane Blocked

Combine Waze/Inrix/Weather

Updates each segment with Speed, Waze and Weather for that 1/2 mile every 2 minutes

User driven filters



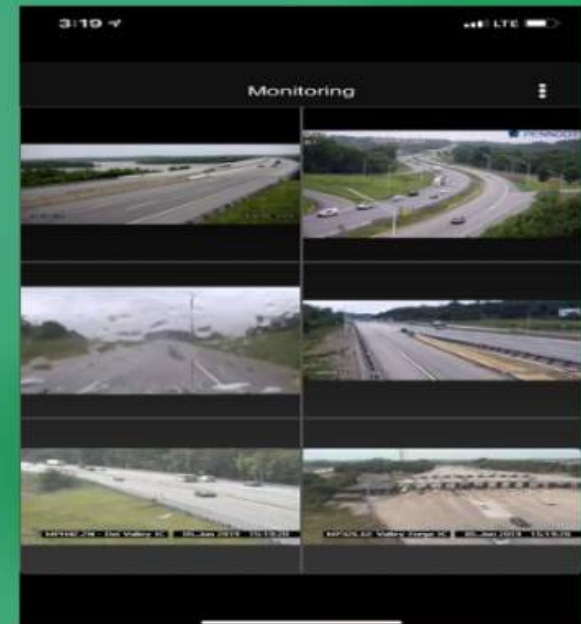
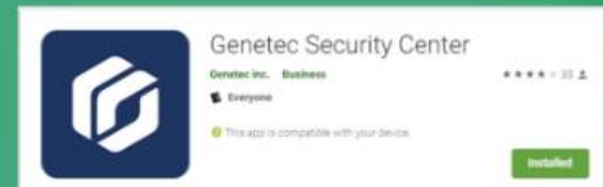
Early Warning Detection tool - Active Watch Points

District	Location	Weather	Temp	Wind	Humidity	Pressure
District 5	NE Ext. , Northbound : 40.8-41.4	Cloudy (77F)	4.0	1	10.00	5.8 (E)
District 5	NE Ext. , Northbound : 67.4-67.9	Cloudy (77.18F)	1.0	1	8.00	4.0 (E)
District 5	NE Ext. , Northbound : 69.2-69.8	Cloudy (77.18F)	-2.0	1	8.00	4.0 (E)
District 5	NE Ext. , Northbound : 81.3-81.8	Cloudy (72F)	10.0	1	7.00	3.5 (ENE)
District 5	NE Ext. , Northbound : 84.4-84.9	Drizzle (71.2F)	5.0	1	8.00	5.6 (ESE)
District 2	Mainline , Eastbound : 179.8-180.3	Light rain (76.04F)	-2.0	1	9.00	4.7 (SSE)
District 3	Mainline , Eastbound : 274.4-275	Light rain (79F)	-	1	10.00	3.5 (N)
District 3	Mainline , Eastbound : 298.4-299	Rain (78.79F)	-10	1	9.00	4.4 (E)
District 4	Mainline , Eastbound : 313.4-313.9	Mostly cloudy (76.25F)	-2.0	1	9.00	4.6 (E)
District 4	Mainline , Eastbound : 335.2-335.6	Rain (75F)	7.0	1	10.00	5.8 (NNE)
District 4	Mainline , Eastbound : 343.6-344.1	Cloudy (77.74F)	5.0	1	9.00	4.6 (E)
District 4	Mainline , Westbound : 333.5-333.7	Cloudy (75F)	5.0	1	10.00	5.8 (NNE)
District 2	Mainline , Eastbound : 121.7-122.2	Mostly cloudy (74.6F)	-37	0	9.00	6.6 (S)
District 2	Mainline , Eastbound : 122.3-122.9	Mostly cloudy (74.6F)	-13	0	9.00	6.6 (S)
District 2	Mainline , Eastbound : 123.8-124.6	Mostly cloudy (74.6F)	-52	0	9.00	6.6 (S)

Staying Connected...

Genetec Mobile

- Android/Apple/Windows Devices
- Live Video Streaming
- PTZ ability
- Playback
- Real-time video streaming from device
- Save Snapshots of incidents
- Up to 6 video streams at once



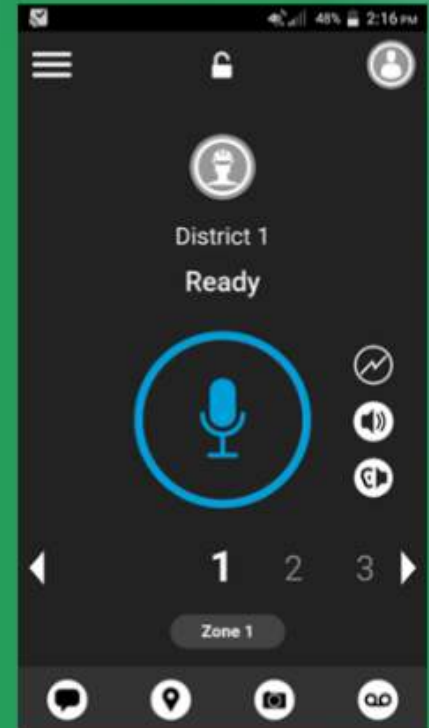
Instant Connect and Enhanced Push-to-Talk

Cisco Instant Connect - Converts Analog Land Mobile Radio Audio to digital data

AT&T Enhanced Push-to-Talk (EPTT)

Smart phone app

Connected to Instant Connect



Ribbon Wall - SLD

Linear View of Mainline and NE Extension

Shows Live Incidents
Shows Speeds
Shows Lane Configuration
Shows Lanes Blocked
Intersecting Roads



Future Enhancements to Real Time

- Create an Active Incident Window
- Use of AVL for Backlog monitoring
- Video stream from cellphones - Send a video link directly to the scene
- Link Mobile cameras to mobile app and other apps
- Use of Inrix data for speed reduction during activation



Questions

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