

# PA Turnpike Work Zone Management

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& Traffic Operations





# The Pennsylvania Turnpike System Map

Website: [www.paturnpike.com](http://www.paturnpike.com)  
Customer Service: 800.331.3414

**Total Turnpike Miles: 565**

**550,000 Vehicles/Day**  
**Truck Traffic: 17%**  
**Truck VMT: 26%**  
**Annual Revenue: \$1.8 B**  
**Truck Revenue: \$875 M**

**Northeast Extension: 110 miles**

**Western Extensions: 96 miles**

**East / West Mainline: 359 miles**



# PTC Traffic Operations Center

**Dial \*11  
for assistance**

**Combined dispatch  
and TOC operation**

**130,000 motorist  
assist calls/year**

**65,000 CAD  
incidents/year**

**17,000 ATMS  
activations/year**



# Event Management to Traveler Information



Advanced Traffic Management System (ATMS)

**TURN PIKE SAFETY PATROL**  
**pennsylvania STATE POLICE**

**EMERGENCY DIAL 911**  
**EMERGENCY CELLULAR \*11**  
**waze**

**INRIX**  
**TrafficVision**  
**VAISALA**

**NATIONAL WEATHER SERVICE**  
**AccuWeather**

APIs SHARE INFORMATION WITH 3RD PARTY DATA PARTNERS

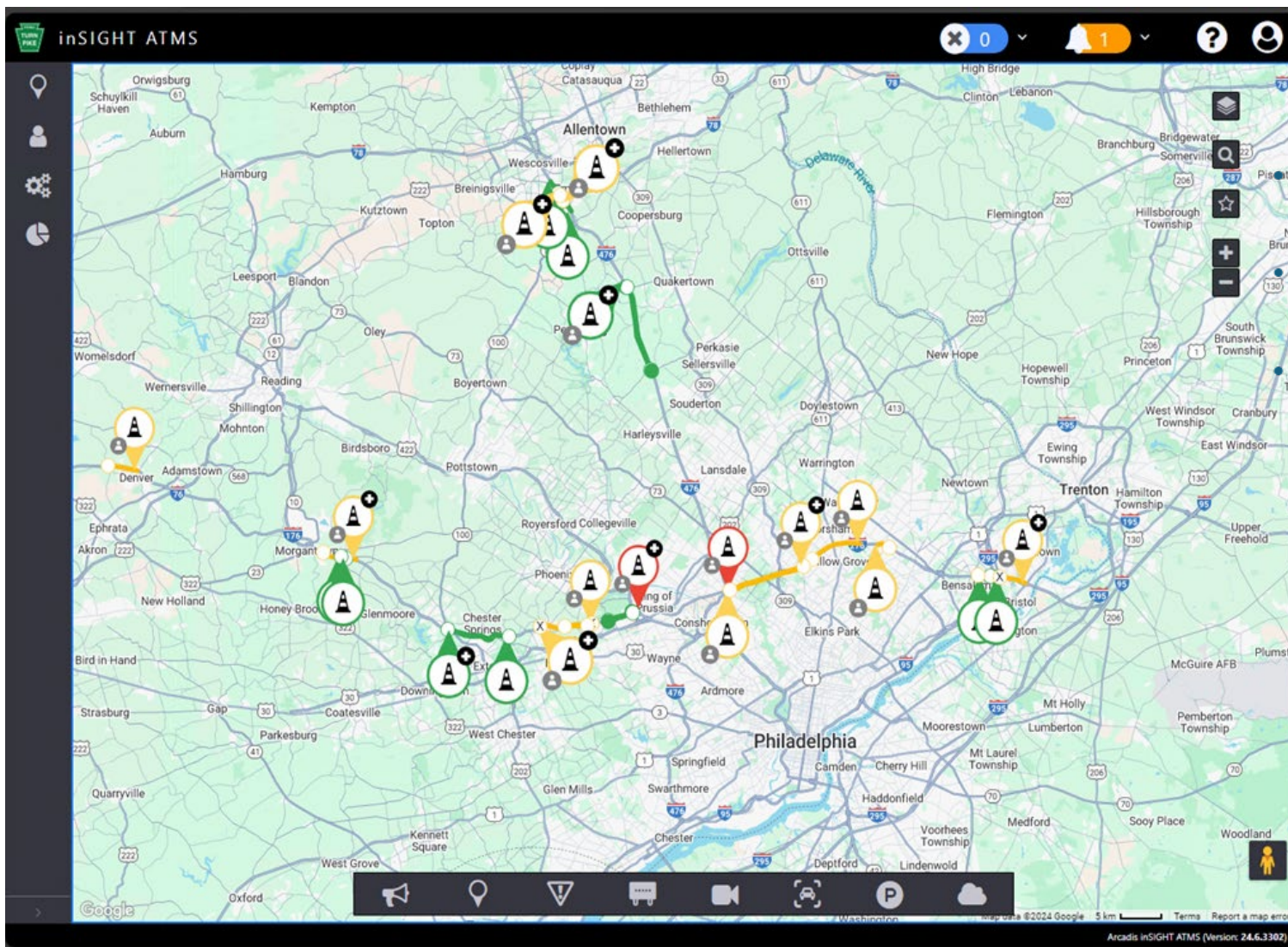
**G**  
**waze**  
**Apple**

**511**  
**SiriusXM SATELLITE RADIO**  
**TOMTOM**

**Drivewyze**  
**Trimble**  
**TRUCKER PATH**

**INRIX**  
**Keystone Mesonet**

# Advanced Traffic Management System (ATMS)



**ATMS is a browser-based platform used by a community of Traffic Operations professionals**

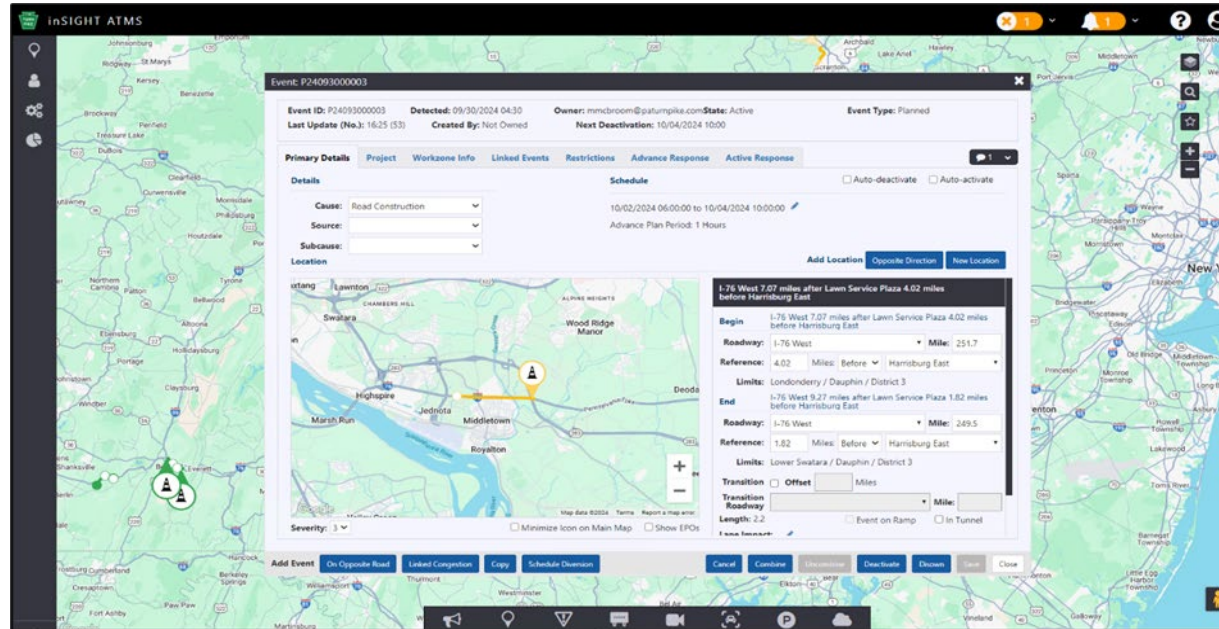
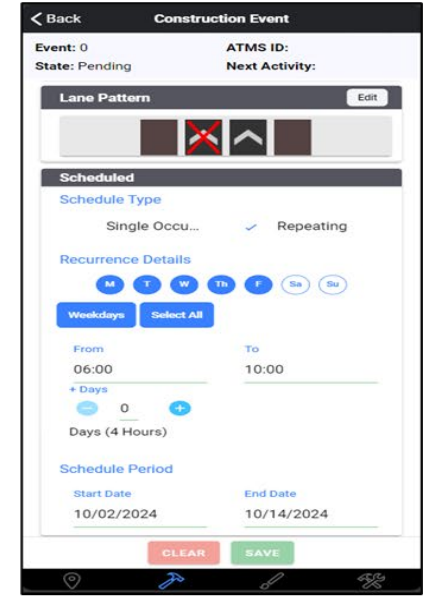
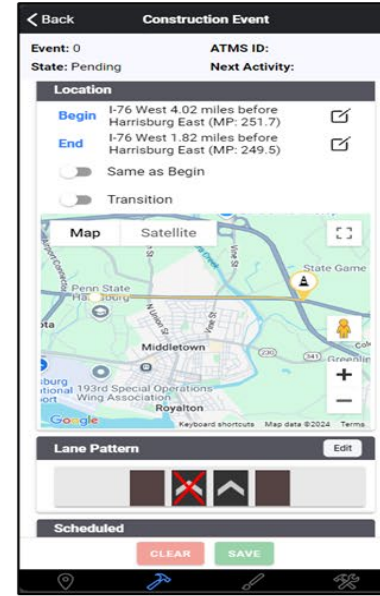
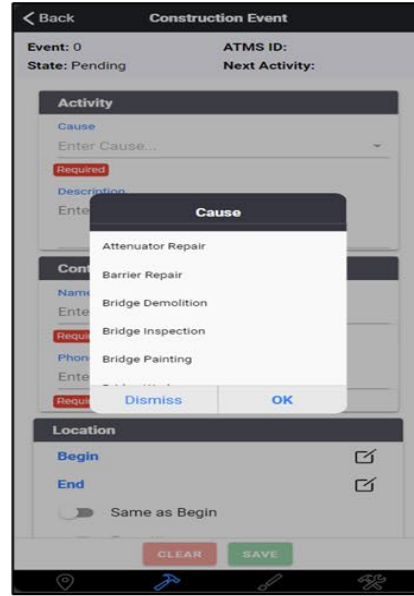
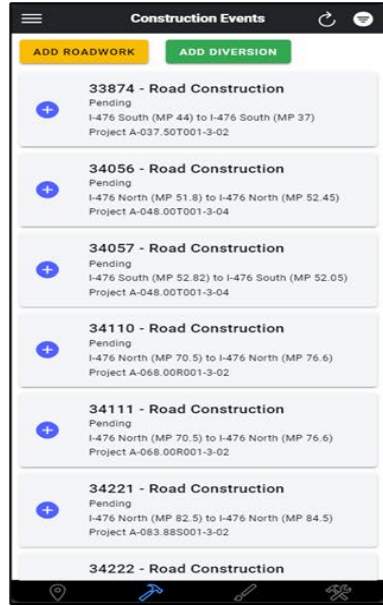
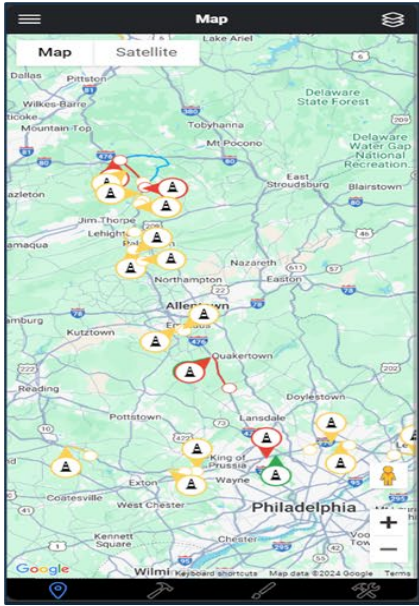
**Manages transportation networks including ITS devices, work zones, and incident response**

**Key operational functions include:**

- **Decision support and automatic traffic event response plan generation**
- **Dynamic message sign (DMS) management**
- **Real-time traveler information dissemination to public and external stakeholders (e.g., emergency responders)**



# Construction & Maintenance Mobile App



# ATMS API

- **ATMS API (JSON)**

- The ATMS API disseminates event data to third parties
- Work Zone Data Exchange (WZDx) feed created for data sharing

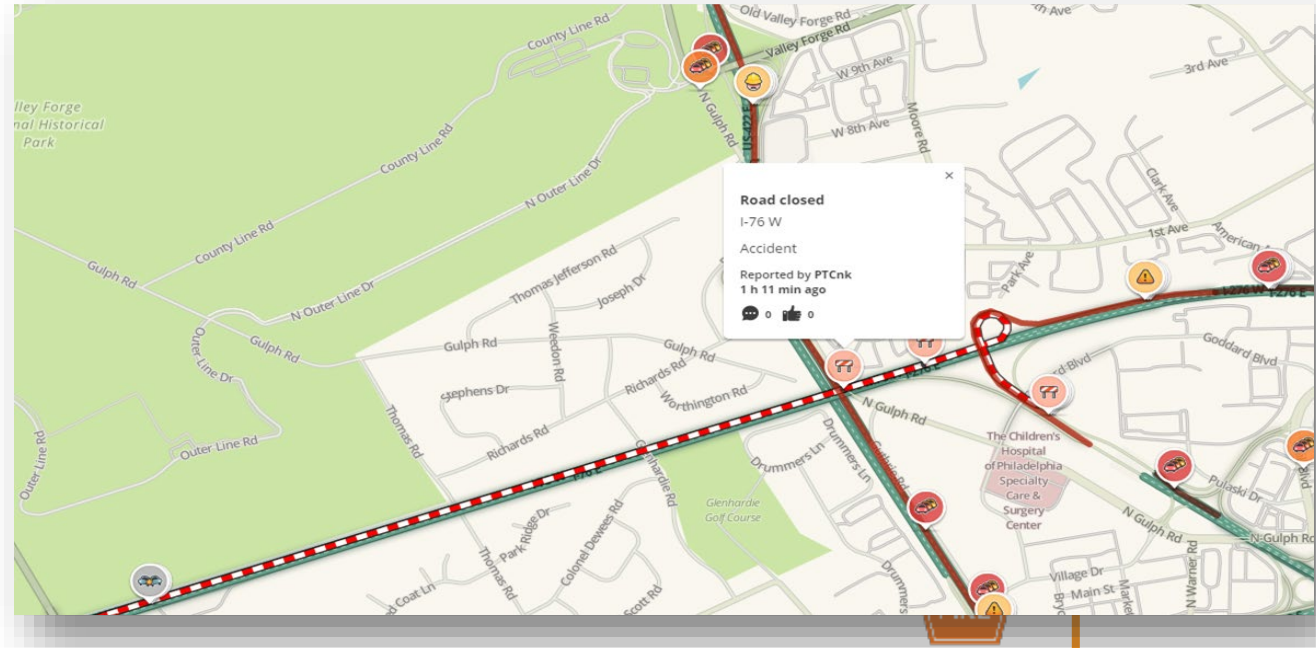
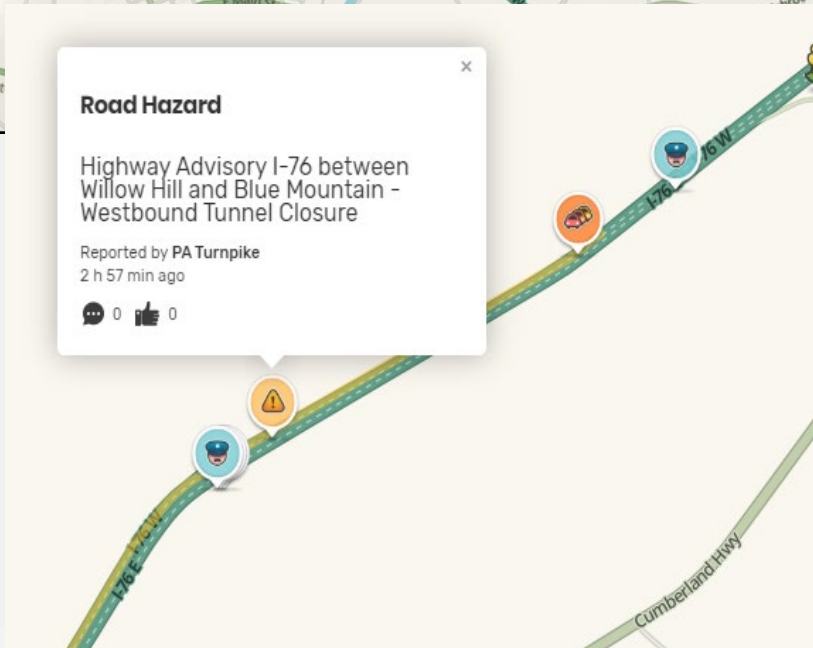
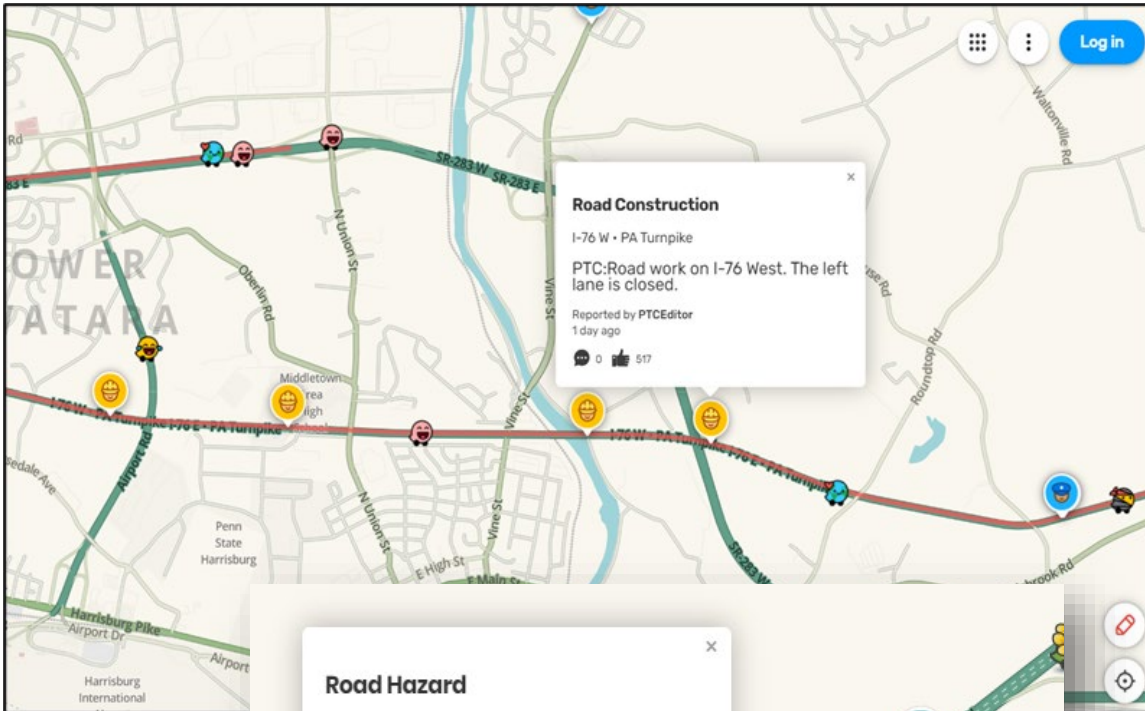
- **WZDx Overview**

- Data standard designed to make work zone information widely accessible
- Used by mapping companies, connected vehicles, and TMS
- Provides details on active/planned work zones and their impact

```
← ↻ 🏠 🔒 https://atms.paturnpike.com/api/WZDxWorkZoneFeed
2501 {
2502   "id": "-930000033",
2503   "type": "Feature",
2504   "properties": {
2505     "core_details": {
2506       "event_type": "work-zone",
2507       "data_source_id": "ATMS",
2508       "road_names": [
2509         "I-76 West"
2510       ],
2511       "direction": "westbound",
2512       "description": "Road work on I-76 West. The left lane is closed.",
2513       "creation_date": "2024-09-30T08:30:10Z",
2514       "update_date": "2024-10-03T20:25:13.04Z"
2515     },
2516     "start_date": "2024-10-02T10:00:00Z",
2517     "end_date": "2024-10-04T14:00:00Z",
2518     "is_start_date_verified": true,
2519     "is_end_date_verified": false,
2520     "location_method": "channel-device-method",
2521     "vehicle_impact": "some-lanes-closed",
2522     "is_start_position_verified": false,
2523     "is_end_position_verified": false,
2524     "lanes": [
2525       {
2526         "order": 1,
2527         "type": "shoulder",
2528         "status": "open"
2529       },
2530       {
2531         "order": 2,
2532         "type": "general",
2533         "status": "closed"
2534       },
2535       {
2536         "order": 3,
2537         "type": "general",
2538         "status": "open"
2539       },
2540       {
2541         "order": 4,
2542         "type": "shoulder",
2543         "status": "open"
2544       }
2545     ],
2546     "beginning_milepost": 251.7,
2547     "ending_milepost": 249.5
2548   },
2549   "geometry": {
2550     "type": "MultiPoint",
2551     "coordinates": [
2552       [
2553         -76.705535,
2554         40.209357
2555       ],
2556       [
2557         -76.747041,
2558         40.210477
2559     ]
2560   }
2561 }
```

# Waze Integration into ATMS

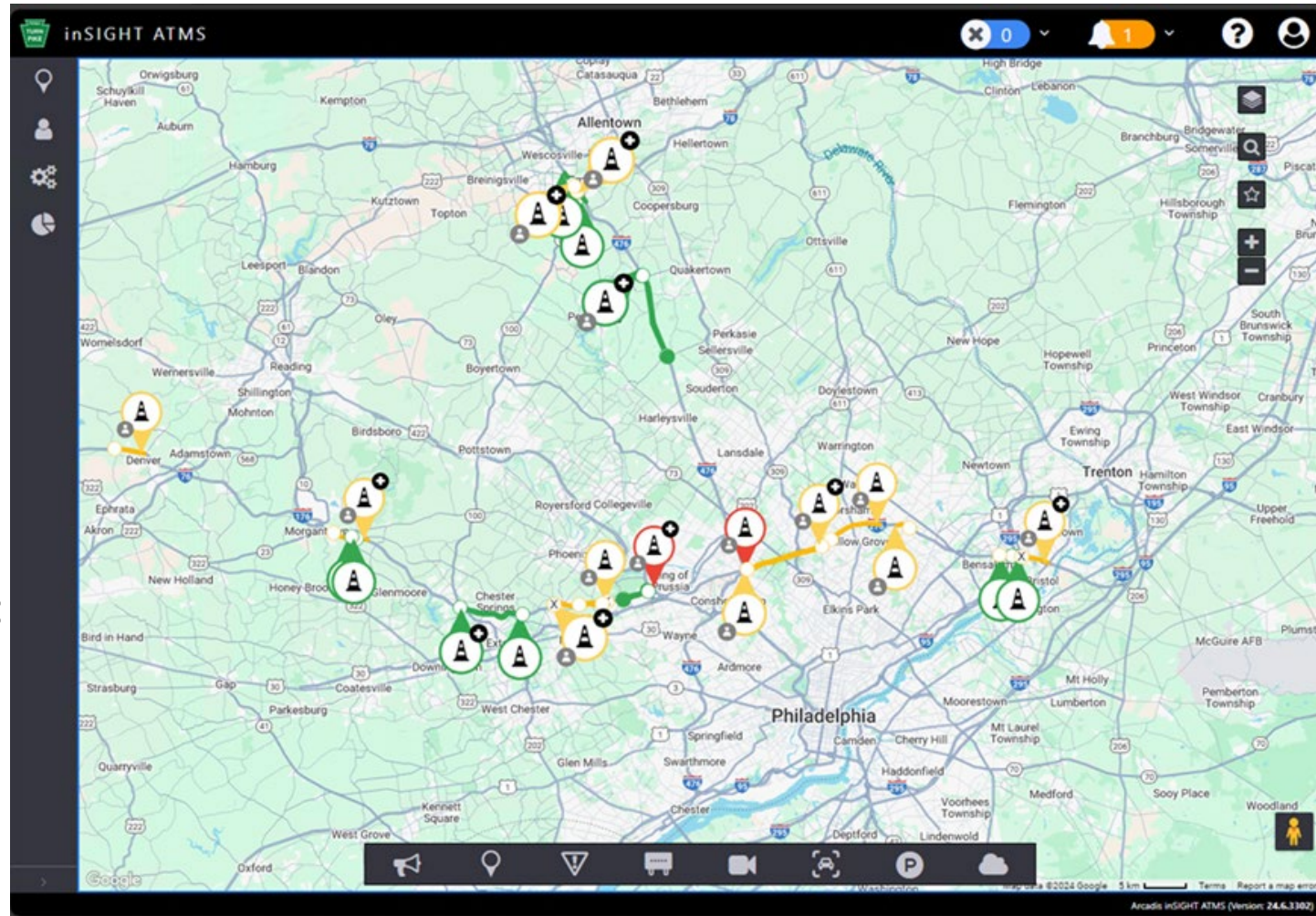
- ATMS allows operators to share event details directly with WAZE and receive WAZE Alerts
- Alert Generation
  - With a single click, event data is shared with WAZE, creating alerts for drivers





# Work Zone ATMS Entries

- **Number of WZs**
  - 2024: 10,984 (and counting)
  - 2023: 11,149
  - 2022: 10,503
  - 2021: 10,112
- **Average Work Zones**
  - Per Month: 925 work zones
  - During Peak Months/Summer Months: 1150 work zones

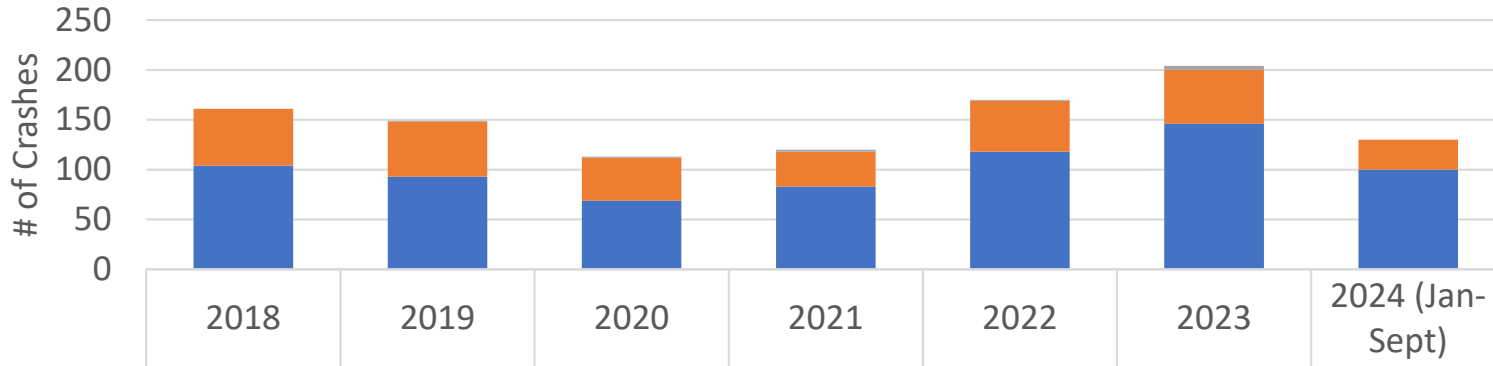


# All ATMS Event Entries – 2024

Type	Number of Events
Work Zone	10984
Incident	3679
Congestion	810
Weather and Fog	512
Road Conditions	317
Service Plaza Alert	142
Wrong Way Driver	134
Diversion	80
MEPA/Amber Alert	48

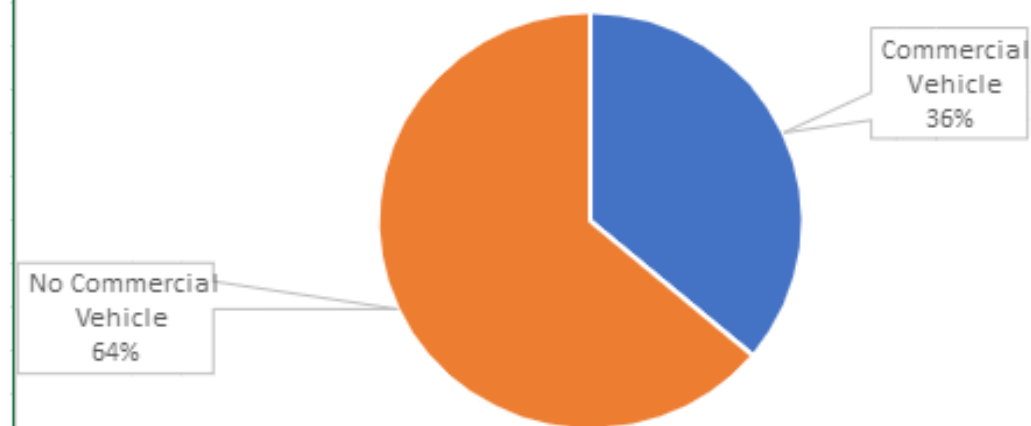
# WORK ZONE CRASHES

Work Zone Crashes



	2018	2019	2020	2021	2022	2023	2024 (Jan-Sept)
■ FATAL	0	1	1	2	1	4	0
■ INJURY	57	55	43	35	51	54	30
■ PDO	104	93	69	83	118	146	100

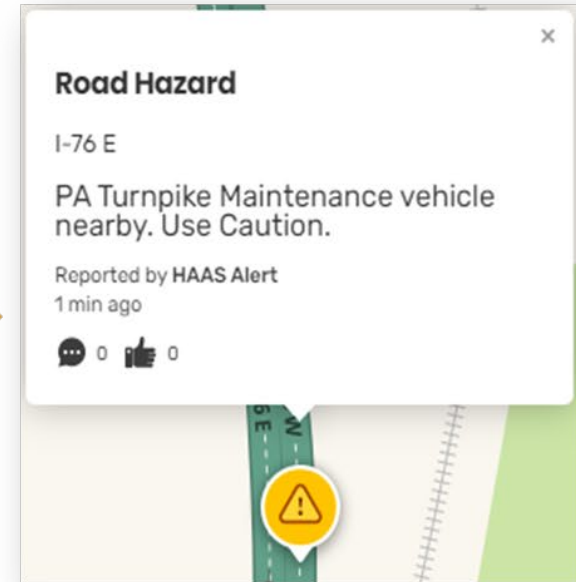
Work Zone Crashes by Vehicle Type



# Digital Alerting



## HAAS Alert

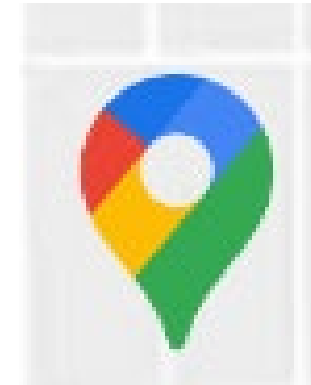
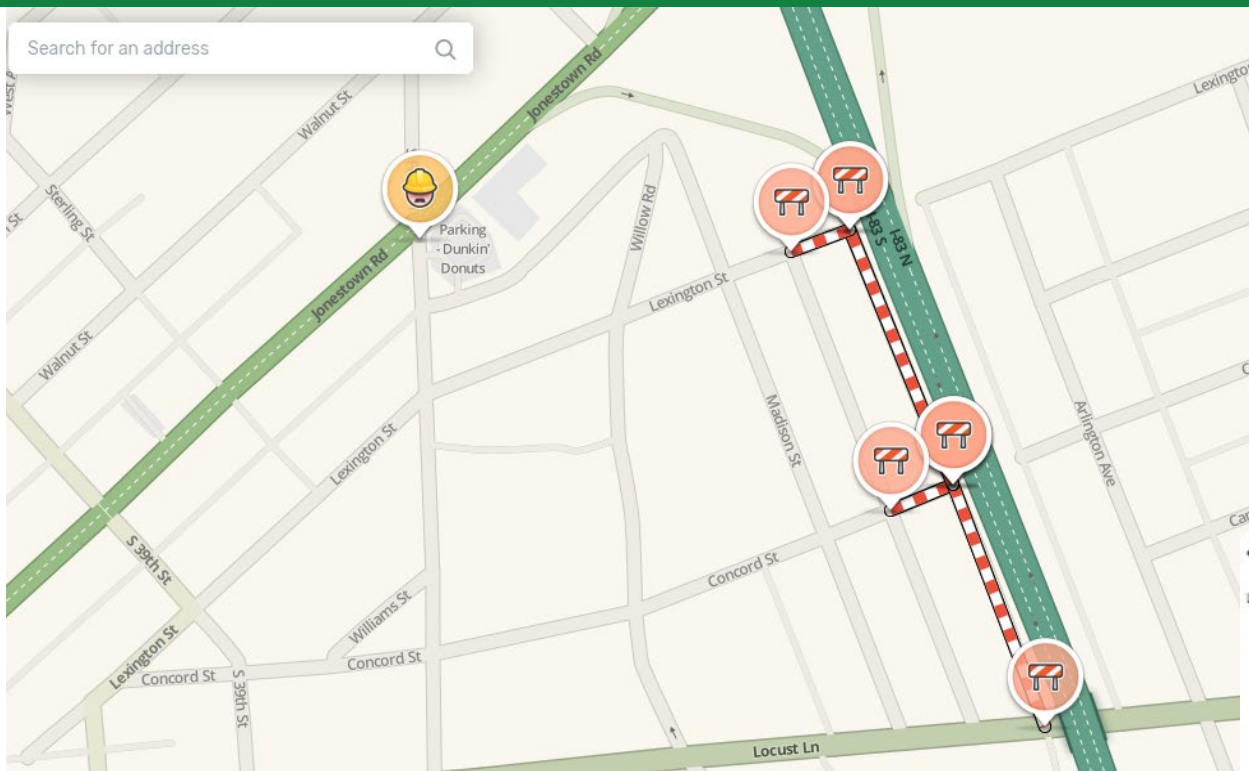


- Digital Alerts to Waze, Apple, and Stellantis via UConnect (i.e., Jeep, Chrysler, Fiat, Ram)
- 174 units (108 hardwired / 66 portable)
- Approximately \$700 a unit / year
- Over 4,000 daily alerts sent

# Drivewyze Alerts



# Waze & Google Road Closure Tool



- ← Fix a road
- Length of road
- Segment of Pennsylvania Turnpike 1km
  - All of Pennsylvania Turnpike 500km
  - All of Interstate 76 500km
  - All of Interstate 70 8,100km
  - All of Dwight D. Eisenhower Highway 8,800km

#### Edit Information

- Road name**  
Add or fix a road name
- Road shape**  
Change the shape of the road
- Closed or blocked**  
Report as permanently closed, or blocked due to an accident or event
- Private road**  
Mark road as private access only
- Remove road**  
Mark road as non-existent
- Traffic direction**  
Edit the direction of traffic
- Other**  
Report other problems with road info



# Doing A lot...Must do Better!!



# New Driver Work Zone Safety Program

Course Now Available!





# Thank You



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