

TRAFFIC DEVICES



2024 MATERIALS CONSTRUCTION
CONFERENCE



West Virginia

almost heaven



6th Largest Roadway System in the US

93% of State's System

34,691 miles of state owned, 835 miles of federally roadway, and 3,244 of municipally owned roadways

6,958 Bridges of which 33% are more than 100' long



Strategic Highway Safety Plan

GOAL

The goal of the **West Virginia Strategic Highway Safety Plan** is to work cooperatively to improve roadway safety, eliminating fatalities and serious injuries through the coordinated efforts of enforcement, education, emergency medical services, and engineering.

OVERALL OBJECTIVE

The objective of the **2022-2026 West Virginia Strategic Highway Safety Plan** is to achieve zero fatalities by 2050 and ultimately zero serious injuries on our roadways, by **reducing fatalities and serious injuries 4% annually** over the next five years.



SHSP Emphasis Areas



2022-2026 WV SHSP



EMPHASIS AREA 1

Speeding and Aggressive Driving



EMPHASIS AREA 2

Roadway Departure



EMPHASIS AREA 3

Occupant Protection



EMPHASIS AREA 4

Older Driver (65+) Involved



EMPHASIS AREA 5

Alcohol and Drug Impaired Driving



EMPHASIS AREA 6 - (Regionally Focused)

Intersections



EMPHASIS AREA 7 - (Regionally Focused)

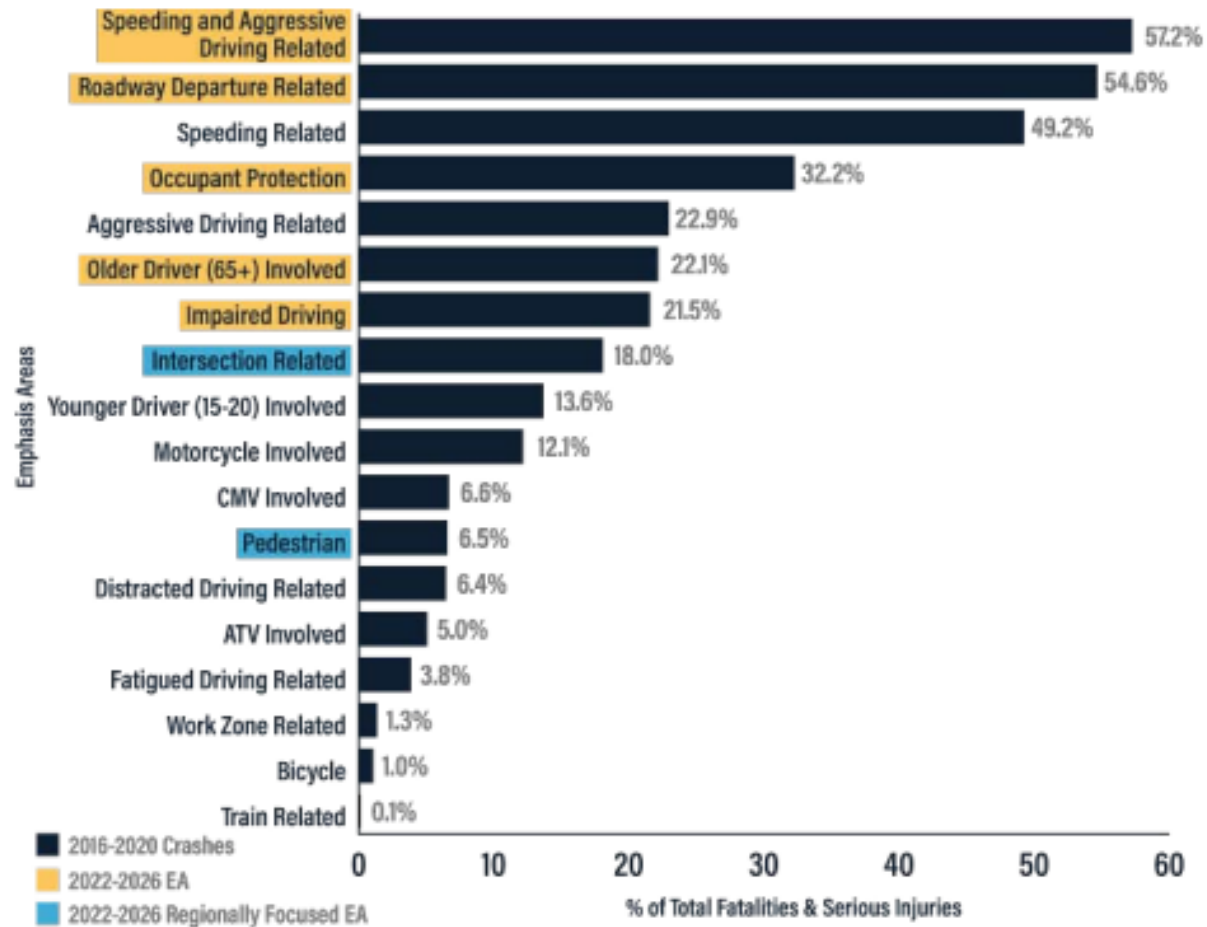
Pedestrians



EMPHASIS AREA 8

Improving Highway Safety Data

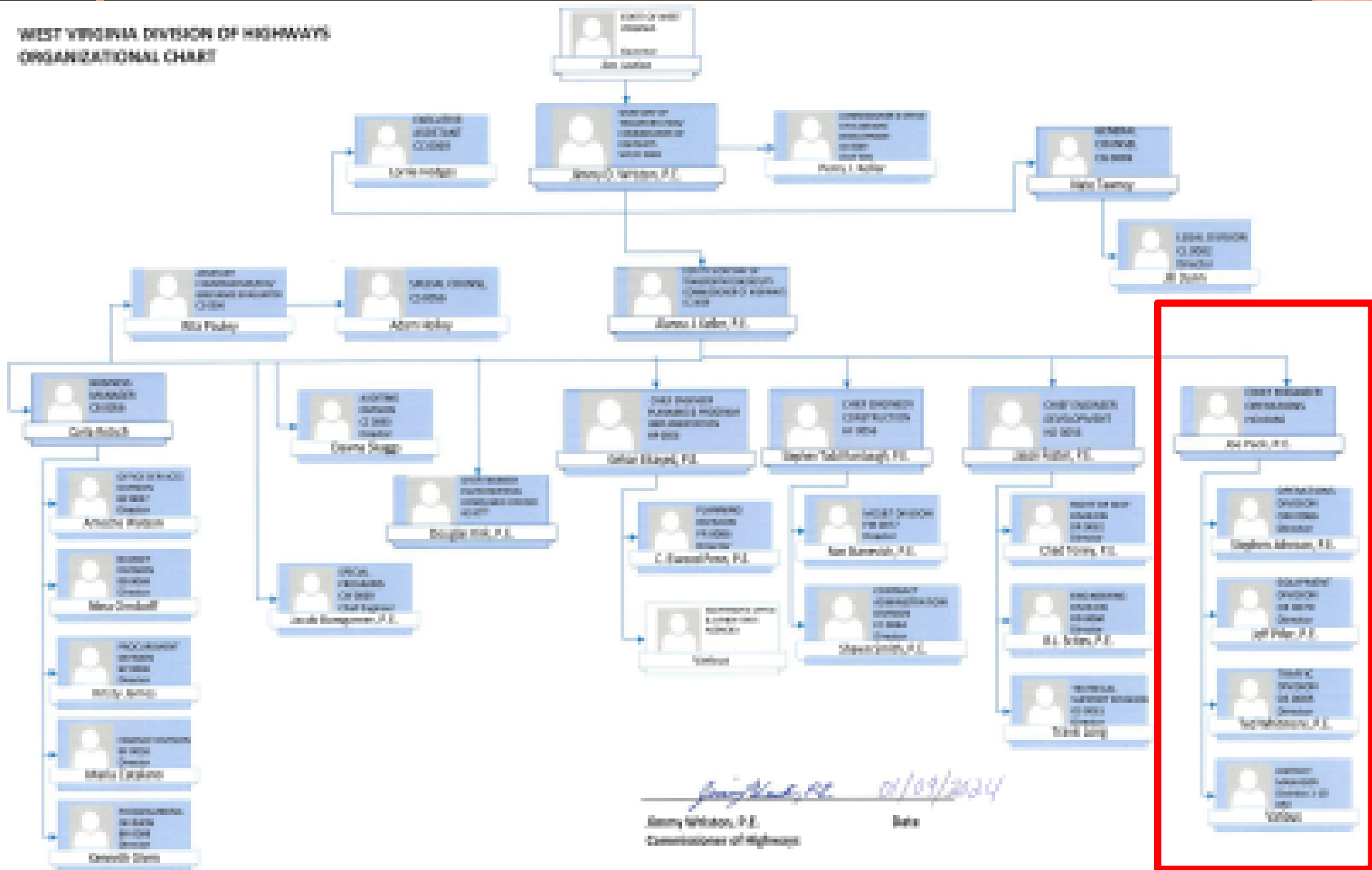
2022-2026 SELECTED EMPHASIS AREAS



The seven data-driven Emphasis Areas account for **98%** of fatalities and **95%** of serious injuries.

WV Department of Transportation Division of Highways

WEST VIRGINIA DIVISION OF HIGHWAYS
ORGANIZATIONAL CHART



Traffic Engineering Division

Traffic's mission is to communicate with the driver and get everyone home as safely and efficiently as possible....we are fighting for dinner together.



How Does Traffic Engineering Do This?

- Signs
- Pavement Markings
- Barrier
- Lighting
- Signals
- ITS
- Communication



WVDOH maintains over 60,000 lights statewide

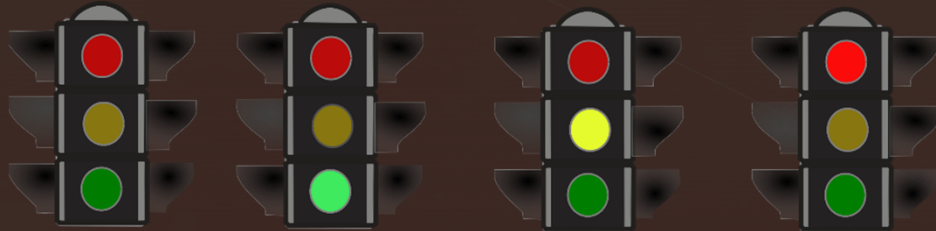


High Mast Towers
Conventional Lighting
Sign Lighters
Navigational Lighting
Aviation Lighting

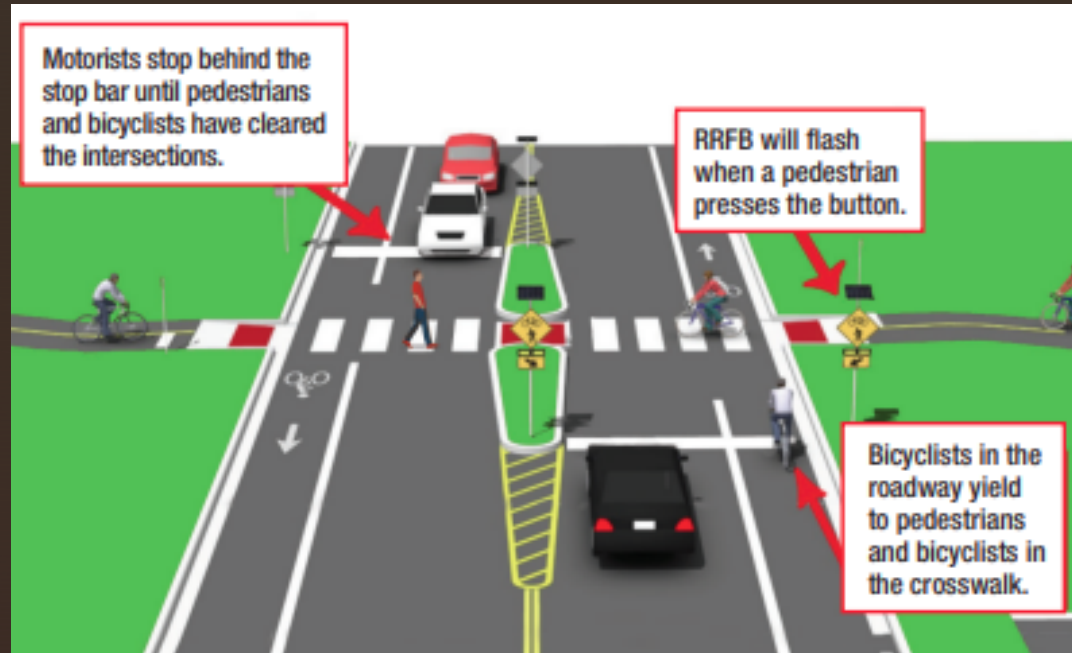
Signals

1,279 Traffic Signals in 50 Counties

- 15 signals have RR Pre-emption
- 456 at isolated intersections
- 823 are part of a signal system



Rapid Rectangular Flashing Beacon RRFB



RRFB can
reduce ped
crashes by
47%

First DOH
installed in
WV
2023



Intelligent Transportation Systems (ITS)

Requires both Power and Communication.
WV is currently 100% wireless

- CCTV
- DMS
- RWIS
- Traffic Monitoring Devices
- Queue Detection Systems



Closed Circuit Television Cameras (CCTV)

- 167 cameras statewide located in 26 counties. Planning for over 250 by 2030
- 45 cameras have video analytics that provide operations staff with road data (20% of time CCTV is first to observe issue).
- 4 Portable Cameras
- 2 Video Servers, one server is for our partners, 911 centers and WVDOH, The other server is for media partners.



Roadway Weather Inventory Stations (RWIS)



- 40 stations which provide meteorological information to the NWS and DOH.
 - Removing - 6
 - Renovating - 21
 - New - 10
 - Remaining sites replaced by other projects - 8
- RWIS station report the remote environment conditions to the TMC
- RWIS stations include multiple sensors such as:
 - Surface state
 - Air temperature
 - Ground temperature
 - Rain State
 - Precipitations
 - Dew point
 - Wind speed
 - Wind Direction

Traffic Monitoring

<https://webapps.transportation.wv.gov/requestfortrafficdata/>

WVDOH Traffic Data Request Form

Use this form to submit a request for traffic data.
Before submitting a request, please check the following links for your traffic data needs:
<https://gis.transportation.wv.gov/aadt>
<https://geocounts.com/traffic/us/wvdoh>
For questions or comments about using this form, please contact Jeremy.P.Skeen@wv.gov

Contact Information

First Name: *	<input type="text"/>	Last Name: *	<input type="text"/>
Email: *	<input type="text"/>	Phone: *	<input type="text"/>

Request Type

What type of data do you want?: *	<input type="text" value="-Select-"/>	Is this data being used for a project?: *	<input type="text" value="-Select-"/>
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Dynamic Message Signs (DMS)

80 permanent message signs located in 18 counties. Planning for over 100 by 2030.



TMC is not currently integrated with CMS. Reviewing options to integrate by 2030.

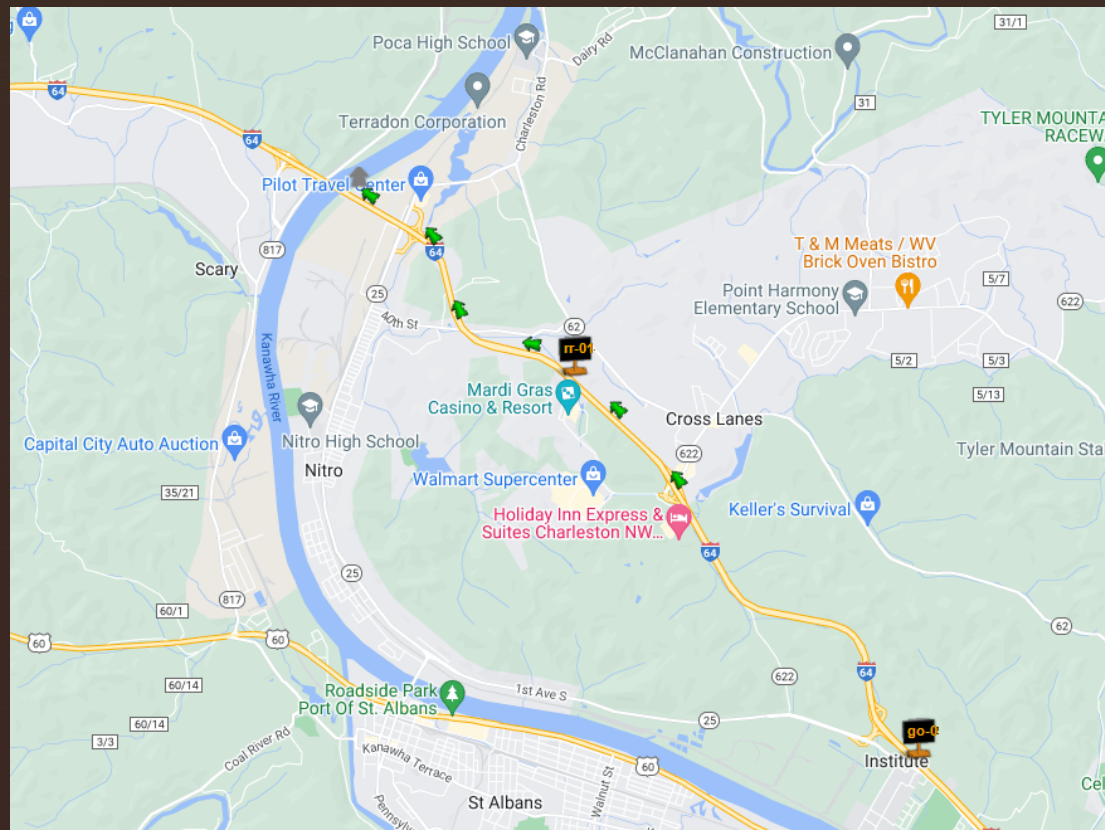
Queue Detection System



- Reports speed, volume, density and classification per lane for all traffic
- Available with or without Wavetronix SmartSensor HD sensor
- Accurately detects lane changing vehicles
- Detects up to 22 lanes of traffic or 250'
- Detects multi-direction traffic with a single sensor

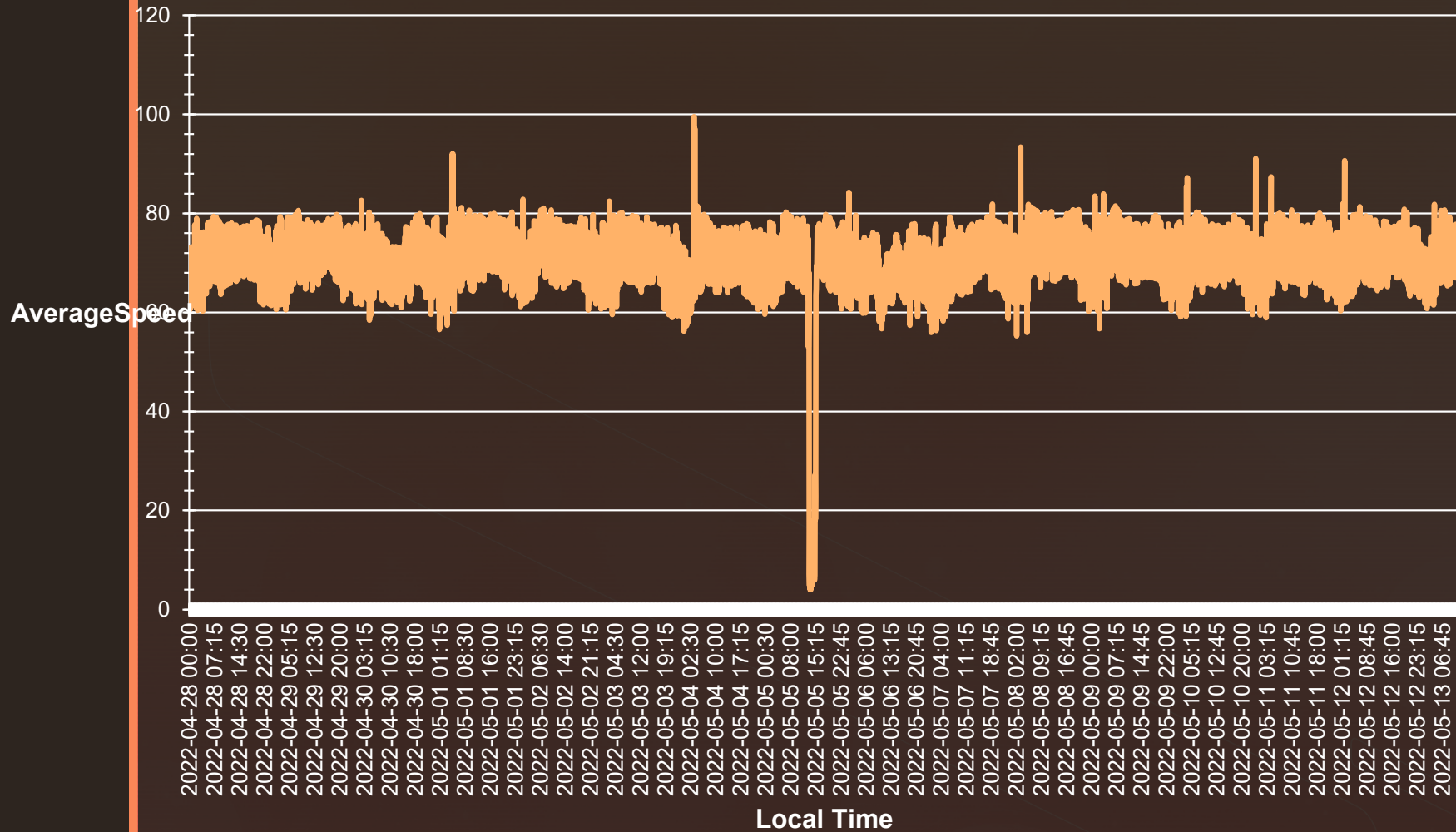
Queue Detection

Sensor	Location	ORDER	Speed Limit	Direction
51451	Just Before Cross Lanes Ramp	1	70	WB
51449	Just Past Cross Lanes Ramp	2	70	WB
51452	Down hill from Casino by Smith St.	3	70	WB
51454	Near 40th St Bridge	4	70	WB
51450	Before Nitro Ramp	5	70	WB
51455	Between Nitro Ramp and Bridge	6	55	WB



Average Speed in Work Zone

AverageSpeed - W-bound - I-64 Nitro



Transportation Management Center

Pre 2007

- Single operator in a radio room
- Telephone and radio network for dispatch
- Heavily reliant on Law Enforcement contacting WVDOH.

2008

- Centralized TMC Concept
- Communications hub for DOT
- Web-based so managers can operate from any location
- Communication limitations addressed

2012

- **WVDOH State-Wide 511 created in 2012**

Now

- Integration with 24 E911 centers
- Integration with Turnpike Operations Center
- Integration with National Weather Service
- Next generation of 511



There are no active alerts at this time.

511 Travel Info to Go

Select Language

Powered by Translate

passenger commercial

Travel Conditions

Personal Alerts

Using 511

Resources

Roadwork by District

WV511: KNOW BEFORE YOU GO
Download the Smartphone app!
Click to Learn More

Traffic

Road Conditions

Incidents - All

Incidents - Road Closure without Detour

Incidents - Lane Closure

Incidents - with Detour

Incidents - Other

Active Planned Events

Future Planned Events

SIGNS / CAMERAS

Active Signs

Inactive Signs

Cameras

WEATHER

National Weather Service - Watches & Warnings

National Weather Forecast

COMMERCIAL

Truck Parking

Runaway Truck Ramp Locations

Steep Grades

INFO

Rest Areas

Park and Rides

Toll Booths

Welcome Centers

EV Charging Stations

Select a Region

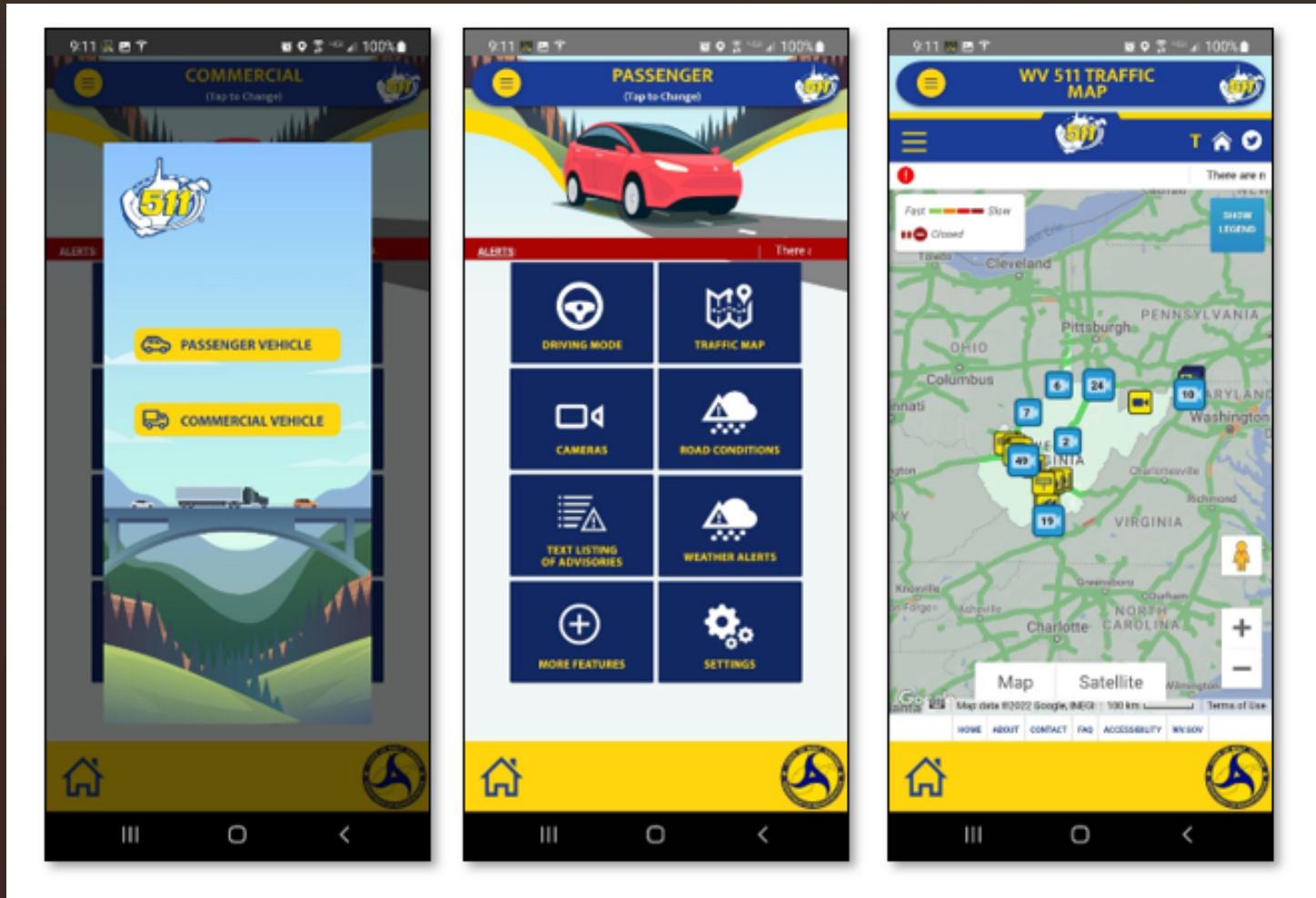
Map Satellite

Fast Slow Closed

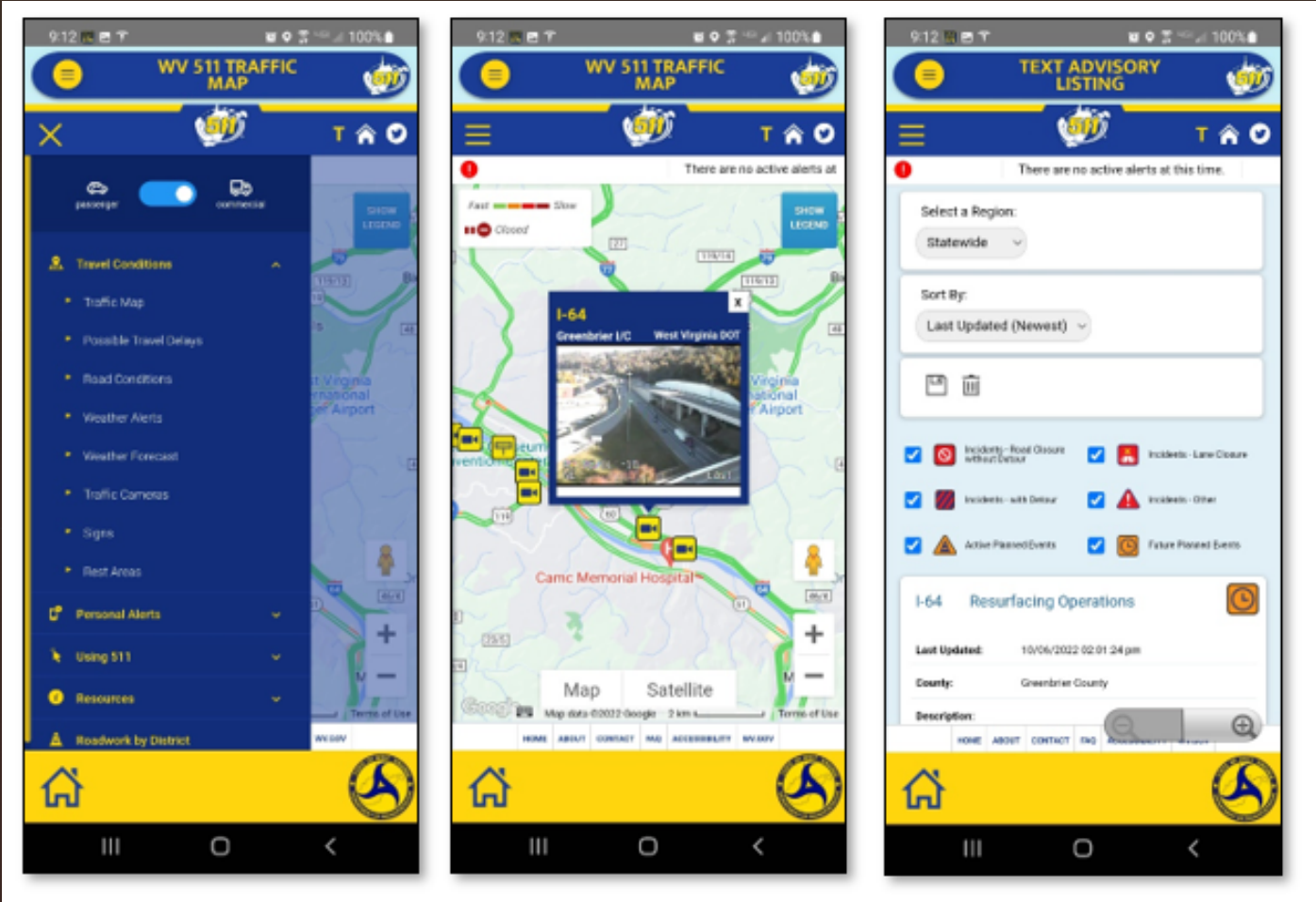
HOME ABOUT CONTACT FAQ ACCESSIBILITY WV.GOV

Keyboard shortcuts | Map data ©2022 Google | 20 km Terms of Use

WV 511 Mobile App



Camera Views Now Available



WV 511 My Route

Step by step instructions with CCTV links
Active Construction and Incident accounted in time

511 Travel Info to Go

Select Language ▼ Home Close

Powered by Google Translate

Select a Region ▼ Map Layers Print Text Zoom Need Help?

Turn-by-turn directions are from Google. Detours may not be reflected in directions.

- 📍 Oglebay Resort, Lodge Drive, Wheeling,
- 📍 1900 Kanawha Boulevard East, Charlest

+ ADD A STOP

2 hours 49 mins (185 mi)
via I-70 W and I-77 S

Head north on Lodge Dr toward Greenhouse Wy
1 min (0.4 mi)

↶ Turn left onto WV-88 S/Oglebay Dr
Continue to follow WV-88 S
6 mins (2.9 mi)

↷ Turn right onto National Rd
Pass by Perkins Restaurant & Bakery (on the left in
0.5 mi)
2 mins (0.8 mi)

Traffic Incident Management



**WEST VIRGINIA TRAFFIC
INCIDENT MANAGEMENT
(TIM) PROGRAM**



Transportation Management Plans

First Responder Meetings

Project Coordination

Traffic Incident Management Program

<https://timwv.com>

**Next-Generation Traffic Incident
Management: Technology for Saving Lives
(NextGen TIM Tech)**

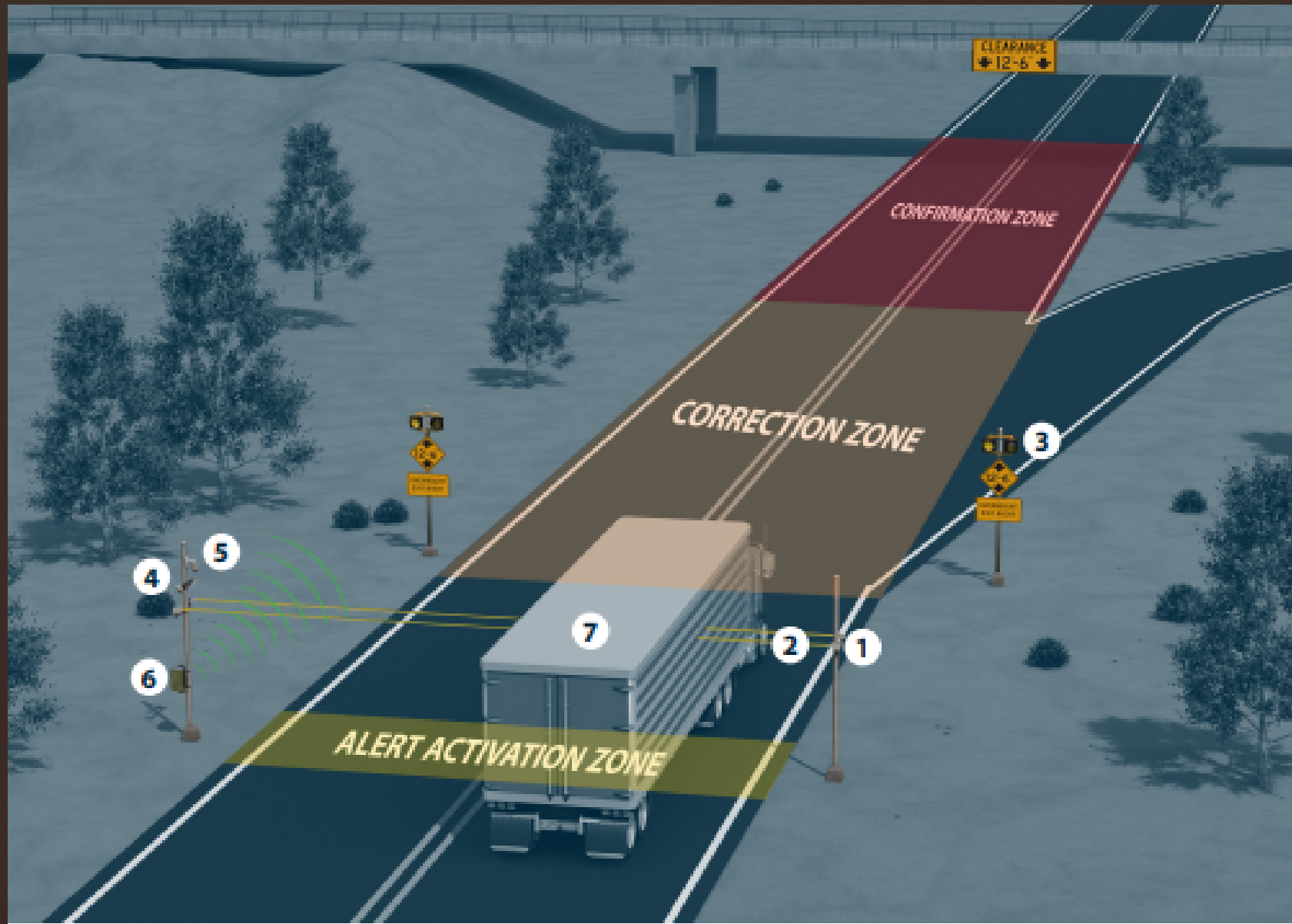


What is the Future of Traffic?



- Over Height Detection System
- Truck Parking
- Ramp Metering
- Lighting at RR Crossing
- Speed Detection
- Smart Work Zones
- AV/CV

Over Height Detection System

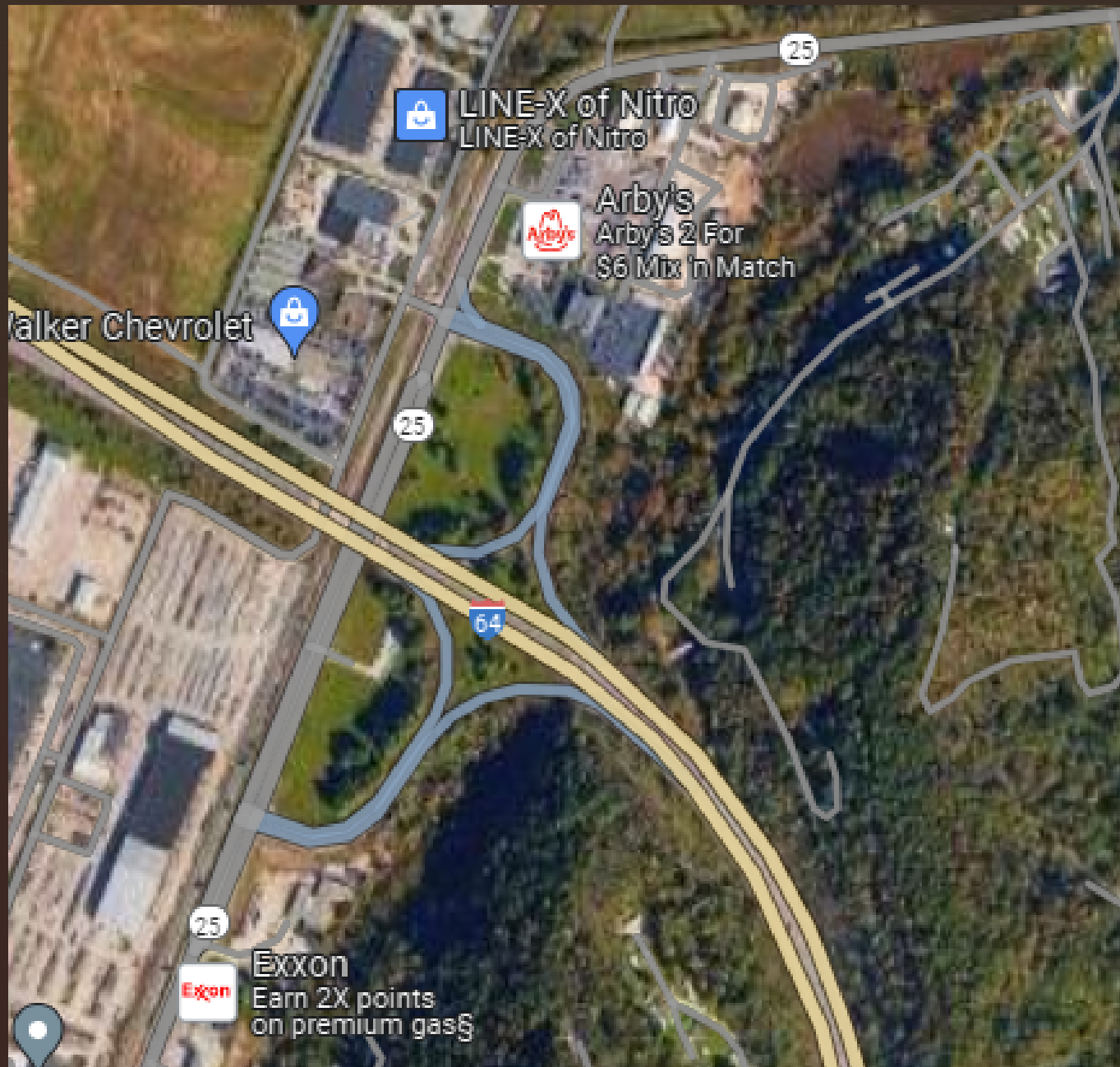


Smart Work Zones

- Real Time Traveler Information
- Queue Warning
- Dynamic Lane Merge
- Variable Speed Limit
- Automated Enforcement
- Entering/Exiting Vehicle Notification



WV 25, Nitro, WV



Contact Info

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