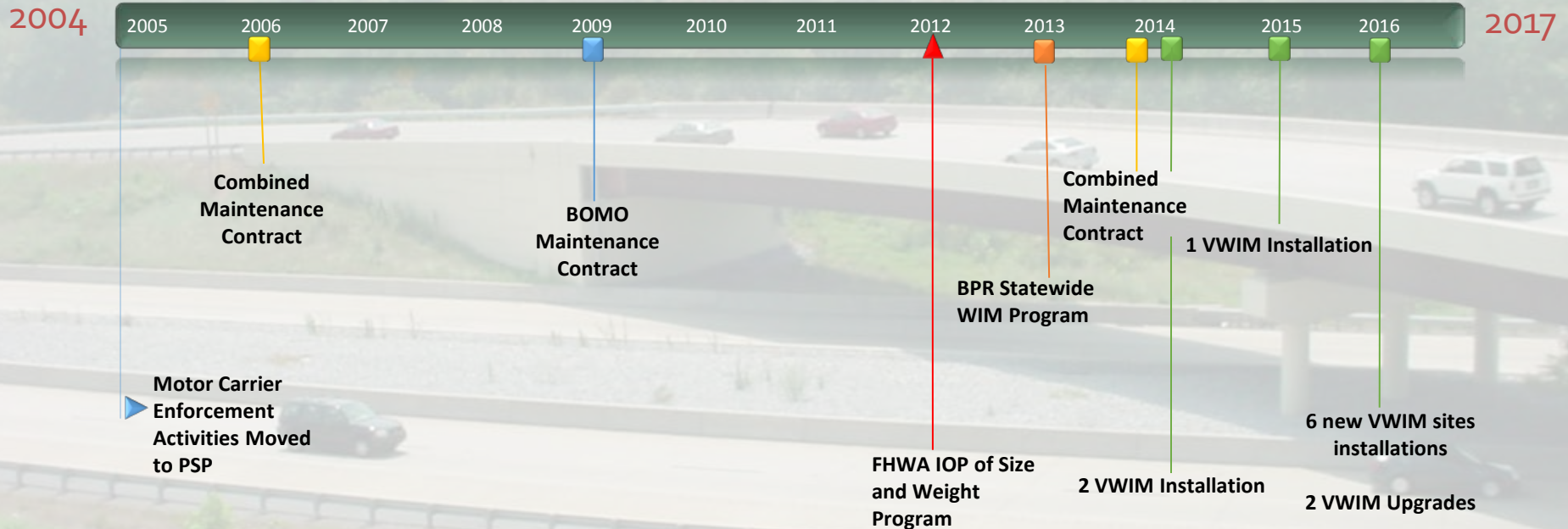


Use of WIM in Pennsylvania:
PennDOT and Pennsylvania State Police
Coordination

NATMEC 2016

▶ Background



VWIM – Virtual Weigh in Motion
PSP – Pennsylvania State Police
BOMO – Bureau of Maintenance and Operations
BPR – Bureau of Planning and Research
IOP – Independent Oversight Program

▶ Background: Two Departments Utilizing WIM

PennDOT

- 13 strategically placed mainline WIM sites.
- Per vehicle record data is polled and analyzed daily.
- Traffic data collection program is based on the guidelines of the FHWA TMG and CFR.

PA State Police (PSP)

- 24 rest/ramp sites
- Screen for overweight trucks to carryout State Enforcement Plan activities and objectives to comply with Title 23 US Code 127.

▶ Coordination: PennDOT Technology

Standard mainline WIM sites



Mainline WIM Solar Panels



Newly Installed Mainline WIM Piezo



WIM Cabinet

▶ Coordination: PSP Technology

Ramp/rest area (non-mainline) WIM sites.



Ramp Rest Stop Bending Plates



Rest Area WIM Cabinet

Coordination: Joint Technology

Combines mainline weigh-in-motion technology with integrated side-fire camera.

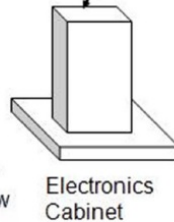
What is a Virtual Weigh Station?



Cellular,
Connection



•Side View
Camera,



Electronics
Cabinet

Not to scale



Coordination: Joint Technology

Virtual Weigh-in-Motion (VWIM) or Virtual Weigh Stations (VWS).



Virtual WIM Camera



Virtual WIM Web Display

WIM Real-time Display

Display Results



Vehicle	Class	Axle	Length (ft)	Speed (mph)	GVW (lb)	Max GVW (lb)	2016-03-11 08:47:55 AM EST Lane 4 PA106 Hamburg WIM
11095	9	5	58.8	57	77,885	80,000	
Max GVW (%) 97							
(kips) 35.3 33.3 9.3							

⚠ overweight



Vehicle	Class	Axle	Length (ft)	Speed (mph)	GVW (lb)	Max GVW (lb)	2016-03-11 08:47:29 AM EST Lane 4 PA106 Hamburg WIM
11073	9	5	69.1	66	63,634	80,000	
Max GVW (%) 80							
(kips) 20.7 32.5 10.5							



Vehicle	Class	Axle	Length (ft)	Speed (mph)	GVW (lb)	Max GVW (lb)	2016-03-11 08:47:24 AM EST Lane 4 PA106 Hamburg WIM
11070	5	2	26.1	70	16,171	40,000	
Max GVW (%) 40							
(kips) 8.4 7.8							



Vehicle	Class	Axle	Length (ft)	Speed (mph)	GVW (lb)	Max GVW (lb)	2016-03-11 08:47:13 AM EST Lane 4 PA106 Hamburg WIM
11057	9	5	72.8	63	42,836	80,000	
Max GVW (%) 54							
(kips) 16.6 15.3 10.9							

Coordination: New Installs, Replacement, & Upgrades

New Installs:



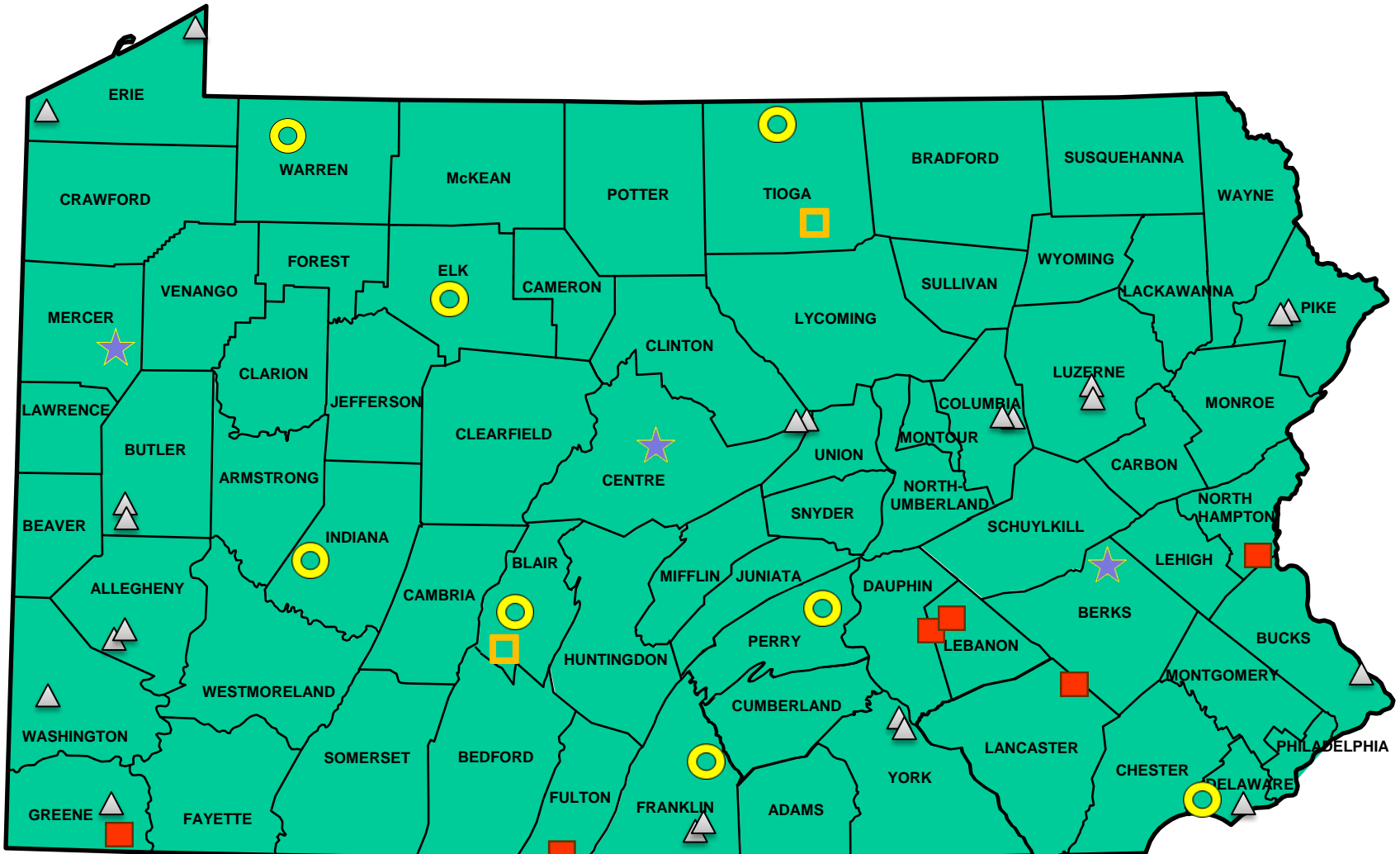
▶ Coordination: New Installs, Replacement, & Upgrades



Site Replacement:

Site Upgrades:

WIM Locations



○ WIM
★ Virtual WIM

△ Ramp Weigh Stations
□ Upgrade to Virtual WIM

■ New Virtual WIM

Coordination: VWIM Benefits

Mainline Virtual WIM

PennDOT:

- 24/7/365 data collection.
- Remotely view truck images in central office to verify data.
- Generate reports for internal and external use.
- Comply with FHWA Truck Weight Enforcement Program.

PSP:

- 24/7/365 data collection.
- Screen trucks at highway speeds.
- Less disruption in traffic flow.
- Web access to data provides location flexibility.
- Access to reports.

Where are we now?

- 3rd year of the Program
 - 1 contract
 - 1 point of contact
 - Improved maintenance of enforcement sites
- By the end of 2016 – access to more data
- 2017-2018 – addition of 2 VWIM sites planned
- Commercial Vehicle Information Systems and Networks (CVISN) grant application

Contact Information

Questions?