



THE DELAWARE VALLEY
**GOODS MOVEMENT
TASK FORCE**

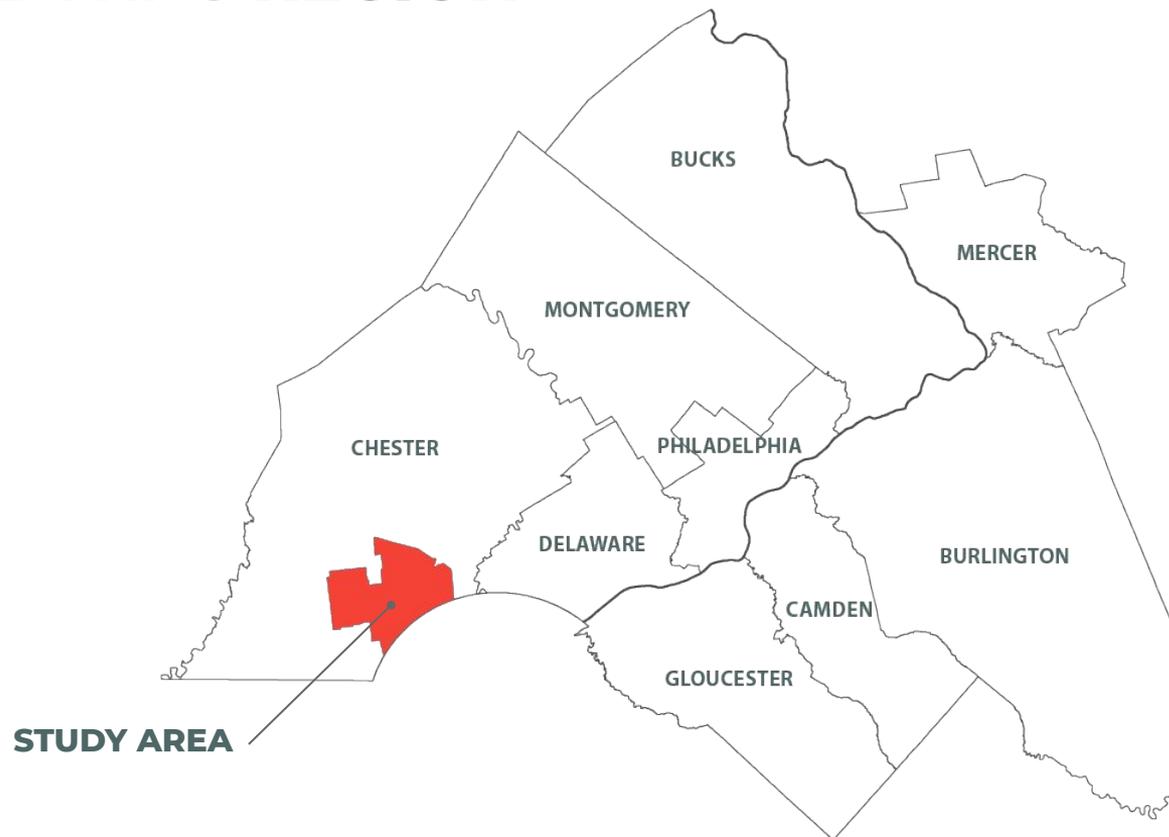
KENNETT AREA

Freight Transportation Study

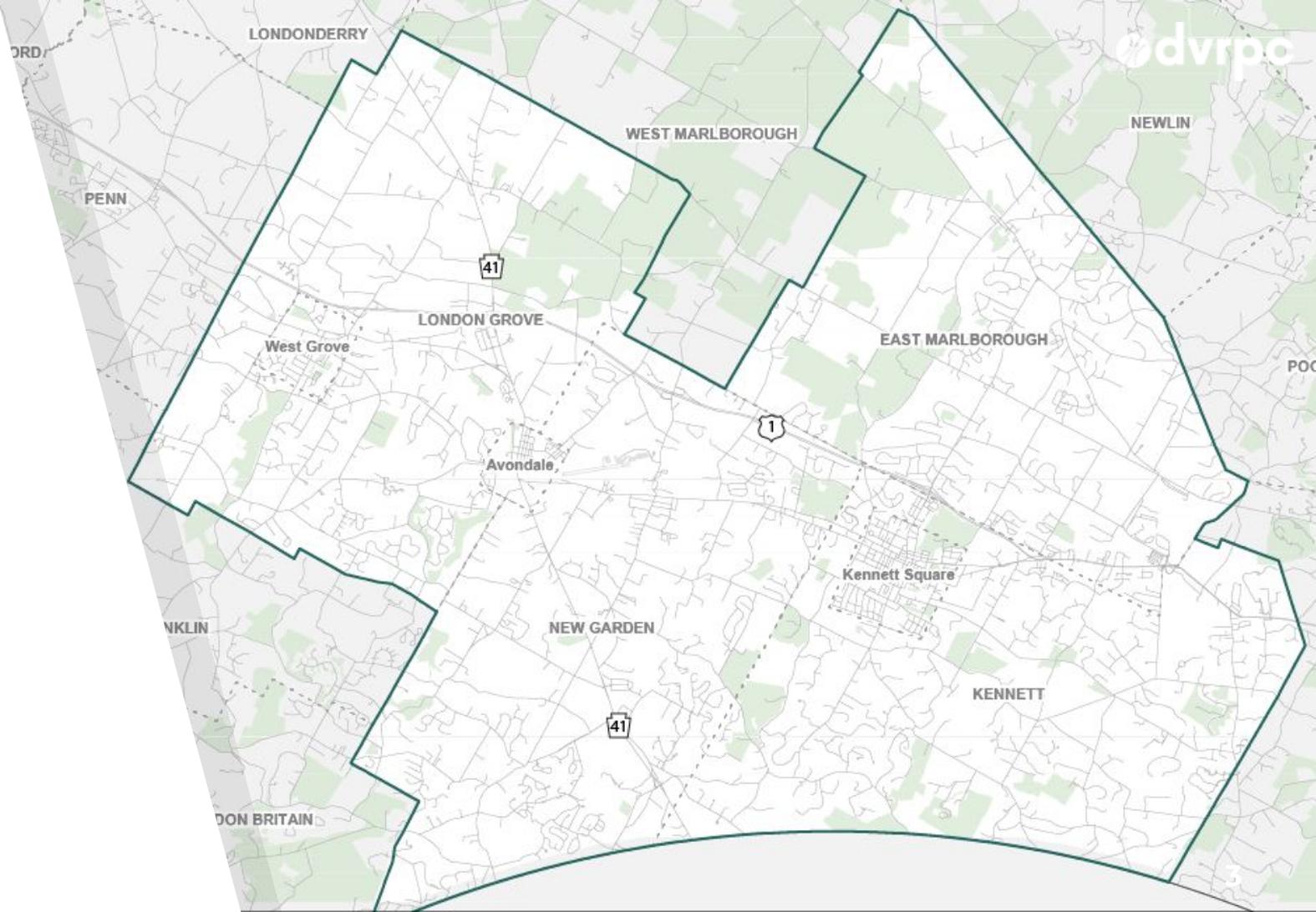
Delaware Valley Goods Movement
Task Force

July 10, 2019

DVRPC REGION



STUDY AREA



STUDY AREA

STUDY PURPOSE

Expand the economy by improving the movement of people and goods through an integrated multimodal transportation network while strengthening livable communities.

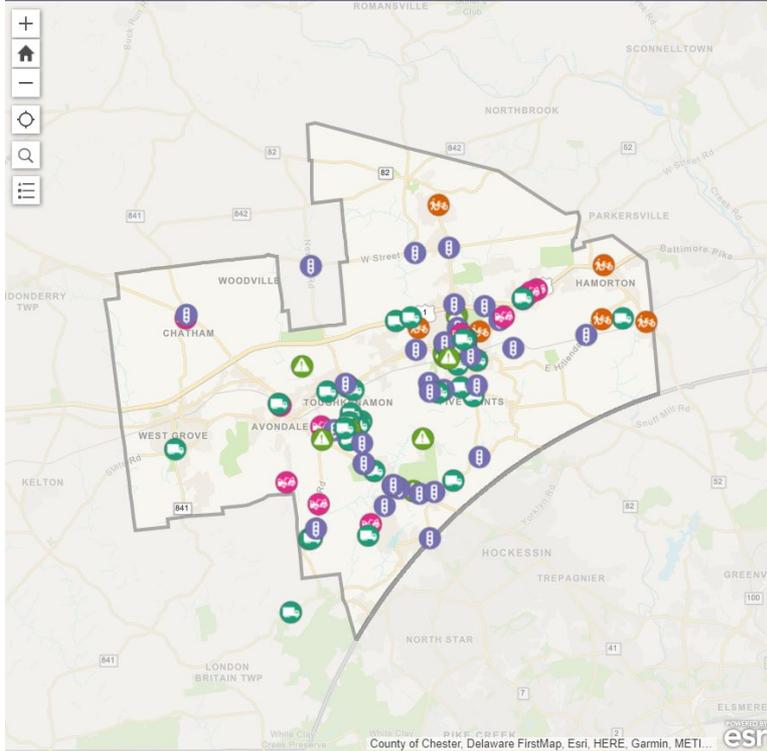
Identify strategies to address:

- ▶ Geometric constraints
- ▶ Bridge restrictions
- ▶ Truck movement/routing
- ▶ Historic resources

COMMUNITY OUTREACH

dvrpc **KENNETT AREA** Freight Transportation Study

Sign In



Transportation Issues	
+ Submit a Report	
Issue: Truck Routing	23 ♥
Issue: Truck Routing	20 ♥
Issue: Intersection Design	14 ♥
Issue: Truck Routing	13 ♥
Issue: Intersection Design	10 ♥
Issue: Bike/Pedestrian	8 ♥
Issue: Truck Routing	8 ♥
Issue: Truck Routing	8 ♥
Issue: Intersection Design	8 ♥
Issue: Truck Routing	7 ♥
Issue: Intersection Design	6 ♥
Issue: Safety	6 ♥
Issue: Truck Routing	6 ♥
Issue: Bike/Pedestrian	5 ♥
Issue: Safety	5 ♥

Source: Streetlight Data

NEEDS ASSESSMENT

OUTREACH HIGHLIGHTS

- ▶ Trucks on narrow rural roads
- ▶ Kennett Borough - State & Union Streets
- ▶ Safety concerns - truck activity in school zones
- ▶ Truck volume and traffic speeds on PA 41
- ▶ Need for pedestrian facilities

- ▶ Cyclists on rural roads
- ▶ Truck routing equity

PROJECT GOALS

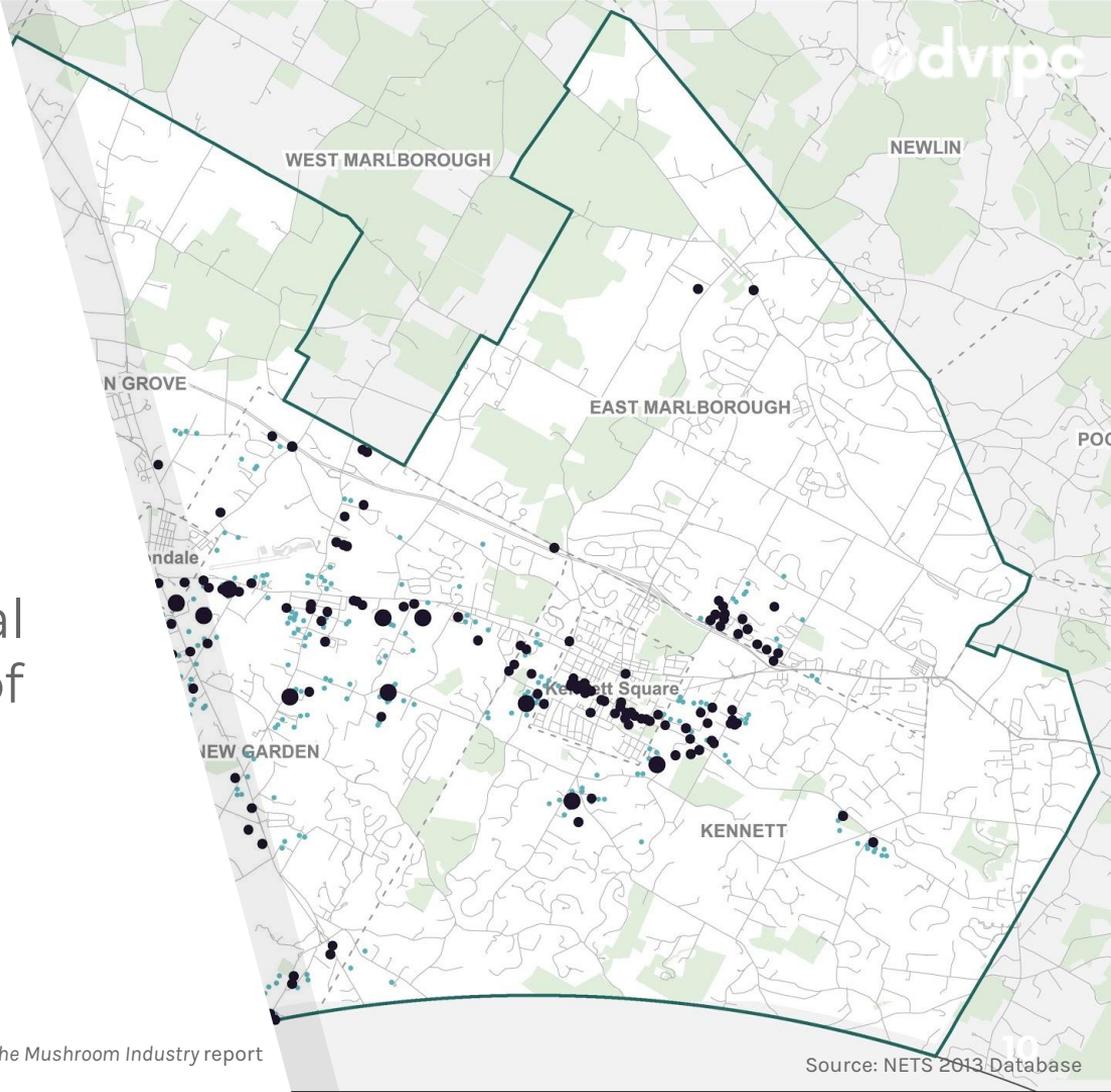
Identify strategies to:

- ▶ Improve traffic flow
- ▶ Identify and improve truck routes
- ▶ Provide appropriate wayfinding
- ▶ Minimize conflicts and impacts of freight on other modes

EXISTING CONDITIONS

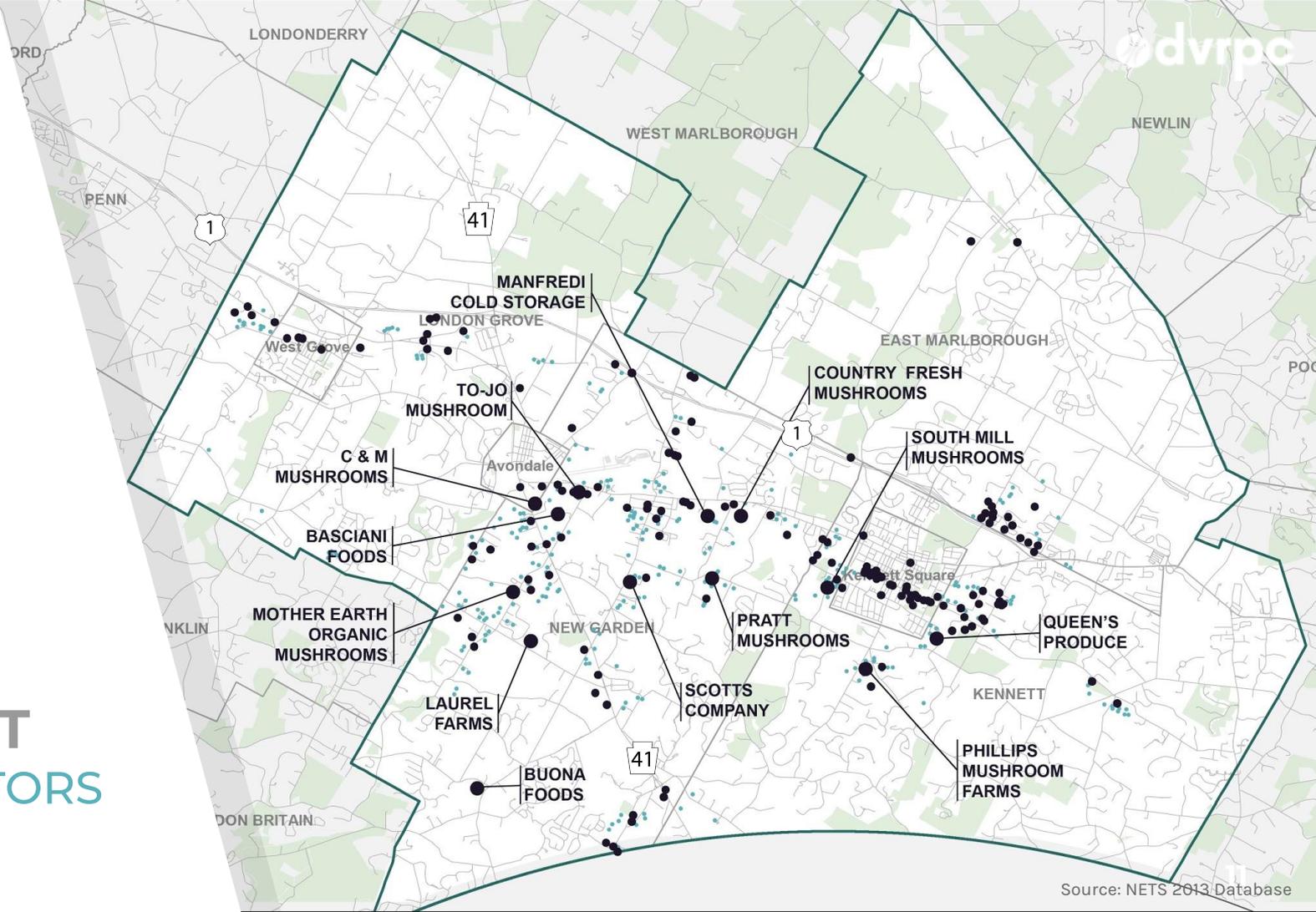
ECONOMIC IMPACTS

- ▶ \$764 M Total Economic Impact
- ▶ \$16.4 M in Tax Revenue
- ▶ 572 M Pounds of Annual Mushroom Crop (60% of National Sales)
- ▶ Supports 8,600 jobs

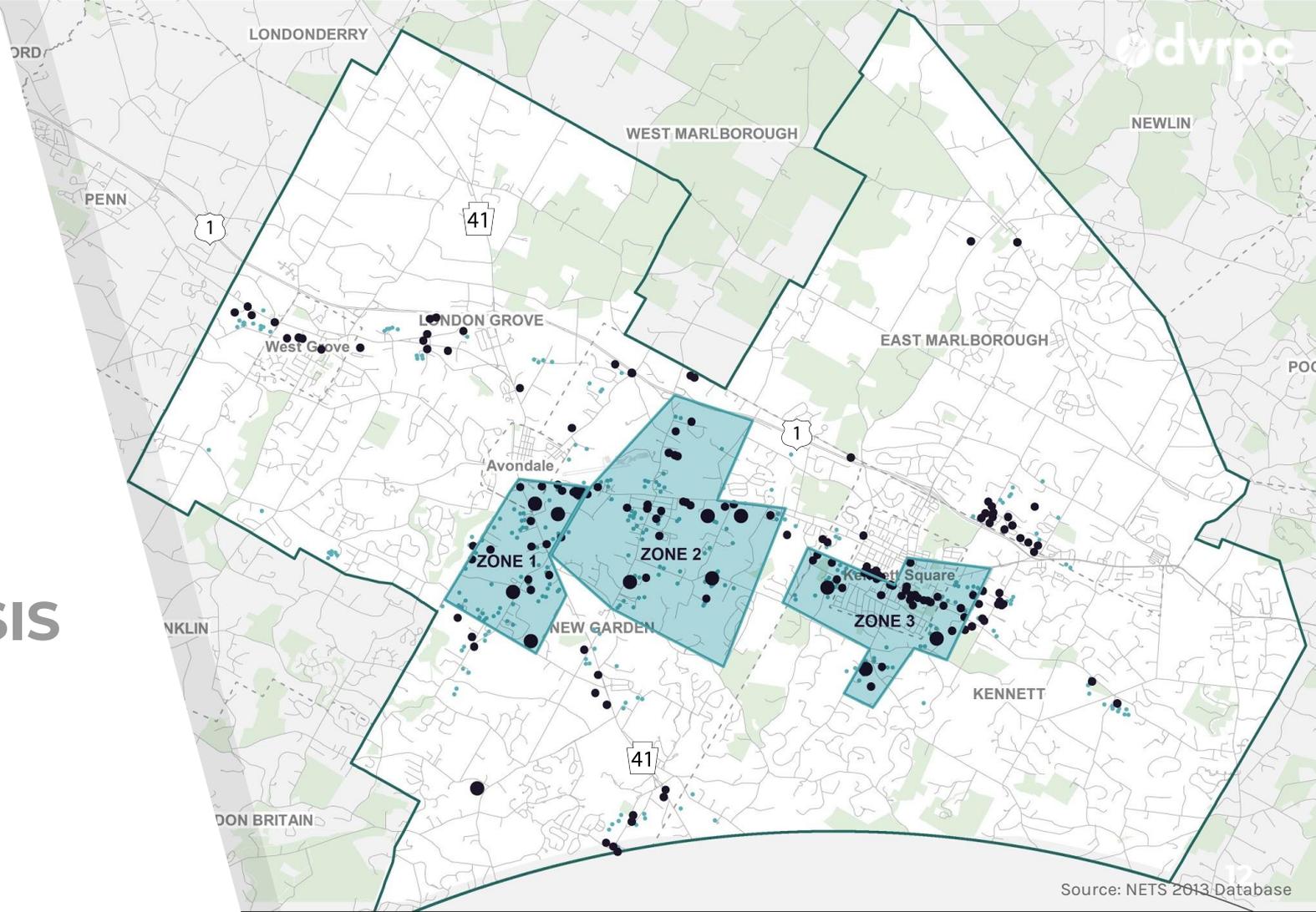


* impacts for all of Pennsylvania from ECONSULT's *The Economic Impact of the Mushroom Industry* report

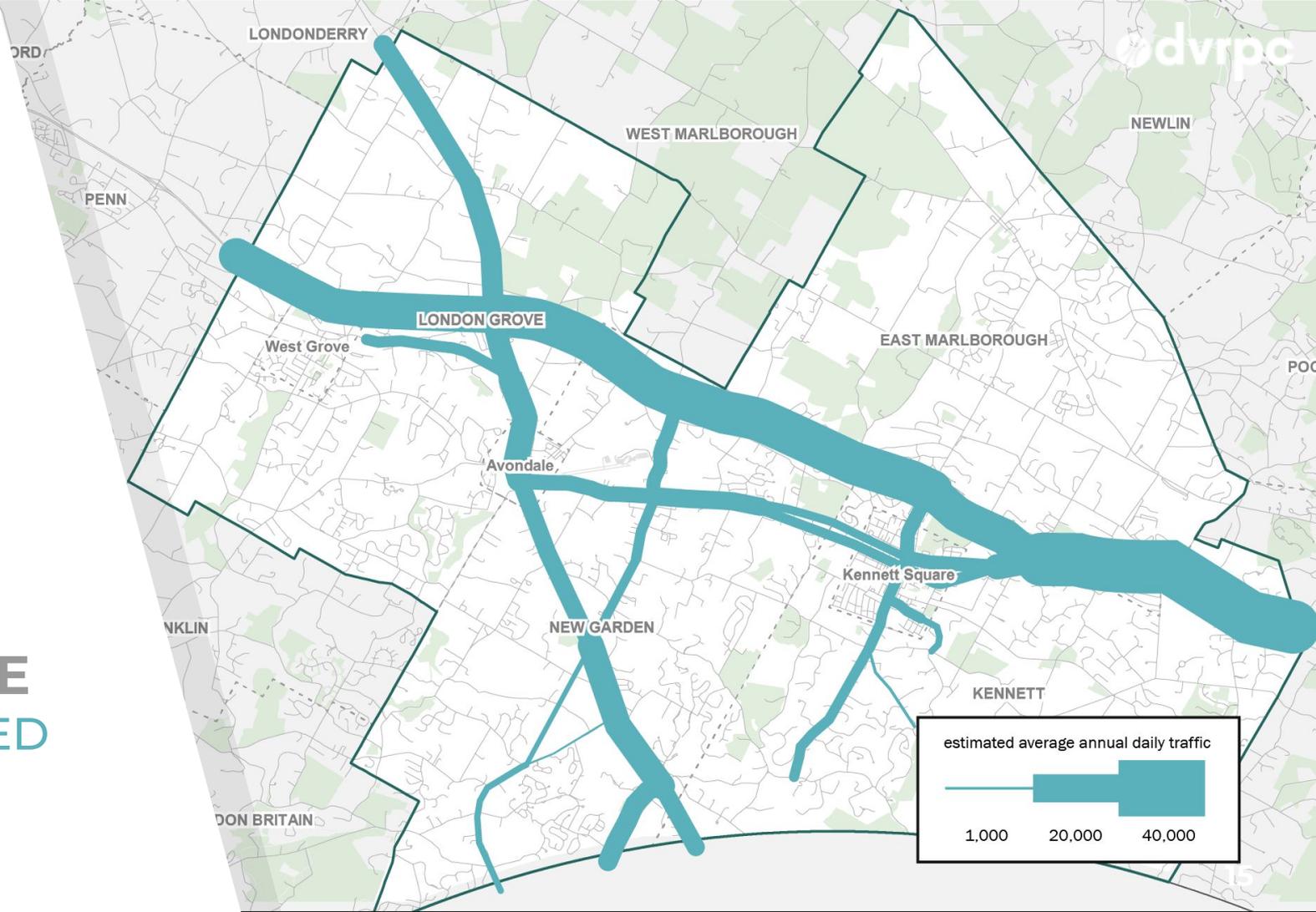
FREIGHT GENERATORS



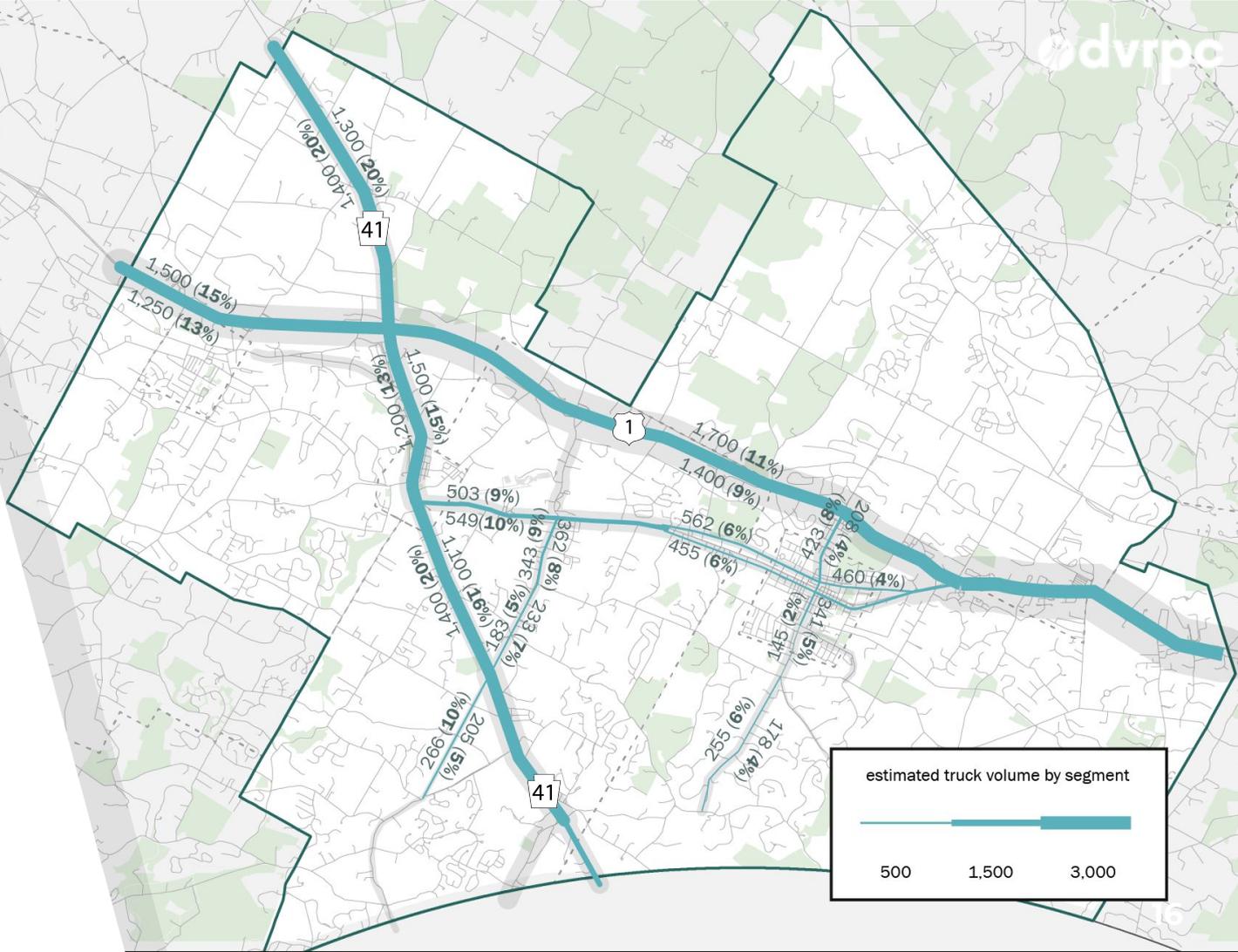
O-D ANALYSIS ZONES



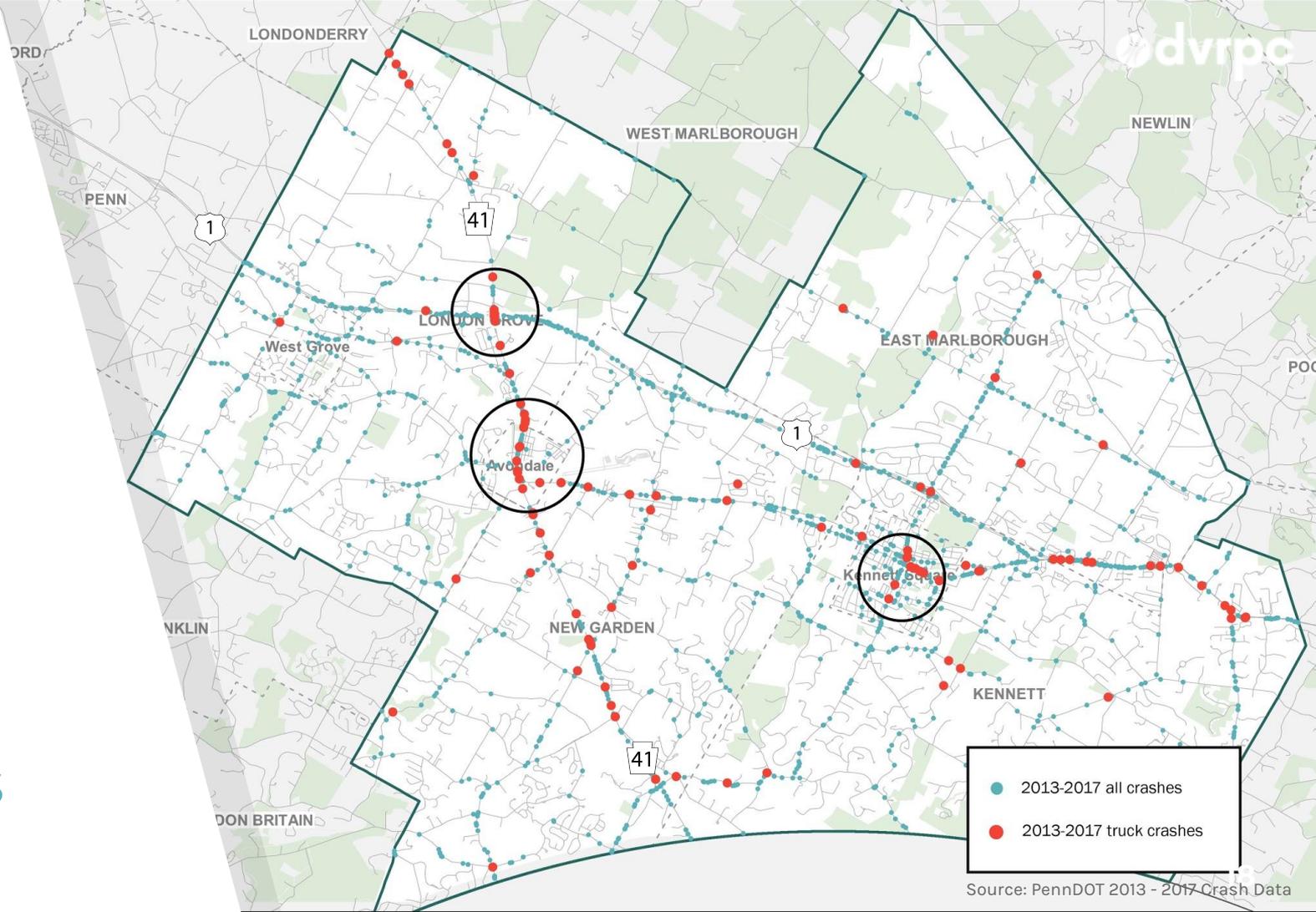
VOLUME ESTIMATED AADT



VOLUME TRUCK ACTIVITY



SAFETY TRUCK CRASHES

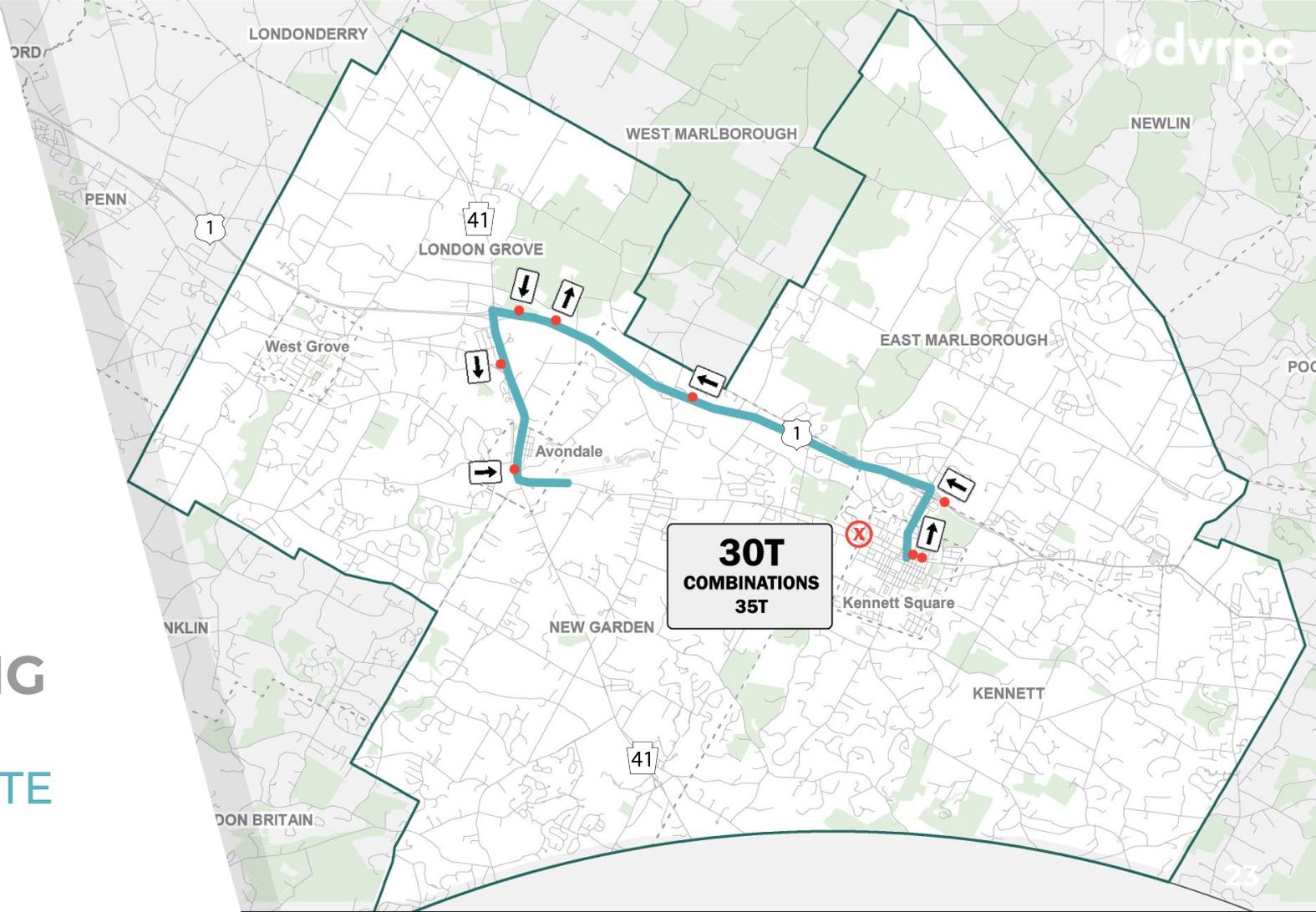


Source: PennDOT 2013 - 2017 Crash Data

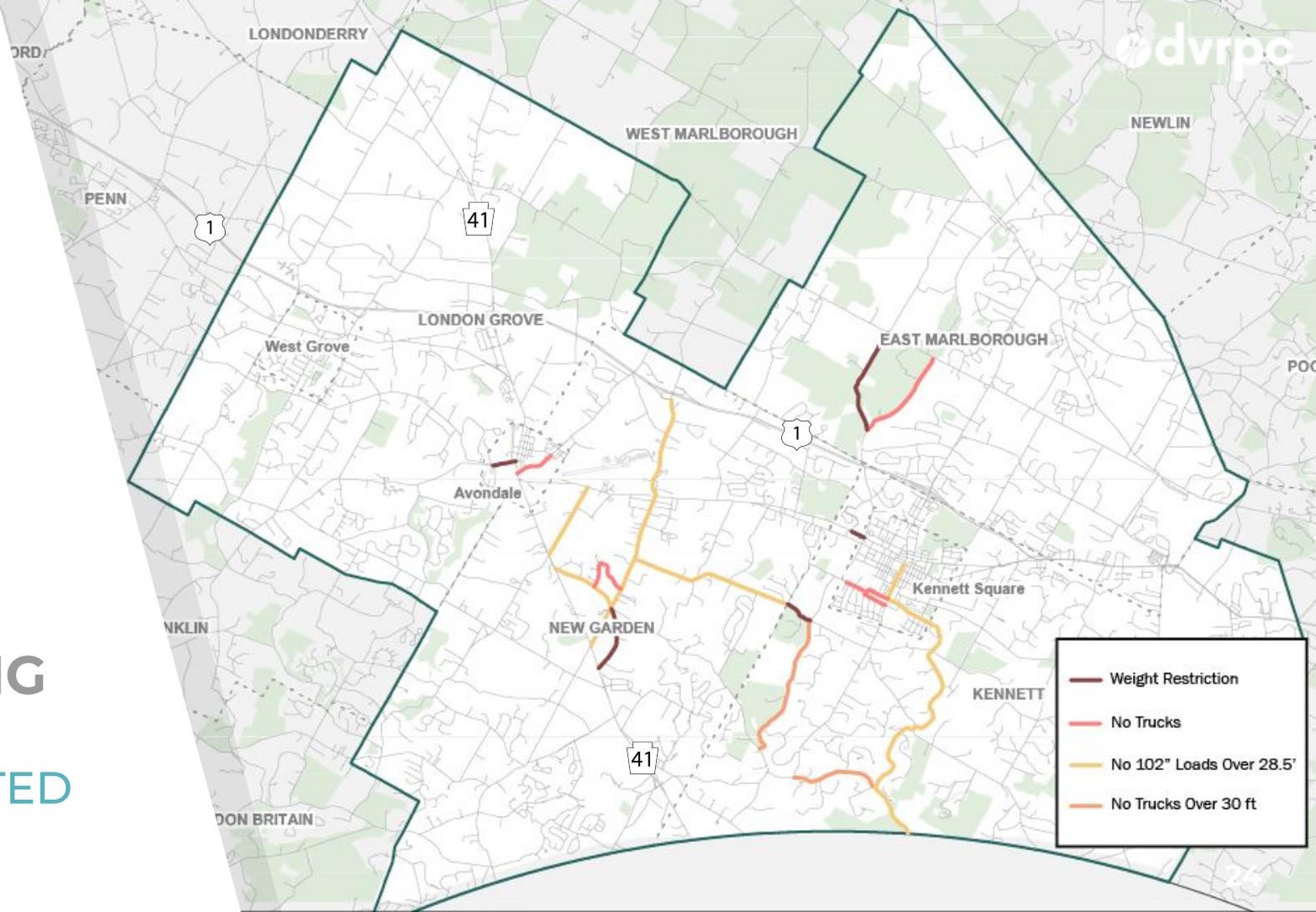
ROUTING STATE & UNION



ROUTING TRUCK ALTERNATE



ROUTING TRUCK RESTRICTED



PRELIMINARY RECOMMENDATIONS

RECOMMENDATIONS

INCREASE SIGN VISIBILITY

- ▶ De-clutter signage
- ▶ Clear vegetation
- ▶ Location review



RECOMMENDATIONS

TRAFFIC CALMING

- ▶ Overhead Speed Display
- ▶ Median Gateways



RECOMMENDATIONS

TRAFFIC CALMING

- ▶ **Improve Uncontrolled Crossing Locations**
- ▶ High-visibility crosswalks
- ▶ Rectangular Rapid-Flashing Beacon (RRFB)



RECOMMENDATIONS

TRUCK ROUTE DEVELOPMENT

- ▶ **Multi-jurisdictional Work Group**
 - ▷ Coordinate restrictions & preferred routes
 - ▷ Ongoing engagement
 - ▷ Ensure community buy-in

- ▶ **Route Components**
 - ▷ Geometric Restrictions - weight, height, 102”
 - ▷ Community Restrictions (local roads)
 - ▷ Primary Freight Network
 - ▷ Secondary and Rural Alternative Routes

RECOMMENDATIONS

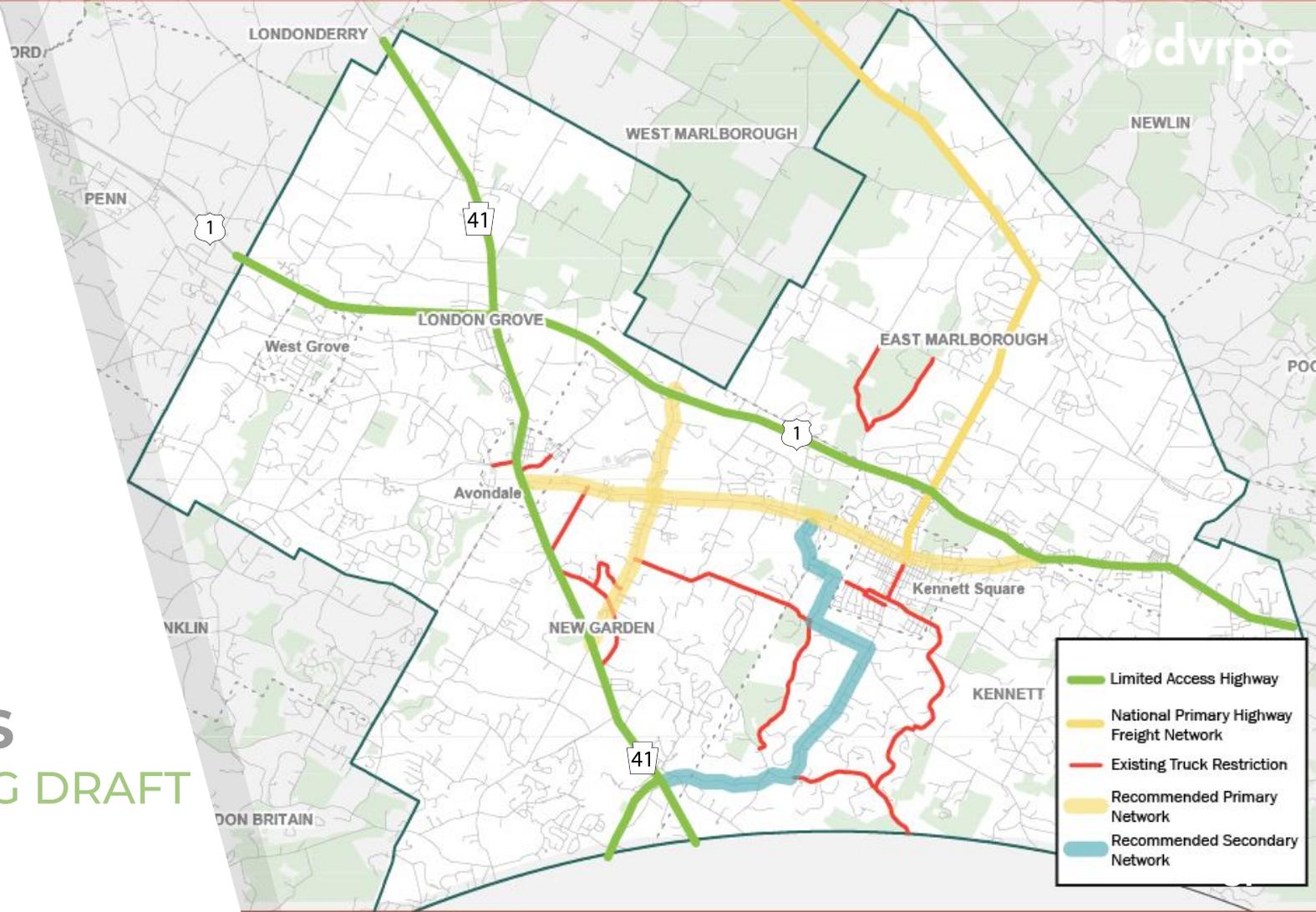
TRUCK ROUTE DEVELOPMENT

▶ **Network into Action**

- ▶ Signage Plan (standardized)
- ▶ Update network database
- ▶ Communication materials to facilities
- ▶ Inform investment in bike/ped facilities

▶ **Resources**

- ▶ Trip generation and counts
- ▶ Rough geometry inventory
- ▶ Best practices



TRUCK ROUTES

WORKING DRAFT

- Limited Access Highway
- National Primary Highway Freight Network
- Existing Truck Restriction
- Recommended Primary Network
- Recommended Secondary Network

NEXT STEPS

- ▶ Update class count gaps
- ▶ Refine recommendations
 - ▶ Develop details and location documentation
- ▶ Report

THANK YOU!

Questions/comments:

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REIMAGINE -NORFOLK SOUTHERN-

UPDATE ON NORFOLK SOUTHERN
DVRPC GOODS MOVEMENT TASK FORCE
RICK CRAWFORD, DIRECTOR PUBLIC PROJECTS
JULY 10, 2019



MEETING THE CHALLENGES



Industry Timeline for Nationwide Interoperability

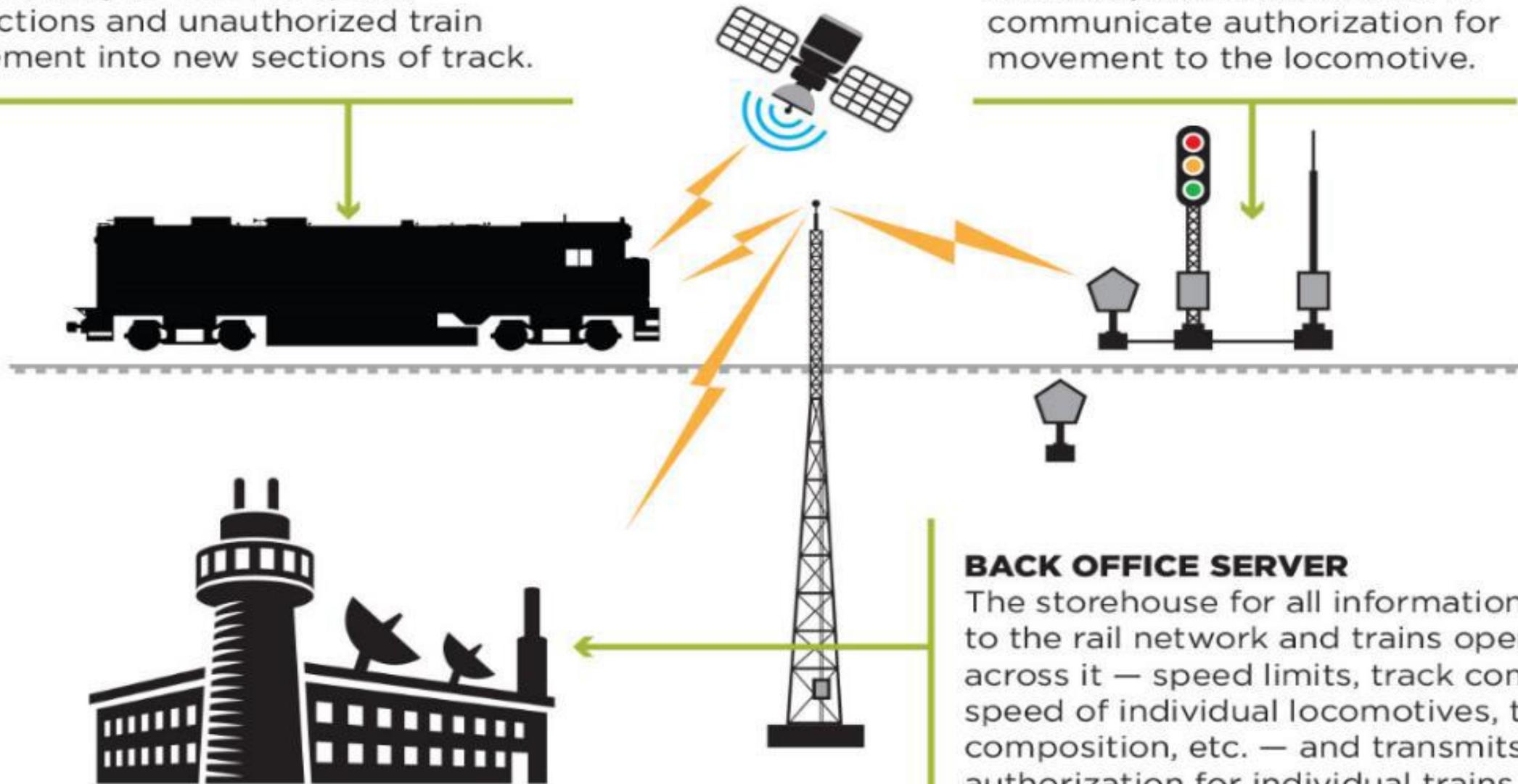
Industry Timeline								
Component	Thru 2014	2015	2016	2017	2018	2019	2020	Totals
Locomotives Partially Equipped	9734	240						
Locomotives Fully Equipped	3376	3573	6940	6373	1804			22,066
Percent Complete	15%	31%	63%	92%	100%			
Wayside Interface Units installed	16641	6032	5718	2433	1830			32,654
Percent Complete	51%	69%	87%	94%	100%			
Base Station Radios Installed	1504	1002	564	475	423			3,968
Percent Complete	38%	63%	77%	89%	100%			
PTC Route Miles Implemented	3115	5147	14583	15775	12875	5016	3642	60,153
Percent Complete	5%	14%	38%	64%	86%	94%	100%	
PTC Track Miles Implemented	5151	6864	20688	20902	16635	7153	4649	82,042
Percent Complete	6%	15%	40%	65%	86%	94%	100%	
Employees Trained	18139	13304	27303	27277	18795	4865	4832	114,515
Percent Complete	16%	27%	51%	75%	92%	96%	100%	
PTC Spending (\$M)	\$ 5,094	\$ 1,354	\$ 1,231	\$ 796	\$ 423	\$ 173	\$ 97	\$ 9,168

ONBOARD SYSTEM

Monitors the train's position and speed and activates braking as necessary to enforce speed restrictions and unauthorized train movement into new sections of track.

WAYSIDE SYSTEM

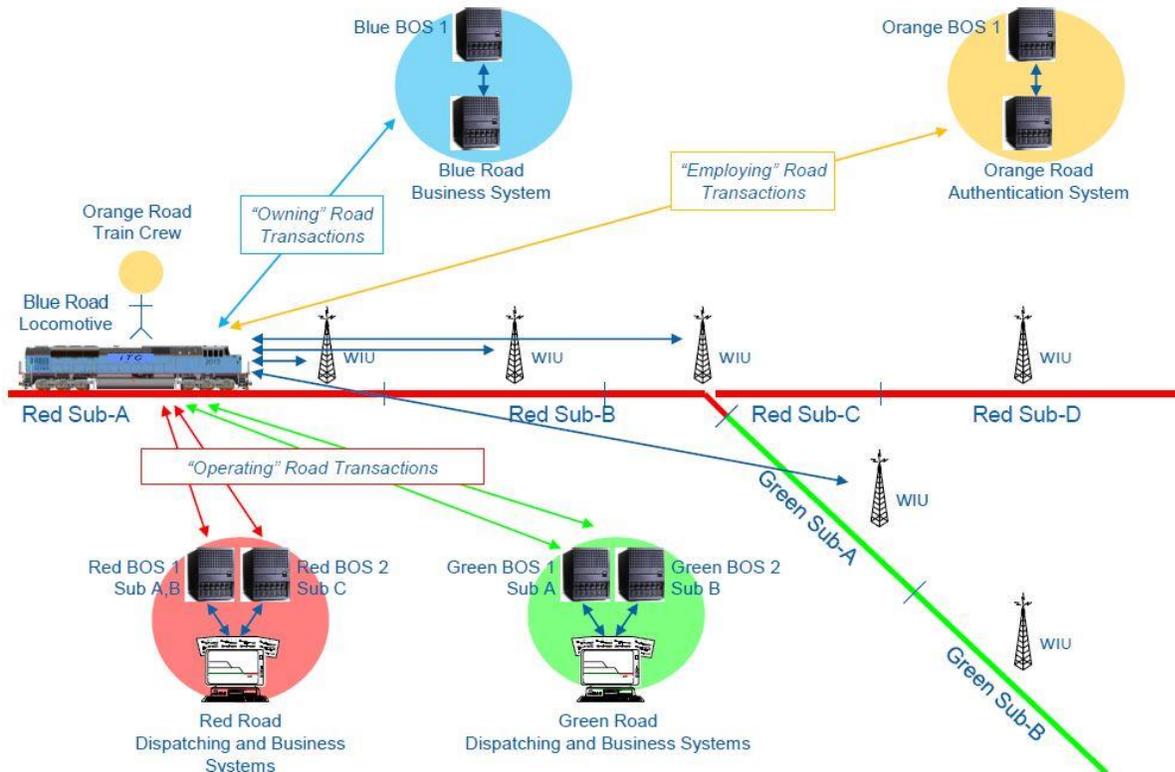
Monitors railroad track signals, switches, and track circuits to communicate authorization for movement to the locomotive.



BACK OFFICE SERVER

The storehouse for all information related to the rail network and trains operating across it — speed limits, track composition, speed of individual locomotives, train composition, etc. — and transmits the authorization for individual trains to move into new segments of track.

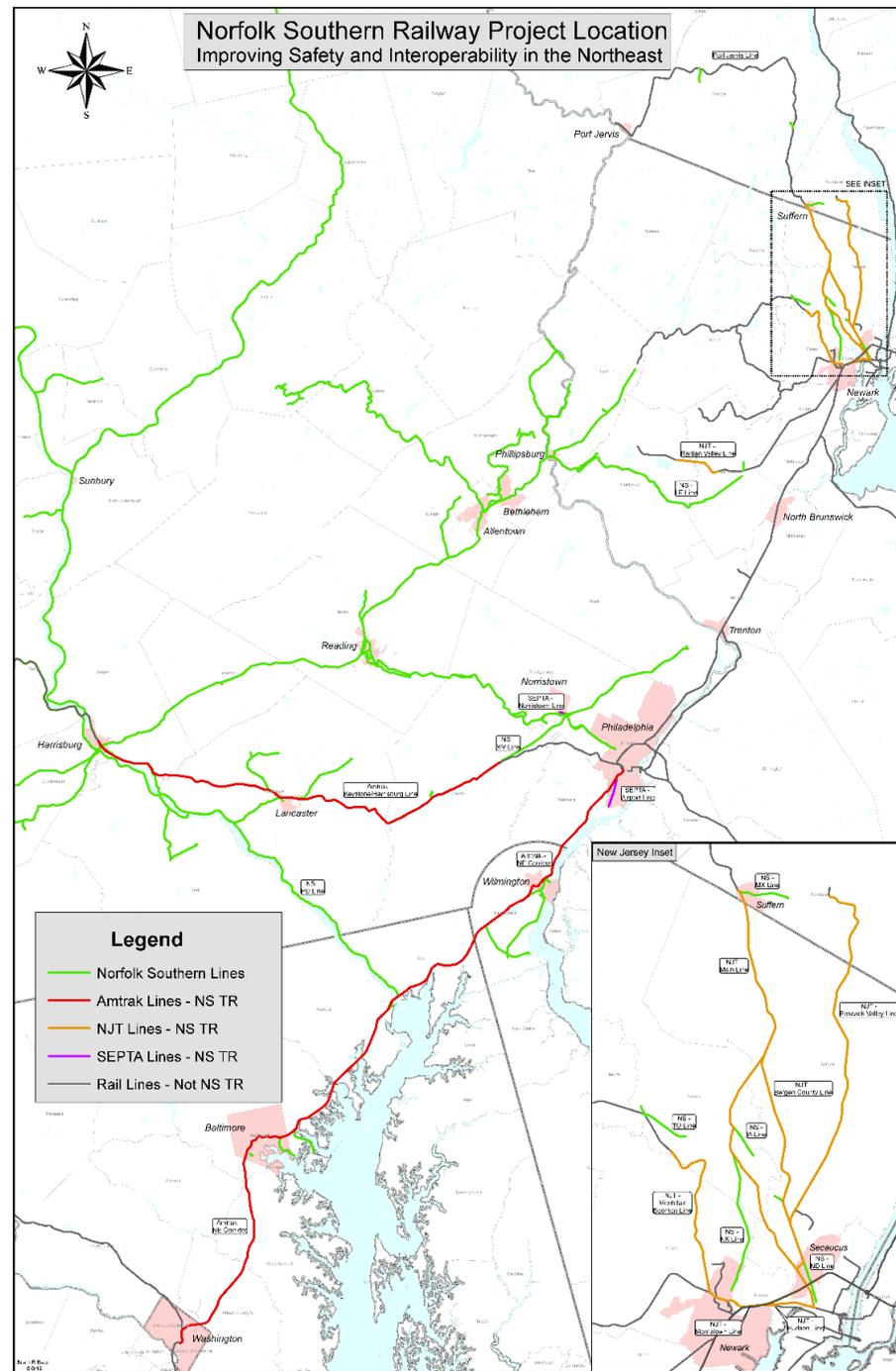
INTEROPERABILITY IS COMPLICATED



INTEROPERABILITY IS COMPLICATED

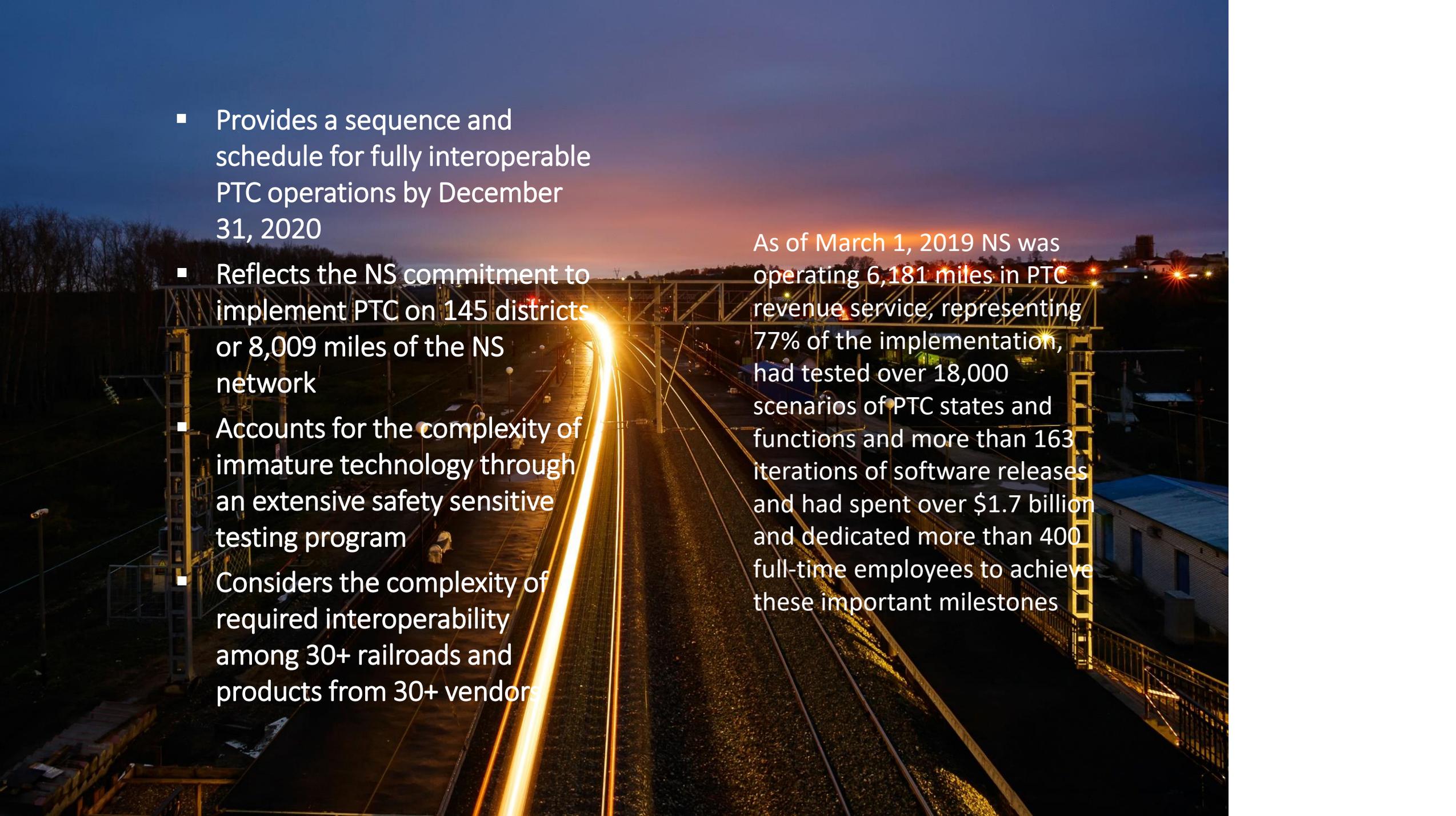


- **4,524 tower sites => 1,505 done**
- FCC Issues- Cost 18 month delay
 - 488 revisit sites
 - Costly delay => + \$ Millions



PTC ON THE NEC AND FREIGHT



- 
- Provides a sequence and schedule for fully interoperable PTC operations by December 31, 2020
 - Reflects the NS commitment to implement PTC on 145 districts or 8,009 miles of the NS network
 - Accounts for the complexity of immature technology through an extensive safety sensitive testing program
 - Considers the complexity of required interoperability among 30+ railroads and products from 30+ vendors

As of March 1, 2019 NS was operating 6,181 miles in PTC revenue service, representing 77% of the implementation, had tested over 18,000 scenarios of PTC states and functions and more than 163 iterations of software releases and had spent over \$1.7 billion and dedicated more than 400 full-time employees to achieve these important milestones

SERVICE



SAFETY



EFFICIENCY



One line, infinite possibilities.

FIVE CORE PRINCIPLES

- Serve Customers
- Manage Assets
- Control Costs
- Work Safely
- Develop People

“In the future we must make

Promises we can keep and keep the promise we make”

Jim Squires



Top 21

- Service Customers
- Manage Assets
- Control Cost
- Safety
- Develop People



OUR KEY DISCIPLINES: RUN TRAINS TO THE PLAN, STAY ON THE PLAN

TOP 21

- Run trains on time
- Switch everything in Six hours
- Right car, Right Block, Right Train
- Do it All Safely



TOP 21

- Keep the promises we make
- Provide consistency to our customers
- Manage our assets
- Control cost to sustain cost reduction

A Network of Key Corridors



FOCUSED INVESTMENT FOR GROWTH IN OUR CORE ROUTES

- Chicago to NY/NJ → Premier Corridor
- Norfolk to Chicago → Heartland Corridor
- Memphis & NOL to Atlanta & Harrisburg, PA → Crescent Corridor
- Ft. Wayne to Atlanta

POSITIONED FOR GROWTH

- Serves more than 5,000 local industries
- Diverse franchise with more than 3700 customers
- Over 250 Shortline partners
- VW Chattanooga Expansion
- Toyota/Mazda Project
- Global Container Terminals Bayonne
- Upstate Express Corridor
- Continuing to market Navy Yard



OUR INTERMODAL NETWORK HAS BROAD REACH AND LOWERING COST FOR ALL MODES



2018 PROJECT COMPLETIONS

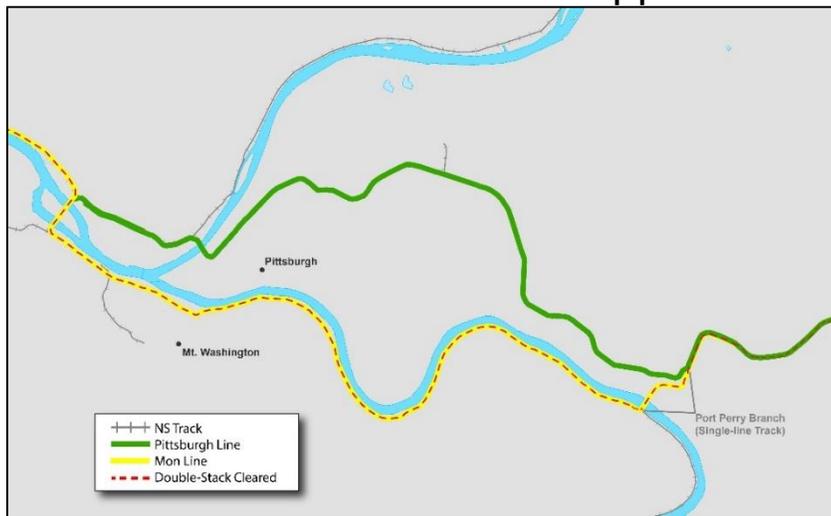
- Portageville Bridge Replacement Project:
 - 2018 dedication ceremony unveiled the bridge's new name: Genesee Arch Bridge
 - First revenue train moved December 11, 2017
 - \$75m project; completion took 13 years

- Simpson Yard Expansion:
 - Expansion of intermodal facility completed in 2018
 - First NS PPP in Florida



PITTSBURGH CLEARANCE PROJECT

- Construction proposed at 9 bridge-track intersections to allow for double-stacked intermodal traffic to run on the Pittsburgh Line, rather than the Mon Line
- Will eliminate 4.7 million hours of delay over 30 years
- \$164 million saved in transportation over 30 years
- Application Approved – Q1 2017 Award



2018 GRANT AWARDS IN PROGRESS

- Norfolk Southern Awards:
 - Harrisburg Parking Expansion Project
 - Buffalo Area Infrastructure Improvement Project
 - Pittsburgh Doublestack Clearance Project
 - Georgia Port Project
 - Goldsboro TBT/Seymour Johnson AF Pipeline
 - Lynchburg-Alexandria Speed Im
 - F-LINE Clearances
- Shared Asset (CONRAIL) Awards
 - Stony Creek Yard Track Project
 - Paulsboro Siding Track Project
 - Hack-Kearny Siding Project
 - Detroit Intermodal Terminal Project



FEDERAL GRANTS AWARDED IN 2018

- 2017 INFRA Grant: Ohio River Rail Rehabilitation Project
 - Project components include capacity improvements, repairs, and PTC installation along the NS River Line



- 2018 BUILD Grant: Upstate Express Corridor Project 2
 - Project components allow for longer Norfolk Southern trains to operate between the Port of Charleston and the Inland Port Greer



	FEDERAL	STATE	NS	PRIVATE	TOTAL
OHIO RIVER RAIL	\$16.25m	\$1.13m	\$14.5m	\$0	\$31.88
UPSTATE EXPRESS	\$25m	\$0	\$11.74m	\$14.38m	\$51.12
TOTAL:	\$41.25m	\$1.13m	\$26.24m	\$14.38m	\$83m

PENDING NEW JERSEY ECO LOCOMOTIVES



- Conrail NJSAA 2 Eco Locomotives with Hot Start Shore Connecting Power
- Proposal Presented to NJDOT/NJDEP
- Buy America
- NS Croxton Yard, Pavonia

2 locomotives; hot starts:	
Public funds	\$2,724,400
NS Match	\$1,167,600
Total	\$3,892,000

One line, infinite possibilities.

QUESTIONS?



New Jersey



GLOBAL CHALLENGES, CHEMISTRY SOLUTIONS

American chemistry is essential to our economy and plays a vital role in helping to solve the biggest challenges facing our nation and our world by driving innovations that make our lives and our world healthier, safer, more sustainable and more productive.

Unprecedented access to domestic natural gas is helping to drive a renaissance in U.S. manufacturing. Renewed competitiveness in America's chemical industry is helping to create jobs, grow payrolls and generate new tax revenue, affirming the chemical industry's role as the cornerstone of our country's economic future.

September 2017

At **\$25.5B**, is the **largest** manufacturing industry in the state



Makes New Jersey the **9th largest** chemistry producing state



Provides **43,802** direct jobs and another **33,556** related jobs



Generates **\$5.5B** in payroll across **590** establishments



Has an average wage of **\$125,997**, **60% higher** than the average manufacturing wage



Generates **\$710M** in state & local taxes, and **\$1.02B** in federal taxes



Invests **\$777M** to build & update equipment and facilities



Ships **\$8.3B** in products to customers around the world



Generates an additional **14,913** in plastics & rubber products



New Jersey chemistry...



RESPONSIBLE CARE
OUR COMMITMENT TO SUSTAINABILITY

americanchemistry.com