

*a better ride*

Berks County

Chester County

Montgomery County

<http://www.422corridor.com>

**422**  
CORRIDOR

*plus*



**DRAFT**  
**June 6, 2011**



# Our Situation

1. US 422 is a major travel corridor in southeastern Pennsylvania with growing population and jobs, and increasing congestion.
2. The 422 Corridor currently has limited travel options with no train service to Philadelphia or Reading.
3. Relying on only state and federal funds for highway improvements means that travel conditions on 422 will improve very slowly or not at all.






# The Challenge

How can we supplement state and federal commitments with local funds to maintain and improve US 422?

How can we add train service to provide travel options in the 422 Corridor, given limited funding options?



# Other Options?

	OPTION	OUTCOME
	<b>Stay the Course</b>	Existing funds are declining and cannot meet the growing need. 422 conditions continue to decline; no train extension
	<b>Raise gas tax</b>	Unlikely to happen in near term; Revenue not exclusive to 422 Corridor.
	<b>Establish new form of tax</b>	Unlikely to happen in near term; Revenue not exclusive to 422 Corridor.
	<b>Toll other regional roads</b>	Multiple entities are considering options for other roads; Revenue not exclusive to 422 Corridor.
	<b>Toll US422</b>	Highway improvements constructed sooner. Train extension a reality; Revenue exclusive to 422 Corridor with local control

# KEY FINDINGS



# Key Findings

Could tolling US422 provide enough funds for highway maintenance and improvements, and train service?

- + Toll Revenue can support an initial \$1.1B capital program for highway improvements and rail service extension within 15 years.
- + A local tri-county authority ensures that toll revenue is used exclusively in the 422 corridor for improvements and enhanced maintenance.
- + Approximately \$750M (67%) could pay for highway improvements and expansion to rebuild 422 and eliminate congestion that would otherwise continue to worsen.
- + This includes \$243M already programmed by PennDOT over the next 8 years. Toll revenue fills the \$500M+ funding gap.

# Key Findings – con't

Could tolling US422 provide enough funds for highway maintenance and improvements, and train service?

- + Approximately \$370M (33%) could pay for capital costs to extend rail service from Norristown to Reading.
- + Without tolling, capital expenditures limited to the \$243M in PennDOT over the next 8 years, with no chance of extending the rail service.
- + Financial analysis shows this approach would work, using very conservative assumptions.
- + The highway and transit improvements within the plan will reduce travel time and congestion. Without them, jobs and economic growth are threatened.

# TOLLING



# How Would Tolling Work?



Toll rates are consistent with PA Turnpike rates

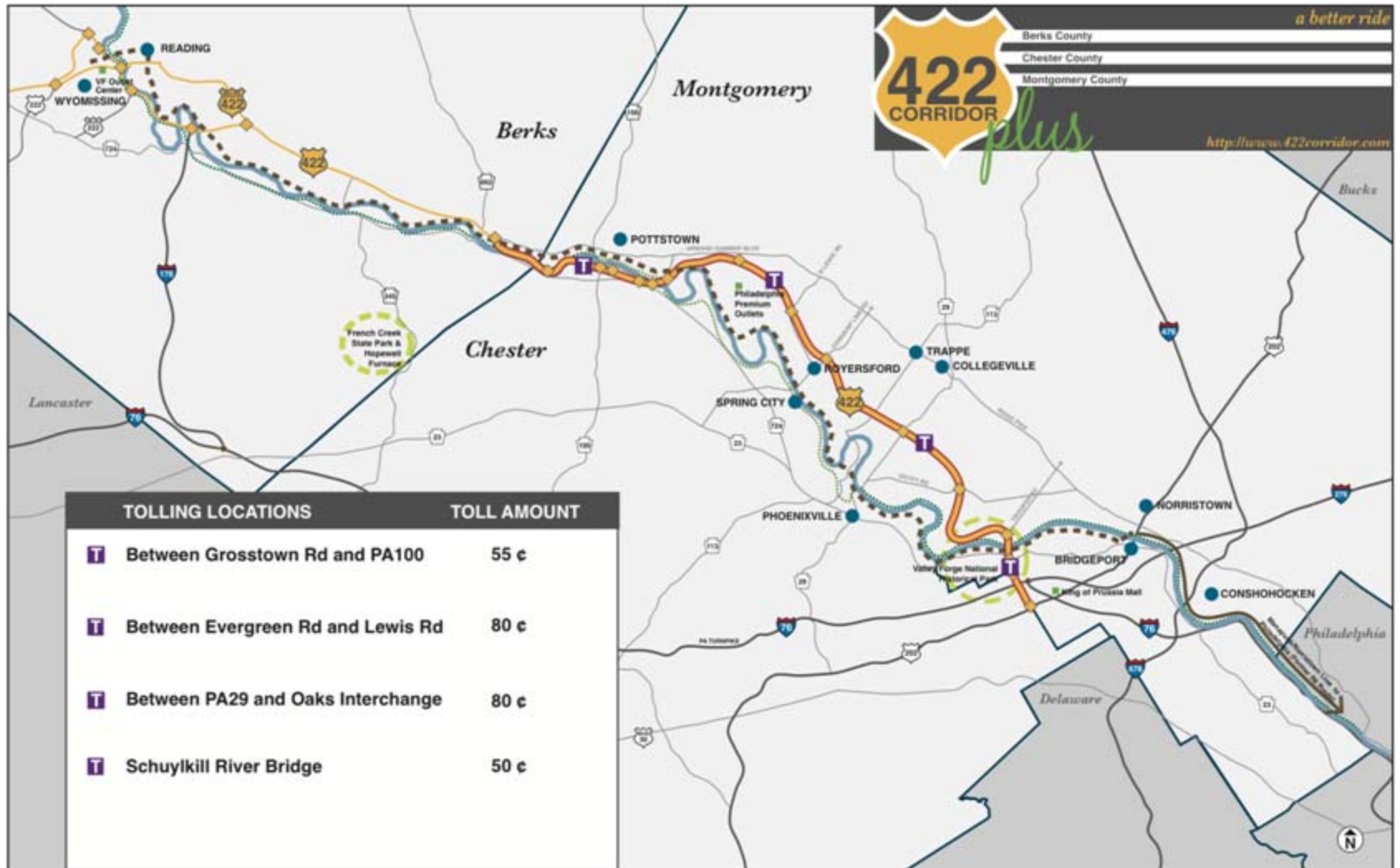
4 locations where tolls will be collected at all movements, including ramps to minimize diversion:

- Electronic toll collection for E-ZPass holders
- Bills sent to license plate registrant

Cars that get on and off without passing any of these 4 locations will not pay a toll



# Tolling Locations



# Traffic Volumes and Toll Revenue

Toll Location	Toll Cost	Daily Traffic (2015)	Daily Revenue
Grosstown Road	55 ¢	54,260	\$29,843
Township Line Road	80 ¢	63,770	\$51,016
PA 29	80 ¢	72,520	\$58,016
Schuylkill Bridge	50 ¢	101,390	\$50,695

= \$189,570 per day in 2015, or \$69 million

- Assume 10-15% diversion or non-collection, yielding \$59 M in 2015
- Tolls increase at 2.5% per year
- Tolls and traffic increase over time, to \$80 M by 2035.

# Highway Capital Program



The Goal:  
To better preserve,  
protect, enhance,  
and maintain the  
422 Corridor.

# Initial Phase 1 Highway Capital Program

PENNDOT Funded (contingent on bi-annual update) \$243.4 M\*

- US 422 / PA 363 Interchange and PA 23 / Valley Forge Road & North Gulph Road
- US 422 Schuylkill River Bridge Reconstruction (partially funded)
- US 422 Pottstown Bypass Reconstruction (partial) and Schuylkill River Bridge(s) Reconstruction
- US 422 Resurfacing in Montgomery County

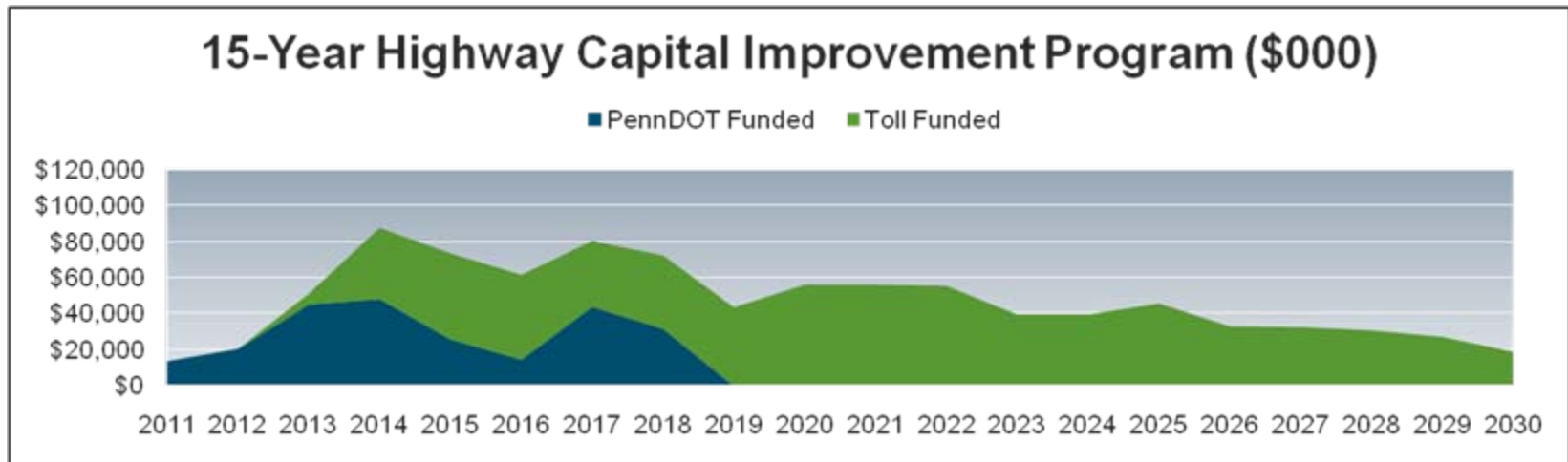
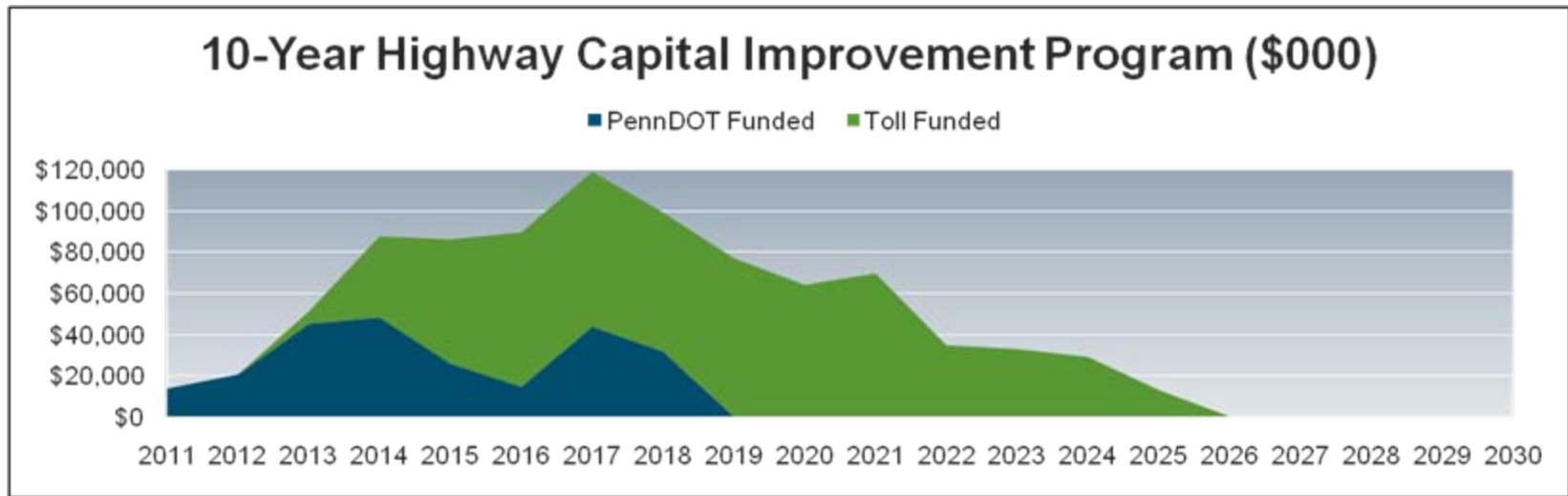
Toll Funded (in 2010 \$) \$505.4 M

- Early Action & Secondary Projects \$36.6 M
  - ITS Deployment – Real Time Traffic Info
  - Acceleration / Deceleration Lanes at Interchanges
  - Offsite Intersection Improvements
  - Signal Interconnection
- Unfunded Projects \$456.1 M
  - US 422 Schuylkill River Bridge (to fully fund project)
  - US 422 Pottstown Bypass Reconstruction Project (remaining sections)
  - US 422 Resurfacing in Chester and Berks counties
  - US 422 Widening from US 202 to PA 29 (widening beyond PA 29 included in 2<sup>nd</sup> Phase HCIP)
  - Sanatoga Interchange Improvements
  - US 422 Structure Rehabilitation
- Toll Infrastructure \$12.7 M
  - Toll Gantry Construction & Implementation

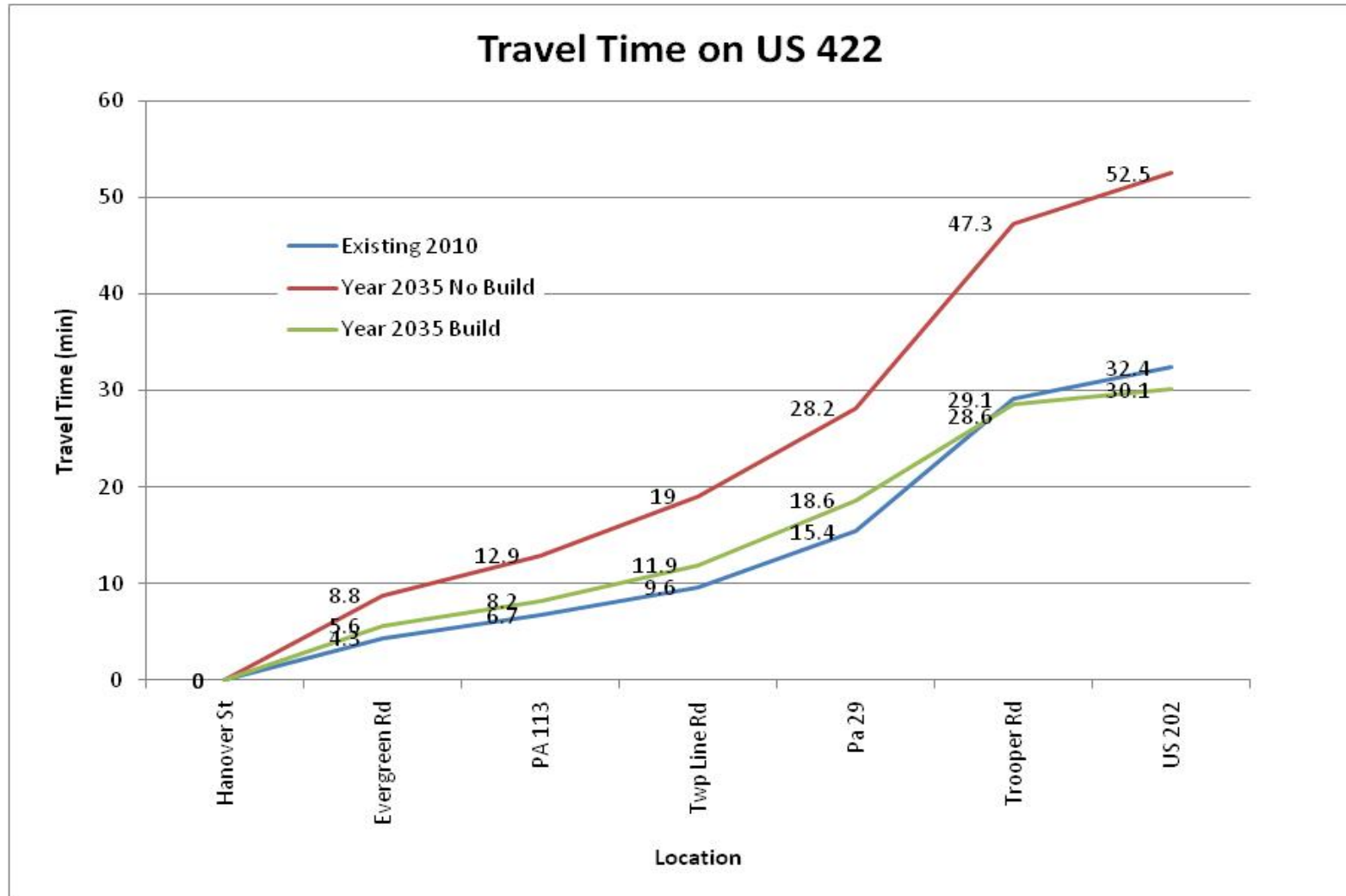
Total Capital Program \$748.8 M

\* As currently reflected in DVRPC FY 2011-2014 Transportation Improvement Program for Pennsylvania and 2<sup>nd</sup> 4 years of 12-year Program

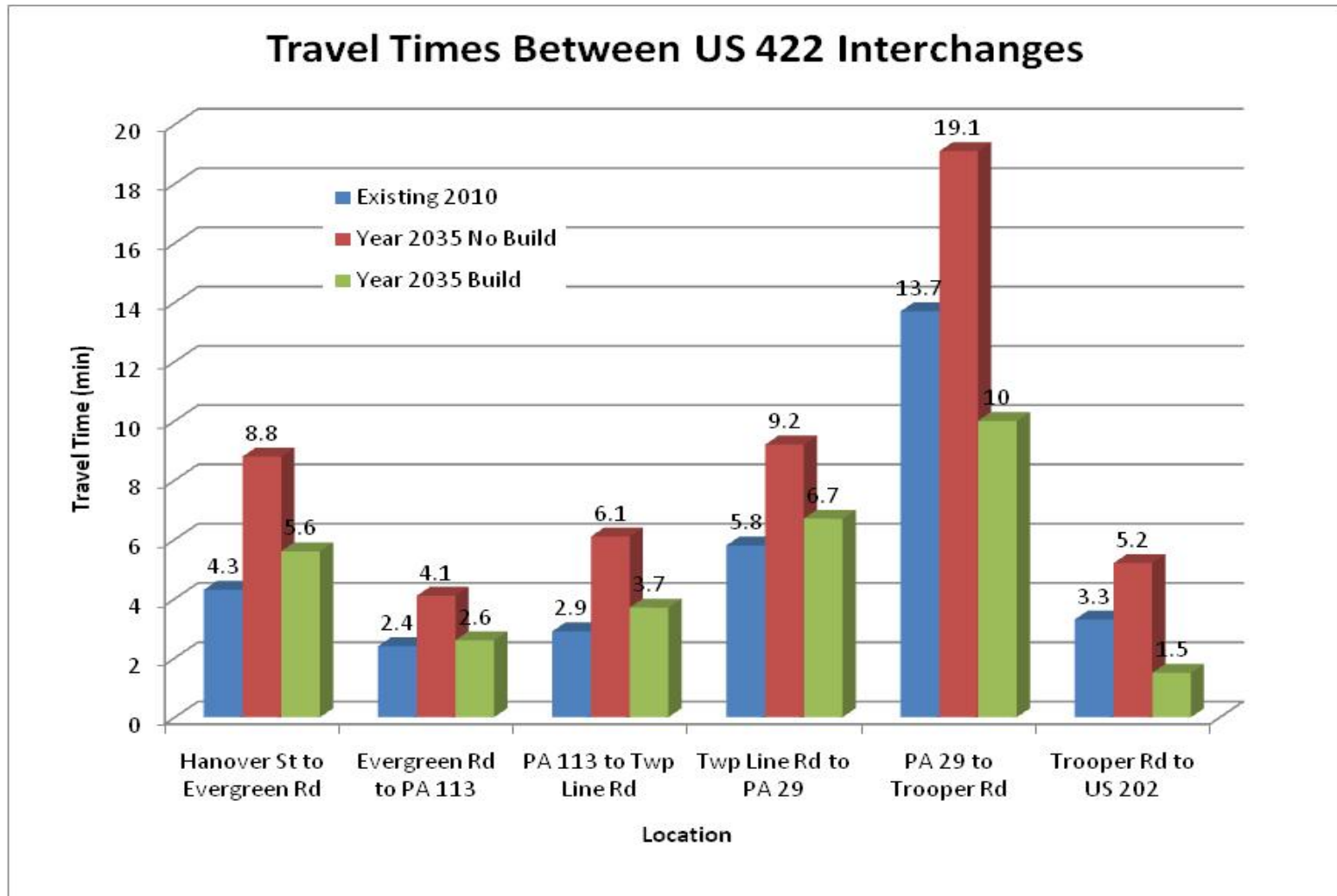
# Capital Program by Year of Expenditure



# Travel Time Analysis



# Travel Time Analysis

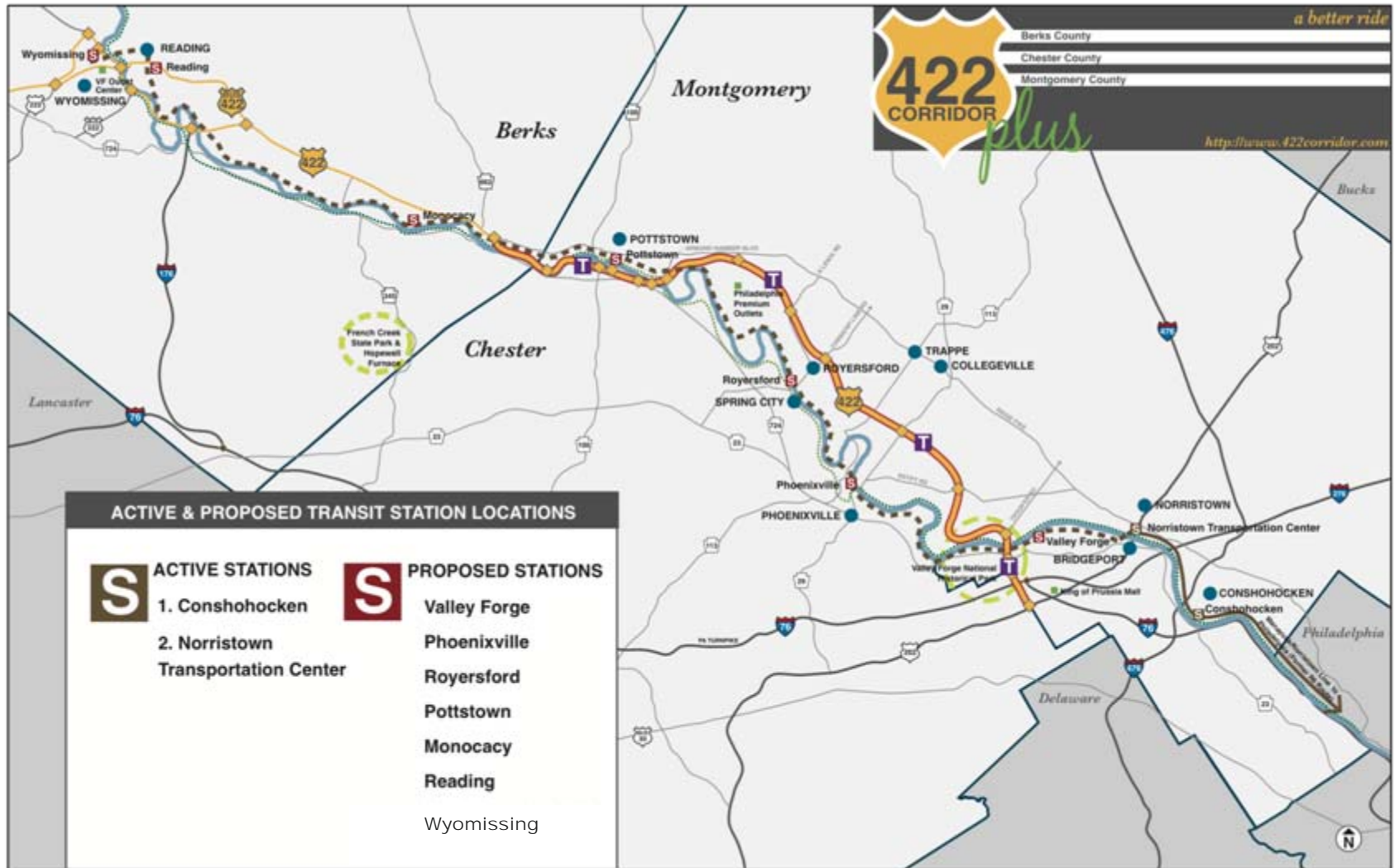


# Transit Capital Program



The Goal:  
Extend the Norristown train  
line to the Reading area  
with a one-seat ride to  
Center City Philadelphia.

# Transit Capital Program



# Transit Capital Program

- + 7 roundtrips (14 trains) per weekday as start-up at 6 new stations
- + Future expansion (up to 16 roundtrips and weekends) with additional investment
- + Approximately 3,300 new riders per day (in opening year); 4,350 in 2035
- + SEPTA operator on Norfolk Southern shared right-of-way
- + Initial license payment to NS for track usage
- + Capital improvements needed on NS property
- + Dual-powered electric-diesel train through to Center City

# Transit Capital and Operating Costs

Capital Costs (2010 \$)		Operating Costs (2010 \$)	
Construction	\$117.8 M	Operations	\$5.30 M
Station Property	\$7.9 M	Maintenance	\$3.55 M
Rolling Stock	\$80.0 M	Administration	\$1.85 M
NS Fee*/ Other Costs	\$164.9 M	NS Trackage Fee and Insurance	\$5.34 M
<b>Total Capital Cost</b>	<b>\$370.6 M</b>	<b>Total O and M</b>	<b>\$16.04 M</b>
		- Fare Revenue	\$3.97 M
		- State Share (85%)	\$10.26 M
		- Local Share (15%)	\$1.81 M
		- Berks (40.6%)	\$0.74 M
		- Chester (11.8%)	\$0.21 M
		- Montgomery (47.6%)	\$0.86 M

\*To be determined

# FINANCIAL PLAN



# The Bottom Line

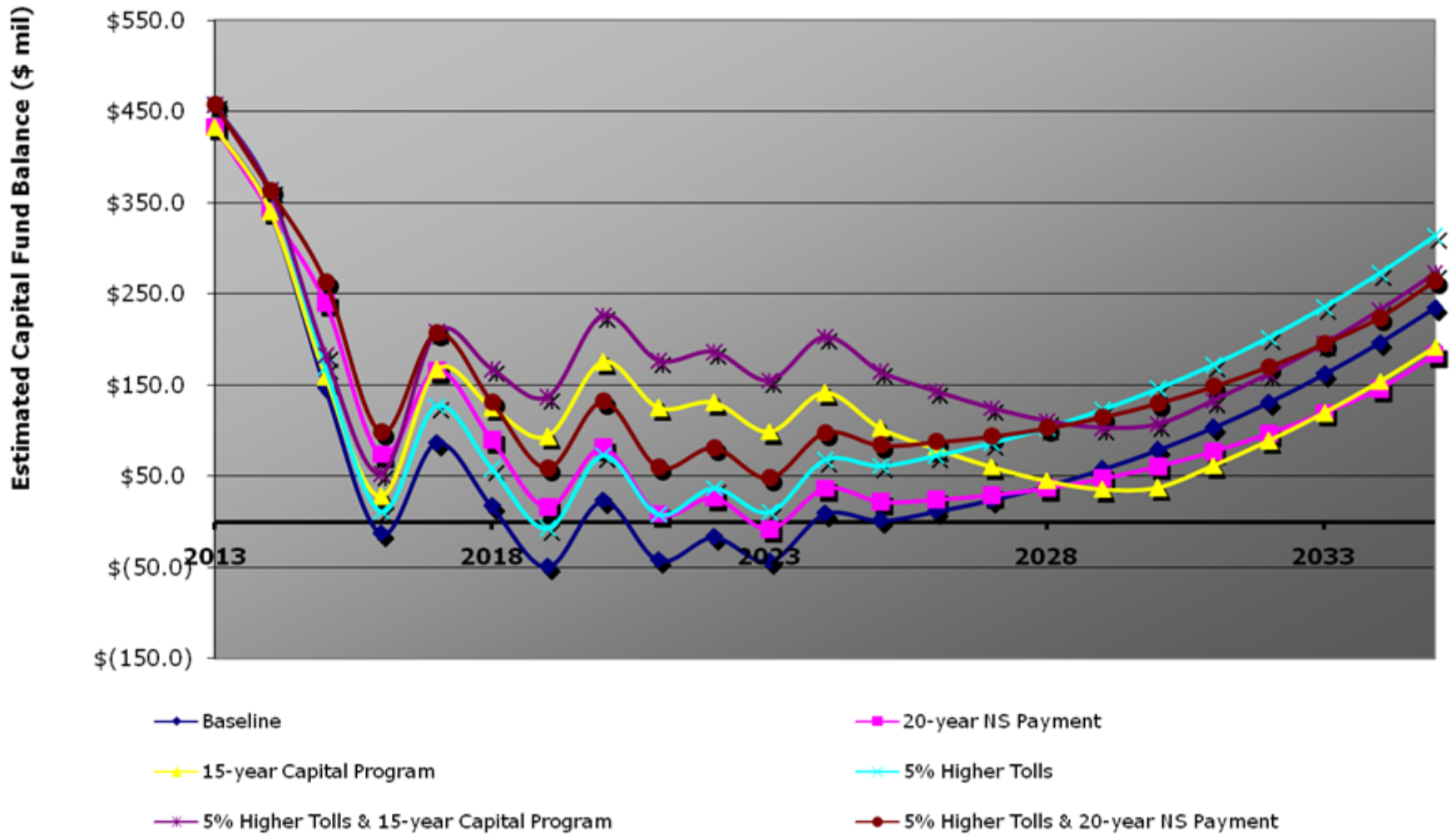
- Tolls can pay for improvements, including:
  - Currently Planned Highway Improvements
  - New Rail Transit Service
  - Enhanced Highway Maintenance and operating costs
    - Affordability dependent on assumptions:
      - Interest rate for bonds
      - Inflation costs for construction
      - Traffic Volumes
- If traffic or revenue assumptions are not met, improvements are still affordable, but at a slower pace

# Financial Analysis

- We examined the feasibility of the project under five different scenarios:
  - **Baseline**
  - **20-year Norfolk Southern Payment**
  - **15-year Capital Program**
  - **5% Higher Tolls**
  - **5% Higher Tolls & 15-year Highway Capital Program**
  - **5% Higher Tolls & 20-year NS Payment**

Also, considered sensitivity to lower revenues and/or higher borrowing or construction costs

# Baseline & Five Alternatives



# Proposed Management Structure



- Federal Toll Agreement with FHWA under Section 129
- Examined other states and Pennsylvania experience
- Considered four alternative structures
- Recommend new local Tri-County Authority
- Management and operations could be public or private (PPP)

# NEXT STEPS



# Next Steps

What is needed  
to make the  
*422plus* Project  
happen?

1. County ordinances to establish multi-county toll authority
2. State legislation to enable local tolling authority
3. Lease Agreement with PennDOT
4. Tolling Agreement with FHWA (Section 129)
5. Maintenance and Operating Agreement
6. Investment Grade Traffic and Revenue Study, and counties financial guarantee
7. Agreements with Norfolk Southern and SEPTA