

Freight Web Mapping Application

Action Item 13-03

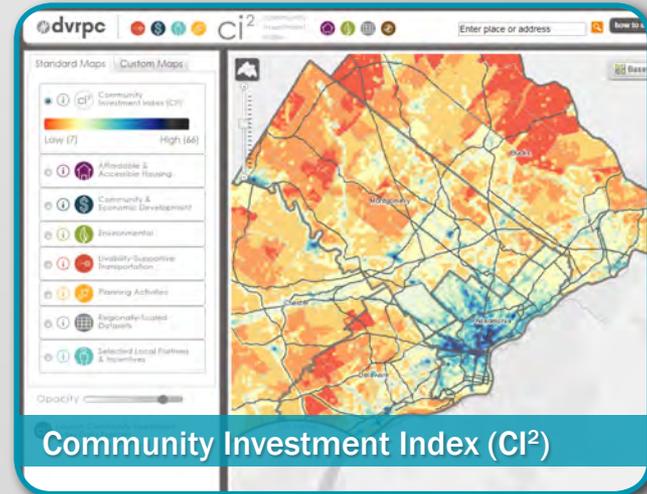


Delaware Valley Goods
Movement Task Force
January 16, 2013

Michael Ruane
Transportation Planner
Office of Freight and Aviation

DVRPC and Interactive Maps

- Public Access to Data
- Municipal Resource
- Dynamic information
- Interactive
- No need for advanced software



DVRPC Interactive Map Online Library

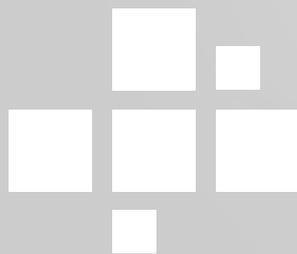
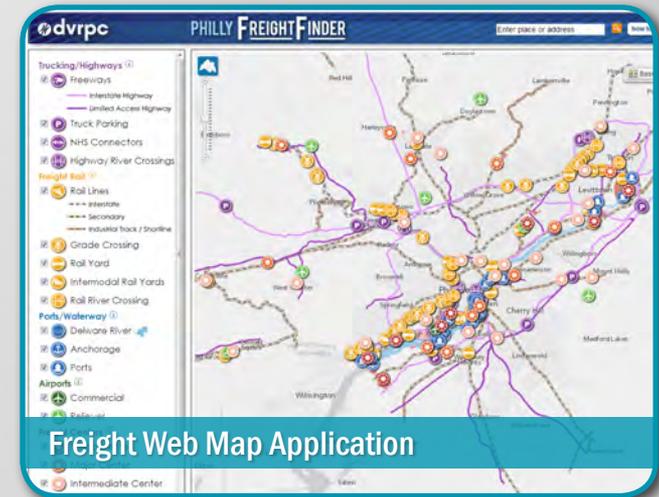
Transportation & Community Development Initiative

Why a Freight Web Map?

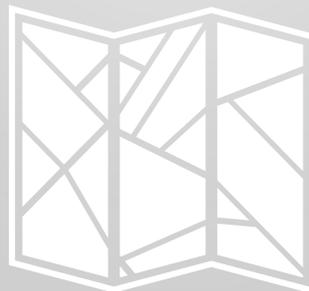
- Unique Regional Tool
- Promotional Tool for Freight
- More than a Clearinghouse
- Improve data-sharing across region
- Build better relationships between partners
- Identify & Justify Investment Priorities
- Useful to:
 - Planners
 - Public Agencies
 - Private Businesses
 - Curious Public

Building the Freight Application

- Staff & DVGMTF Data Subcommittee
- Identification of data sets
- Collection of data:
 - existing sources
 - planning partners
 - mapping of new data
- Verification of data
- Build & test



Data



Maps



Code



Components of the Map

- Focus on major infrastructure/facilities
- Regional importance
- Three Types: Line, Point, Polygon
- 7 Freight Categories
 - Trucking/Highways
 - Freight Rail
 - Ports/Waterways
 - Airports
 - Freight Centers
 - Pipelines
 - Community

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Standard Data:

- Name
- Owner
- Operator
- Municipal Location
- Size

I 295

Owner: NJDOT
Type: Interstate Highway
Length:

	NB	SB
Capacity (lanes):	3	3
Truck Volume:	5468	5042
Share of AADT:	8.9%	8.5%

[View near by Traffic Counts](#)
[Zoom to](#)

Freeway Info Window

Components of the Map

- Focus on major infrastructure/facilities
- Regional importance
- Three Types: Line, Point, Point-to-Point
- 7 Freight Categories
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 - Pipelines
 - Community

Standard Data:

Indicators:

- Facility Specific
- Capacity
- Activity
- Report Links

I 295

Owner: NJDOT
Type: Interstate Highway
Length: 10.5 miles

	NB	SB
Capacity (lanes):	3	3
Truck Volume:	5468	5042
Share of AADT:	8.9%	8.5%

[View near by Traffic Counts](#)
[Zoom to](#)

Freeway Info Window

Process Pays Dividends Early

- Aggregation of new data types
- Segmentation of Infrastructure
- Building New Framework for Consistency
- Expression of Regional Freight Facilities

230 acres of Rail Yards along **672 miles** of Freight Rail ROW

13 General Cargo Ports with **5+ miles** of berths
and **23 cranes**

1,122 Truck Parking Spaces
at **14** facilities in **12** municipalities

New Insights

Trucking/Highways



Freeways (Interstate + Limited Access)

Capacity: Lanes

Activity: AADT by Class



Truck Parking

Capacity: Designated Spaces

Activity: Single Overnight Survey Count



NHS Connectors

Capacity: Lanes

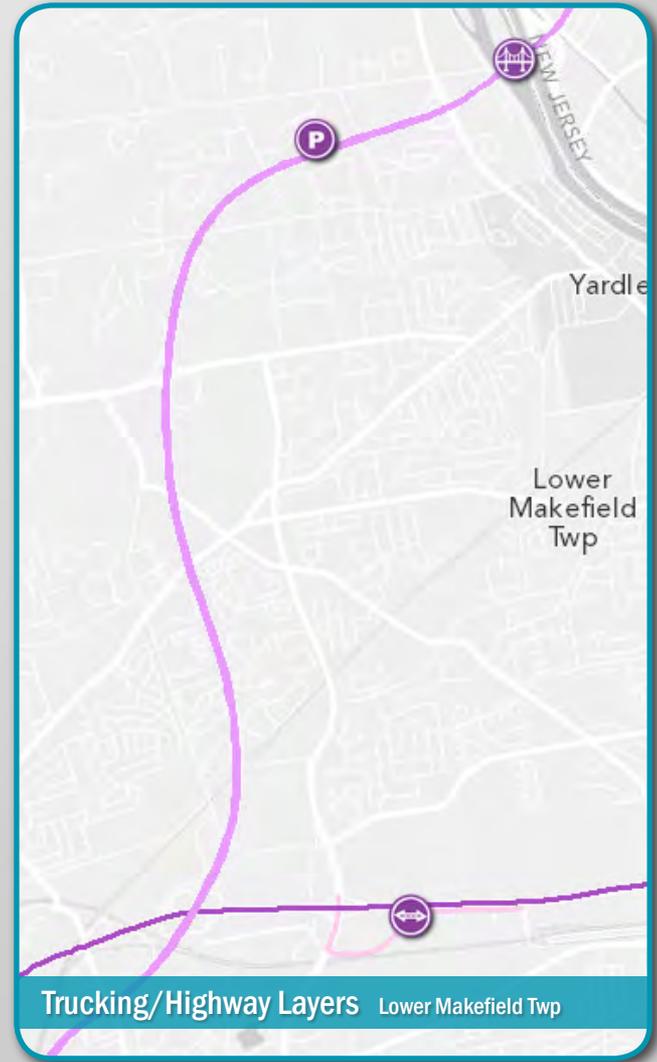
Activity: AADT by Class



Highway River Crossings

Capacity: Lanes, Height Restrictions

Activity: AADT by Class



Trucking/Highway Layers Lower Makefield Twp



Freight Rail



Rail Lines (Interstate + Secondary + Industrial)

Capacity: Tracks, Weight, Double Stack

Activity: Tonnage, Train Count



Class 1 Grade Crossings

Capacity: Tracks

Activity: Tonnage, Train Count



Rail Yards

Capacity: Track Linear Feet, Acres

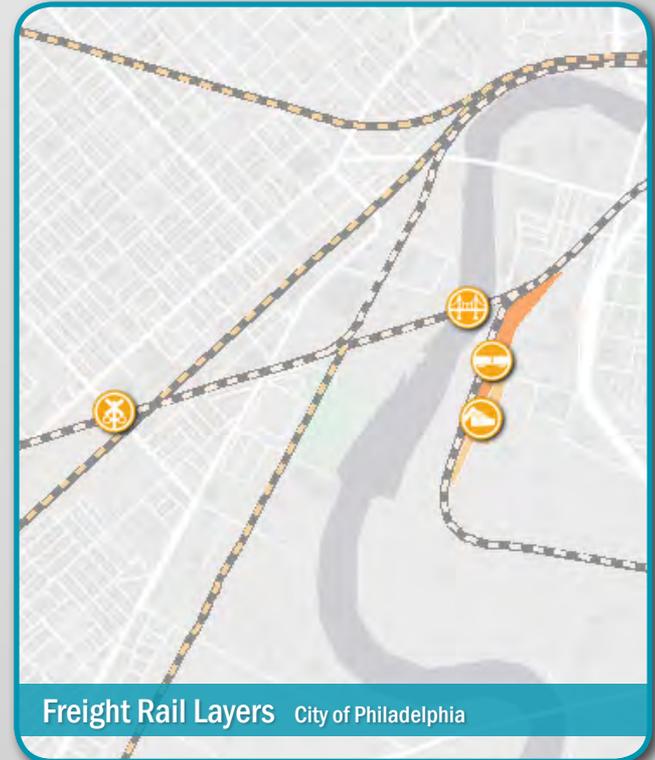
Activity: Tonnage, Car Count



Intermodal Rail Yards

Capacity: Loading Track (LF), Acres

Activity: Tonnage, Car Count



Rail River Crossings

Capacity: Tracks, Weight, Double Stack

Ports/Waterways



River (Delaware + Schuylkill)

Capacity: Channel Depth, Width, Air Draft

Activity: Ship Count



Anchorages

Capacity: Length

Activity: Annual Ships

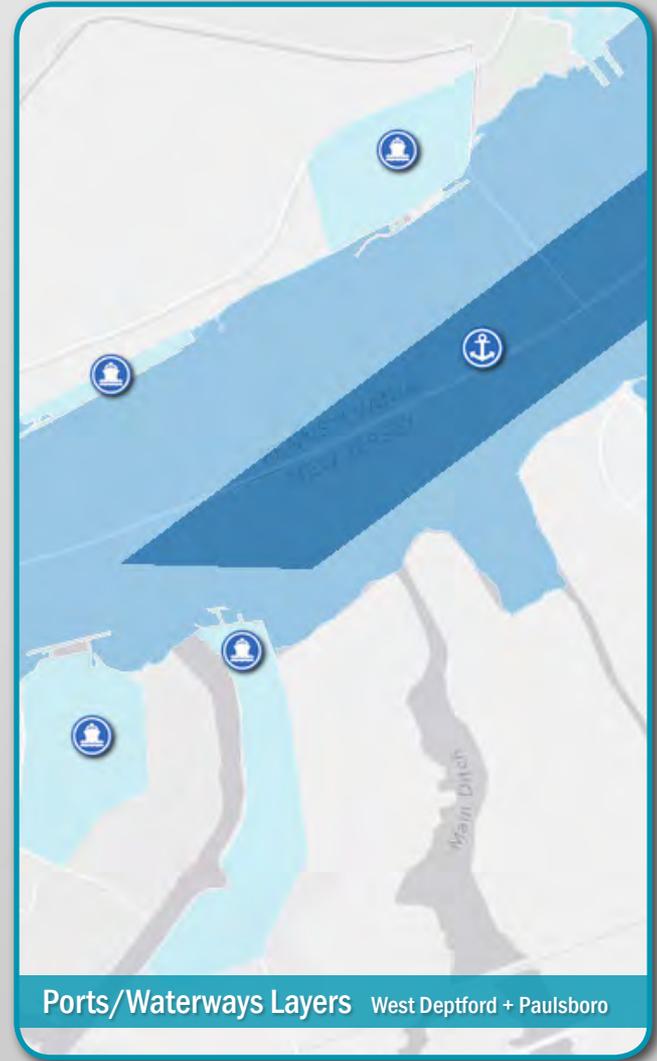


Port Terminals

Capacity: Berths- count, length, depth;

Cranes, Warehouse, Acres

Activity: Ship Arrivals



Airports



Commercial

Capacity: Runways-count, length; Acres

Activity: Annual Operations



Reliever

Capacity: Runways-count, length; Acres

Activity: Annual Operations



Freight Centers



Mega Centers

Capacity: Acres

Activity: Employment



Major Centers

Capacity: Acres

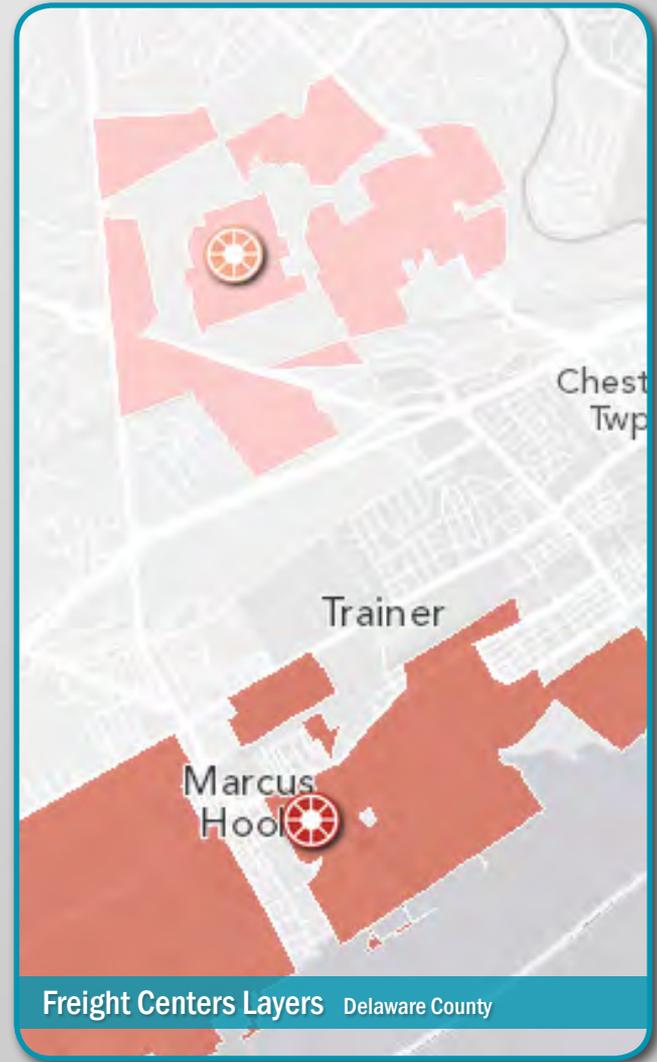
Activity: Employment



Intermediate Centers

Capacity: Acres

Activity: Employment



Pipelines

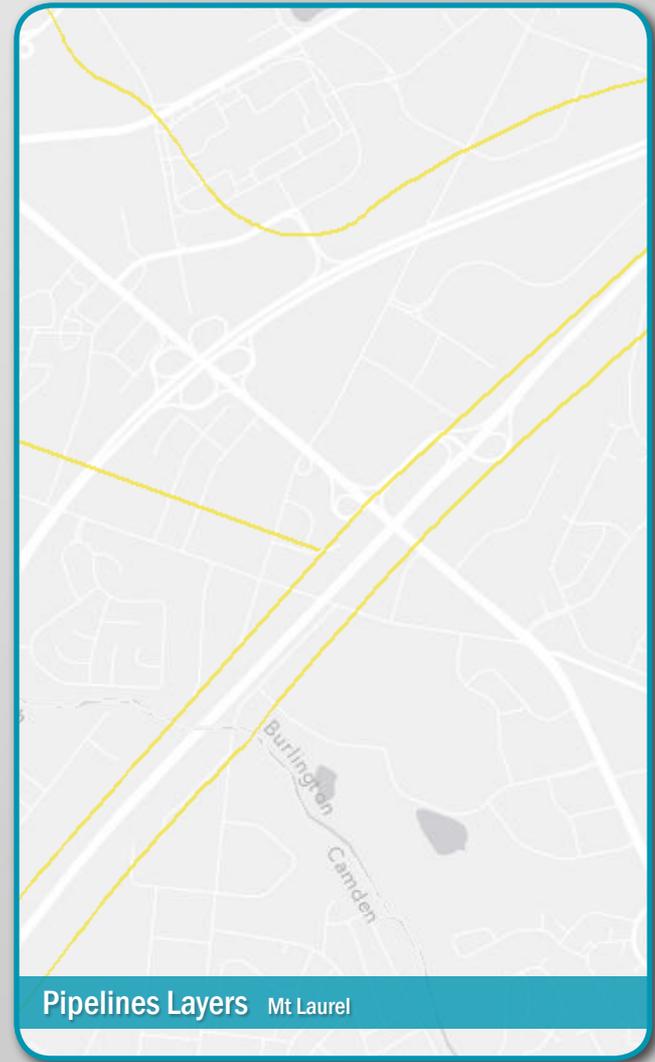


Pipelines

Capacity: none

Activity: none

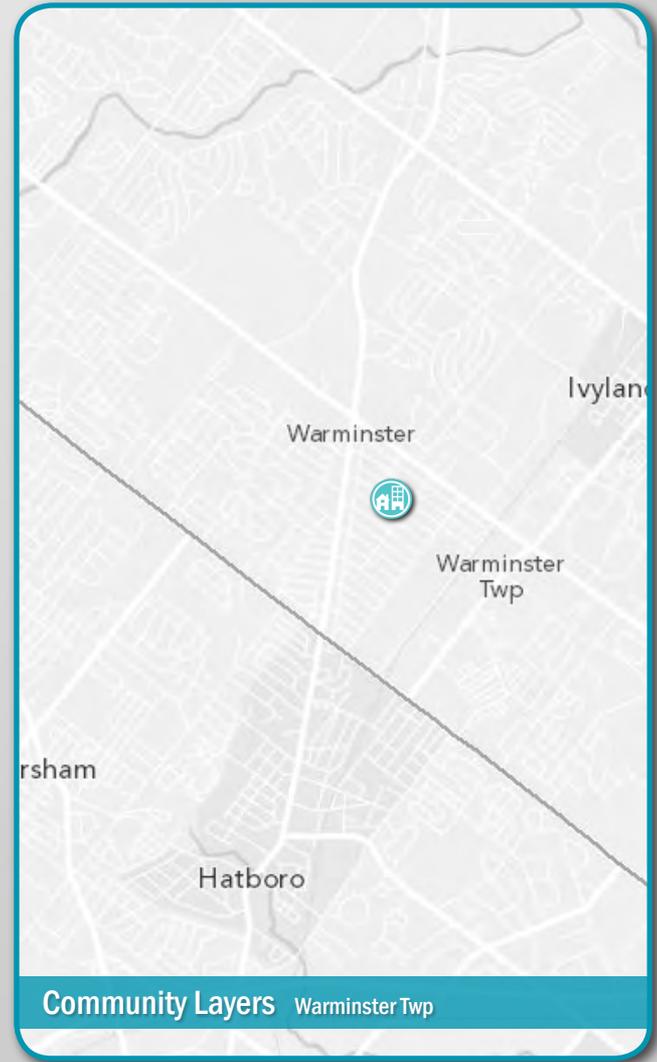
Due to concerns of security the data is mapped to 500' accuracy and contains limited information



Community



Freight as a Good Neighbor Project Narratives



A brief demo...

PHILLY FREIGHT FINDER

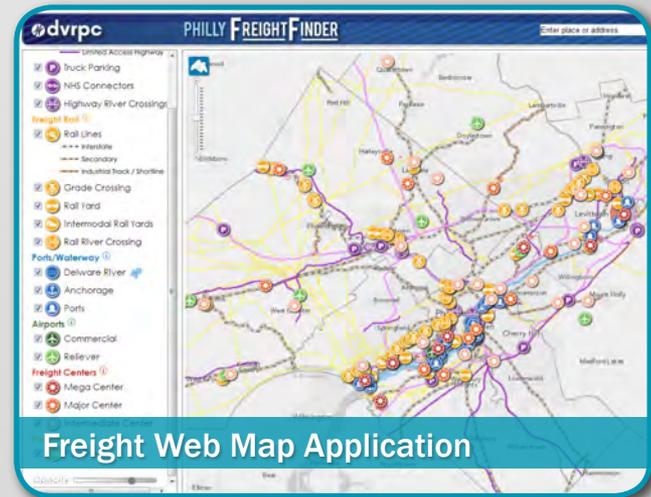
- Limited Access Highway
- Truck Parking
- NHS Connectors
- Highway River Crossings
- Freight Rail**
- Rail Lines
 - Interstate
 - Secondary
 - Industrial Track / Shortline
- Grade Crossing
- Rail Yard
- Intermodal Rail Yards
- Rail River Crossing
- Ports/Waterway**
- Delaware River
- Anchorage
- Ports
- Airports**
- Commercial
- Reliever
- Freight Centers**
- Mega Center
- Major Center
- Intermediate Center

Freight Web Map Application



Next Steps and Building Beyond

- Data Subcommittee & DVRPC Staff revisions
- Verification of data
- Update to data sets
- DVRPC develops data collection program
- Indicators > Performance Measures



A Tool for the Future of Freight

- Unique Regional Tool
- More than a Clearinghouse
- Build better relationships between partners
- Improve data-sharing across region

Help to Identify & Justify Investment Priorities

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Jim Ritzman, PennDOT

Data Subcommittee:

Rick Crawford-Norfolk Southern, Chair

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TRANSPORTATION INVESTMENT SCENARIOS

CHOICES & VOICES

CONNECTIONS 2040



CONNECTIONS *2040*

PLAN FOR GREATER PHILADELPHIA

fostering sustainability, equity and innovation



Delaware Valley Goods Movement Task Force

January 16, 2013

Brett Fusco

Sr. Transportation Planner



THE CONNECTIONS LONG-RANGE PLAN



- **Create Livable Communities**
 - Invest in 100 regional centers
- **Manage Growth & Protect Resources**
 - Preserve 500,000 acres of open space
- **Build an Energy-Efficient Economy**
 - Cut GHG emissions by 50%
- **Modernize the Transportation System**
 - Increase local funding by \$100M/year

TRANSPORTATION INVESTMENT SCENARIOS

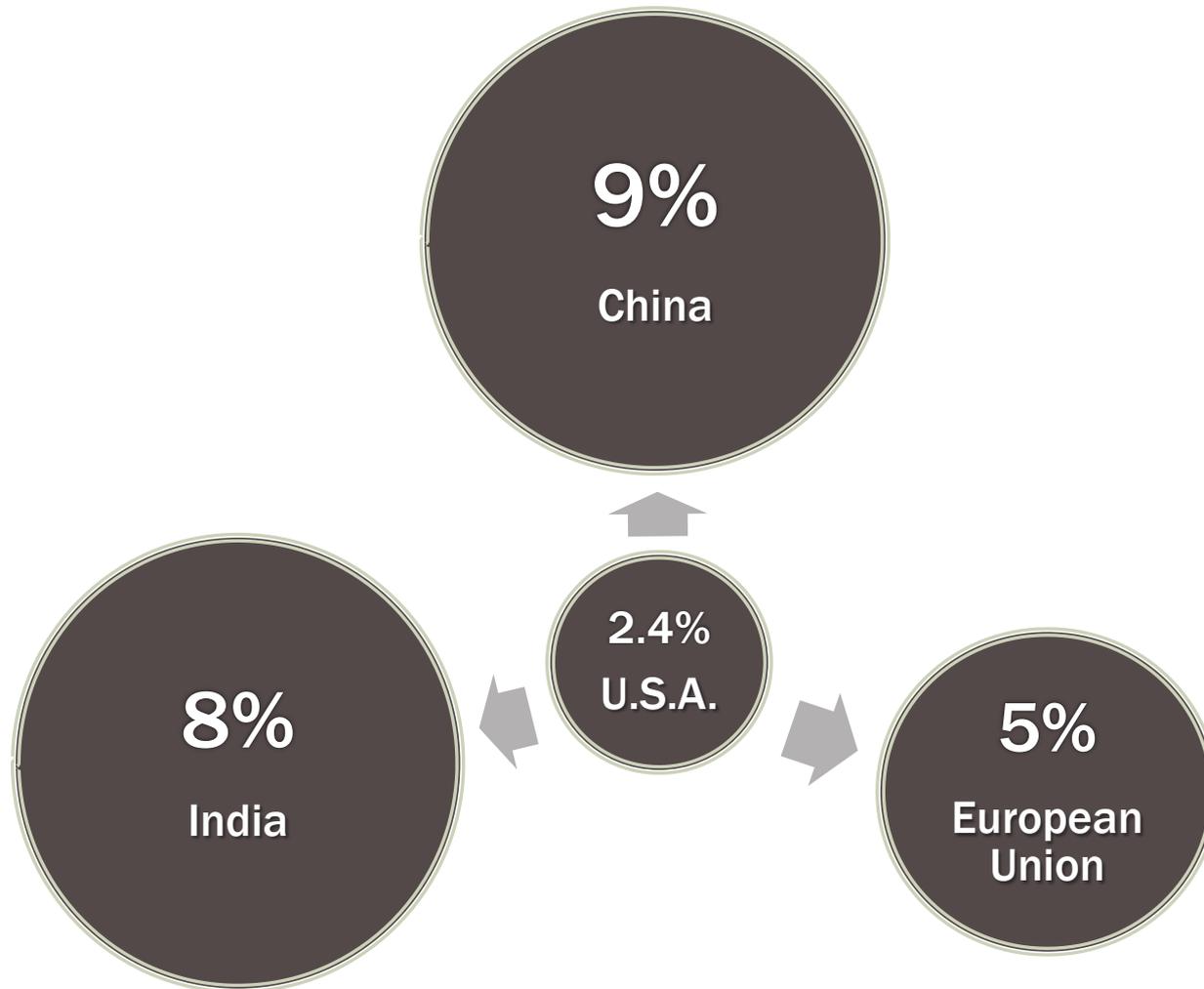


October 2012

CONNECTIONS 2040 Transportation Investment Scenarios



INFRASTRUCTURE SPENDING AS A PERCENTAGE OF GDP



STRIVING (BUT FAILING) TO KEEP UP

5

**2002 Worldwide
Ranking of U.S.
Infrastructure Quality**

14

**2012 Worldwide
Ranking of U.S.
Infrastructure Quality**

FEDERAL TRANSPORTATION FUNDING

Highway Trust Fund Deficit



MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY ACT (MAP-21)

■ The Good News:

- Strong Bi-partisan support
- Funding levels did not decrease much
- No earmarks

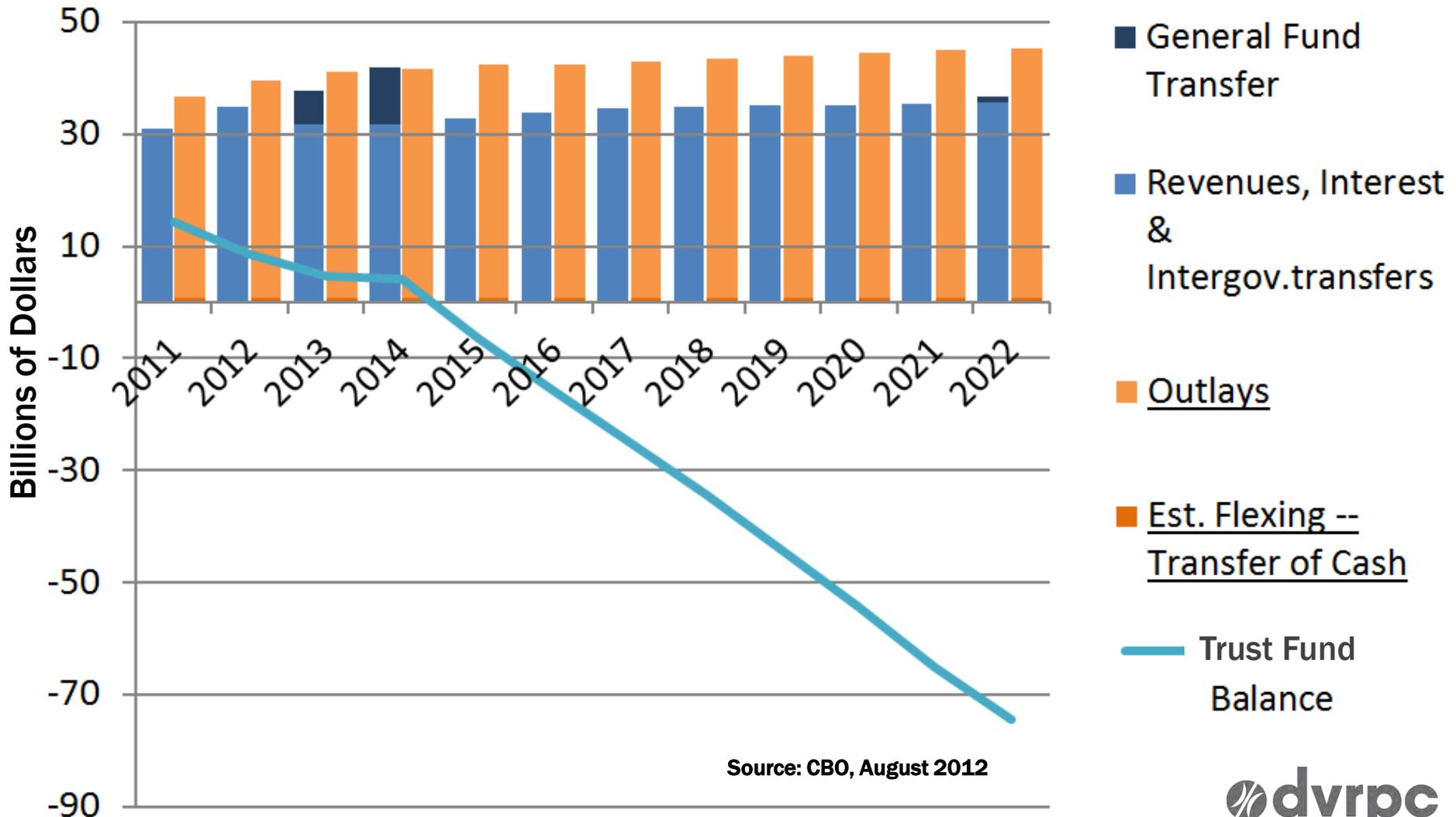
■ The Bad News:

- Only 2 years
- Not supported by available revenue

■ What's New:

- Program consolidation
- Performance Measures
- Transportation Alternatives
- Highway Safety Improvement Program
- National Freight Policy
- TIFIA
- Transit State of Good Repair Program

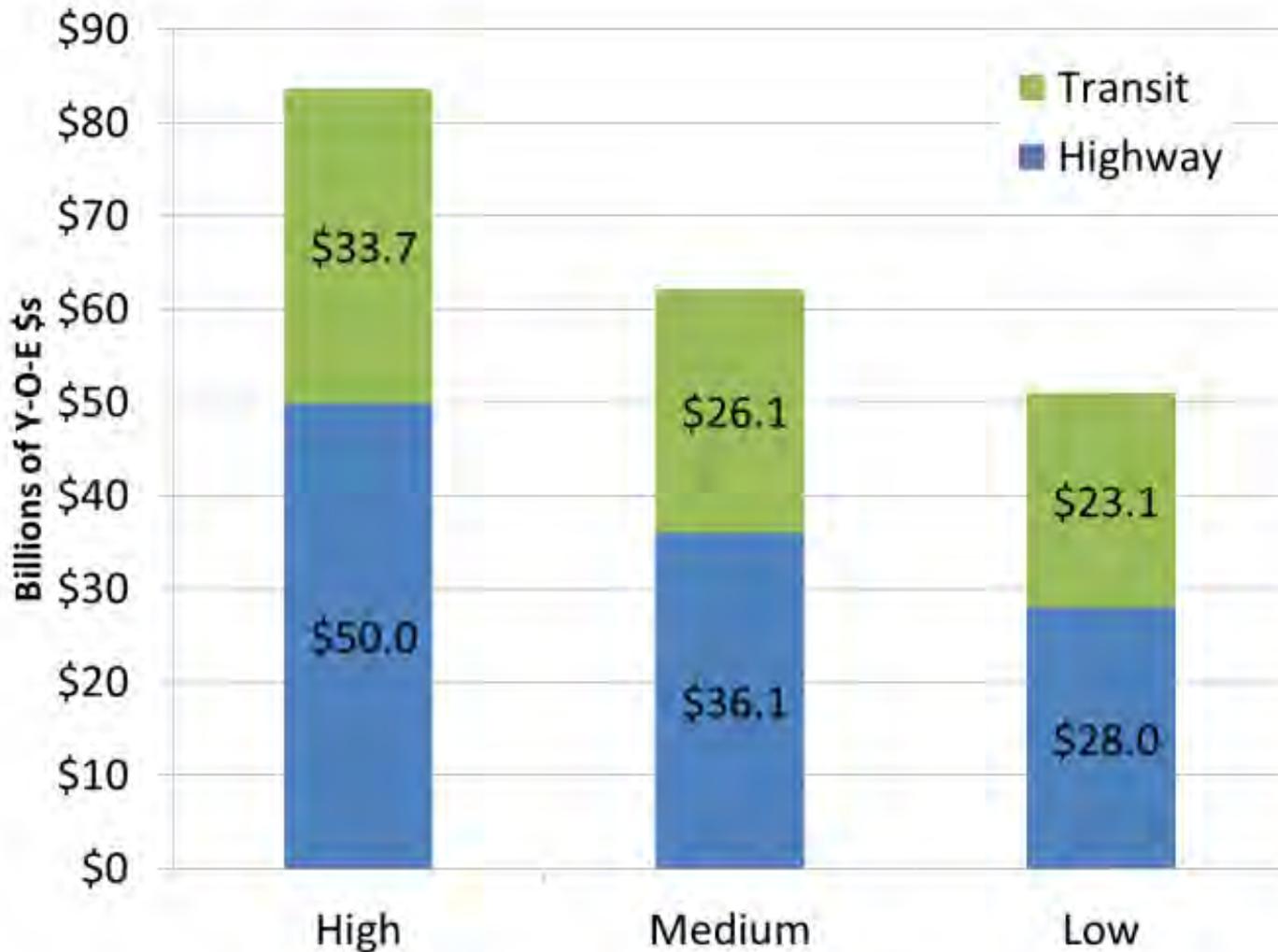
FEDERAL HIGHWAY TRUST FUND, CBO PROJECTIONS



Source: CBO, August 2012

REVENUE FORECAST 2014-2040

TRANSPORTATION INVESTMENT SCENARIOS



High - \$84 B

- Obama proposal

Medium - \$62 B

- MAP-21 level continues

Low - \$51 B

- Actual gas tax revenue

Worst Case - \$43B

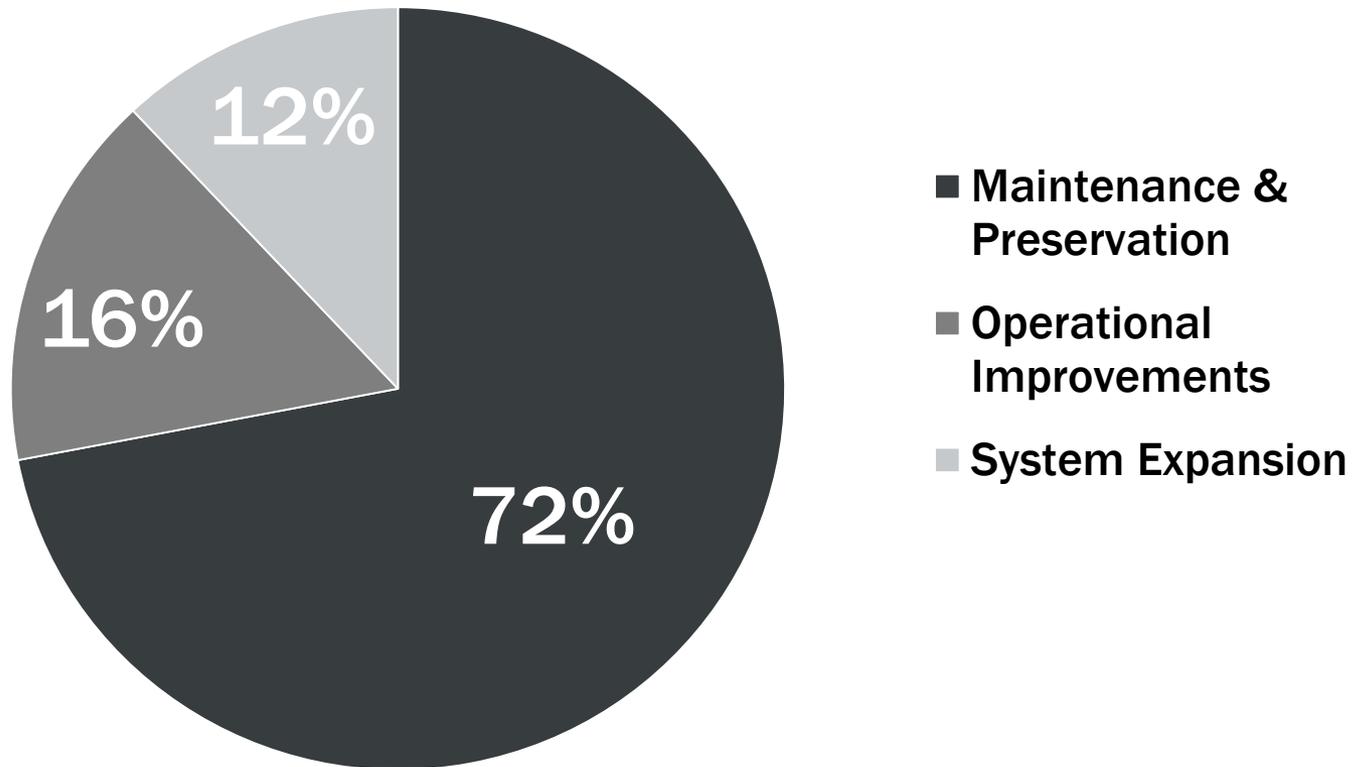
- Flat Federal and State

Connections (2035)

- \$65B over 26 years

TRANSPORTATION INVESTMENT PRIORITIES

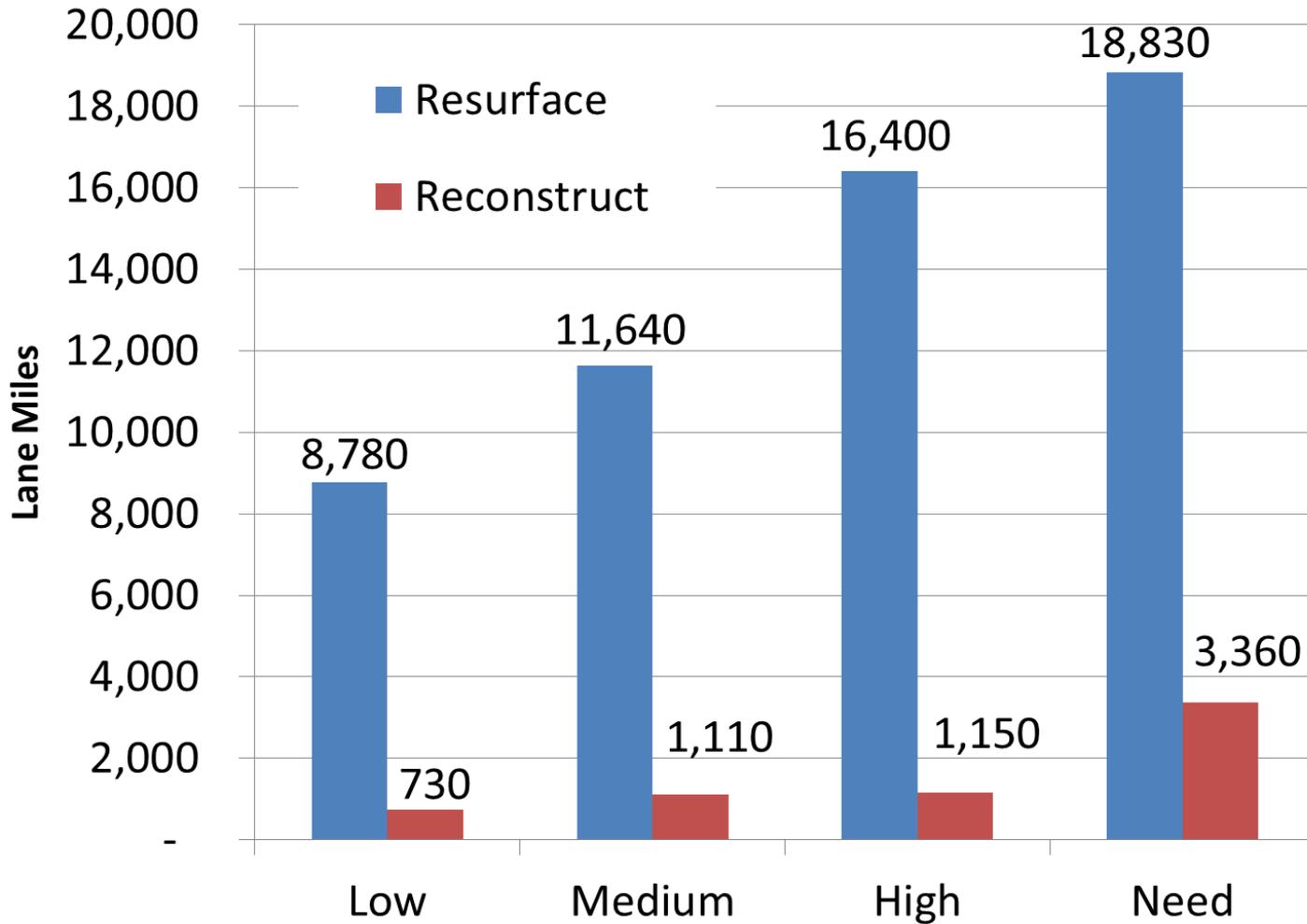
CONNECTIONS (2035) REVENUE ALLOCATION



58% Highway/42% Transit

PAVEMENT

LANE MILES RECONSTRUCTED AND RESURFACED COMPARED TO NEED



Need

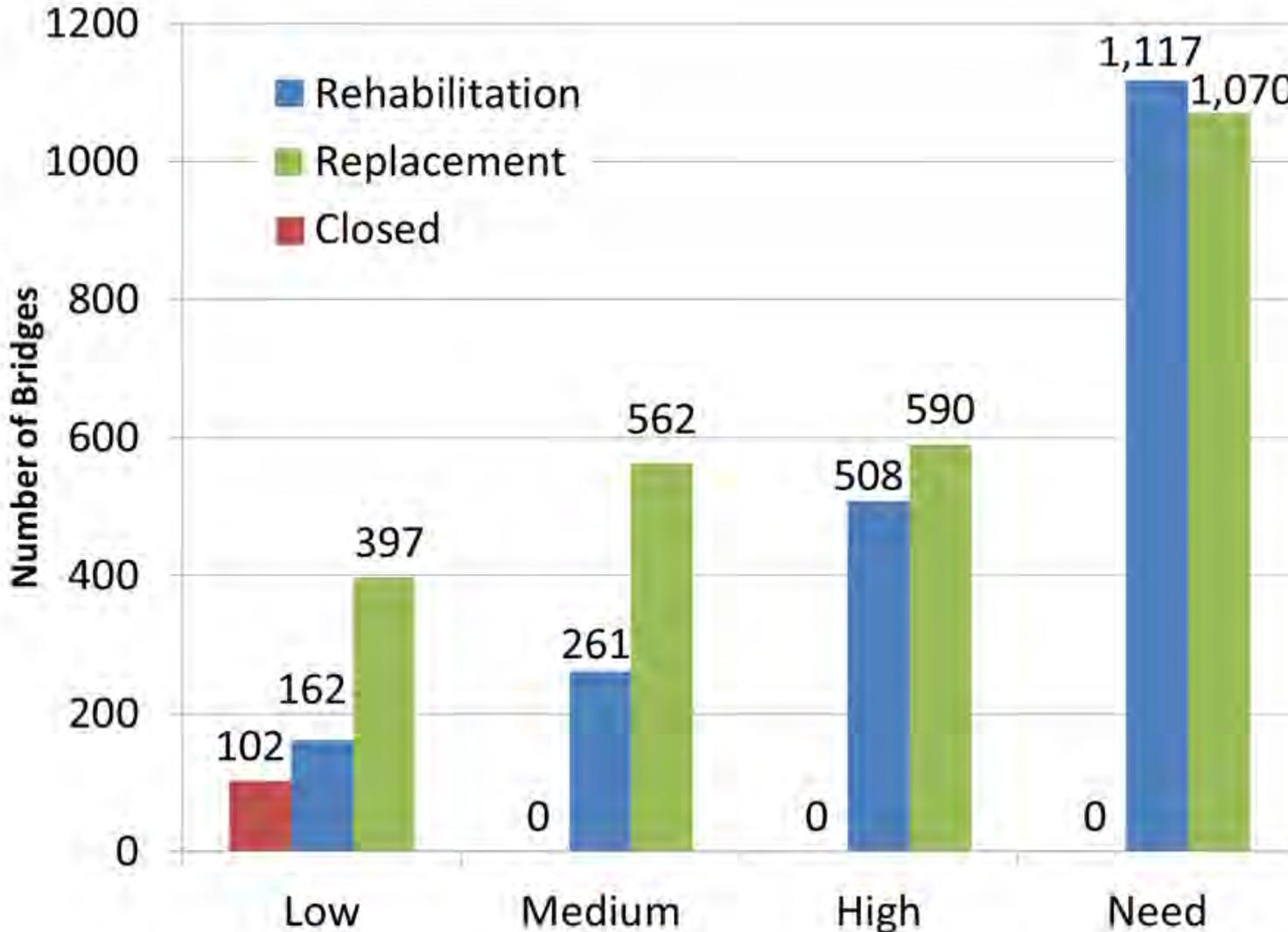
- \$19 billion

Available

- \$11 billion

BRIDGES

NUMBER OF PROJECTS NEEDED 2014-2040



Need

- \$58 billion

Available

- \$15 billion

TRANSIT

2014-2040 BY SCENARIO

Low Funding

- Basic maintenance, safety priorities, defer larger projects
- No new trains, speed restrictions, likely service truncations
- South Jersey bus rapid transit, but no new rail expansion

Medium Funding

- Backlog of projects remains the same
- Some new trains, and station improvements
- Extensions to Wawa (PA) and Glassboro (NJ)

High Funding

- State of Good Repair, replace buses, trains and trolleys as needed
- Increased service frequency
- New service to Navy Yard, Waterfront, King of Prussia??

How Should We Grow?

What type of community do you want to build to meet anticipated population and job growth over the next 27 years? Should they offer more transportation choices where most people can walk, bike, or take transit for most travel needs? Or should they be automobile-oriented communities where people are more reliant on driving for the majority of their travel needs? Another way to think about this is whether you would prefer to be able to safely walk to a nearby store to get a quart of milk, or if you would prefer to drive there.

To further compare living in a neighborhood with transportation options versus an auto-oriented neighborhood, [click here](#).

What kind of community do you want build?

One that is auto-oriented



Auto-oriented community

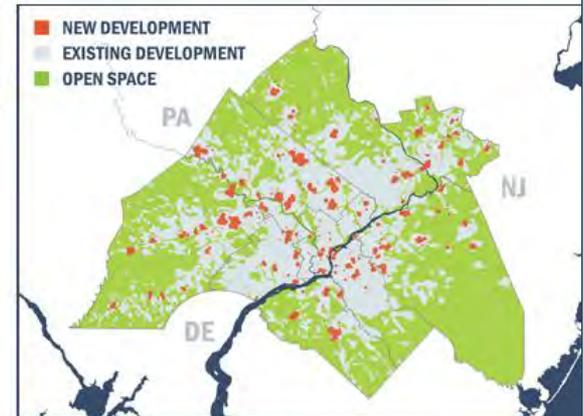
Auto-oriented communities separate houses from other uses requiring a vehicle to get to work, run errands, or make any other trip. This is typical of development patterns over the last 50 years.

One with more transportation options



Community with transportation options

Communities with transportation options mix shops and residences, bringing them closer together so that getting to work, running errands, and other trips can be done by walking, biking, or taking transit. Many of the region's older towns and cities incorporate a variety of transportation



Your Vision for the Future...

TODAY → 2040

↑	3%	814,000	Acres Developed
↑	3%	7,570	Vehicle Miles Driven
↑	5%	89	Biking & Walking Trips
↑	14%	66	Transit Trips
↑	33%	47.8%	Poor Road Condition
↑	13%	40.3%	Poor Transit Condition
↑	7%	\$13,510	Transportation & Energy Costs
↑	39%	30.3	Hours of Congestion
↓	-1%	7.5	Greenhouse Gas Emissions
↑	8%	7.3	Road Fatalities

CONNECTIONS 2040 REVENUE FORECAST AND TRANSPORTATION NEEDS ASSESSMENT



CONNECTIONS 2040
PLAN FOR GREATER PHILADELPHIA



■ PA Road ■ PA Transit ■ NJ Road ■ NJ Transit

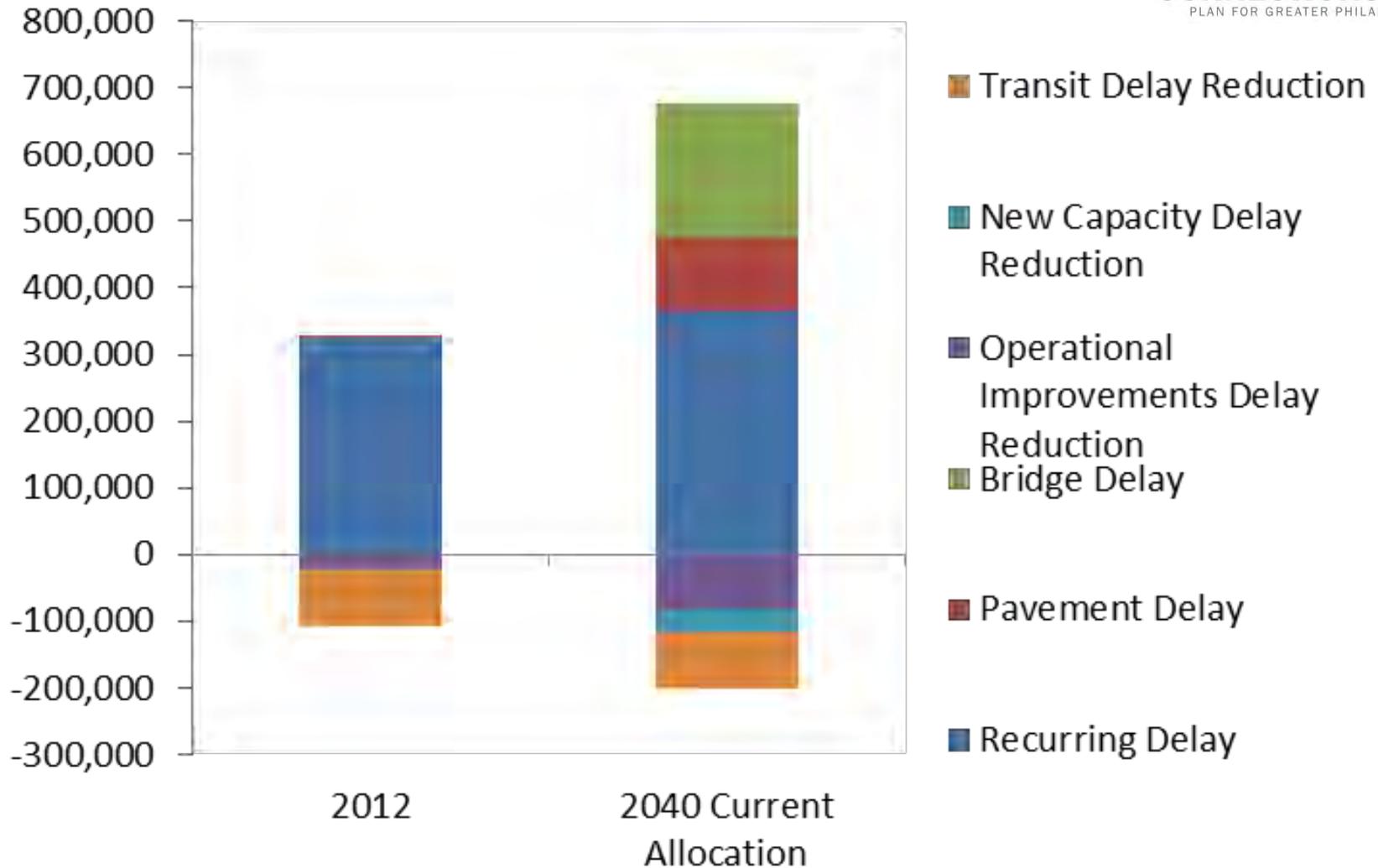
Formula Funding Only, in Billions of Y-O-E Dollars



DELAY & FUNDING ALLOCATION



CONNECTIONS 2040
PLAN FOR GREATER PHILADELPHIA



**Annual Delay
per Capita (Hours)**

14.0

34.7

NEXT STEPS

- **Financial Plan**
 - Allocate Funds to Project Categories
 - Evaluate and Select Major Regional Projects

- **Public Participation**
 - Meetings in March/April
 - Link Newsletter
 - Transportation Fact Sheet
 - Choices & Voices Results Summary
 - Public Comment Period June

- **Write Plan Document and Technical Appendices**

- **Continue public & stakeholder outreach after Plan adoption**



CONNECTIONS *2040*

PLAN FOR GREATER PHILADELPHIA

fostering sustainability, equity and innovation



WWW.DVRPC.ORG/CONNECTIONS2040

WWW.DVRPC.ORG/CHOICESANDVOICES

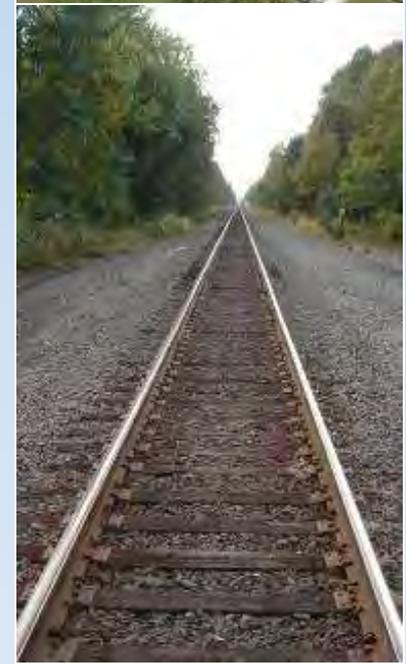
Questions & Comments

DVGMF
January 16, 2013



NEW JERSEY DEPARTMENT OF TRANSPORTATION

New Jersey Statewide Strategic Freight Rail Plan



OVER-ARCHING PROJECT PURPOSE

In short, the plan is intended to:

- ❖ Identify Issues That Constrain Freight Rail Operations and Service to New Jersey Industries
- ❖ Recommend Strategies and Actions to Eliminate the Constraints
- ❖ Support the New Jersey Strategic Plan by Supporting the Freight Rail Industry

OVER-ARCHING PROJECT PURPOSE

The State Strategic Plan Seeks to Support:

- ❖ Economic Vitality and Growth
- ❖ Environmental Stewardship
- ❖ Enhanced Quality of Life

**Maintaining and Growing New Jersey's
Competitive Position Supports Job
Growth and Economic Vitality**



Why Invest in the Rail Infrastructure?



❖ **Economic Benefits**

❖ **Environmental Benefits**

❖ **Quality of Life Benefits**

GOALS AND OBJECTIVES

Integrated Planning: To foster increased cooperation and coordination among public agencies and between public agencies and the private sector.

Economic Development: To retain and generate jobs, maintain and increase revenue, and help maintain and enhance the state's competitive position through strategic freight initiatives

Mobility: To improve access to the national freight system and improve the efficiency of goods movement.

Sustainable Investment: To cultivate and protect freight initiatives which provide lasting returns on public investment.

Community and Environment: To promote freight as a good neighbor and the movement of freight in a socially and environmentally responsible manner.

Safety and Security: To protect people, cargo, and infrastructure.

CORE COMPONENTS OF THE PLAN

- ❖ Describe the role of freight rail in the future
- ❖ Reflect desires of the stakeholders
- ❖ Identify risks and opportunities
- ❖ Provide high level strategic guidance on actions

Economic Vitality requires a strong rail system capable of providing New Jersey ports and businesses with competitive access to local, national and international markets

Issues and Strategies

43 Issues in 13 Opportunity/Risk Categories

13 OPPORTUNITY / RISK CATEGORIES

FEDERAL MANDATES

SYSTEM CAPACITY/INTERSTATE CONNECTIVITY

WEIGHT LIMITATIONS (286K CAPACITY)

CLEARANCES (VERTICAL AND HORIZONTAL)

SYSTEM CAPACITY/YARDS

INTRASTATE CONNECTIVITY

RIGHT OF WAY AND MILITARY NETWORK PRESERVATION

PASSENGER/FREIGHT SHARED USE

TRACKAGE RIGHTS / PAPER BARRIERS

EMERGING ISSUES

COMMUNITY ISSUES - ENVIRONMENTAL

COMMUNITY ISSUES – SAFETY

OPERATING RULES

Planning for the Future

Recommended Actions:

Issue	POTENTIAL SOLUTION SET CATEGORIES				
	Compliance	Maintain	Improve	Expand	Develop / Implement (New)
NJ Rail Assistance Program		Continue to require host community sign off for capital project support.	Incorporate outreach program to assist community education and coordination of candidate projects.	Expand program funding levels. Consider annual funding levels tied to rail freight volumes.	Develop new program with dedicated funding mechanism.
		Assess the impacts of this requirement on communities and rail operations			
286K Standard on Class I Secondary and Light Density Lines		Inventory and maintain existing capacity.	Identify and prioritize routes to upgrade.	Upgrade additional freight lines and bridges to 286K as identified.	Assess the cost and need for strengthening infrastructure to accommodate 315K in the future on identified lines.
			Upgrade identified priority routes to 286K.		
286K Capacity on Shortlines		Inventory and maintain existing capacity.	Identify and prioritize lines to be upgraded to 286K based upon annual carloads (existing and projected).	Upgrade identified priority lines to 286K.	Assess the cost of and need for strengthening infrastructure to accommodate 315K in the future on identified lines.
NJ Transit / Amtrak Constraints to 286K Rail Cars		Inventory and maintain existing capacity.	Determine specific improvements needed for 286K operation.	Evaluate and upgrade additional shared operations lines and bridges to 286K as required.	Negotiate and implement operating and cost-sharing agreements to allow 286K freight access to strategic locations along NJ Transit-owned ROW.
		Identify and prioritize routes to upgrade to 286K in support of freight service on these shared lines.	Upgrade identified priority routes to 286.	Seek alternate routes for freight.	

Evaluation of Strategies Based Upon Support of Goals and Objectives

Objective	Sample Issue - Delair Bridge Rehabilitation			
	Highly Supportive	Moderately Supportive	Not Applicable	Detrimental
Maintain state of good repair	+			
Preserve out of service and at-risk rail rights of way			+	
Protect critical corridors and connections to the national network	+			
Enhance intermodal connectivity			+	
Enhance connectivity between Class I, regional and shortline railroads			+	
Ensure adequate yard capacity			+	
Maintain and expand funding programs and opportunities			+	
Maintain or expand system redundancy		+		
Reduce congestion and enhance operational efficiency			+	
Maintain or enhance economic development opportunities		+		
Support retention, attraction and growth in rail-served industries within		+		
Expand public education and support			+	
Reduce emissions and improve quality of life			+	

Stakeholder Inputs

Immediacy of Need

Instructions: Please indicate the immediacy of the issue, using the **red, yellow, green** color system defined below, within each of the four geographical area. For example, a red dot in the statewide box would mean that you consider the issue to require immediate action throughout New Jersey. Similarly, a red dot in the southern New Jersey box would indicate that the issue requires immediate action in southern New Jersey only.

- **Critical:** Issue or opportunity that requires immediate action.
- **Important:** Issue or opportunity that requires attention but does not pose an immediate threat
- **Developing:** Issue or opportunity that does not require immediate action but should be monitored for changes in trends or conditions.

Issue	Immediacy of Need by Geographic Area			
	Statewide	Northern NJ	Central NJ	Southern NJ
FEDERAL MANDATES				
• Positive Train Control	●	●	●	●
INTERSTATE CONNECTIVITY				
• Delair Bridge	●			●
• River Line		●		
• NYSW		●		
• Lehigh Line (Conrail Oak Island – Manville)	●	●	●	
• Lehigh Line (NS Marville – Phillipsburg)	●	●	●	
• West Trenton		●		
• Greenville Yard		●		

Planning for the Future

Prioritization of Issues

STATEWIDE PRIORITY SCORES				
Risk Category	Sub-Issue	Stakeholder Respondent Group	Score	Rank
EMERGING ISSUES	NJ Rail Assistance Program	SHORTLINE RAILROADS	7.50	1
WEIGHT LIMITATIONS (286K) Capacity	NJ Transit/ Amtrak	CLASS I RAILROADS	8.33	1
EMERGING ISSUES	Adoption of a National Rail Plan	AGENCIES	6.83	1
WEIGHT LIMITATIONS (286K) Capacity	NJ Transit/ Amtrak	SHORTLINE RAILROADS	6.83	2
WEIGHT LIMITATIONS (286K) Capacity	Short Lines	CLASS I RAILROADS	8.33	2
WEIGHT LIMITATIONS (286K) Capacity	NJ Transit/ Amtrak	AGENCIES	6.67	2
WEIGHT LIMITATIONS (286K) Capacity	Short Lines	SHORTLINE RAILROADS	6.00	3
INTERSTATE CONNECTIVITY	Lehigh Line (Conrail Oak Island – Manville)	CLASS I RAILROADS	6.67	3
SYSTEM CAPACITY	Intermodal Yard Capacity	AGENCIES	6.67	3

Top Twelve

- Continuation and expansion of the NJ Rail Freight Assistance Program;
- Upgrading secondary / light density lines to handle the current industry standard 286,000 lb. (286K) rail cars;
- Upgrading New Jersey's shortlines to handle the current industry standard 286K rail cars;
- Selective Updating of NJ Transit and Amtrak operating rules that inhibit the movement of 286K rail cars;

Top Twelve

- Elimination of tunnel and bridge height and width constraints that restrict the movement of today's larger industry standard rail cars;
- Repair and rehabilitation of the Del Air Bridge to ensure continued freight rail access to southern New Jersey;
- Capacity and access improvements for Greenville Yard
- Expand capacity of the Lehigh Line (shared with NJ Transit's Raritan Valley Line) from Oak Island Yard to Manville Yard.

Top Twelve

- Providing freight rail connectivity between the northern and southern New Jersey port complexes;
- Preservation and reactivation of the military rail network;
- Enhancing connectivity between the Class I and the short line railroads; and
- Expanding intermodal yard capacity, particularly in northern New Jersey.

South Priorities

1. Delair Bridge
2. NJ Rail Freight Assistance Program
3. 286K on NJ Transit Lines
4. North/ South Connectivity
5. 286K on Class 1 Secondary/Light Density Lines
6. 286K on Short Lines
Yard Capacity

Central Priorities

1. Lehigh Line (Oak Island to Manville)
2. Lehigh Line (Manville to Phillipsburg)
3. West Trenton Line
4. Positive Train Control
5. Greenville Yard

North Priorities

1. Greenville Yard
2. Lehigh Line (Oak Island to Manville)
3. River Line
4. Intermodal Yard Capacity
5. 286K on Class 1 Mainlines
6. Transload Yard Capacity



New Jersey Statewide

Strategic Freight Rail Plan

Comments, Thoughts, Ideas?

Please Contact

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