



# RAIL FREIGHT AND THE COMMONWEALTH'S ECONOMY

Investing in Pennsylvania's Future



December 2018

# SPECIAL THANKS

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Standard Steel LLC  
United States Cold Storage

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Regional Rail, LLC  
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Shamokin Valley Railroad  
Southwest Pennsylvania Railroad  
Union County Industrial Railroad  
Union Industrial Railroad  
West Shore Railroad Corporation  
Western New York & Pennsylvania Railroad  
Wheeling & Lake Erie Railway  
York Railway Company

“  
**Rail freight is an important component of Pennsylvania's transportation network and these investments create opportunities for expansion and job creation.**  
”

– Secretary Leslie S. Richards, 2018

Produced by the Pennsylvania Department of Transportation, Multimodal Deputate, Bureau of Rail Freight, Ports and Waterways.

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## PENNDOT IN ACTION

### OVERVIEW

Rail Freight Assistance Program (RFAP) and Rail Transportation Assistance Program (RTAP)

**OVER \$5  
BILLION**

AUTHORIZED SINCE  
THE INCEPTION OF  
THE PROGRAMS

PROVIDING  
SUPPORT TO  
**OPERATING  
RAILROADS**

**64**  
TOTAL

**RFAP & RTAP**

AWARDED

**250+** PROJECTS

**\$200** MILLION

between

**2009** and **2017**

in **2017** **34** RAIL PROJECTS APPROVED  
**5** RTAP PROJECTS COMPLETED (23 TRACK MILES IMPROVED/ADDED)  
**8** RFAP PROJECTS COMPLETED (19 TRACK MILES IMPROVED/ADDED)





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# RAIL IN PENNSYLVANIA

The Commonwealth of Pennsylvania is home to more than 12 million residents in 67 counties. Its landscape is abundant with rolling hills, hardwood forests, mountain ranges, and 140 miles of waterfront along Lake Erie and the Delaware River Estuary. Pennsylvania is the nation's 6<sup>th</sup> largest economy, owing much of its strength to industries such as mining, manufacturing, agribusiness, tourism, life sciences, and petrochemical processing. These industries complement the state's natural beauty, rich history, and lively spirit.

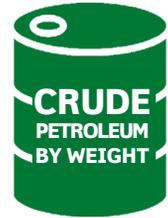
Key to Pennsylvania's success was the establishment and use of its rail network. The Commonwealth's rail freight network consists of more than 5,000 miles of track served by 64 operating railroads. According to 2015 estimates, more than 200 million tons of goods and commodities, worth more than \$250 billion, are carried on Pennsylvania's rail freight network. To maintain such a thriving network, Pennsylvania also administers one of the largest rail freight grant programs in the U.S.

**PENNSYLVANIA'S TOP COMMODITIES**  
 ACCORDING TO THE FEDERAL HIGHWAY ADMINISTRATION (2016)

**NO.1**



**NO.2**



**NO.3**



**NO.4**



**NO.5**



**PENNSYLVANIA'S RANKING AMONG THE 50 STATES**  
 ACCORDING TO THE PA FREIGHT MOVEMENT PLAN (2016)

**NO.5** in



**ROUTE MILES**  
 PA FREIGHT RAILROADS  
 OPERATE OVER  
**5,000**

**NO.6** in



**NO.8** in



**RAILROAD EMPLOYEES EMPLOYMENT**  
**6,977**

**NO.9** in



# INVESTING IN PENNSYLVANIA'S RAIL FREIGHT SYSTEM

To compete and thrive in a dynamic global economy, the Commonwealth of Pennsylvania invests millions of dollars in its rail freight system. The Pennsylvania Department of Transportation (The Department), through its Bureau of Rail Freight, Ports and Waterways, manages two competitive grants programs: the Rail Freight Assistance Program (RFAP) and the Rail Transportation Assistance Program (RTAP). Both can be leveraged with other federal and state funding sources to advance rail freight projects that will preserve, improve, and create rail freight transportation services. Using these programs, the Department will achieve its goals for Pennsylvania's future: to ensure economic competitiveness, improve safety, and strengthen the rail freight system.

## SUCCESS STORIES



### LYCOMING COUNTY: JERSEY SHORE STEEL (2014 RFAP)

Funding sources: RFAP grant and applicant matched funds

\$224,000 to construct turnout, crossing, and 800' of track providing rail service at the Montoursville facility

Previously relying on trucks to ship products, the new railroad spur allows Jersey Shore Steel to ship via rail, removing truck traffic from Route 220.



### BERKS COUNTY: F.M. BROWN'S SONS, INC. (2010 RFAP)

Funding sources: RFAP grant and applicant matched funds

\$493,460 for construction of unloading facility, turnout installation, track rehabilitation, and canopy installation

Rail expansion allows the company to receive grain from the Midwest and increase its output.



### MCKEAN COUNTY: AMERICAN REFINING GROUP INC. (2015 RTAP)

Funding sources: RTAP grant and applicant matched funds

\$1.6 million to construct 50' of track, rehabilitate 1,400' of track, one turnout, and two crossings, and modify six existing loading racks

Rail improvements and modifications help the company to maintain and grow shipment capacity.

# DELIVERING SUCCESS

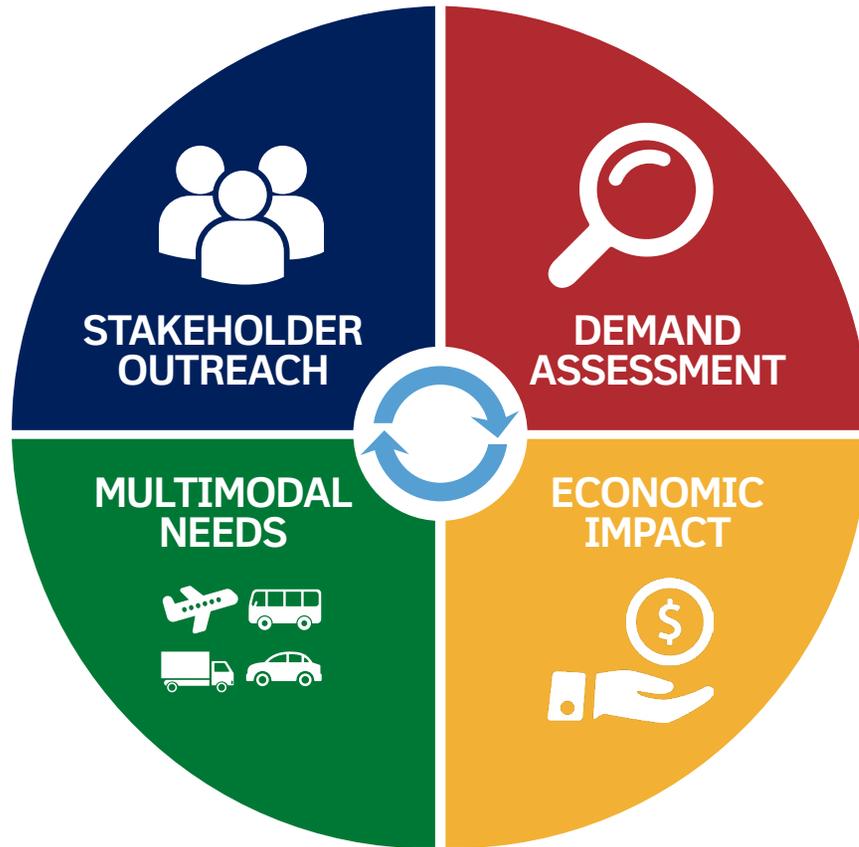
As part of recent efforts to administer the RFAP and RTAP, the Department launched a rail freight study that engaged stakeholders, determined needs, and identified candidate projects for the programs. As of December 2018, the Department completed the following five steps:

1. Conducted outreach to shippers, economic development groups, and railroads to identify opportunities for growth within the rail freight industry.
2. Assessed the flow of goods in, out, and through the Commonwealth for the next 10-years to identify demands on the rail freight network.
3. Assessed the rail freight network within the Commonwealth to identify needed capital improvements.
4. Identified and evaluated economic development opportunities that would benefit from rail freight infrastructure investment.
5. Categorized improvements and opportunities by economic, safety, and system impacts to determine alignment with the programs' strategic goals and project readiness.



# PROJECT IDENTIFICATION

The study identified and assessed rail freight projects using a four-step process:



## PROJECT IDENTIFICATION PROCESS

### Stakeholder Outreach

During the study's outreach process, many of Pennsylvania's shipping companies, railroads, and economic development groups provided input on projects that would improve the rail freight network. Site reviews, engineering assessments, and stakeholder interviews added to the understanding of each proposed project.

### Demand Assessment

The study compared stakeholder-identified projects with commodity flow data representing existing and forecast demand over the next 10-years. This assessment found that the commodities associated with the projects support many of Pennsylvania's Targeted Industries of Economic Growth and Keystone Opportunity Zones.

### Economic Needs Assessment

The study analyzed project locations to determine their proximity to existing and emerging rail-related industries and economic activity centers. The assessment found that individual projects could create over 1,700 new jobs and help retain over 1,100 jobs.

### Multimodal Assessment

The study evaluated the impacts of projects on nearby roads. The assessment found that some of the projects will remove overweight trucks off Pennsylvania roadways while others will increase shipments through intermodal and transloading facilities. All projects increase the share of goods traveling by rail.

The project identification and assessment process continued through the 9-month duration of the study. The effort resulted in the identification of 122 rail freight improvement projects that will benefit the Commonwealth's economy and transportation infrastructure.

# CATEGORIZING THE COMMONWEALTH'S INVESTMENT

The final step of the study was to evaluate and categorize the projects to help the Department optimize investments, increase the impact of the programs, and maximize return on investment. All 122 projects were categorized according to the Proposed Changes to the Network and Project Readiness.

The Proposed Changes to the Network are divided into three groups. Projects that:

- Create new service, expand the existing network to new markets, and attract new employers;
- Improve the existing network through upgrades or increases to capacity that will allow existing employers to grow, add new jobs, and access new markets; and
- Maintain the existing network by replacing rail infrastructure to keep the network in a state of good repair.

Project Readiness is also divided into three groups. Projects that are:

- Ready-to-Go or "shovel ready" and can readily receive capital funding;
- Almost Ready, meaning they still need additional refinement before being Ready-to-Go; and
- Concepts that need to meet major project milestones before being Ready-to-Go.

## PROPOSED CHANGE TO NETWORK



### CREATES SERVICE

Projects that bring in new customers or build new rail freight connections



### IMPROVES SERVICE

Projects that rehabilitate or upgrade rail lines to improve service to existing customers



### MAINTAINS SERVICE

Projects that bring the rail infrastructure into a state of good repair

## PROJECT READINESS



### READY-TO-GO

Projects that have a clear purpose and need, completed engineering and design, and minimal permitting requirements



### ALMOST READY

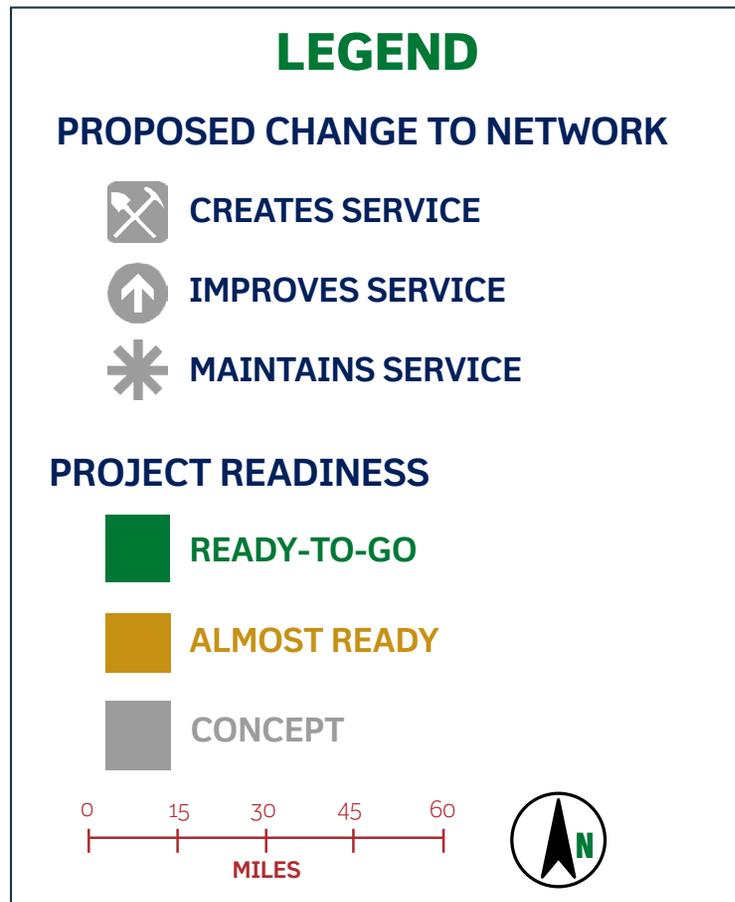
Projects that meet the majority of "Ready-To-Go" criteria but are missing one or more of the criteria



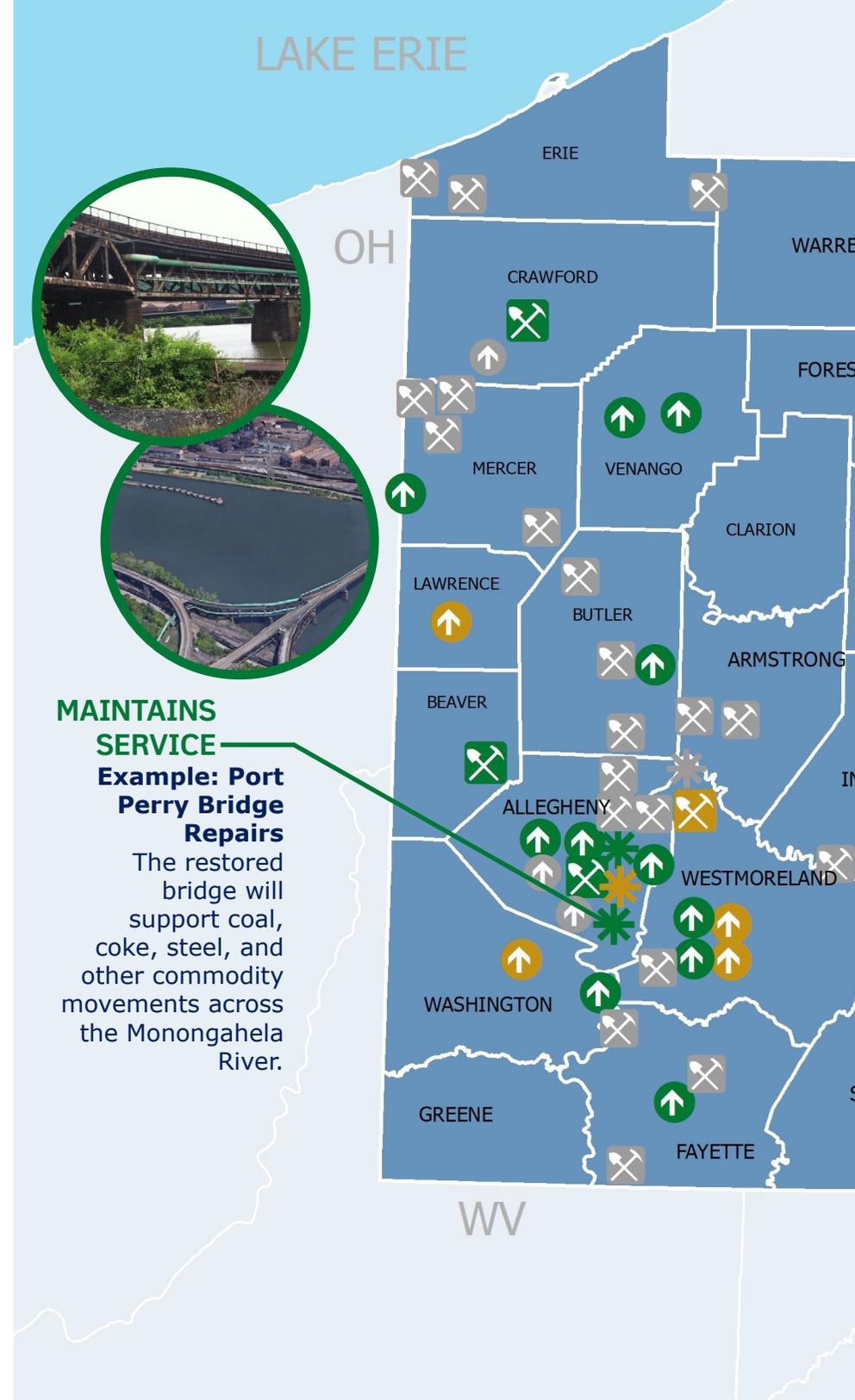
### CONCEPT

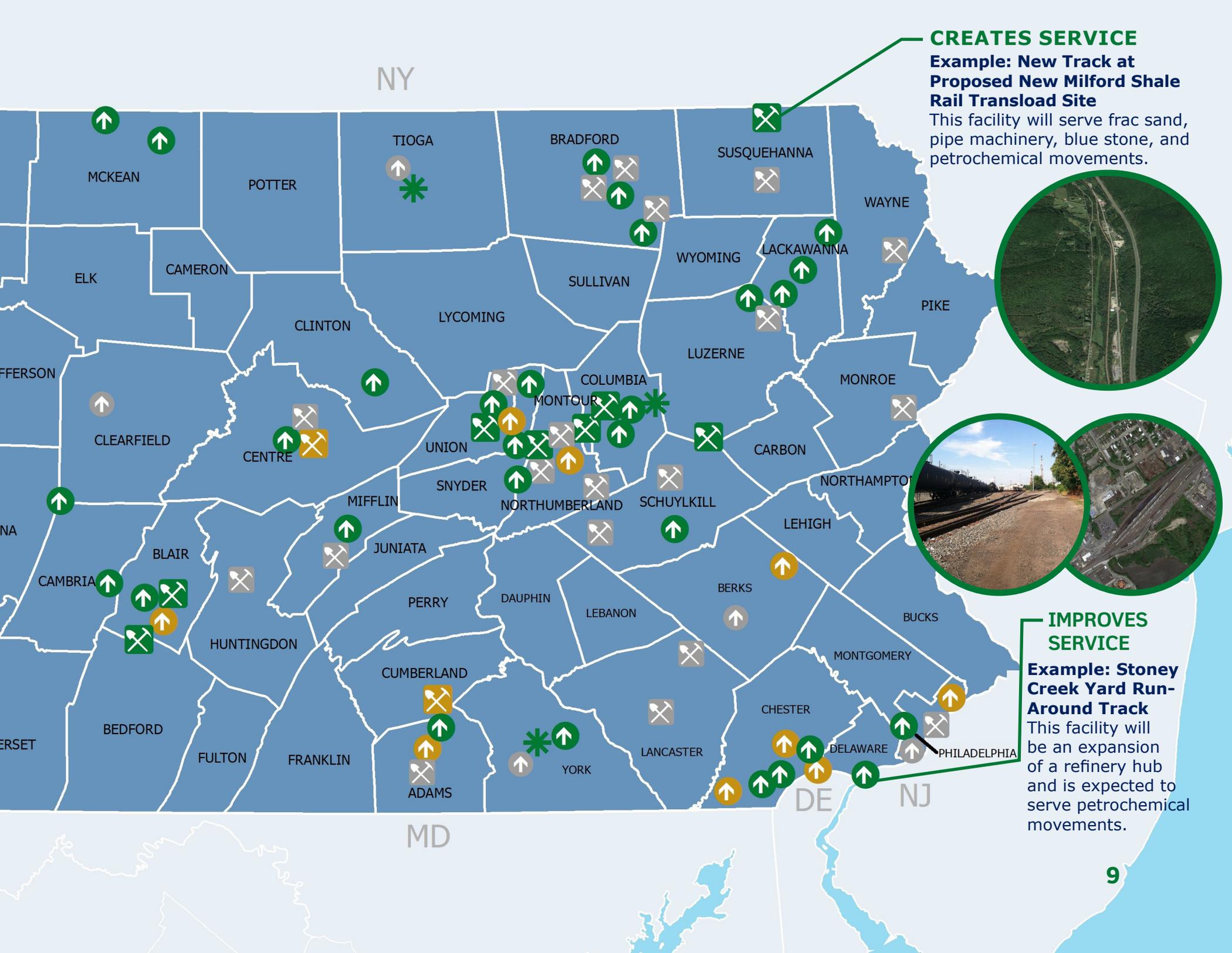
Projects that are needed but are still in early stages of project development (i.e., project requires a customer, sponsor, engineering)

# MAP OF THE PROJECTS



Note: The three call-outs on the map were selected to provide an example of each of the three types of Proposed Changes to the Network.





**CREATES SERVICE**

**Example: New Track at Proposed New Milford Shale Rail Transload Site**

This facility will serve frac sand, pipe machinery, blue stone, and petrochemical movements.



**IMPROVES SERVICE**

**Example: Stoney Creek Yard Run-Around Track**

This facility will be an expansion of a refinery hub and is expected to serve petrochemical movements.

NY

MD

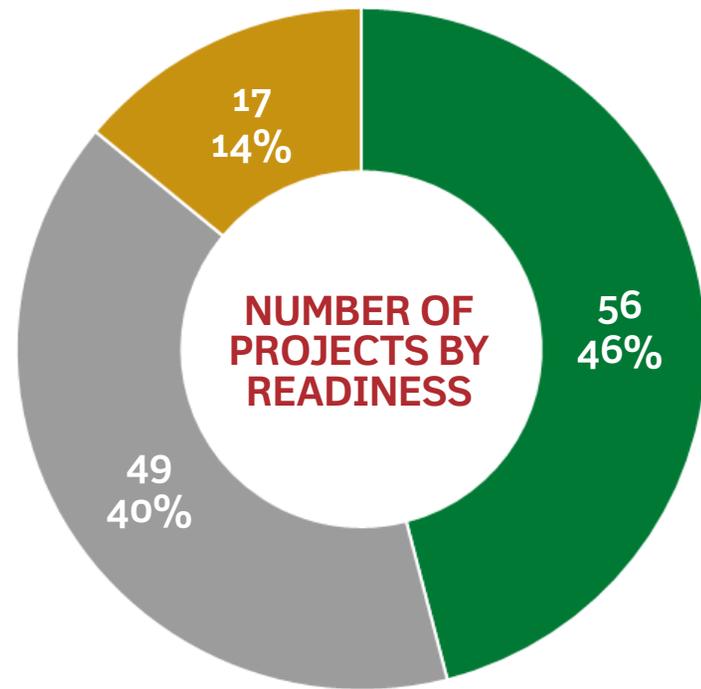
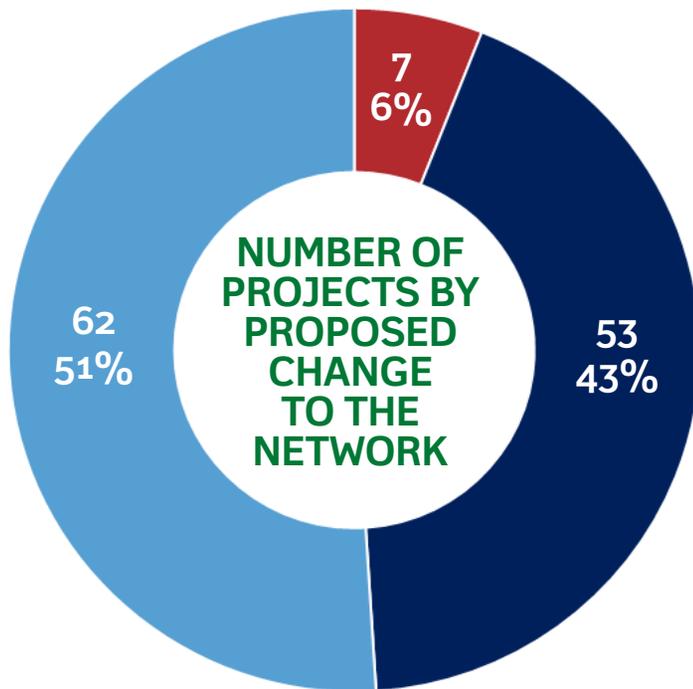
DE

NJ

# PROJECT CHARACTERISTICS

**122** PROJECTS AND PROJECT CONCEPTS

on **37** RAILROADS in **42** COUNTIES



■ CREATES SERVICE ■ IMPROVES SERVICE ■ MAINTAINS SERVICE ■ READY-TO-GO ■ ALMOST READY ■ CONCEPT

# NUMBER OF PROJECTS BY COUNTY

COUNTY				TOTAL	COUNTY				TOTAL
Adams	1	1	-	2	Lackawanna	-	3	-	3
Allegheny	4	5	3	12	Lancaster	2	-	-	2
Armstrong	2	-	-	2	Lawrence	-	1	-	1
Beaver	1	-	-	1	Luzerne	2	1	-	3
Berks	-	2	-	2	Mckean	-	2	-	2
Blair	2	2	-	4	Mercer	4	1	-	5
Bradford	3	3	-	6	Mifflin	1	1	-	2
Butler	3	1	-	4	Monroe	1	-	-	1
Cambria	-	1	-	1	Montour	1	-	-	1
Centre	2	1	-	3	Northumberland	4	2	-	6
Chester	-	6	-	6	Philadelphia	1	3	-	4
Clearfield	-	2	-	2	Schuylkill	2	1	-	3
Clinton	-	1	-	1	Susquehanna	2	-	-	2
Columbia	1	2	1	4	Tioga	-	1	1	2
Crawford	-	2	-	2	Union	2	4	-	6
Cumberland	1	-	-	1	Venango	-	2	-	2
Cumberland and Adams	-	1	-	1	Warren	1	-	-	1
Delaware	-	1	-	1	Washington	1	2	-	3
Erie	2	-	-	2	Wayne	1	-	-	1
Fayette	2	1	-	3	Westmoreland	2	4	1	7
Huntingdon	1	-	-	1	York	-	2	1	3
Indiana	1	-	-	1					

**TOTALS  
STATEWIDE**

 **53**  
CREATE  
SERVICE

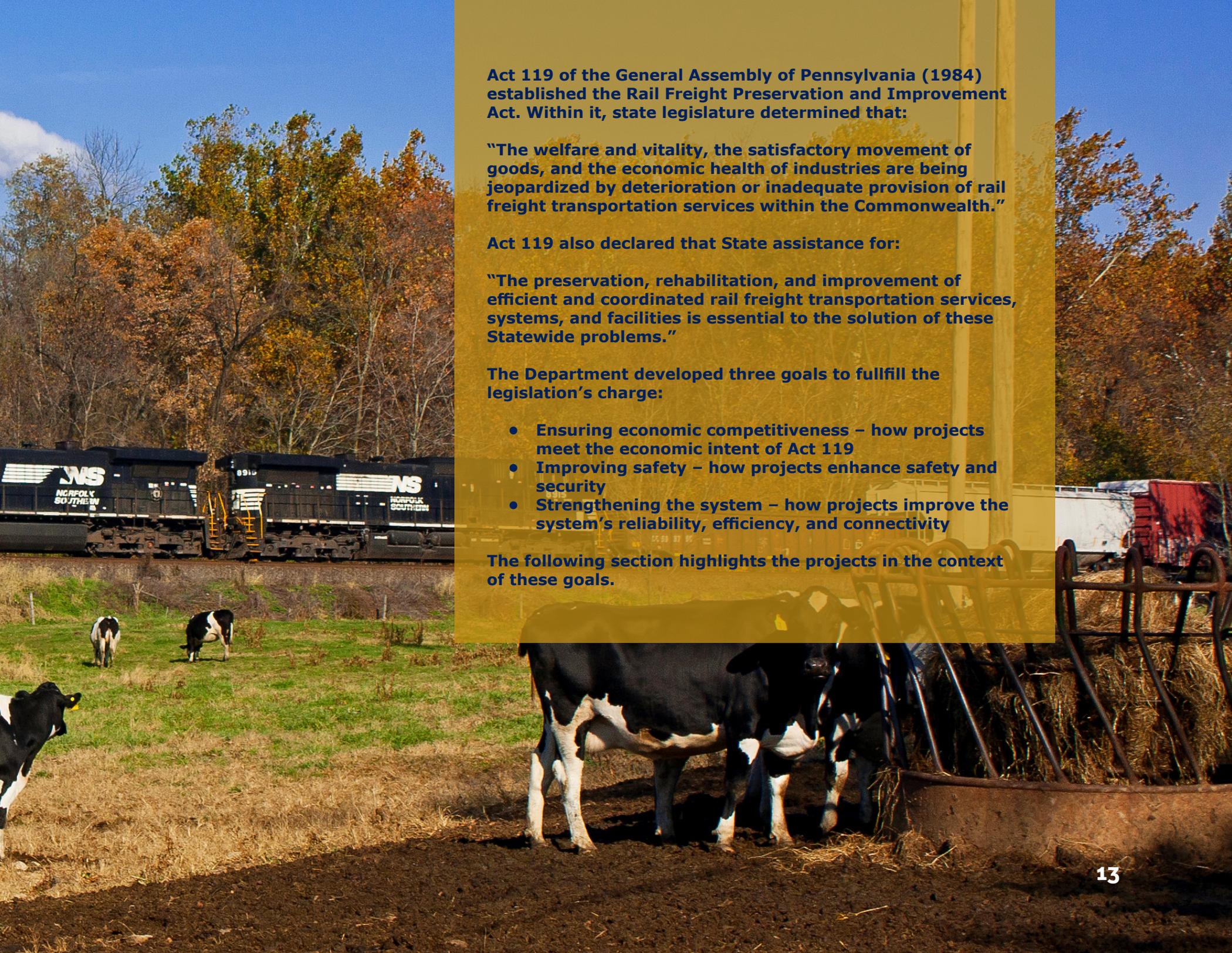
 **62**  
IMPROVE  
SERVICE

 **7**  
MAINTAIN  
SERVICE

**122**  
TOTAL **11**

# SUPPORTING THE DEPARTMENT'S STRATEGIC GOALS



A photograph of a Norfolk Southern freight train passing through a rural landscape. The train consists of several black locomotives with "NS" and "NORFOLK SOUTHERN" branding. In the foreground, several black and white cows are grazing in a field. In the background, there are trees with autumn foliage and a blue sky with some clouds. A semi-truck is visible on the right side of the image.

**Act 119 of the General Assembly of Pennsylvania (1984) established the Rail Freight Preservation and Improvement Act. Within it, state legislature determined that:**

**“The welfare and vitality, the satisfactory movement of goods, and the economic health of industries are being jeopardized by deterioration or inadequate provision of rail freight transportation services within the Commonwealth.”**

**Act 119 also declared that State assistance for:**

**“The preservation, rehabilitation, and improvement of efficient and coordinated rail freight transportation services, systems, and facilities is essential to the solution of these Statewide problems.”**

**The Department developed three goals to fulfill the legislation’s charge:**

- **Ensuring economic competitiveness – how projects meet the economic intent of Act 119**
- **Improving safety – how projects enhance safety and security**
- **Strengthening the system – how projects improve the system’s reliability, efficiency, and connectivity**

**The following section highlights the projects in the context of these goals.**



# ENSURING ECONOMIC COMPETITIVENESS

Pennsylvania’s key industries need a reliable transportation network to move goods and commodities to market. As part of Pennsylvania’s overall transportation network, rail freight is essential to maintaining economic competitiveness and sustaining growth. Projects that create, improve, or maintain service along the rail freight network support the State’s economic welfare and vitality by creating jobs, reducing costs, increasing the flexibility of inland transportation, and increasing capacity.

The identified projects enhance connectivity and accessibility to the rail network, key industries, and economic generators. These projects will fuel economic growth.

## SUCCESS STORY



### **PHILADELPHIA COUNTY: PHILADELPHIA REGIONAL PORT AUTHORITY (PHILAPORT) (2014 RFAP)**

Funding sources: RFAP grant and applicant matched funds  
\$278,705 to replace rail, ties, switch timbers, and upgrade asphalt

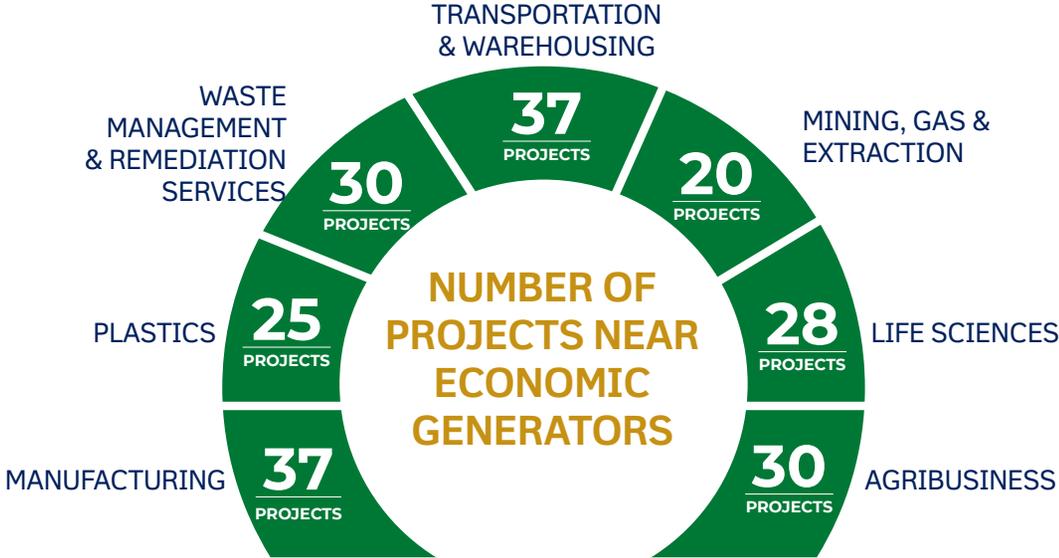
PhilaPort provides double-stack intermodal service. These improvements, along with other upgrades, increased shipment capacity. Investments made to PhilaPort strengthened its competitive position against other east coast ports (e.g., Baltimore, New York, Wilmington).

# OPPORTUNITIES FOR GROWTH

**17** PROJECTS LOCATED IN DISTRESSED COMMUNITIES AND/OR KEYSTONE OPPORTUNITY ZONES

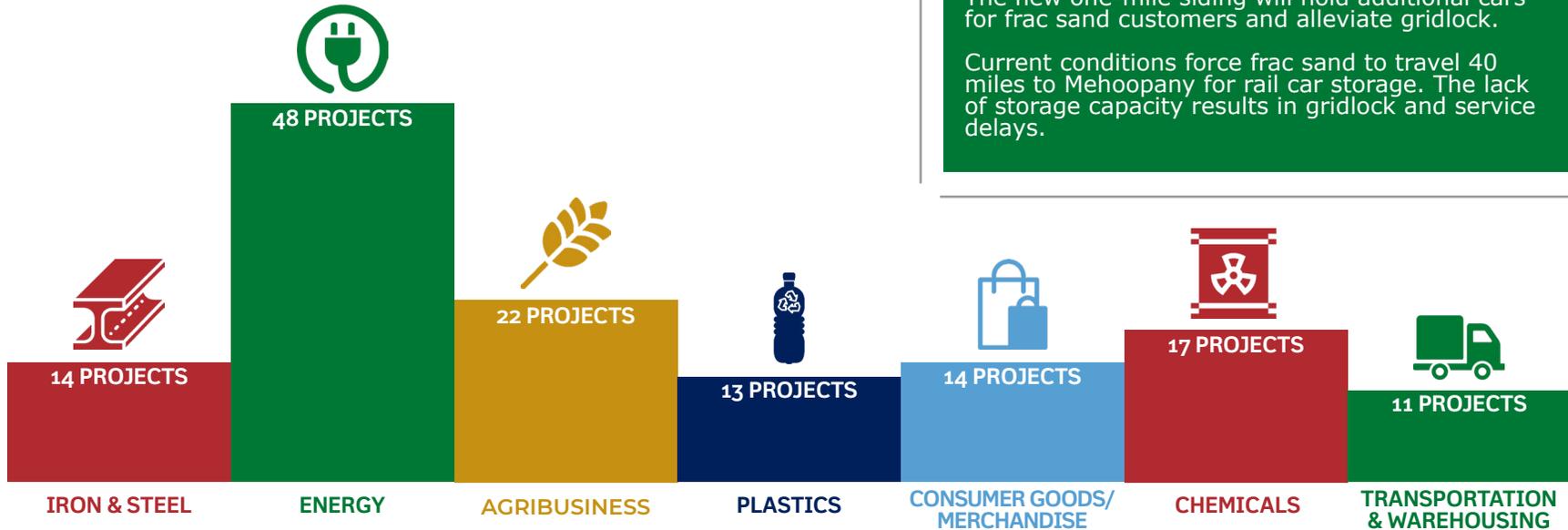


**25** PROJECTS LOCATED IN COUNTIES WITH UNEMPLOYMENT AT OR ABOVE 5 PERCENT



**EXAMPLE: NEW WYSOX SIDING (LOCATED IN BRADFORD COUNTY – “READY-TO-GO”)**

The new one-mile siding will hold additional cars for frac sand customers and alleviate gridlock. Current conditions force frac sand to travel 40 miles to Mehoopany for rail car storage. The lack of storage capacity results in gridlock and service delays.



**NUMBER OF PROJECTS BY COMMODITY MARKET SERVED**



## IMPROVING SAFETY

The importance of safety cannot be overstated. The U.S. Department of Transportation forecasts the demand for freight transportation to nearly double by 2035 with railroads expected to experience an 88% increase in tonnage moved.

This means that it will become increasingly critical to have the vision and programs in place to continue decreasing rail-related injuries and fatalities. The Department prioritizes projects that maintain safe rail operations.

# SUCCESS STORY



### **ALLEGHENY COUNTY: ALLEGHENY VALLEY RAILROAD CO. (AVR) (2016 RTAP)**

Funding sources: RTAP grant and applicant matched funds

\$1,032,168 for Phase II to rehabilitate the 36th Street trestle bridge to increase capacity by eliminating weight restrictions

Phase II of the trestle rehabilitation replaced the remaining timber sections with steel, and the mud block supports with supports connected to bedrock. These improvements extended the life of the trestle by 50+ years, upgraded the track to FRA Class III, and removed 2,500 truckloads from Pennsylvania roads per year, enhancing public and operational safety.

# STRENGTHENING THE SYSTEM

The RFAP and RTAP strengthen the system by supporting important rail connections, reinforcing existing facilities, creating new connections that increase the connectivity of the system, and extending the useful life of the network.

With over 5,000 miles of track across the state, this is no small task. However, according to the American Society of Civil Engineers' (ASCE) 2018 Report Card for Pennsylvania's Infrastructure, Pennsylvania freight railroads received a B score, the best grade of all infrastructure categories rated across the State. Before Act 119 of 1984, freight railroads were in a state of disrepair and abandonment. The results of the latest ASCE report card demonstrate the effectiveness of the RFAP and RTAP in preserving, rehabilitating, and improving the rail freight network.

SUCCESS STORY



## **BEAVER COUNTY: YOUNGSTOWN & SOUTHEASTERN RAILROAD, INC. (2013 RFAP)**

Funding sources: RFAP grant and applicant matched funds

\$339,500 for the rehabilitation of track from the Pennsylvania border to Darlington, PA, and rebuilding siding at NOV Tuboscope, including the replacement of rail, crossties, ballast, and surfacing

The track along the Pennsylvania and Ohio border is essential for the east-west movement of goods in and out of the Commonwealth. Improvements to the rail line enable the Marcellus Shale industry to grow and create job opportunities in western Pennsylvania.





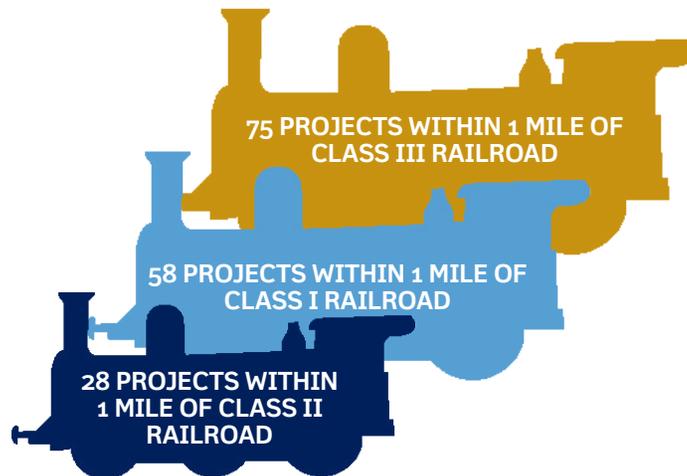
## OPPORTUNITIES FOR IMPROVED CONNECTIVITY



**19**  
PROJECTS WITHIN 1 MILE OF A PRIORITY ROADWAY

**118**  
PROJECTS WITHIN 1 MILE OF A PRIORITY RAILWAY

### PROJECT CONNECTIVITY TO OTHER MODES OF TRANSPORTATION



### CONNECTING BUSINESSES TO THE GLOBAL ECONOMY

#### EXAMPLE: PHASE I – SEPTA AIRPORT LINE BYPASS-CHESTER SECONDARY (LOCATED IN DELAWARE AND PHILADELPHIA COUNTIES – “READY-TO-GO”)

This project will develop a double-stack cleared, curfew-free, freight-only route to connect Marcus Hook and the Chester Secondary to Philadelphia.

Currently, curfew restrictions hinder this heavily-trafficked service line. Improvements will allow freight to bypass passenger train curfews to enable 24/7 rail freight operations and reduce shipment delays.

# COMMONWEALTH FUNDING OPPORTUNITIES

PennDOT, through the Bureau of Rail Freight, Ports and Waterways, manages two competitive grant programs available to eligible rail freight stakeholders. These programs improve transportation connections across Pennsylvania and are a catalyst for local and statewide job creation.

- Rail Freight Assistance Program (RFAP) accelerates maintenance projects by funding up to 70 percent of the total project cost up to \$700,000. The Bureau administers competitive grants annually based on available funding.
- Rail Transportation Assistance Program (RTAP) advances capital projects by funding up to 70 percent of the total project cost. Grants require legislative sponsorship to secure line item funding for projects within the Capital Budget.

These PennDOT grant programs allow for 30 percent of the grantee's match to be in the form of a loan. One option to obtain a low-interest loan is PennDOT's Pennsylvania Infrastructure Bank (PIB). The PIB provides financing for eligible projects, such as rail track improvements, new sidings, rail/street crossings, and rail bridge infrastructure projects.

There are additional sources of funding available through other Commonwealth agencies to incentivize private sector development. These may be coupled with PennDOT sources to advance economic development projects as part of a comprehensive economic development funding package:

- Pennsylvania First (PA First) is a comprehensive funding source that offers grants, loans, and loan guarantees for equipment, infrastructure, land, and site improvements.
- Job Creation Tax Credits (JCTC) offers a \$1,000-per-job tax credit for approved businesses that demonstrate new job creation within three years.
- Pennsylvania Industrial Development Authority (PIDA) provides low-interest loans for eligible businesses that create or retain full-time jobs at industrial parks and multi-tenant facilities.
- Redevelopment Assistance Capital Program (RACP) provides grants for projects of regional or multi-jurisdictional impact. Like RTAP, these grants require legislative sponsorship.







# RESOURCES

## **PennDOT Rail Freight Funding Programs**

[www.penndot.gov/Doing-Business/RailFreightAndPorts](http://www.penndot.gov/Doing-Business/RailFreightAndPorts)

## **RTAP and RFAP Policies**

[www.penndot.gov/Doing-Business/RailFreightAndPorts](http://www.penndot.gov/Doing-Business/RailFreightAndPorts)

## **PA Infrastructure Bank (PIB) Loan Program**

[www.penndot.gov/ProjectAndPrograms/Planning/Pages/PA-Infrastructure-Bank.aspx](http://www.penndot.gov/ProjectAndPrograms/Planning/Pages/PA-Infrastructure-Bank.aspx)

## **Pennsylvania First (PA First) Program**

[dced.pa.gov/programs/pennsylvania-first-program-pa-first/](http://dced.pa.gov/programs/pennsylvania-first-program-pa-first/)

## **Job Creation Tax Credits (JCTC) Program**

[dced.pa.gov/programs/job-creation-tax-credits-jctc/](http://dced.pa.gov/programs/job-creation-tax-credits-jctc/)

## **Pennsylvania Industrial Development Authority (PIDA)**

[dced.pa.gov/programs/pennsylvania-industrial-development-authority-pida/](http://dced.pa.gov/programs/pennsylvania-industrial-development-authority-pida/)

## **Redevelopment Assistance Capital Program (RACP)**

[www.budget.pa.gov/Programs/RACP/Pages/Main%20Page.aspx](http://www.budget.pa.gov/Programs/RACP/Pages/Main%20Page.aspx)



## Photographs by Austin MacDougall

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