
Northwest
COMMISSION
NORTHWEST PA COMMISSION
2050 LONG-RANGE
TRANSPORTATION PLAN
Adopted March 26, 2024

Dedication

The Northwest Commission Transportation Advisory Committee (TAC) dedicates this 2050 Long-Range Transportation Plan to Dan Glotz, TAC Chairman. Dan retired from the TAC in November 2023 after serving as its chairman for 23 years.

The commission expresses its gratitude for Dan's dedicated service and leadership to the region. He guided the Northwest Rural Planning Organization (RPO) through many transportation initiatives over the years, from the initial implementation of TEA-21 and improvements to transportation security in the aftermath of 9/11, to the modern-day provisions of the Bipartisan Infrastructure Law. Dan's role as Director of Planning and Zoning for Warren County was foundational to his expertise and commitment to improving transportation in our region.

He has been an ardent advocate for healthy lifestyles and walking and bicycling, and improving regional mobility and connections to the national Interstate system. His steady leadership and influence has inspired a new generation of leaders on the TAC, as Zach Norwood of Crawford County will be carrying on the mantle beginning in 2024.

While we will miss Dan's leadership as TAC chairman, we are confident he will continue to be an advocate for improving the region's transportation system through his new role as Warren County Commissioner.

Thank you, Dan, for your many years of faithful service to the Northwest RPO.

With appreciation,

Jill Foys, Executive Director

Northwest PA Regional Planning & Development Commission

Notice under the Americans with Disabilities Act

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 ("ADA"), the Northwest Pennsylvania Regional Planning and Development Commission ("Northwest Commission") will not discriminate against individuals with disabilities on the basis of disability in its services, programs, or activities.

Employment: The Northwest Commission does not discriminate on the basis of disability in its hiring or employment practices and complies with all regulations promulgated by the U.S. Equal Employment Opportunity Commission under Title I of the ADA.

Effective Communication: The Northwest Commission will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities so they can participate equally in the Northwest Commission's programs, services, and activities, including qualified sign language interpreters, documents in Braille, and other ways of making information and communications accessible to people who have speech, hearing, or vision impairments.

Modifications to Policies and Procedures: The Northwest Commission will make all reasonable modifications to policies and programs to ensure that people with disabilities have an equal opportunity to enjoy all of its programs, services, and activities. For example, individuals with service animals are welcomed in the Northwest Commission offices, even where pets are generally prohibited.

Anyone who requires an auxiliary aid or service for effective communication, or a modification of policies or procedures to participate in a program, service, or activity of the Northwest Commission, should contact the Commission's Regional Planning Manager/ADA Coordinator at 814-677-4800 or nwc@northwestpa.org as soon as possible but no later than 48 hours before the scheduled event.

The ADA does not require the Northwest Commission to take any action that would fundamentally alter the nature of its programs or services or impose an undue financial or administrative burden.

Complaints that a program, service, or activity of the Northwest Commission is not accessible to persons with disabilities should be directed to the Commission's Regional Planning Manager/ADA Coordinator at 814-677-4800 or nwc@northwestpa.org.

The Northwest Commission will not place a surcharge on a particular individual with a disability or any group of individuals with disabilities to cover the cost of providing auxiliary aids/services or reasonable modifications of policy, such as retrieving items from locations that are open to the public but are not accessible to persons who use wheelchairs.

Grievance Procedure under the Americans with Disabilities Act

This Grievance Procedure is established to meet the requirements of the Americans with Disabilities Act of 1990 ("ADA"). It may be used by anyone who wishes to file a complaint alleging discrimination on the basis of disability in the provision of services, activities, programs, or benefits by the Northwest Pennsylvania Regional Planning and Development Commission ("Northwest Commission"). The Northwest Commission's Personnel Policy governs employment-related complaints of disability discrimination.

The complaint should be in writing and contain information about the alleged discrimination such as name, address, phone number of complainant and location, date, and description of the problem. Alternative means of filing complaints, such as personal interviews or a tape recording of the complaint, will be made available for persons with disabilities upon request.

The complaint should be submitted by the grievant and/or his/her designee as soon as possible but no later than 60 calendar days after the alleged violation to:

Regional Planning Manager/ADA Coordinator
Northwest Pennsylvania Regional Planning and Development Commission
395 Seneca Street
Oil City, PA 16301

Within 15 calendar days after receipt of the complaint, the Regional Planning Manager/ADA Coordinator or his/her designee will meet with the complainant to discuss the complaint and the possible resolutions. Within 15 calendar days of the meeting, the Regional Planning Manager/ ADA Coordinator or his/her designee will respond in writing, and where appropriate, in a format accessible to the complainant, such as large print, Braille, or audio tape. The response will explain the position of the Northwest Commission and offer options for substantive resolution of the complaint.

If the response by the Regional Planning Manager/ ADA Coordinator or his/her designee does not satisfactorily resolve the issue, the complainant and/ or his/her designee may appeal the decision within 15 calendar days after receipt of the response to the Executive Director or her designee.

Within 15 calendar days after receipt of the appeal, the Executive Director or her designee will meet with the complainant to discuss the complaint and possible resolutions. Within 15 calendar days after the meeting, the Executive Director or her designee will respond in writing, and, where appropriate, in a format accessible to the complainant, with a final resolution of the complaint.

All written complaints received by the Regional Planning Manager/ADA Coordinator or his/her designee, appeals to the Executive Director or her designee, and responses from these two offices will be retained by the Northwest Commission for at least three years.

Warren County Courthouse, City of Warren

Northwest Region by the Numbers	
Miles of Roads	7,046
State Bridges	1,275
Local Bridges	315
Miles of Freight Rail	288
Total Shared-Ride Trips (FY 2020-21)	76,000
Number of Transit Systems	4
Number of Public-Use Airports	5
Vehicle Registrations	119,436
2020 Population	220,326
2020 Population 65+	47,368
Workers 16+	95,982
Daily Vehicle-Miles Traveled (DVMT)	6,144,160
Electric Vehicle Registrations	147
Municipalities with a Comprehensive Plan	53%
Municipalities with Zoning	29%
Municipalities with a Planning Commission	37%

Prepared for:
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Introduction

2050 Long-Range Transportation Plan

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Letter from the RPO Chairman

Transportation is one of the most important services that government provides. It plays a crucial role in connecting people, facilitating economic activity, and providing access. The development and maintenance of a long-range transportation plan is one of the primary functions of the Northwest Rural Planning Organization (RPO). This 2050 LRTP considers trends, issues, and opportunities across the next 25+ years and prioritizes transportation investments accordingly.

Although we cannot precisely foresee the future, we have a responsibility to anticipate and prepare for challenges and opportunities. This supports better decision-making in terms of how we allocate limited resources, maintain our transportation infrastructure and services, and formulate policy. A few of the most notable emerging trends we are preparing for include:

Electric Vehicles

The percentage of electric vehicles (EVs) registered in the Northwest region is minuscule (well under 1 percent), but has climbed sharply since 2020. Many vehicle manufacturers are pledging to be "all electric" well within this plan's horizon year. The Pennsylvania Department of Transportation (PennDOT) has developed a National Electric Vehicle Infrastructure (NEVI) Plan and is focusing on Alternate Fuel Corridors (AFCs) along the Interstate system. As these networks are developed, they can be expected to eventually expand into the state's more rural areas—particularly in response to federal initiatives such as Justice40. The RPO has an opportunity to plan now for EV infrastructure and technology to promote its adoption.

Automated Vehicles

Self-driving vehicles are a major focus of research and development. PennDOT has helped facilitate the advancement of this technology in Pennsylvania by creating an Automated Vehicle Task Force, convening summits to inform stakeholders, and encouraging regulations to allow the safe testing of automated vehicles (AVs) within the state. Widespread adoption of AVs may still be a decade or more away, but it is certainly expected within this plan's 2050 horizon year.

Asset Management

Asset management is the practice of optimizing investments in maintenance, rehabilitation, and ultimately reconstruction of transportation assets such as roadways and bridges with the aim of achieving lowest life-cycle cost. That is, investing in timely maintenance to delay or reduce the need for costlier rehabilitation and extend the life of transportation infrastructure. Maintenance and preservation have long been considered as part of transportation planning. However, asset management and condition requirements rolled out at the federal level over the last several years

Pennsylvania Avenue, Warren

have shaped state policy, and new PennDOT tools help allocate available funding according to asset management principles. The LRTP assists in this endeavor by presenting an inventory and condition summary of existing assets.

Public Transportation

Use of public transportation services was declining before the COVID-19 pandemic across all the region's service providers, both for fixed-route and shared-ride transportation. The pandemic accelerated the trend away from traditional bus service. The Northwest Pennsylvania Mobility Alliance seeks to improve options for alternative forms of mobility, such as bikeshare and micromobility (a pilot began in Titusville in Summer 2023). The initiatives are a precursor to moving from traditional transportation modes to looking at Mobility as a Service (MaaS), which aims to seamlessly integrate various transportation modes, including public transportation and ride-hailing.

Active Transportation

Northwest RPO's previous LRTP was adopted during the height of the COVID-19 pandemic. The global health crisis led to a sharp increase in active transportation, as people faced restrictions on indoor activities and public transportation. There continues to be an active interest in bicycle- and pedestrian-friendly roadways and public spaces, which have a positive impact on public health and our communities.

Ice hockey legend Wayne Gretzky famously stated, "I skate to where the puck is going to be, not where it has been." This maxim from the world of ice hockey is analogous to transportation planning, and instructive to us as we develop plans and programs with long-range view. Over the planning horizon of this 2050 LRTP, Northwest RPO will continue to work toward delivering a transportation program that improves the safety, fairness, and resiliency of our transportation system.

Daniel Glotz, Chairman

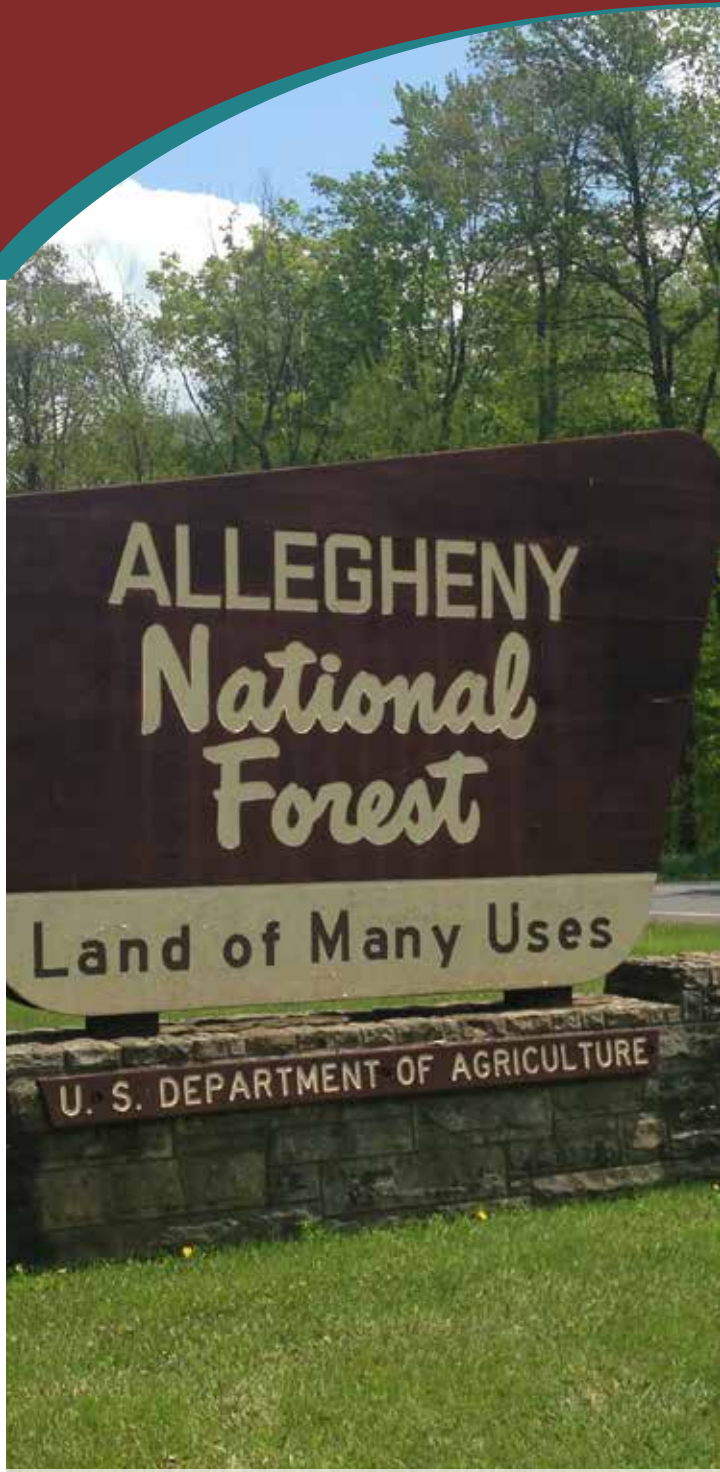
Northwest Pennsylvania Rural Planning Organization
Transportation Advisory Committee

PA 36 and the Allegheny River, Tionesta

Geographical Position

Overview

- The Northwest PA RPO region encompasses Clarion, Crawford, Forest, Venango, and Warren counties in northwestern Pennsylvania (Figure 1).
- The region is one of the state's smallest transportation planning regions by population, yet it consists of nearly 3,600 square miles of land area (an area almost half the size of New Jersey).
- The region in general is very rural. Significant portions are remote and inaccessible, with limited access to the national Interstate system.
- The largest municipalities in the region include Meadville, Oil City, and Warren, all urban clusters of micropolitan statistical areas. The Allegheny National Forest is a major geographical feature within the region and stretches across large portions of Forest and Warren counties.
- The Northwest RPO region has one of the harshest environments in the state due to its proximity to Lake Erie. The region averages more than 100 inches of snowfall per year, along with 40-48 inches of rain. PennDOT typically needs to conduct winter maintenance (plowing and/or ice treatment) between 100 and 150 days each year.
- The region is located within the Appalachian Plateau region, with deposits of glacial till that can run more than 200 feet deep. These geological conditions can substantially drive up the cost of bridge construction and maintenance, just as much as the region's freeze-and-thaw cycles can adversely affect roadway condition.
- The RPO region's five counties are among the 52 Pennsylvania counties that are part of the Appalachian Regional Commission (ARC) region. The ARC region generally struggles with insufficient funding for transportation and broadband improvements.



Allegheny National Forest, Forest County

Figure 1: Northwest PA RPO Geographical Position

Trends and Implications

2050 Long-Range Transportation Plan

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Demographics

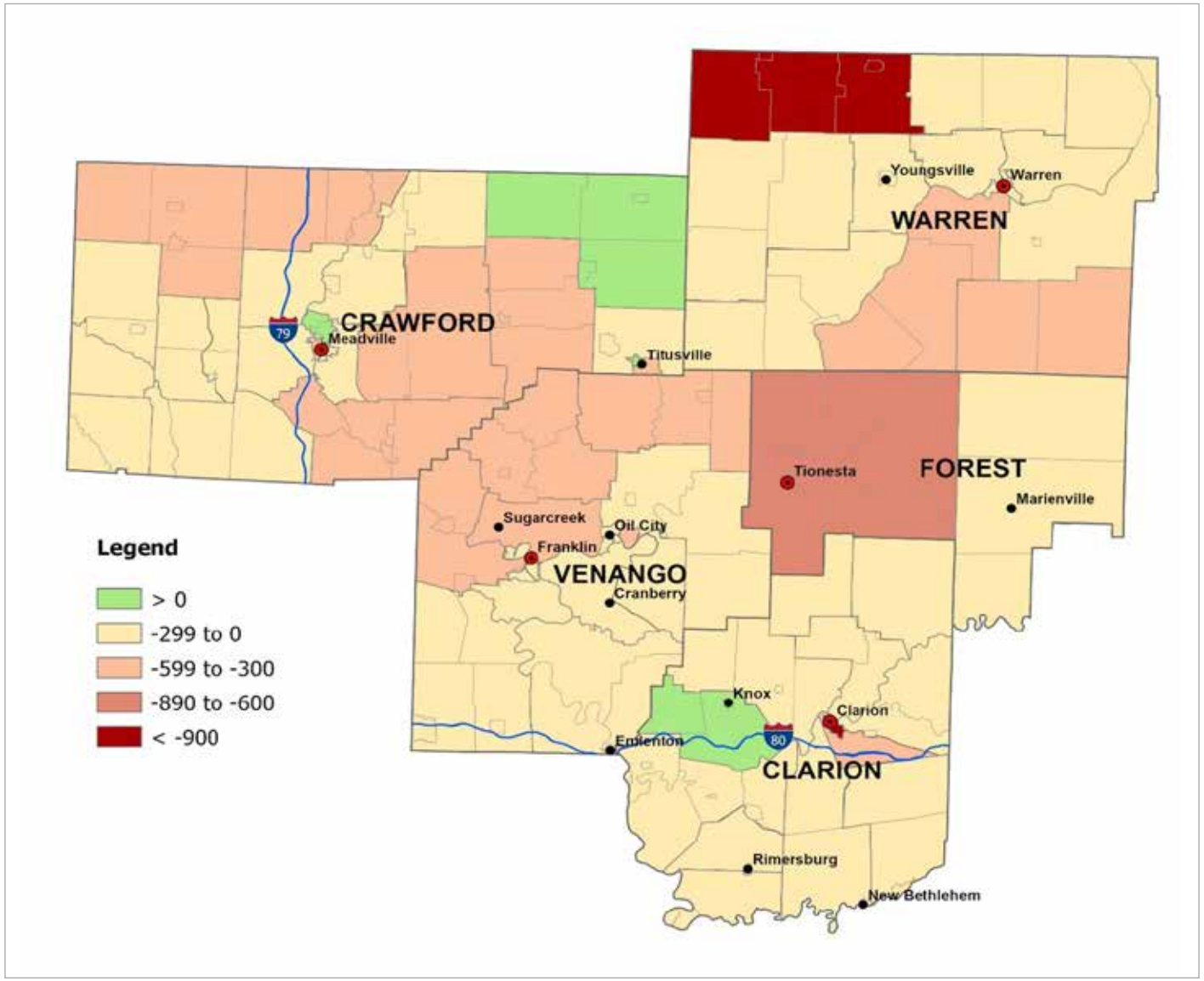
Overview and Key Trends

- The Northwest PA RPO region had a population of 218,788 in 2021, down 16,000 since 2010.
- Of the 11 Pennsylvania counties suffering the greatest population losses, four are within the Northwest RPO region. Venango County's 8.2 percent rate of decline was the fourth-highest in the state. In terms of absolute numbers of population loss, Crawford and Venango counties ranked 10th and 11th statewide, with losses of more than 4,500 each between 2010 and 2020.
- According to data from the economic and demographic projection firm of Woods and Poole, the region's population is projected to continue to decline to approximately 204,245 by 2050—a loss of nearly 14,500 residents.
- There are 153 municipalities in the five-county Northwest RPO region, including 106 townships, 42 boroughs, and five cities: Franklin, Meadville, Oil City, Titusville, and Warren. The cities of Meadville, Oil City, and Warren all serve as urban clusters of Micropolitan Statistical Areas.
- Of the region's municipalities, only 16 recorded population gains over the past decade, led by Jenks Township in Forest County (+229), and Rome Township in Crawford County (+151). The region's largest population losses occurred in the communities of Clarion Borough (-1,345) and Oil City (-944). The region's boroughs collectively declined by 3,461 people (9.6 percent), townships by 10,219 (6.7 percent), and cities by 2,395 (5.2 percent).
- The region has a high median age, led by Forest County (49.6 years), and Venango County (47.4 years). The median age in all five RPO counties is significantly higher than the statewide figure of 40.8 years.
- By 2050, 28 percent of the region's population (57,723 persons) is expected to be age 65 or older. Senior populations in Venango and Warren counties are expected to exceed 30 percent by 2050.

Planning Implications

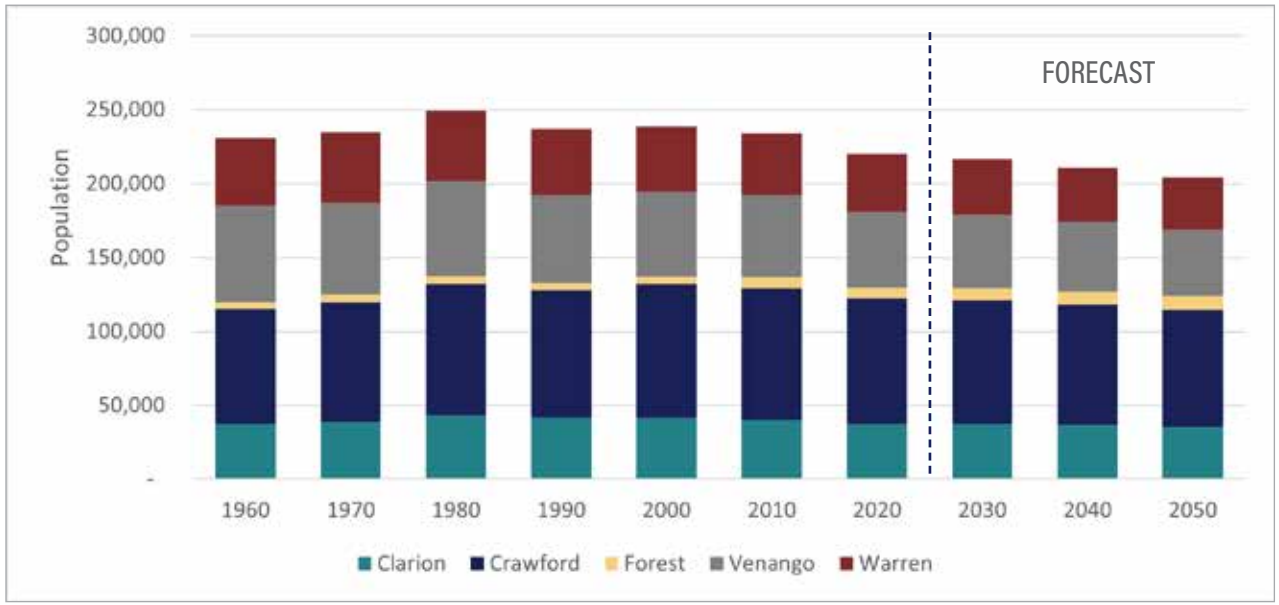
- Growth in the senior population translates to the need for more public transportation services and a highway system that is more predictable to use, with greater reflectivity, maintenance, protection of traffic in work zones, and improved signage, among other considerations.
- Effective transportation serves an aging population by enabling older adults to access essential services such as healthcare, grocery shopping, and social activities, and allowing them to remain connected to their communities.

Figure 2: Population Growth by Municipality, 2010–2021



Source: U.S. Census American Community Survey 5-Year Estimates, 2021

Figure 3: Population by County, 1960–2050



Source: 1960–2020, U.S. Census; 2030-2050, Woods and Poole (2020)

Table 1: Northwest PA Historical and Projected Population by County, 1960–2050

	Clarion	Crawford	Forest	Venango	Warren	Region	% Change
1960	37,408	77,956	4,485	65,295	45,582	230,726	–
1970	38,414	81,342	4,926	62,353	47,682	234,717	1.73%
1980	43,362	88,869	5,072	64,444	47,449	249,196	6.17%
1990	41,699	86,169	4,802	59,381	45,050	237,101	-4.85%
2000	41,765	90,366	4,946	57,565	43,863	238,505	0.59%
2010	39,988	89,153	7,585	55,320	41,877	233,923	-1.92%
2020	37,241	85,074	7,190	51,355	39,466	220,326	-5.81%
2030	37,456	83,768	8,045	49,428	37,855	216,552	-1.71%
2040	36,389	81,645	8,744	47,334	36,538	210,650	-2.73%
2050	35,352	79,077	9,504	45,044	35,268	204,245	-3.04%

Source: 1960-2020 U.S. Census; 2030-2050 Woods and Poole (2020)

West Center Street, Meadville

Socioeconomics

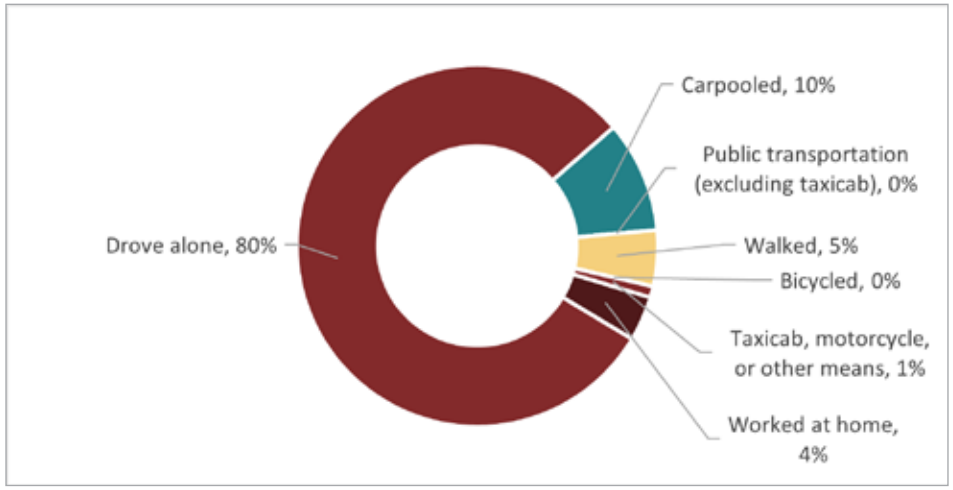
Overview and Key Trends

- As of December 2022, the region had a labor force of 93,700. Between 2018 and 2022, the Northwest PA RPO region added 1,580 jobs—an increase of 1.72 percent across the five-year period. Woods and Poole forecasts show the region's total employment reaching 117,972 by 2050—an increase of 26 percent from 2022 values.
- As of the fourth quarter of 2022, the region's unemployment rate was 4.3 percent, similar to the statewide rate of 4.0 percent.
- Nearly 60 percent of the region's resident workers both live and work within the region, while the remaining 40 percent commute out of the region for employment. Eight out of ten (80 percent) of the region's workers commute by driving alone, while 10 percent carpool (Figure 4). Inflow and outflow statistics from the U.S. Census Longitudinal Employer-Household Dynamics data show that more than 50,000 workers live and work within the Northwest region, while 20,274 workers commute into the region and 34,170 workers commute out (Figure 5).
- Commuting distance patterns show that more than 40 percent of Forest County's residents travel 50 miles or more to work. Over 40 percent of commuters in Crawford, Venango, and Warren counties and more than 30 percent of commuters in Clarion County travel less than 10 miles to work (Figure 6).
- Five industry sectors account for nearly 70 percent of the regional workforce, including Health Care and Social Assistance (21.3 percent), Manufacturing (19.5 percent), Retail Trade (12.9 percent), Educational Services (7.9 percent), and Accommodation and Food Services (7.7 percent).
- Top employers in each of the region's counties include the PA State System of Higher Education in Clarion County, Meadville Medical Center in Crawford County, State Government in Forest and Venango counties, and the Warren County School District. The top 10 employers in each county (as of December 2022) are listed in Table 2.
- Location Quotient (LQ) is a metric that compares the region's share of employment by industry to its share at the state level. Key economic drivers in Northwest PA include Mining, Quarrying, and Oil & Gas Extraction; Manufacturing; Agriculture, Forestry, Fishing, and Hunting; Public Administration; Utilities; and Retail Trade (Table 3).

Planning Implications

- With forecasted job growth, the region will see increased demand on its transportation system as residents and commuters travel in and out of the region for work. This trend puts emphasis on the need to maintain state and local transportation infrastructure in a state of good repair to support this growth over time.
- Nine out of ten of the region's workers commute to their place of employment by private automobile, attesting to the importance of the roadway network in support of the region's economy.

Figure 4: Journey to Work, Northwest PA, 2021



Source: U.S. Census, American Community Survey

Oil City

Table 2: Top Employers by County, Fourth Quarter 2022

Rank	Clarion	Crawford	Forest	Venango	Warren
1	PA State System of Higher Education	Meadville Medical Center	State Government	State Government	Warren County School District
2	Clarion Hospital	State Government	Inperium Management Services, Inc.	UPMC Northwest	Northwest Bank
3	Wal-Mart Associates, Inc.	Crawford County	Northwest Hardwoods Inc.	Joy Global Underground Mining, Inc.	State Government
4	Commodore Homes LLC	Wal-Mart Associates Inc.	Forest Area School District	Wal-Mart Associates Inc.	United Refining Company
5	Training Toward Self Reliance Inc.	Crawford Central School District	Federal Government	Venango County	Warren General Hospital
6	State Government	Acutec Precision Aerospace Inc.	Omni Manor Inc.	Liberty Electronics Inc.	Whirley Industries, Inc.
7	Champion Modular Inc.	Allegheny College	Forest County	Matric Limited	Wal-Mart Associates, Inc.
8	Clarion County	Channellock Inc.	Fair Winds Cabins	Franklin Area School District	Betts Industries, Inc.
9	Riverview Intermediate Unit	Penncrest School District	Joseph Muccio Transportation LLC	Oil City Area School District	Targeted Pet Treats, LLC
10	New Light Inc.	The Arc of Crawford County Inc.	Taylor Diversion Programs, Inc.	Webco Industries Inc.	Rouse Estate

Source: PA Work Stats, December 2022

Table 3: Location Quotient, 2022

Industry	Clarion	Crawford	Forest	Venango	Warren	Region
Mining, Quarrying, and Oil & Gas	2.94	1.73	0.43	2.89	3.50	2.49
Manufacturing	1.20	2.54	0.95	1.93	1.83	2.00
Agriculture, Forestry, Fishing and Hunting	1.18	3.10	3.36	0.54	0.92	1.79
Public Administration	1.01	1.43	11.19	1.25	1.11	1.51
Utilities	2.03	0.91	0.00	1.36	1.45	1.28
Retail Trade	1.19	1.08	0.37	1.35	1.35	1.19
Other Services (Except Public Administration)	1.44	1.24	0.18	1.17	1.03	1.19
Health Care and Social Assistance	1.14	1.07	0.95	1.19	1.17	1.13
Accommodation and Food Services	1.42	1.04	1.14	0.99	0.89	1.07
Educational Services	1.66	0.88	0.21	0.73	0.81	0.95
Construction	1.19	0.69	0.88	0.55	0.57	0.72
Transportation and Warehousing	0.65	0.43	0.40	0.96	0.86	0.67
Finance and Insurance	0.62	0.43	0.30	0.41	0.99	0.56
Information	0.41	0.81	0.21	0.40	0.38	0.55
Wholesale Trade	0.53	0.55	0.15	0.61	0.27	0.50
Administrative and Waste Services	0.32	0.50	0.04	0.62	0.41	0.47
Real Estate and Rental and Leasing	0.47	0.34	0.29	0.60	0.18	0.39
Arts, Entertainment, and Recreation	0.27	0.53	0.00	0.24	0.43	0.38
Professional and Technical Services	0.25	0.30	0.15	0.68	0.22	0.36
Management of Companies and Enterprises	0.16	0.20	0.00	0.01	0.00	0.11

Source: PA Work Stats (2022) and calculations

Key:	x < 1.0	1.0 < x < 2.0	x > 2.0

Figure 5: Inflow and Outflow Job Counts, 2020

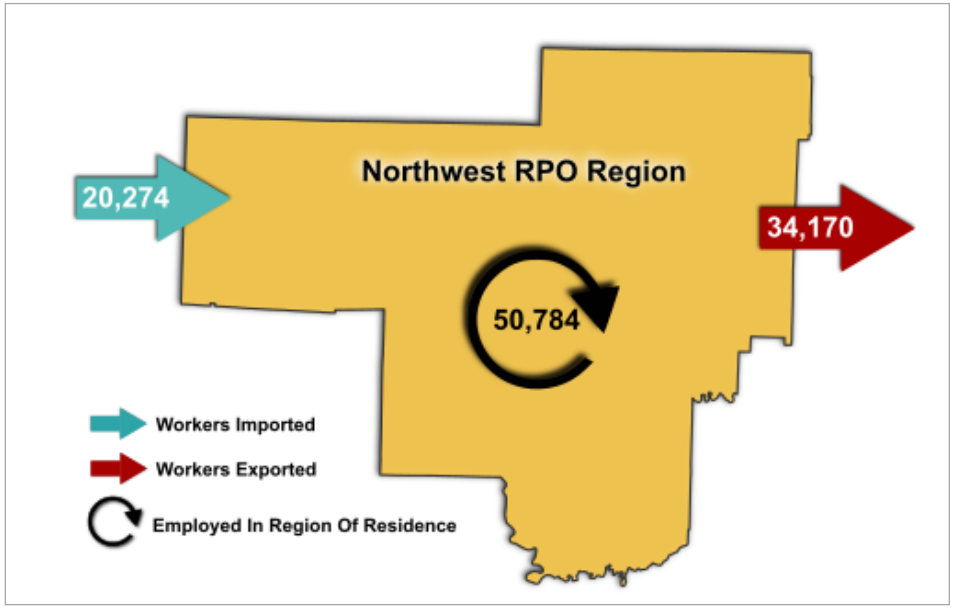


Figure 6: Commuting Distances by County

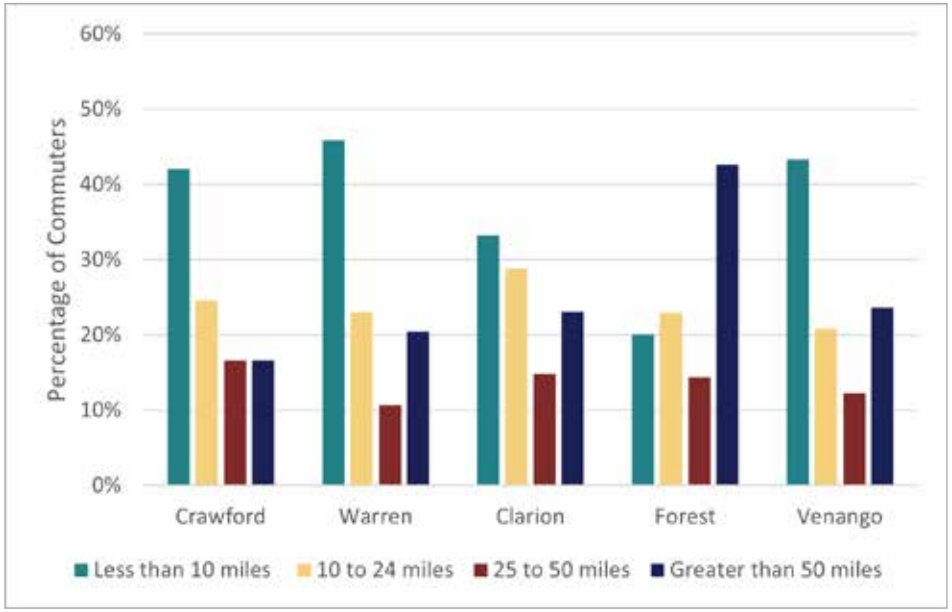
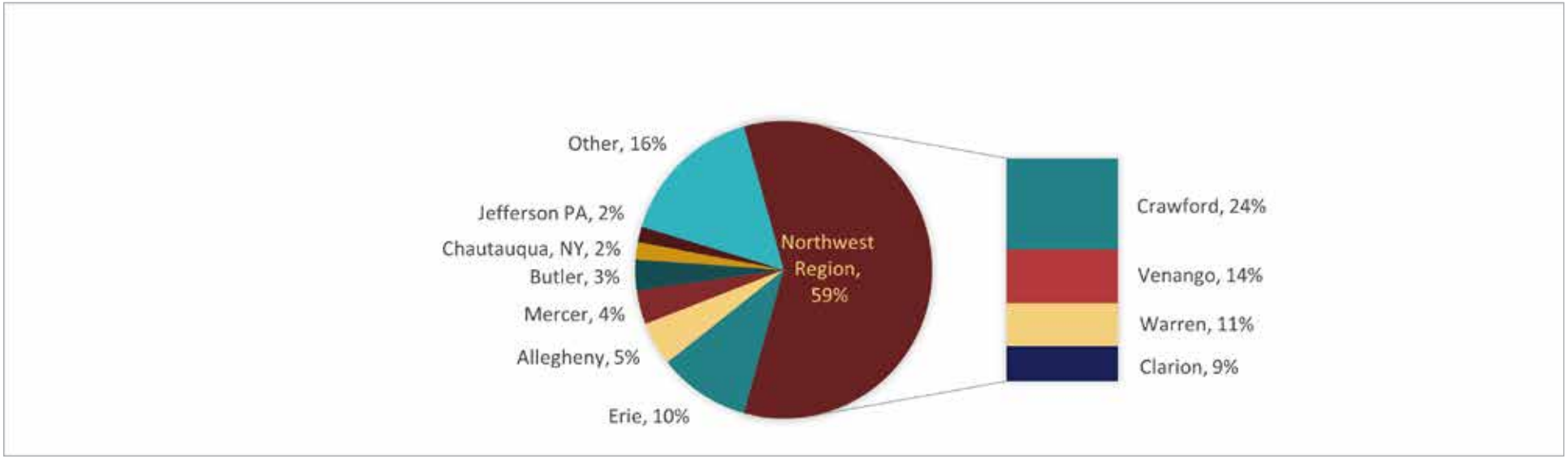


Figure 7: Place of Employment (Northwest Region Residents)



Source: U.S. Census, Longitudinal Employer Household Dynamics (LEHD)

Roadway Network

Overview and Key Trends

- There are just over 7,000 linear miles of roadway within the Northwest PA region, a figure that has remained constant over the years. Most of the mileage (4,038 linear miles) is locally owned; however, 86 percent of travel is carried by state-owned roadways.
- The region has a disproportionate share of roadway owned by "Other Agencies," such as the PA Department of Conservation and Natural Resources (DCNR) and the U.S. Forest Service. In Forest and Warren counties, these roadways constitute 41 percent of all roadway mileage (Figure 8 and Table 4).
- There are 42.54 miles of locally owned, federal-aid-eligible roadway throughout the region. These roadways are located in and around the region's more urban areas, including Clarion, Franklin, Oil City, Meadville, and Titusville. Venango County has the greatest share of this mileage, with nearly 46 percent (20 miles). In contrast, Forest County does not have any locally owned, federal-aid-eligible roadways. A listing of these roadways can be found in Appendix G.
- The region's roadway network accommodates more than 6.1 million vehicle-miles of travel daily, a decline of 15 percent since 2012. Factors influencing this decline include decreases in total population coupled with a growing share of senior population—a cohort that tends to drive less. Despite this decline, the demand for travel has remained steady since 2016. Similar to other regions in the state, Northwest PA faced reductions in travel demand during the COVID-19 pandemic in 2020; however, demand has since rebounded to pre-pandemic levels (Figure 9).
- The National Highway System (NHS) was established in 1995 to designate roadways that are a vital priority for the nation's economy, defense, and mobility. Within Northwest PA, the NHS includes Interstate 80 in Clarion and Venango counties and Interstate 79 in Crawford County; US 322 and US 62 in their entirety; and PA 66 and PA 68 from US 322 to I-80 in Clarion County.
- In 2017, Northwest RPO identified several candidates for consideration as Critical Rural Freight Corridors (CRFCs). In 2019, three of these candidates were certified by the Federal Highway Administration (FHWA): 1.7 miles of US 322 in Venango County, and in Warren County, 11.5 miles of US 62 and 0.84 miles of Lexington Avenue.
- There are currently two state-designated byways in Northwest PA: the Crawford Lakelands and Longhouse National Forest scenic byways. There are no federally designated byways in the region.

Planning Implications

- The roadway network in the Northwest PA region serves as the backbone of the transportation system.
- Understanding federal-aid requirements is critical in the delivery of federal-aid projects at the state and local level. Municipal and state partners must work with the RPO, PennDOT, and FHWA to successfully manage locally administered federal-aid projects.

Figure 8: Roadway Mileage by Ownership

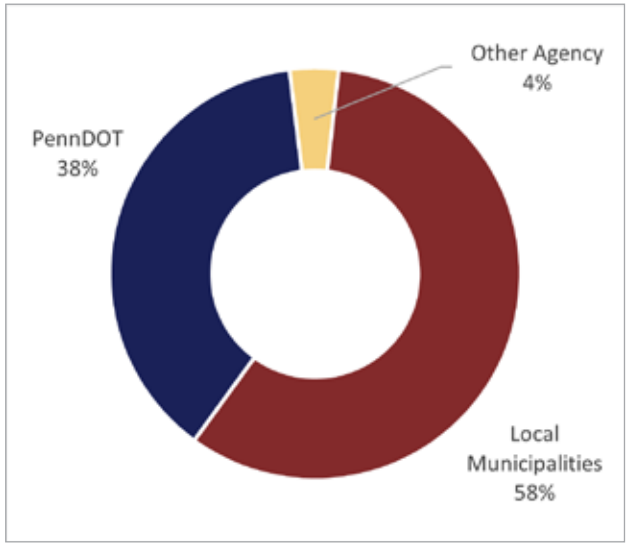


Figure 9: Daily Vehicle-Miles of Travel (DVMT), 2012-2022

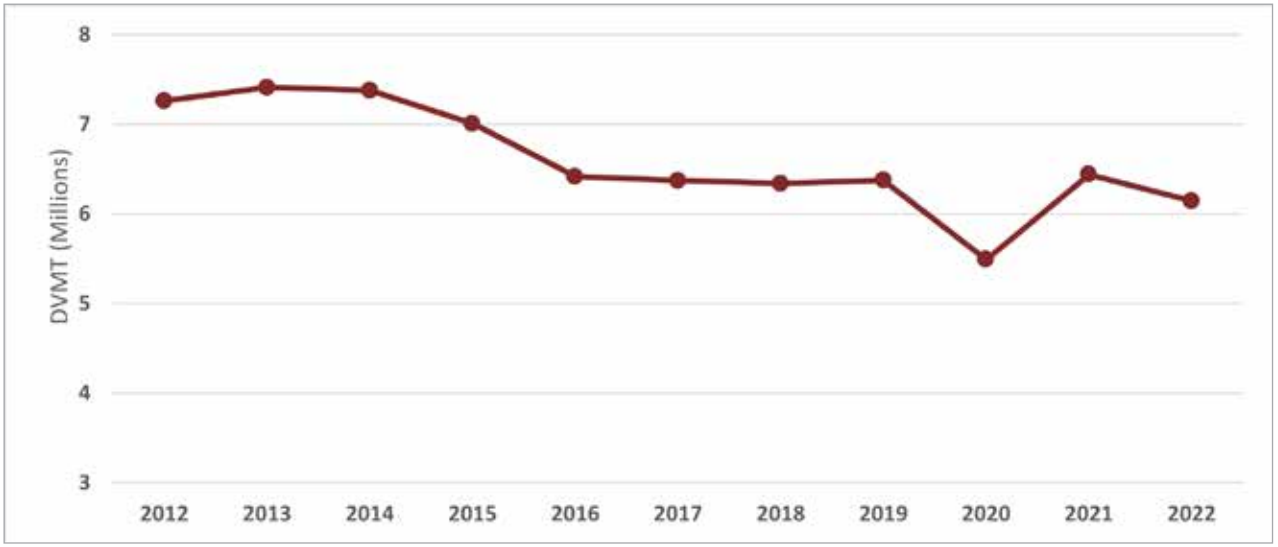


Table 4: Roadway Mileage by County, 2022

	PennDOT	Other Agency	Local Municipalities	Total
Clarion	468.76	9.95	943.78	1,422.49
Crawford	909.35	30.61	1,493.13	2,433.09
Forest	200.58	108.47	161.92	470.97
Venango	528.16	7.55	824.50	1,360.21
Warren	528.61	110.12	610.64	1,249.37
Region	2,635.46	266.70	4,033.97	6,936.13

Source: PennDOT Pub 600, 2022

Functional Classification

Overview and Key Trends

- Functional classification is an important nexus between transportation and land use. Northwest RPO's most recent functional classification update occurred during the development of its 2045 LRTP in 2020. The updates made to the classification scheme allowed for the region's system to be more closely aligned with the federal recommendations for a rural system (Table 5). Additional information regarding functional classification procedures can be found on PennDOT's Traffic Information webpage.
- All roadways serve two primary functions: mobility (moving through an area efficiently) and access (connections to residences, businesses, and workplaces). Interstates, for example, provide high mobility but low accessibility, whereas local streets primarily focus on providing access.
- Within the Northwest PA region, there are more than 70 municipalities that participate in the Turnback Program. Since the program's inception in 1981, there have been 4,764 miles of functionally local roadway statewide that have been transferred from state to local control. Of that total, just over 273 miles have been "turned back" within the Northwest RPO region.

Planning Implications

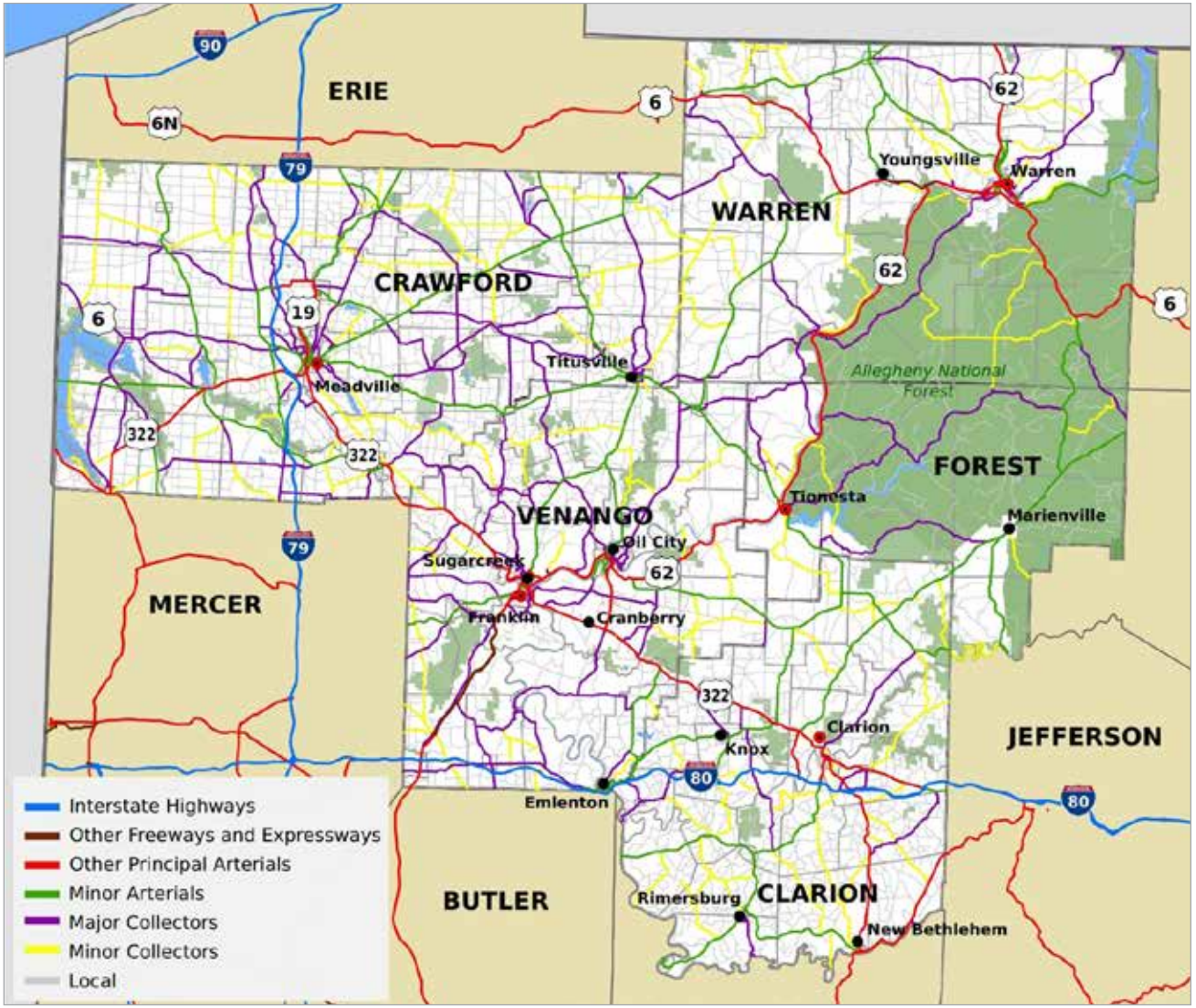
- Functional classification helps determine eligibility for many federal funding sources.
- Functional classification helps planners to better prioritize the allocation of resources for different types of roads.
- Functional classification can also inform land use decisions and zoning regulations.

Table 5: Northwest PA Roadways by Functional Classification

Functional Classification		Linear Miles	Percentage of Network	FHWA-Recommended Rural System	Share of all Travel
Federal-Aid	Interstates	69.9	1.0%	1-2%	23.9%
	Other Freeways and Expressways	14.3	0.2%	0-2%	2.2%
	Other Principal Arterial	261.5	3.7%	2-6%	22.4%
	Minor Arterial	501.6	7.1%	3-7%	20.8%
	Major Collector	773.5	11.0%	9-19%	12.1%
Non-Federal-Aid	Minor Collector	634.0	9.0%	4-15%	3.5%
	Local	4,791.9	68.0%	64-75%	15.0%
	Total	7,046.7	100%	n/a	100%

Source: PennDOT Highway Statistics, 2021

Figure 10: Northwest PA Functional Classification



Roadway Conditions

Overview and Key Trends

- PennDOT organizes the state's roadways into four Business Plan Networks (BPNs): (1) Interstates, (2) NHS, Non-Interstate, (3) Non-NHS > 2,000 Average Daily Traffic (ADT), and (4) Non-NHS < 2,000 ADT. In Northwest PA, 70 percent of the roadway mileage is Non-NHS < 2,000 ADT (or BPN 4) (Figure 11).
- The International Roughness Index (IRI) indicates the smoothness of the pavement surface, while Overall Pavement Index (OPI) is a measure of a roadway's pavement condition and how well a surface can carry stress.
- Northwest RPO and PennDOT continue to make progress in improving pavement quality, particularly on higher-order networks that carry the most traffic volume. When measured in IRI ratings, approximately half of Northwest PA's pavements are in "excellent" or "good" condition, exceeding the averages for Pennsylvania statewide. The greatest improvement has been made in the smoothness of the region's Interstate highways, with a median IRI drop (improvement) from 53 in 2018 to 44 in 2021 (Figures 12 and 13).
- When measured in OPI ratings, the RPO's pavements show slight increases in the shares of "fair" and "poor" pavement quality, with rates increasing by 3.7 and 4.8 percent, respectively (Figure 14).
- The passage of Act 89 in 2013 led to the annual investment of $28 million statewide into the Dirt, Gravel, and Low-Volume Roads Program. This program offers technical assistance and grant funding for the maintenance of these roadways while reducing the impacts of sediment pollution on adjacent streams and waterways. Administered at the county level (usually by conservation districts), there are a total of 215 miles funded by the program in the Northwest RPO region with total expenditures reaching nearly $30 million.[1]

Planning Implications

- Pavement conditions in the region compare favorably to Pennsylvania statewide. While most pavements are in "good" to "excellent" condition, the trends indicate a greater need for roadway resurfacing on non-NHS routes with < 2,000 ADT.
- Northwest RPO and PennDOT promote a "lowest life-cycle cost" approach in addressing infrastructure condition. This approach puts greater emphasis on timely maintenance for system preservation. It not only extends the life of pavements and bridges, but it lowers the total cost of maintaining the asset.

1 Data from the Penn State Center for Dirt and Gravel Road Studies; Accessed October 4, 2023 (https://dirtandgravel.psu.edu/pa-program-resources/conservation-districts/)

Figure 11: Roadway Mileage by Business Plan Network, 2021

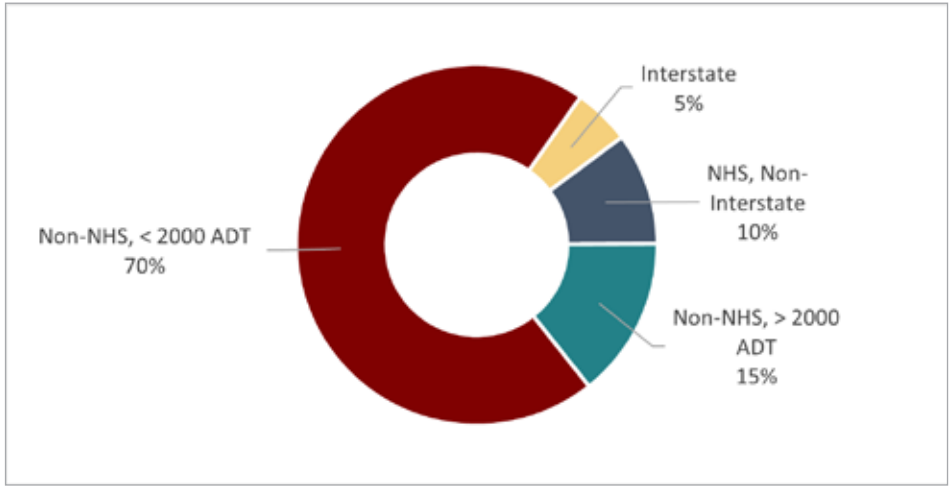
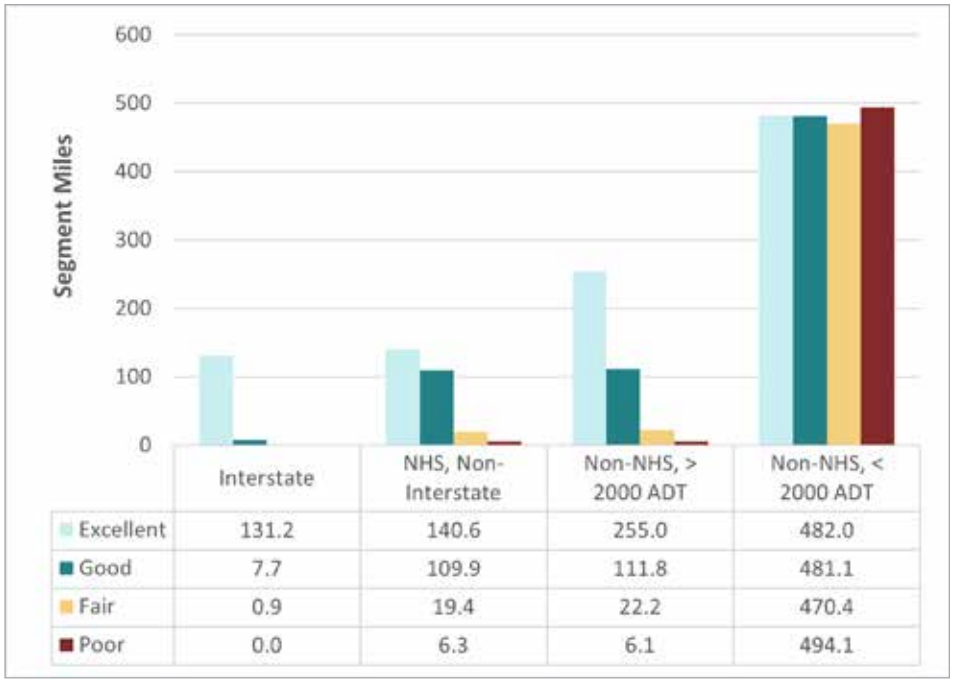


Figure 12: IRI Ratings by Business Plan Network, 2020



	Interstate	NHS, Non-Interstate	Non-NHS, > 2000 ADT	Non-NHS, < 2000 ADT
Excellent	131.2	140.6	255.0	482.0
Good	7.7	109.9	111.8	481.1
Fair	0.9	19.4	22.2	470.4
Poor	0.0	6.3	6.1	494.1

Figure 13: Roadway Condition by IRI Rating, Northwest RPO and Pennsylvania, 2018–2021

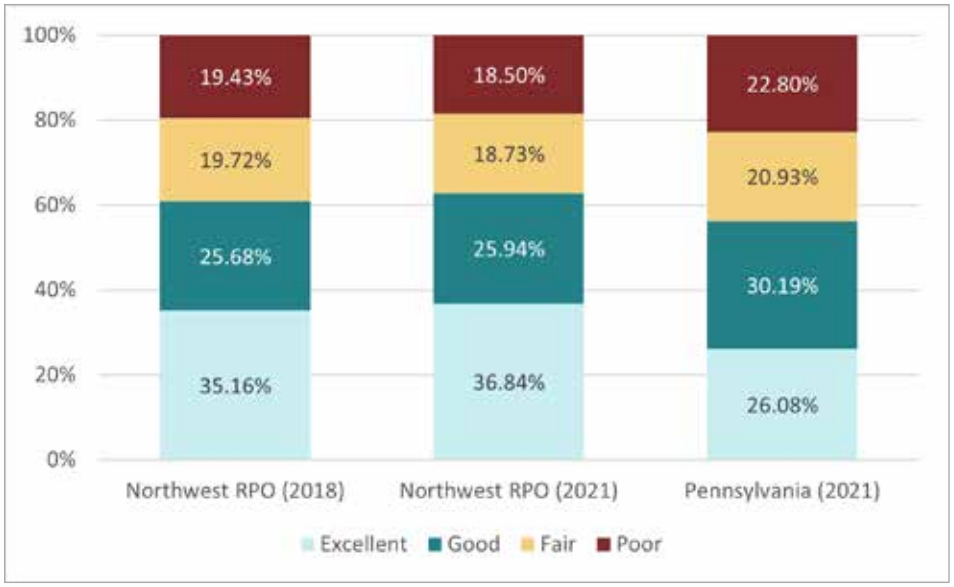


Figure 14: Roadway Condition by OPI Rating, Northwest RPO, 2018–2021

Source: PennDOT

Roadway Safety

Overview and Key Trends

- For the five-year period ending in 2022, PennDOT data show that total crashes in the region have decreased. When considering five-year averages since 2013, trends show total crashes decreasing over time (Figure 15).
- The number of fatal crashes has increased in the past five years—from 28 in 2018 to 42 in 2022. However, when looking at five-year averages, fatalities are declining at a slow but steady rate (Figure 16).
- Suspected-serious-injury crashes are trending upward in the region, from 75 to 82 crashes annually in the past five years. Five-year average trends also reflect this increase (Figure 17).
- Crashes involving drivers age 65 and older are increasing in the Northwest RPO region (Figure 18), with 385 crashes in 2022. This has important implications for Northwest PA as its population continues to age.

Center Street Railroad Crossing, Downtown Oil City

Planning Implications

- To support the national aspirational goal of eliminating traffic fatalities by 2050, PennDOT has committed to a goal of reducing crashes by 1 percent annually. Safety targets are calculated based on rolling five-year averages.
- Improved safety performance will require improvements in highway design, driver behavior, and enforcement mechanisms. Improvements in highway safety are not solely dependent on infrastructure improvements, but also educational initiatives and the efforts of many organizations and individual drivers. This includes the safety of older drivers as the region's senior citizen population increases.
- In 2022, PennDOT revisited its safety performance targets for the two-year reporting period. The RPO continues to have the option to adopt the targets set by the state to support the attainment of statewide and national highway safety goals. In late 2022, the RPO voted to support the state's safety targets.

Figure 15: Total Crashes by Five-Year Average

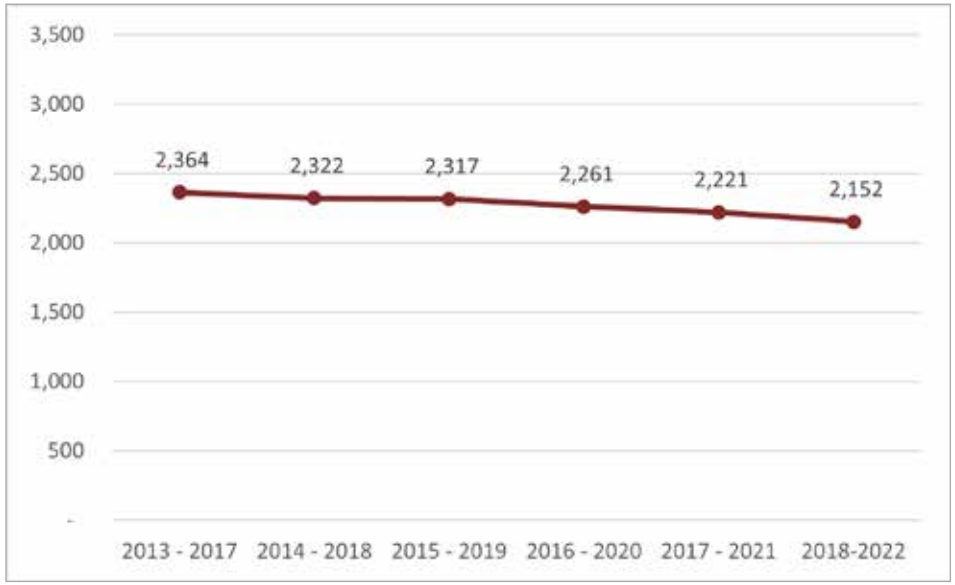


Figure 16: Total Crash Fatalities by Five-Year Average

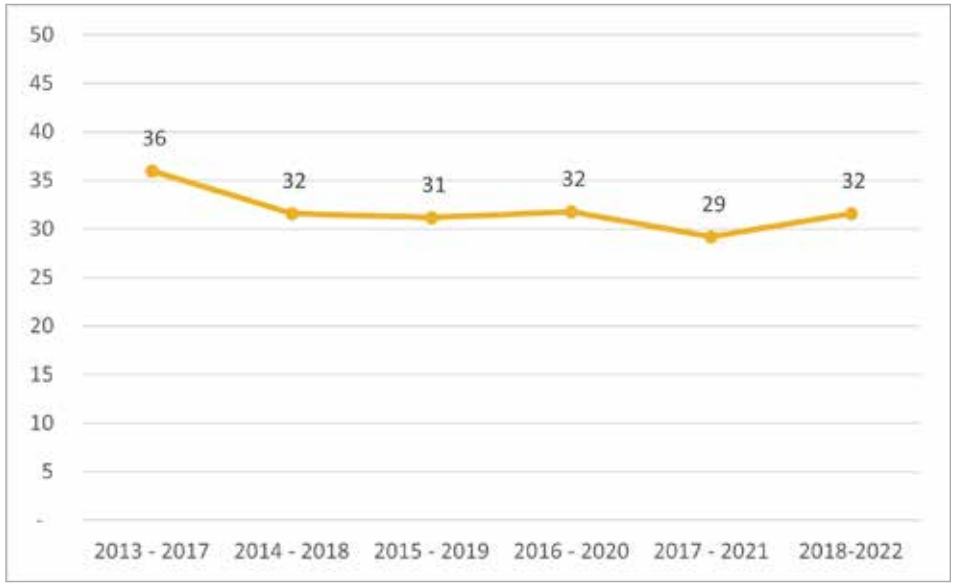


Figure 17: Total Suspected-Serious-Injury Crashes by Five-Year Average

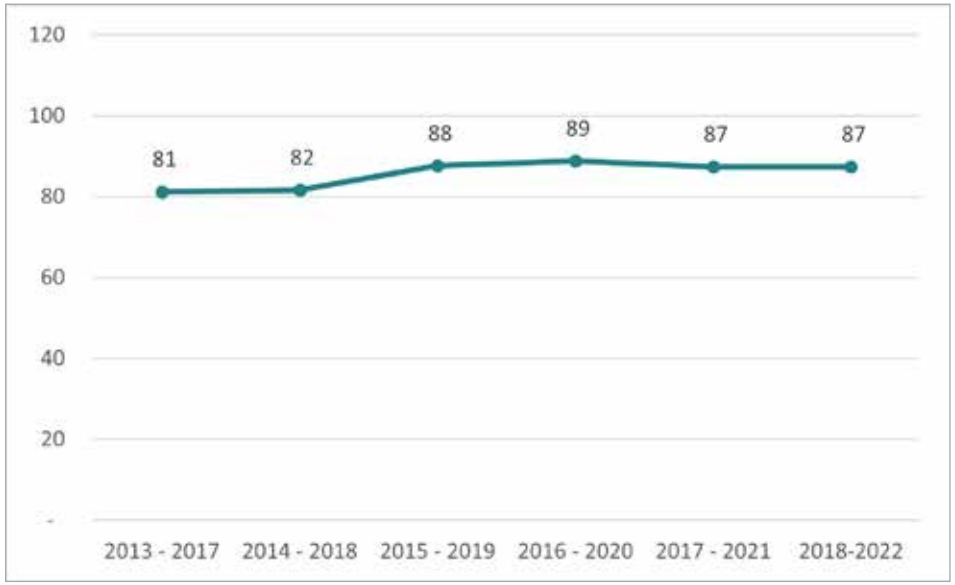
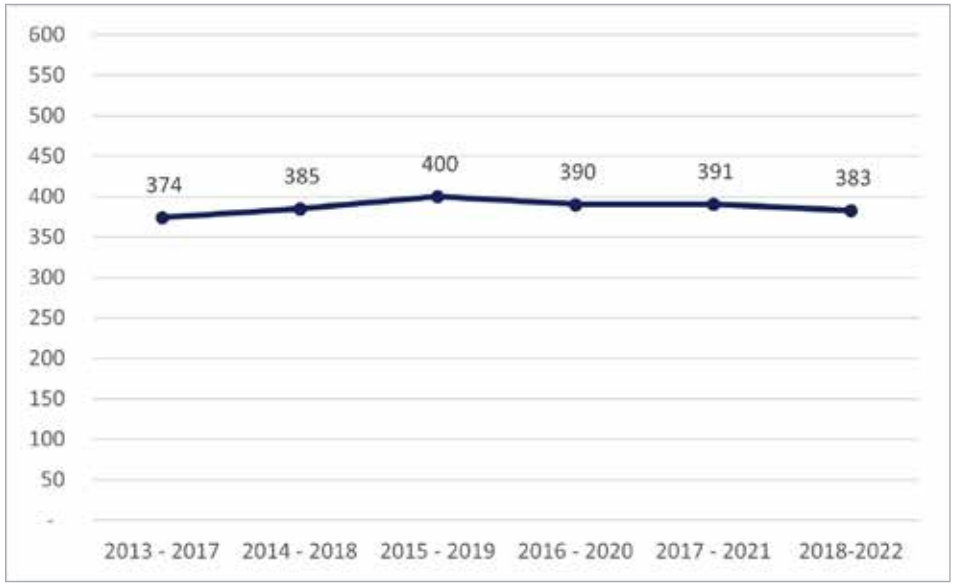


Figure 18: Total Crashes Involving Drivers Age 65+ by Five-Year Average



Source: Pennsylvania Crash Information Tool, 2022

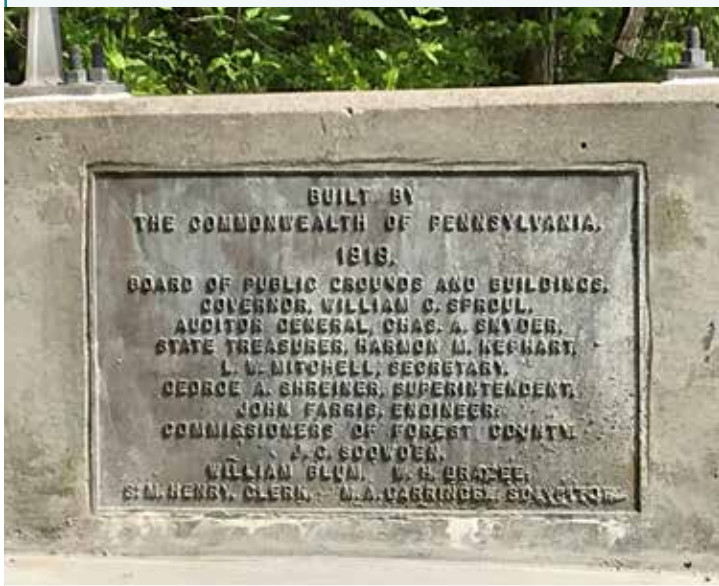
State-Owned Bridges

Overview and Key Trends

- Within the Northwest PA RPO region, there are 1,275 state-owned bridges greater than 8 feet in length. The majority of the region's bridge deck area is on non-NHS roadways < 2,000 ADT and Interstate highways and ramps (Figure 19).
- The condition of the region's state-owned bridges has been improving over time. Of these structures, 93 (7.3 percent) are rated as being in "poor" condition, an improvement from 102 structures in 2019. This count compares favorably to the state rate of 9.5 percent (Table 6).
- A meaningful measure of bridge condition is the share of bridge deck area considered in "poor" condition. The bridge deck area refers to the roadway surface that spans the length of the bridge. This rate is 5.5 percent in the Northwest PA region, comparable to the state average of 6 percent.
- Of these structures, 12 are posted (weight-restricted), while one is closed. While the number of closed bridges has not changed since 2018, the number of weight-restricted bridges has increased from nine structures.
- The average age of state-owned bridges in Pennsylvania is 58 years. In Northwest Pennsylvania, the average age is 56 years, with nearly 30 percent of the region's bridges constructed in the 1950s and 1960s (Figure 20). Most bridges are expected to have a design life of approximately 50 years.
- Since 2010, bridge construction activity in the Northwest PA region shows the addition of 184 structures to the region's bridge stock. While most of these bridges continue to remain in "good" condition, structures from past decades show larger shares of "fair" and "poor" condition ratings.
- The region had 26 bridges that were replaced as part of PennDOT's Rapid Bridge Replacement Program. These bridges were completed between 2016 and 2018.
- If the region's "poor" state-owned bridges were placed end to end, they would stretch a distance of 7,441 feet, or nearly a mile and a half.

Planning Implications

- As the region's bridge inventory continues to age, the RPO will be faced with a greater number of bridges in need of maintenance or rehabilitation. Bridges built before and during the Depression era (built in the 1930s and earlier) comprise 22 percent of the region's bridge inventory and will need to be replaced.
- The Northwest PA RPO and PennDOT promote a "lowest life-cycle cost" approach in addressing infrastructure condition. This approach puts greater emphasis on timely maintenance for system preservation. It not only extends the life of pavements and bridges, but it lowers the total cost of maintaining the asset.



Forest County Bridge Placard

Table 6: State-Owned Bridge Conditions, Northwest RPO Region and Statewide, January 2023

	Total Count	Total Deck Area (million square feet)	Closed Bridges	Posted Bridges	Poor Condition by Count	Percentage Poor Condition by Count	Poor Condition by Deck Area (million square feet)	Percentage Poor Condition by Deck Area
Clarion	208	1.020	0	0	8	3.85%	0.0442361	4.34%
Crawford	501	1.463	0	9	46	9.18%	0.1186772	8.11%
Forest	76	0.204	0	3	6	7.89%	0.009294	4.55%
Venango	223	0.709	1	1	14	6.28%	0.0326116	4.60%
Warren	267	0.668	1	5	28	10.49%	0.0379144	5.68%
Region	1,275	4.063	2	18	102	8.00%	0.2427333	5.97%
State	25,454	117.540	21	419	2,362	9.28%	6.236836	5.31%

Figure 19: Northwest Bridges Greater than 8 Feet in Length by Business Plan Network

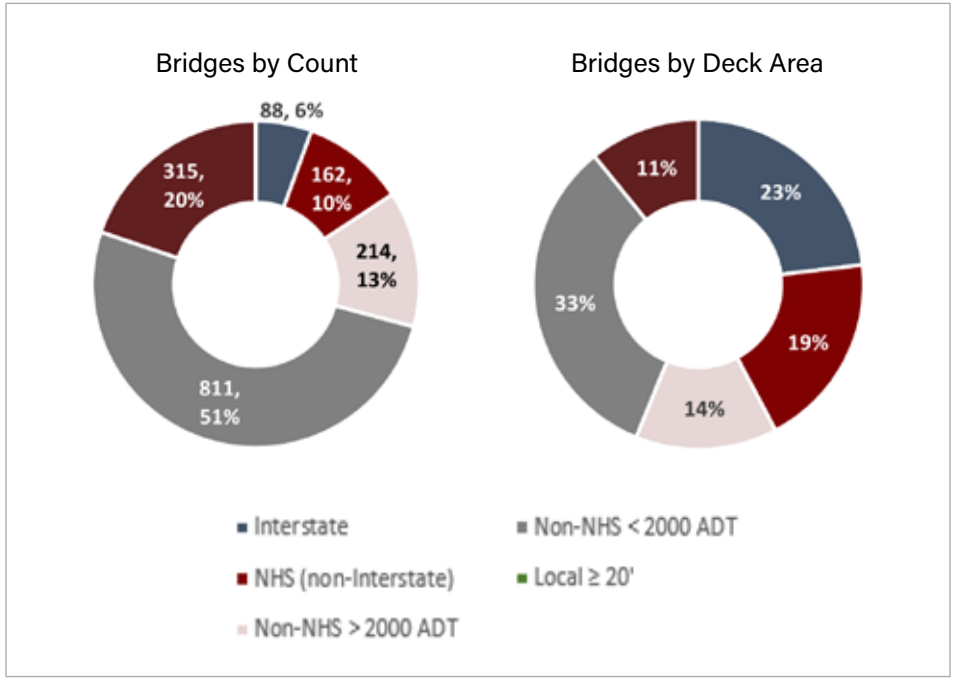
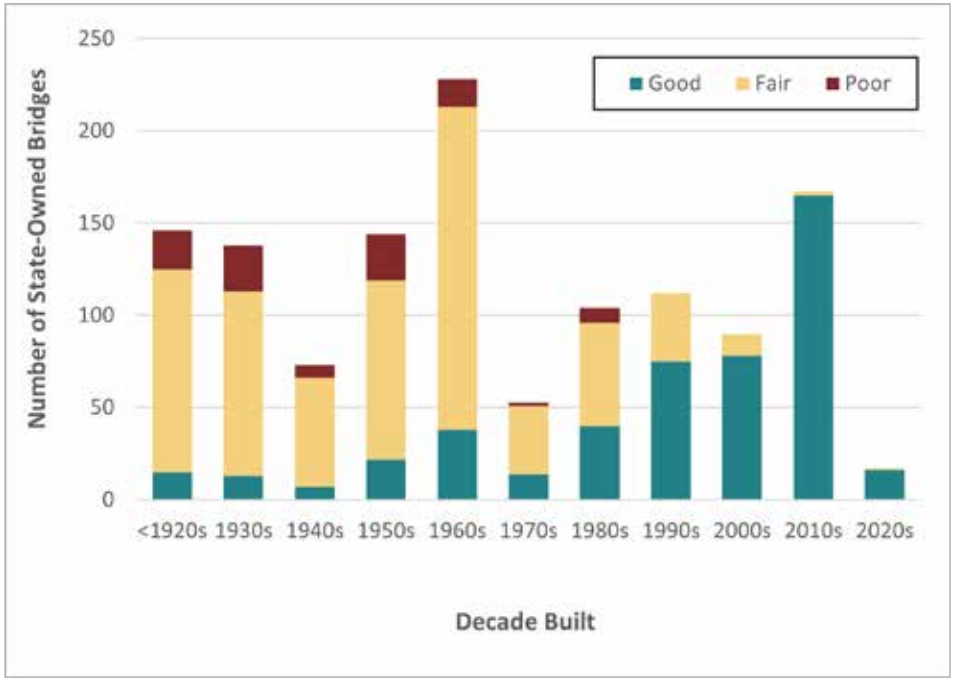


Figure 20: State-Owned Bridges by Condition and Decade Built, Northwest PA



Source: PennDOT Bridge Management System

Local Bridges

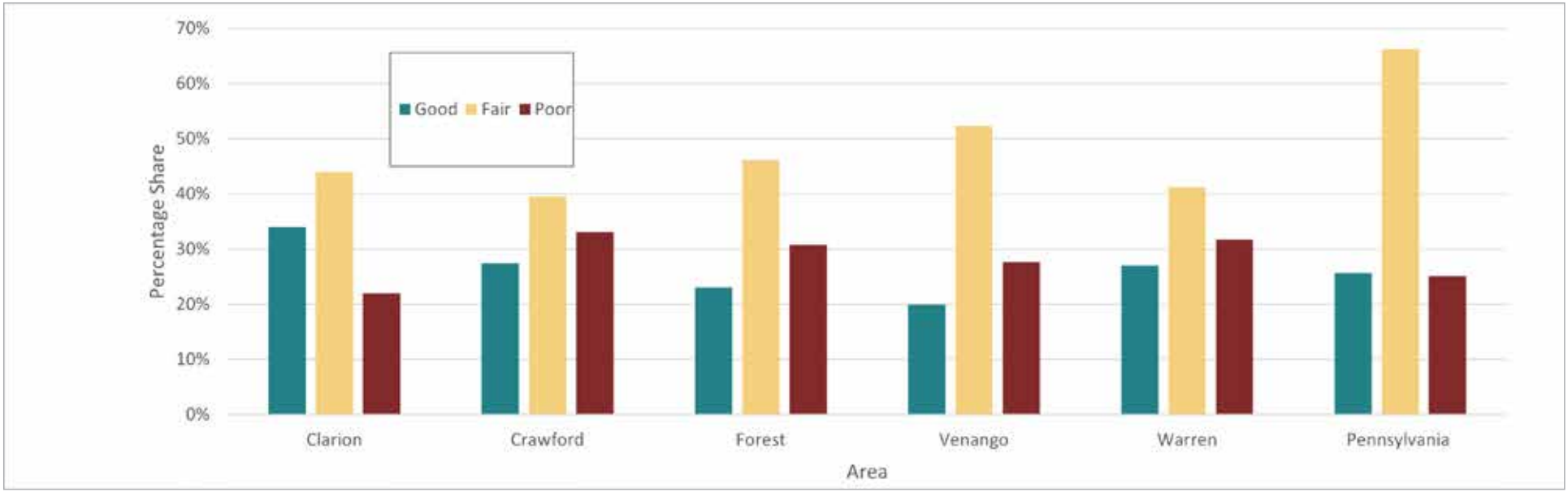
Overview and Key Trends

- PennDOT's Bridge Management System (BMS) notes that there are 315 total locally owned bridges greater than 20 feet long throughout the Northwest PA region. Of these structures, 10 are closed and 76 are posted (Table 7).
- The region's municipalities own and maintain 82 percent of these structures by count and the counties own the remaining 18 percent. Crawford County and its municipalities own and maintain the highest share of locally owned bridges in the region by count (39 percent). Warren County is one of only five counties in Pennsylvania that does not own any bridges.
- Forty-three percent of locally owned bridges are in "fair" condition within the region, which compares favorably to the Pennsylvania state rate of 49 percent. The number of local bridges rated in "poor" condition (30 percent), however, exceeds the statewide average of 25 percent.
- When considering "poor" condition local bridge deck area, the Northwest PA region's share (19 percent) closely compares to the statewide share (20 percent).
- The local bridge stock in the Northwest PA region has an average age of 52 years. Thirteen percent of the region's local bridges were constructed in the 1960s and 1970s; however, more than 40 percent of the local bridge inventory in the region has been constructed since the 1990s.

Planning Implications

- Local bridges are commonly ineligible for federal transportation funds, except for the Off-System Bridge program for local bridges greater than 20 feet in length. This program establishes criteria for funding improvements to bridges that are not on the federal-aid system.
- PA Act 89 of 2013 authorized counties to levy an optional $5 fee on vehicle registrations, which can be used for the construction, reconstruction, maintenance, and repair of public highways and bridges. (Collectively, this would translate into approximately $597,000 in annual revenue across the region's five counties.) While none of the region's five counties have enacted the $5 fee, they leverage other funding strategies to support local and county-owned bridges.
- Many of the region's local bridges are reaching the end of their design life. These structures will need to be considered for preservation, rehabilitation, or replacement to extend this design life and avoid closure. Extended bridge closures can impact overall network connectivity for both passenger movement, goods movement, and emergency response.

Figure 21: Share of Local Bridges Rated as Good, Fair, or Poor



Source: PennDOT Bridge Management System, January 2023

Table 7: Local Bridge Conditions, Northwest RPO Region and Statewide, January 2023

	Total Count	Total Deck Area (million square feet)	Closed Bridges	Posted Bridges	Poor Condition by Count	Percentage Poor Condition by Count	Poor Condition by Deck Area (million square feet)	Percentage Poor Condition by Deck Area
Clarion	50	0.0546	1	16	11	22.0%	0.0084	15.35%
Crawford	124	0.1529	3	33	41	33.1%	0.0468	30.61%
Forest	13	0.0231	0	2	1	30.87%	0.0081	35.15%
Venango	65	0.1342	4	15	18	27.7%	0.0138	10.29%
Warren	63	0.1279	2	10	20	31.8%	0.0154	12.02%
Region	315	0.4926	10	76	94	29.8%	0.0925	18.77%
State	6,679	15.3297	202	1,306	1,671	25.0%	3.1022	20.24%

Source: PennDOT Bridge Management System

Public Transportation

Overview and Key Trends

- The Northwest PA RPO region is served by several public transportation providers, including Crawford Area Transit Authority (CATA, serving Crawford and Venango counties), Clarion County Transportation, and the Transit Authority of Warren County (TAWC).
- CATA provides fixed-route services in and around the City of Meadville along with regional lifeline routes connecting the residents of Saegertown, Titusville, Conneaut Lake, and Cochranton to Meadville in Crawford County. CATA provides fixed-route services in and around the cities of Franklin and Oil City in Venango County. CATA operates on-demand microtransit in and around the City of Titusville and operates county-wide door-to-door shared-ride services throughout Crawford and Venango counties.
- For FY 2020-21, CATA provided 179,628 fixed-route trips and more than 45,000 shared-ride trips (Figures 22 and 23).
- The Transit Authority of Warren County (TAWC) provides both fixed-route and shared-ride service. While fixed-route service is available only in the City of Warren and its immediate surroundings, shared-ride service is available throughout the county. Fixed-route ridership in FY 2020-21 was 50,547 while shared-ride services provided more than 16,000 trips in the same year (Figures 24 and 25).
- Clarion County Transportation has provided shared-ride and community transportation service in Clarion County since 1980. The service provided more than 13,000 trips in FY 2021-22 with 12 vehicles in operation (Figure 26).
- Area Transportation Authority (ATA) provides service to Clarion Borough, Pennsylvania Western University–Clarion Campus, and the Clarion Mall. While ATA primarily serves a six-county region immediately outside of Northwest PA, its Clarion service is critical. The university community hosts approximately 4,000 students, most of whom live off-campus and require access to educational and commercial services.
- Forest County operates Forest County Transportation, a shared-ride-only program for county residents as a County-run program (Figure 27).
- Ridership for both fixed-route and shared-ride services has declined for all service providers.
- Greyhound Lines, Inc., and Fullington Auto Bus Company, Inc., provide intercity bus services to the region's travelers.
- While there is no passenger rail service in the Northwest PA region, passenger service is available in Erie via Amtrak's *Lake Shore Limited* route. The service runs east–west and offers three trains daily in each direction between Chicago and New York City with other stops in Indiana, Ohio, and New York.

Planning Implications

- Public transportation provides basic mobility services for those who choose to ride, do not own a car, or are unable to drive. A reliable and efficient system that connects to businesses, employers, recreation, and natural areas can support economic development and help attract new residents and businesses.
- Most users of shared-ride service are senior citizens. As the regional population continues to age, there will be a higher demand placed on public transportation services to promote mobility and maintain a high quality of life.
- The RPO will continue to coordinate with PennDOT and the region's transit providers to improve public transportation services. The RPO's newest transit initiative introduces micromobility to supplement existing service. CATA GO, on-demand microtransit service, replaced fixed-route service in Titusville in July 2023.

Figure 22: CATA Total Fixed-Route Ridership, FY 2017–2021

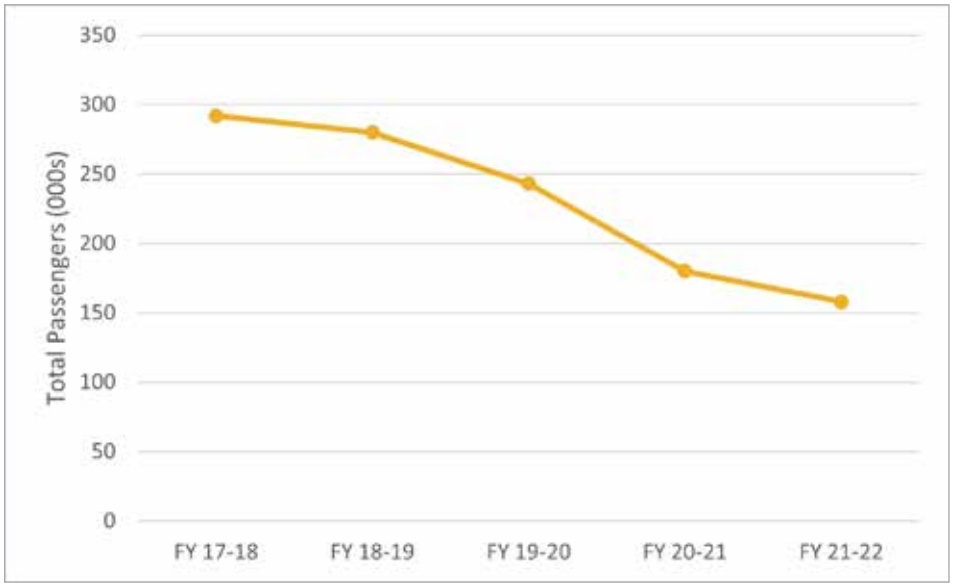


Figure 24: TAWC Total Fixed-Route Ridership, FY 2017–2021

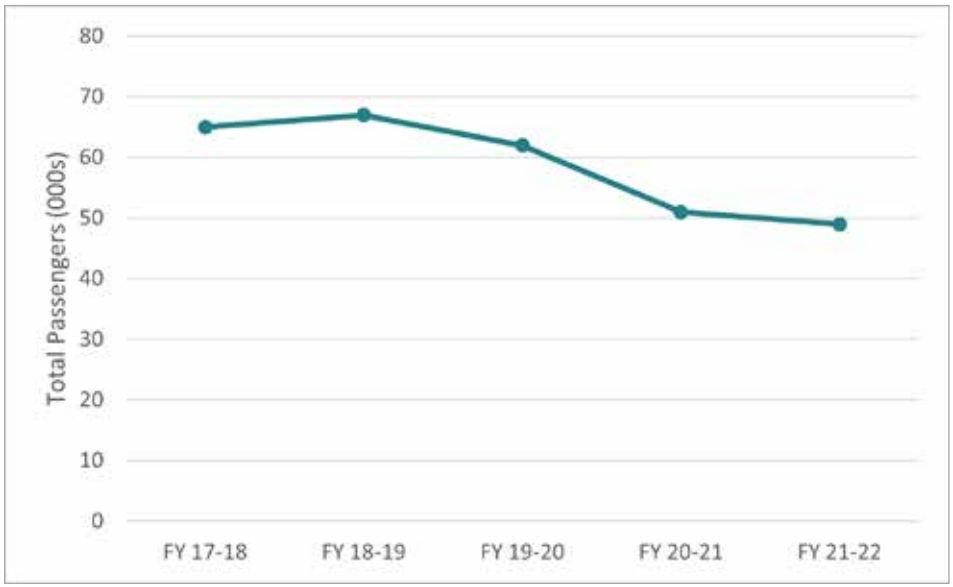


Figure 23: CATA Total Shared-Ride Trips, FY 2017–2021

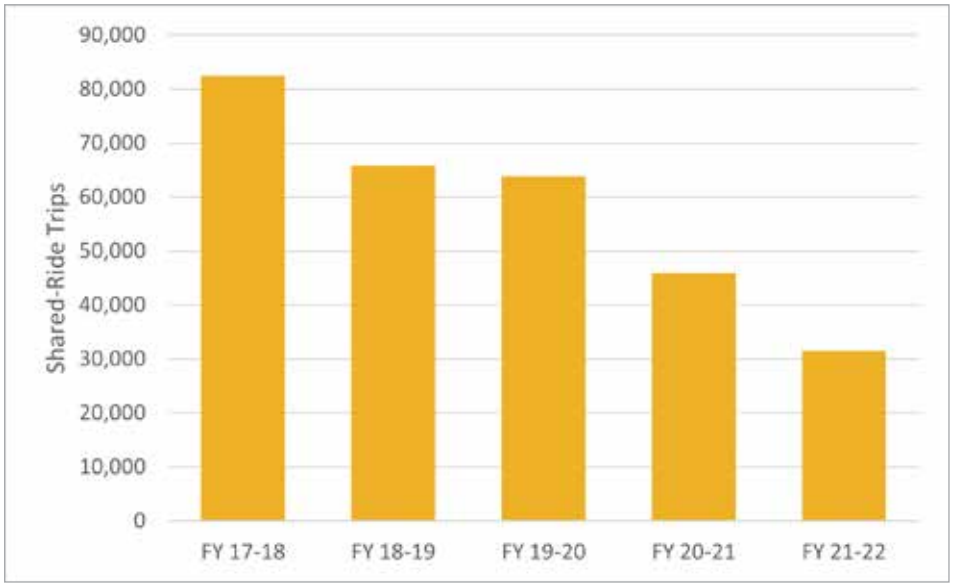
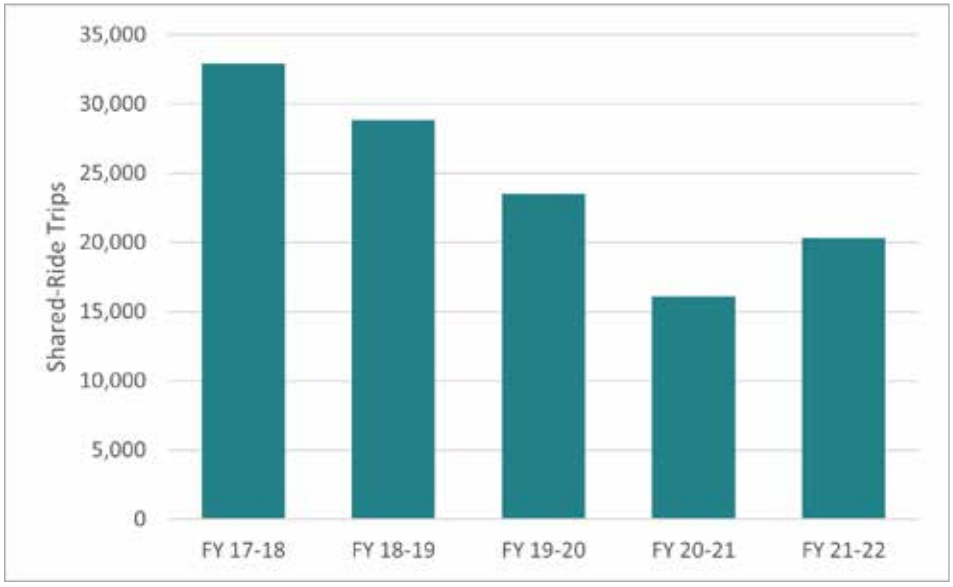
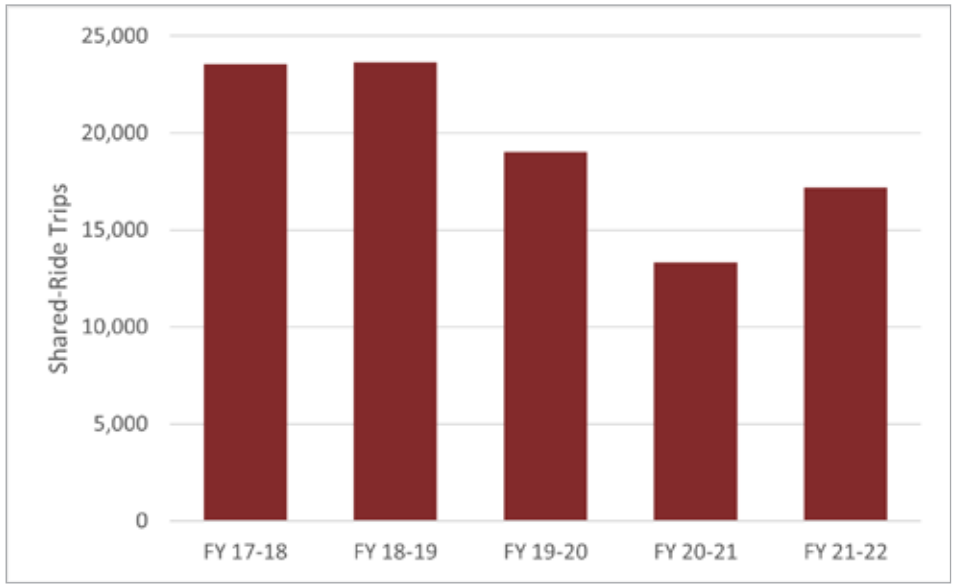


Figure 25: TAWC Total Shared-Ride Trips, FY 2017–2021



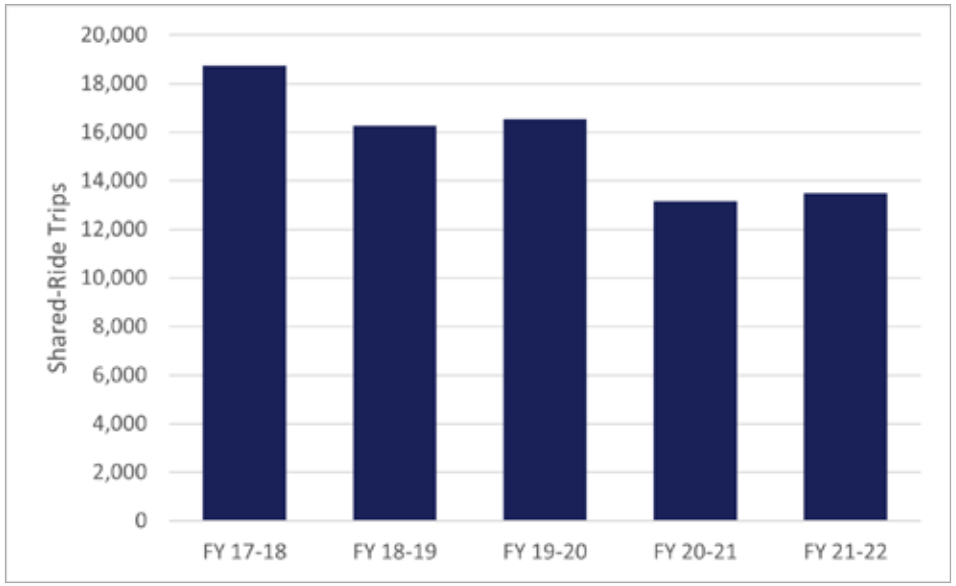
Source: PennDOT Bureau of Public Transportation Annual Report

Figure 26: Clarion County Transportation Shared-Ride Trips, FY 2017–2021



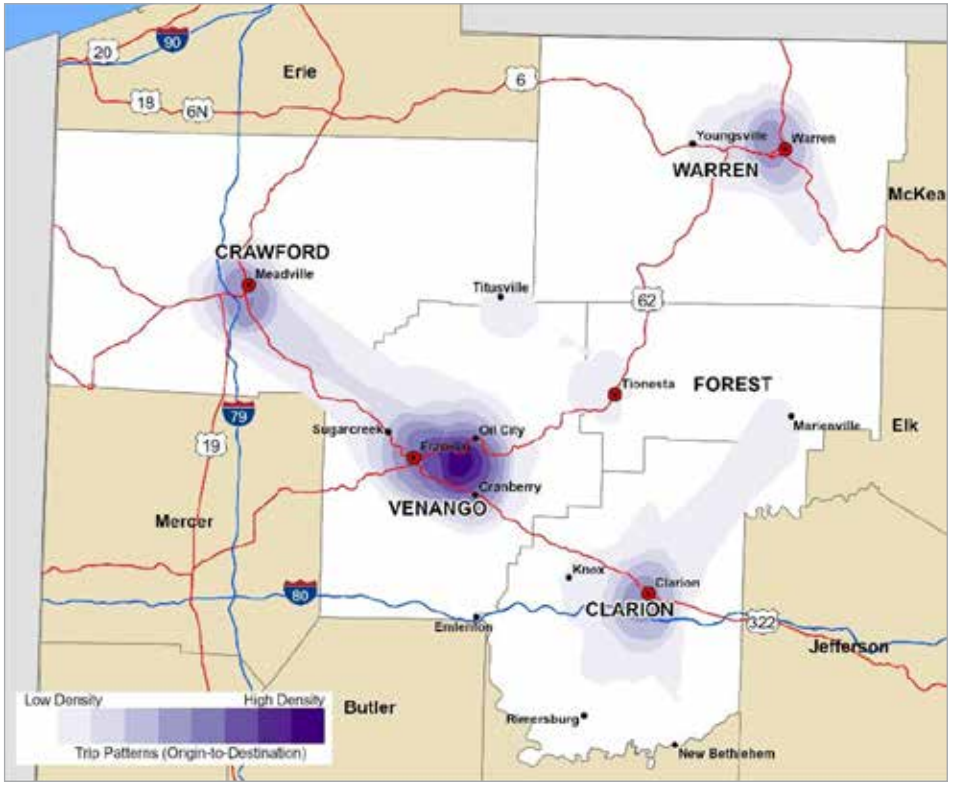
Source: PennDOT Bureau of Public Transportation Annual Report

Figure 27: Forest County Transportation Shared-Ride Trips, FY 2017–2021



Source: PennDOT Bureau of Public Transportation Annual Report

Figure 28: Shared Ride – Desire Lines for Travel



Source: EcoLane

Rail Freight

Overview and Key Trends

- The accessibility of rail in the Northwest PA region is a valued resource for many large manufacturing and distribution enterprises, because shipping freight by rail can significantly reduce transportation costs for bulk products. Although most freight in the region is shipped by truck, rail provides alternative connections to regional, national, and world markets.
- Rail freight service within the region is provided by a mix of Class I railroads, regional railroads, and short lines. Class I service is provided by Norfolk Southern (NS) (Figure 29).
- NS provides service between Sharon, Shenango, and Meadville. At Meadville, NS connects with the Western New York & Pennsylvania Railroad. NS also provides a direct connection between the Northwest PA region and the Canadian National (CN) Bessemer Secondary, a major corridor connecting Pittsburgh and Erie.
- The NS Meadville Line carries less than 1 million gross tons annually and extends a total of 45.3 miles between French Creek and Coalburg, Ohio. A total of 38.8 miles of the line are in Pennsylvania (in Crawford and Mercer counties).
- The Buffalo & Pittsburgh Railroad (BPRR) is a 368-mile regional (Class II) freight railroad that interchanges with several other freight rail lines. BPRR's Allegheny and Eastern Line runs from Erie through Warren County to BPRR's north–south mainline in Elk County. Several operations in Warren County have leveraged use of this line, ensuring its ongoing viability. The line remains a critical asset to Warren County as it helps retain major employers such as United Refining.
- The Western New York and Pennsylvania (WNYP) Freight Main Line connects with the NS Meadville Line and extends more than 60 miles northeast to the New York State border near Lottsville, PA. The line offers the only 286K freight rail link to the Corry–Union City–Meadville–Franklin–Oil City–Titusville corridor. The line supports major customers and employers throughout the region, including in Meadville, Union City, Franklin, and Titusville, among others.
- The Oil Creek and Titusville Lines (OCTL) include a 14-mile line that connects WNYP's Oil City branch at Rouseville (Rynd Farm) in Venango County to Titusville in Crawford County, with a 2.5-mile industrial branch line from Titusville to East Titusville. The railroad serves several industrial businesses and operates several days a week hauling plastics, wax, and lumber.
- Crashes at highway–rail crossings are rare within the Northwest PA region, yet they still remain a subject of concern—such crashes tend to be severe and result in serious injuries or fatalities. For the decade ending in 2021, Federal Railroad Administration (FRA) data reports that 10 crashes occurred at at-grade crossings in the region. Of these crashes, five occurred in Crawford County, while the remainder occurred in Venango and Warren counties.
- PennDOT's Bureau of Rail, Freight, Ports, and Waterways administers two competitive public

funding programs for railroad improvements: the Rail Freight Assistance Program (RFAP) and the Rail Transportation Assistance Program (RTAP). In December 2022, PennDOT awarded $57.1 million in funding statewide for 24 rail projects; however, none of these projects were within the Northwest PA region. OCTL has leveraged more than $1 million in RFAP grant funding since 1994 along with federal funding and company investment to improve the condition of its track and to fund the reconstruction of several at-grade crossings.

Figure 29: Railroad Network, Northwest PA RPO Region

Planning Implications

- Rail freight transportation is essential to economic competitiveness and sustained economic growth. Railroads offer connections to national and global markets and have the added benefit of removing trucks from the roadway network, thus preserving pavement conditions. Preserving and restoring railroad infrastructure is critical given its vital role in the region's economy. Railroads offer shippers and receivers an economical and environmentally friendly way of moving bulk products.
- Jobs in the railroad industry are typically well-paying positions in support of the region's economy.
- During the pandemic, retailers and manufacturers suffered delays due to disruptions in the global supply chain. That experience has led to a greater emphasis on supply chains that are more reliable and resilient. Shippers are also more open to modes other than trucking, which has given rail carriers a greater advantage than before.
- In February 2023, a Norfolk Southern freight train carrying hazardous materials derailed in East Palestine, Ohio—a town bordering Pennsylvania. The crash had significant effects on public health and the environment with the release of toxic chemical fumes and spills into nearby creeks and streams. Crashes like this emphasize the importance of not only planning for and implementing railroad safety measures, but also incident response.

Active and Non-Motorized Transportation

Overview and Key Trends

- Across the state and the nation, active transportation such as bicycling and walking has risen in popularity over the last several years, particularly during the COVID-19 pandemic. According to the 2021 American Community Survey's five-year estimates, bicycle and pedestrian travel accounts for a 5.1 percent share of journey-to-work trips in the Northwest PA region.
- Five-year averages show crashes involving bicyclists or pedestrians have decreased in the region. In the five-year period ending in 2021, the region averaged around five bicycle-involved crashes per year. PennDOT crash data show that pedestrian crashes have decreased by nearly 50 percent since 2013 (from 50 crashes to 27 in 2021) (Figures 30 and 31).
- The region also continues to make strides in planning for a connected multi-use trail network for both recreation and transportation. In 2022, the RPO worked with its counties, PennDOT, and other stakeholders to identify alignments for an extension of the Ernst Trail and to close gaps in the Erie-to-Pittsburgh Trail (Figure 32).
- Accommodations for horseback riders and people utilizing horse-drawn wagons or buggies are an important consideration in the Northwest PA region. The region is home to concentrations of residents whose cultural beliefs and practices make them heavily dependent on horse-based transportation, such as Amish and other Plain Sect communities.
- In the five-year period ending in 2021, there were 23 total crashes in the region, four of which resulted in fatalities. Over half of these crashes occurred in Crawford County (13 crashes), with Warren County having the second-highest number of horse-and-buggy crashes (five).

Planning Implications

- The RPO will specifically address the safe and accessible components in the Bike/Ped section of the LRTP, and address safe and accessible transportation components in bike/ped planning studies.
- Roadways, berms, off-road trails, and parking areas in communities with concentrations of horseback and buggy transportation merit additional consideration to serve all people safely where horseback and buggy are major modes of transportation.
- The Northwest RPO will continue to address high traffic speeds, bicycle lanes and facilities, driver and bicyclist education, and roadway and shoulder maintenance to improve safety.
- More comprehensive data is needed for the RPO to effectively plan for the transportation system needs of bicyclists and pedestrians. This data can be acquired through emerging commercial sources or through a bicyclist/pedestrian counting program.

Oil City

Figure 30: Total Bicycle Crashes by Five-Year Average

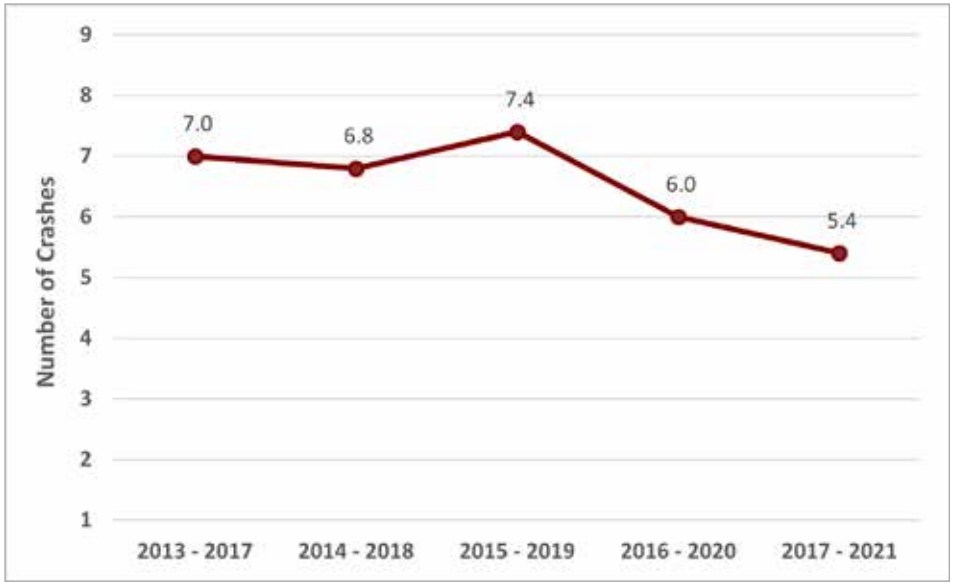
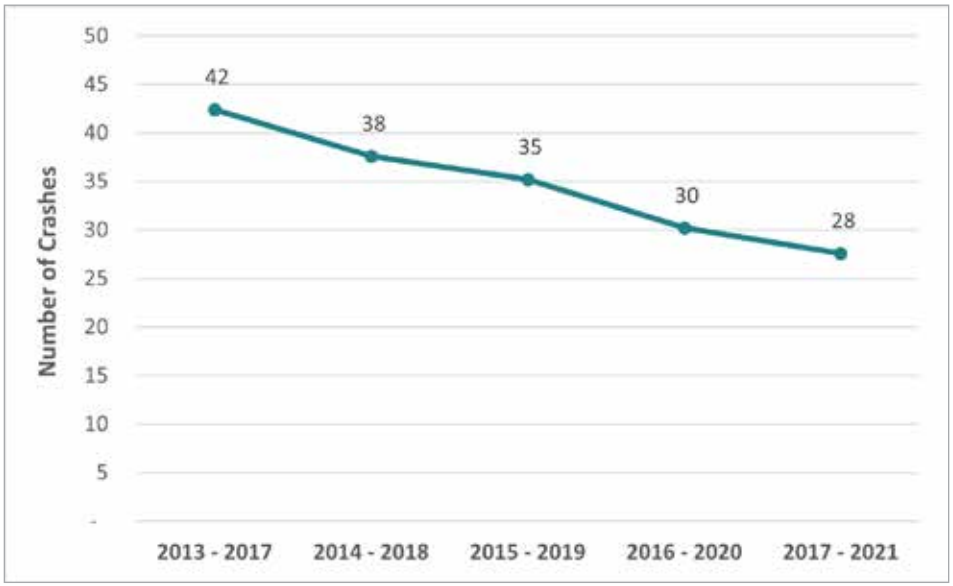


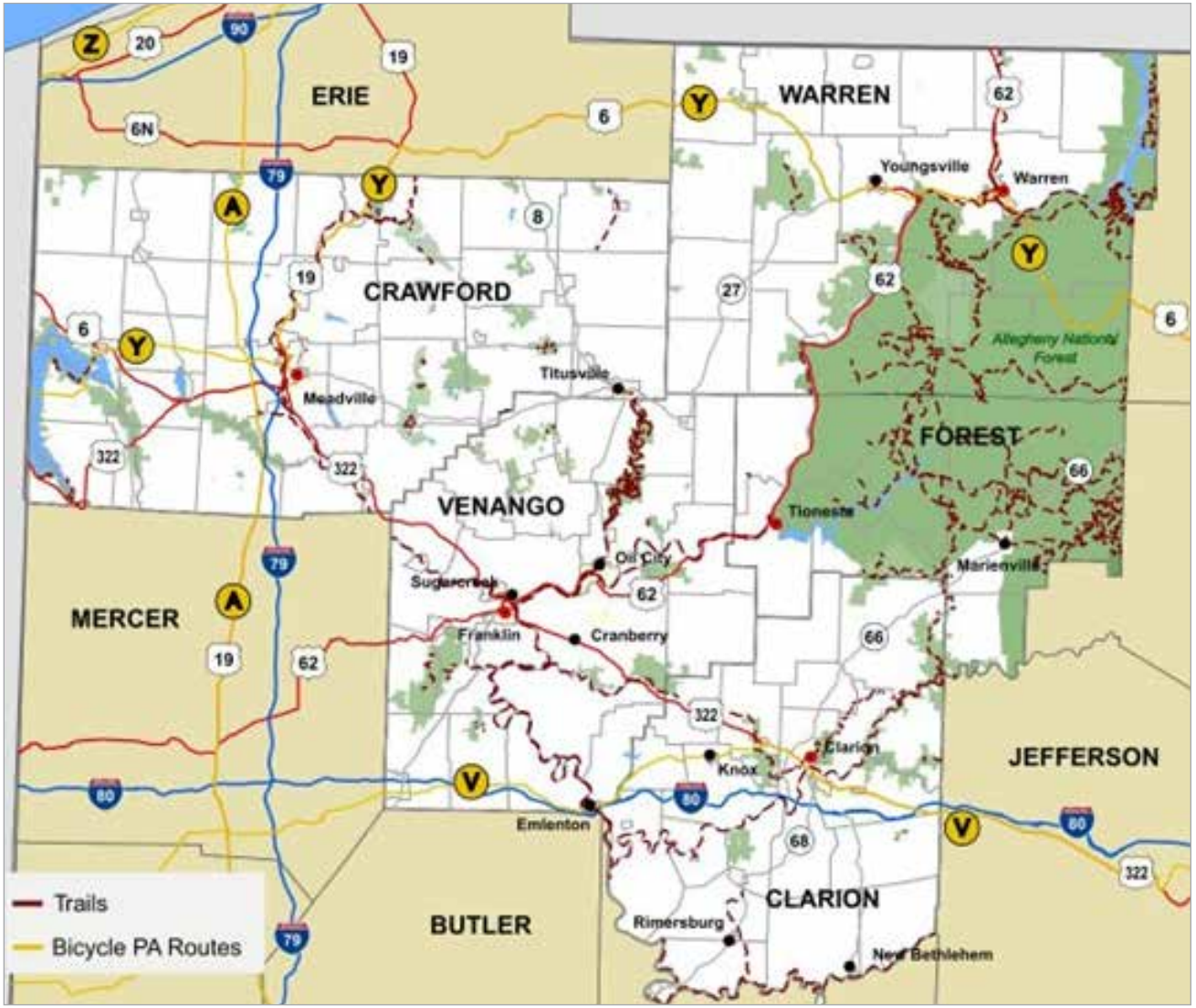
Figure 31: Total Pedestrian Crashes by Five-Year Average



Source: Pennsylvania Crash Information Tool, 2021

City of Warren

Figure 32: Northwest PA Bicycle Routes and Trail Networks



Aviation

Overview and Key Trends

- Venango Regional Airport (FKL) is located southwest of Franklin and approximately 80 miles northeast of Pittsburgh. The airport is a full-service, all-weather facility with professional aircraft refueling and ground handling services, and certified aircraft rescue and firefighting capabilities. PennDOT's 2019 Interim Economic Impact of Aviation report notes that Venango Regional Airport generates $23.4 million in economic output.
- In 2019, Venango Regional Airport lost its Essential Air Service (EAS) subsidy and no longer provides commercial air service. Despite this loss, the airport still receives inquiries from customers regarding commercial air service. The airport is actively looking to offset revenue losses through other contracts and mechanisms.
- In 2020, the RPO conducted a study that explored the feasibility of shipping and receiving air cargo at Venango Regional Airport. The study concluded that there was limited potential for cargo handling at the airport at this time. This is due to the airport's proximity to other major cargo hubs in Pittsburgh and Cleveland, which restricts Venango's ability to capture cargo market share. While cargo capabilities may not be feasible, the study documented potential for the airport to provide private air carrier services for cargo via on-demand service.
- Venango Regional Airport hosted a regional listening session in June 2022 as part of the development of the State Transportation Advisory Committee's Pennsylvania Aviation System Strategic Investment Plan. The session brought together regional aviation stakeholders, including representatives from airports in the Northwest region, state and U.S. legislators, economic development entities, and more.
- In addition to Venango Regional Airport, there are four other public airports in the region: Clarion County Airport, Port Meadville Airport, Brokenstraw Airport, and Titusville Airport (Figure 33).
- Airport Hazard Zoning protects public safety as well as airport viability. PennDOT Bureau of Aviation reports show that 17 municipalities surrounding the region's public-use airports have enacted Act 164 (Airport Hazard Zoning) Ordinances (Table 8).

Planning Implications

- The compatibility of surrounding land uses with airports is important to both the local government and the airport. Ensuring this compatibility through Airport Hazard Zoning requires strategic land use management approaches that protect the airport's viability.
- Maintaining general aviation service can attract businesses, including aviation-related concerns, which can lead to job creation and economic growth.

Table 8: Airport Hazard Zoning (Act 164 Compliance), Northwest PA

Municipality	Act 164 Ordinance
Clarion County Airport, Clarion County	
Beaver Township	Yes
Elk Township	Yes
Paint Township	Yes
Port Meadville Airport, Crawford County	
Vernon Township	Yes
Summit Township	Yes
Union Township	Yes
City of Meadville	Yes
West Mead Township	Yes
Hayfield Township	Yes
Sadsbury Township	Yes
Titusville Airport, Venango County	
Plum Township	No
Cherrytree Township	No
Troy Township (Crawford County)	No
Oil Creek Township (Crawford County)	No

Municipality	Act 164 Ordinance
Venango Regional Airport, Venango County	
Polk Borough	No
Victory Township	No
Sandycreek Township	Yes
Cranberry Township	No
Jackson Township	No
City of Franklin	Yes
Frenchcreek Township	No
Sugarcreek Borough	Yes
Oakland Township	No
Brokenstraw Airport, Warren County	
Brokenstraw Township	Yes
Pittsfield Township	Yes
Youngsville Borough	Yes

Source: PennDOT Bureau of Aviation, Status of AHZ in PA, March 2014

Figure 33: Northwest PA Aviation System

Environmental Resources

Overview and Key Trends

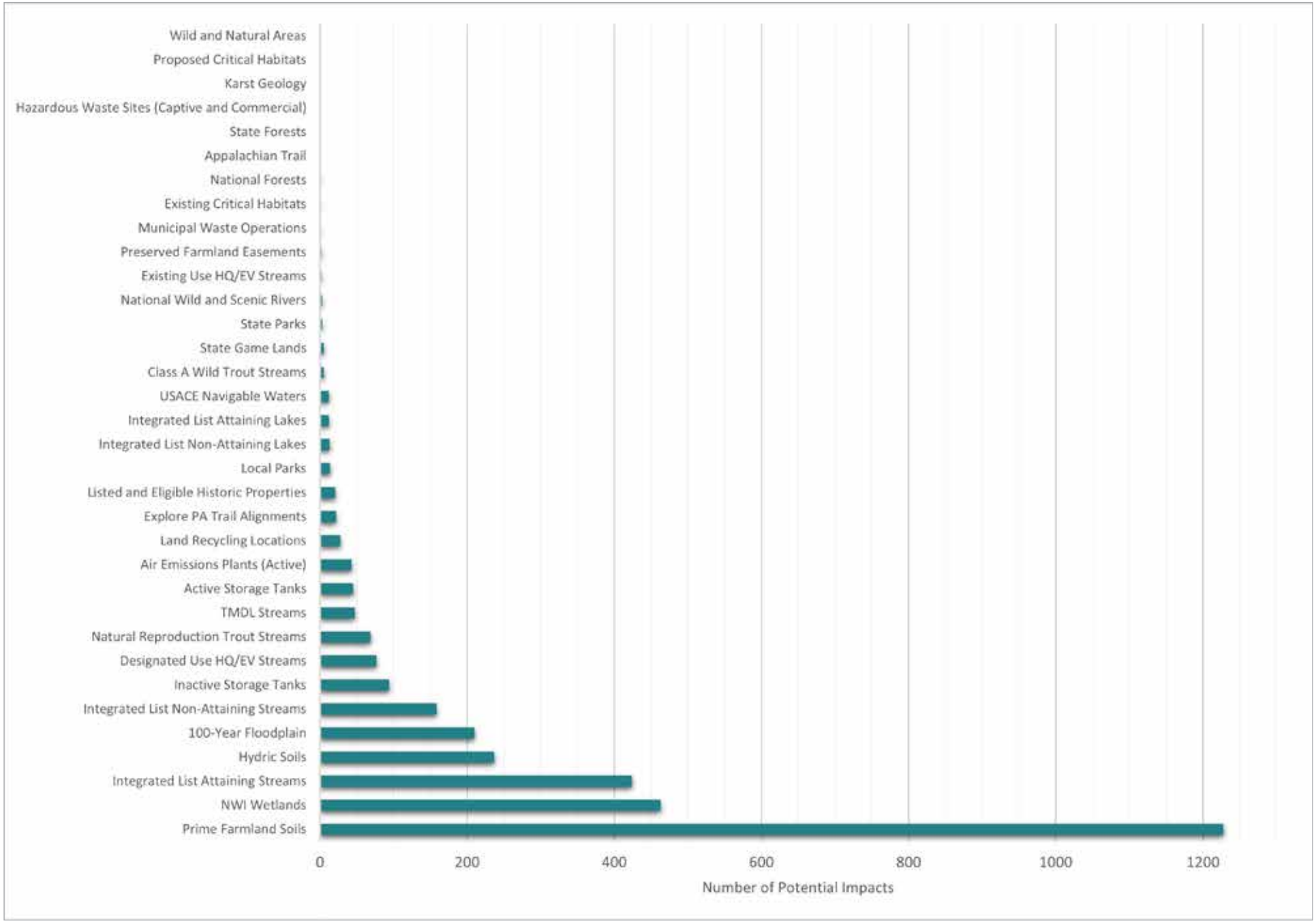
- The Northwest RPO region encompasses diverse natural resources such as prime farmland soil, wetlands, streams, parklands, and a national forest. These natural resources offer several benefits, including recreational opportunities, aesthetics, economic growth, and environmental sustainability.
- The RPO has assessed the region based on the projects outlined in the LRTP and has identified potential impacts on natural features and resources. The analysis of the region allows for the implementation of strategies and processes to prevent harm to any vulnerable areas.
- A buffer analysis was conducted on the projects listed in the RPO's 2023 Transportation Improvement Program (TIP), in accordance with the Pennsylvania Natural Diversity Inventory (PNDI) environmental review process for transportation projects. A buffer of 2,640 feet was applied for projects involving the addition of new roadways or the realignment of roadways or intersections, while all other projects received a 200-foot buffer. Resources and features within each category were deemed "potentially impacted" if they intersected any of the TIP project buffer zones.
- The evaluation of potential impacts illustrated that the 2023 TIP projects will have the highest likelihood of affecting the following environmental resources in the region: prime farmland soils, wetlands, Integrated List "Attaining Streams," and hydric soils.
- In September 2023, the RPO consulted with the Agency Coordination Meeting (ACM) to review environmental resources within the region and impacts of the transportation network.

Tionesta Creek, Forest County

Planning Implications

- The RPO region has a wide distribution of prime farmland soils. To uphold the integrity of agricultural land, the RPO intends to work proactively with local municipalities and farmers. This includes measures such as improving stormwater management and preserving access to operational fields, which will effectively minimize the negative impact on the land due to planned transportation improvements.
- The RPO aims to collaborate with organizations, agencies, and government entities at various levels to facilitate the execution of projects in the TIP with minimal potential impacts. To achieve this objective, the PennDOT Connects process will be utilized.
- The region's predominantly rural landscape lends significant value to its soil, which the RPO will prioritize protecting. Additionally, bridges and roads are at risk of flooding, prompting the RPO to collaborate with PennDOT to address the most vulnerable areas.

Figure 34: Environmental Resources Impacted by LRTP Projects



Performance Measures

2050 Long-Range Transportation Plan

Northwest COMMISSION

Performance Measures

Overview and Key Trends

- The Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act promoted achieving measurable outcomes to ensure the effective use of federal transportation funds. The nation's newest surface transportation legislation, the Infrastructure Investment and Jobs Act (IIJA)/ Bipartisan Infrastructure Law (BIL), was passed in November 2021 and maintains this emphasis.
- Performance measures have been developed for Safety (PM-1), System Condition (PM-2), and System Performance (PM-3) (Table 9). PennDOT is responsible for developing state-level performance targets for each of these measures. All of the state's MPOs and RPOs have the option to support the state targets or establish their own. The Northwest RPO has committed to supporting the state targets for all three measures.
- MPOs are required to establish PM-1 targets within 180 days of PennDOT establishing its targets either by agreeing to plan and program projects in support of the PennDOT targets, or by establishing their own quantifiable targets. For consistency PennDOT requests that RPOs like Northwest follow the same procedure as MPOs.
- FHWA annually determines whether PennDOT has met or made significant progress toward meeting its established performance targets.

SR 1017, Pennsylvania Avenue, Warren

Planning Implications

- IIJA/BIL upholds the strategic approach established by MAP-21 and the FAST Act, which is intended to help MPOs/RPOs, state departments of transportation, and other decision-makers make the best investment decisions to optimize results.
- Performance measurement in long-range planning allows more effective tracking and reporting of the outcomes of the RPO's ongoing investments in the region's transportation system.
- The Northwest RPO will continue to collaborate with both PennDOT and FHWA on performance measurement.
- Interstate pavement condition statewide has exceeded the targets. That is, the percentage in good condition exceeded the target and the percentage in poor condition is less than the target. Further, the percentage in poor condition is less than FHWA's 5 percent minimum threshold, indicating that a state of good repair has been maintained, and proper investments and decision-making have been achieved. PennDOT has made progress implementing a lowest life-cycle cost approach for project and investment decision-making, as required by FHWA.

Table 9: Summary of Federal Performance Measures

Category	Performance Measures
Safety (PM-1)	▪ Number and Rate of Fatal Crashes ▪ Number and Rate of Serious Injury Crashes ▪ Number of Non-Motorized Fatalities and Serious Injuries
System Condition (PM-2)	▪ Percentage of Interstate Pavements in "Good" Condition ▪ Percentage of Interstate Pavements in "Poor" Condition ▪ Percentage of Non-Interstate NHS Pavements in "Good" Condition ▪ Percentage of Non-Interstate NHS Pavements in "Poor" Condition ▪ Percentage of NHS Bridge Deck Area Classified in "Good" Condition ▪ Percentage of NHS Bridge Deck Area Classified in "Poor" Condition
System Performance (PM-3)	▪ Percentage of Reliable Person-Miles Traveled on Interstates ▪ Percentage of Reliable Person-Miles Traveled on Non-Interstate NHS ▪ Interstate System Truck Travel Time Reliability Index ▪ Annual Hours of Peak Hour Excessive Delay per Capita ▪ Percentage of Non-Single Occupancy Vehicle (SOV) Travel ▪ On-Road Mobile Source Emissions Reduction for CMAQ-Funded Projects

Source: FHWA

Table 10: Northwest Region – Baseline and Target Values for Safety (PM-1)

Performance Measure	Five-Year Rolling Averages	
	Baseline 2018-2022	Target 2020-2024
Number of Fatalities	36.0	40.5
Fatality Rate	1.601	1.827
Number of Serious Injuries	105.0	97.8
Serious Injury Rate	4.670	4.412
Number of Non-Motorized Fatalities and Serious Injuries	13.0	12.3

Source: PennDOT Note: Future VMT estimated to hold steady over the next several years

Table 11: Statewide Baseline and Target Values for System Condition (PM-2)

Performance Measure	2021 Four-Year Target	2021 Four-Year Performance	Target Met
Percentage of Pavements of the Interstate System in Good Condition	60.0%	68.8%	Yes
Percentage of Pavements on the Interstate System in Poor Condition	2.0%	0.4%	Yes
Percentage of Pavements of the Non-Interstate NHS in Good Condition	33.0%	49.0%	Yes
Percentage of Pavements of the Non-Interstate NHS in Good Condition (Full Distress + IRI)	5.0%	15.2%	Yes
Percentage of Pavements of the Non-Interstate NHS in Poor Condition	26.0%	27.5%	Yes
Percentage of Pavements of the Non-Interstate NHS in Poor Condition (Full Distress + IRI)	6.0%	4.4%	Yes
Percentage of NHS Bridges in Good Condition	89.5%	92.8%	Yes
Percentage of NHS Bridges in Poor Condition	87.4%	92.6%	Yes

Source: PennDOT

Table 12: Northwest RPO Region Reliability Performance (PM-3)

Performance Measure	2017	2018	2019	2020	2021
Interstate Reliability	100%	100%	100%	100%	93.3%
Non-Interstate Reliability	87.5%	91.5%	91.8%	85.3%	82.0%
Truck Travel Time Reliability Index					
Northwest RPO	1.18	1.32	1.17	1.13	1.46
Pennsylvania	1.34	1.39	1.36	1.23	1.30

Source: PennDOT

Note: The statewide baseline target for Truck Travel Time Reliability (TTTR) in 2021 was 1.30, and is anticipated to remain relatively consistent from year to year. The 2023 Two-Year Target and 2025 Four-Year Target value of 1.40 was set using the trends from 2017 to 2021, with a cushion to accommodate yearly fluctuations. The target also considers increased freight and more road construction impacting performance. PennDOT anticipates performance will move closer to the levels seen prior to the COVID-19 pandemic.

Public Engagement

2050 Long-Range Transportation Plan

Northwest COMMISSION

Overview

- The RPO's transportation program is characterized by public participation as part of the regional transportation planning process.
- For this LRTP update, the Northwest PA RPO leveraged the work of the State Transportation Commission (STC) in collecting information on public preferences for the regional transportation system. The survey was administered as part of the STC's work on the biennial update of Pennsylvania's 12-Year Program.
- The survey included five main sections: demographics; data on how the respondent travels; a priority rating among 10 categories; an interactive map to record a transportation need or concern; and the opportunity to allocate a hypothetical budget across various types of transportation investments.

Demographics

- A total of 124 people within the region responded to the survey, a slight increase from the 90 who participated in 2021. A majority of survey respondents were in the 35-44 or 55-64 age ranges, and just over half (54 percent) were female.
- Survey respondents were evenly distributed across the region, with Forest County and Venango County being slightly overrepresented (Figure 35).

Budget Allocation

- Each respondent was asked how they would invest a hypothetical $100 across six broad categories: Maintenance/Preservation, More Lanes/New Roads, Ride More/Drive Less, Bicycling/Walking, Technology, and Economic Support. While all areas received support, respondents designated the largest shares to Maintenance (34 percent) and Technology (19 percent), as shown in Figure 36.

Transportation Modes

- Survey respondents were asked how often they use nine different modes of transportation: Aviation, Bicycling, Carpool/Ride Share, Drive Alone, Motorcycle, Other, Passenger Rail, and Public Transit.
- Most respondents indicated that they drive alone every day, and driving alone is the predominant means of travel in this largely rural region. In Warren County, many respondents never use public transit or passenger rail (78 percent and 94 percent), respectively; in Venango County, more than 90 percent never use public transit or passenger rail.

Transportation Priorities

- Survey respondents identified their transportation infrastructure priorities by allocating 20 stars among 10 categories. Each option allowed for a ranking between one (lowest priority) and five stars (highest priority). The top four rated "five stars" were:
  - Road Pavement – 29 percent,
  - Bridges – 15 percent,
  - Interstate Highways – 15 percent, and
  - Traffic Flow – 10 percent.

Figure 35: Survey Responses by County Population Share

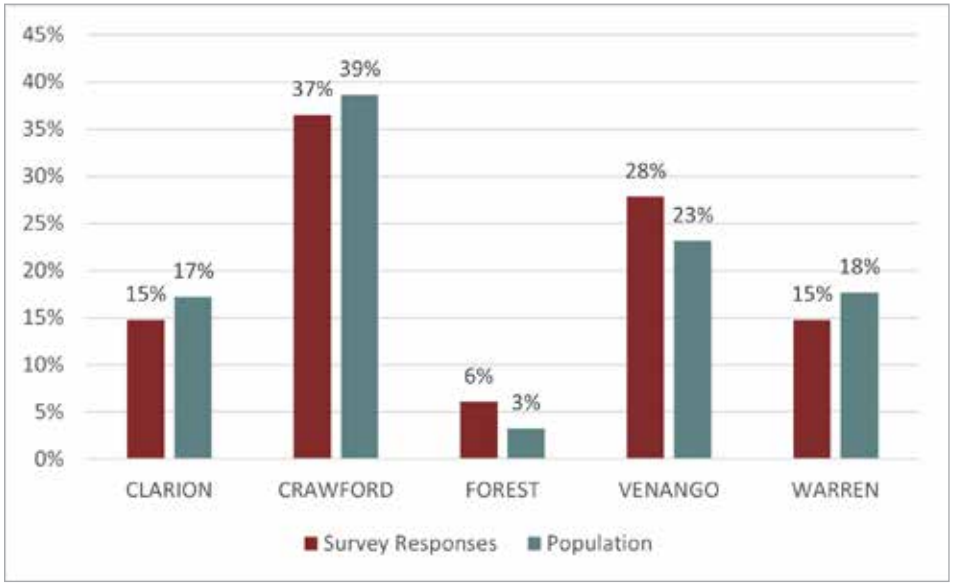
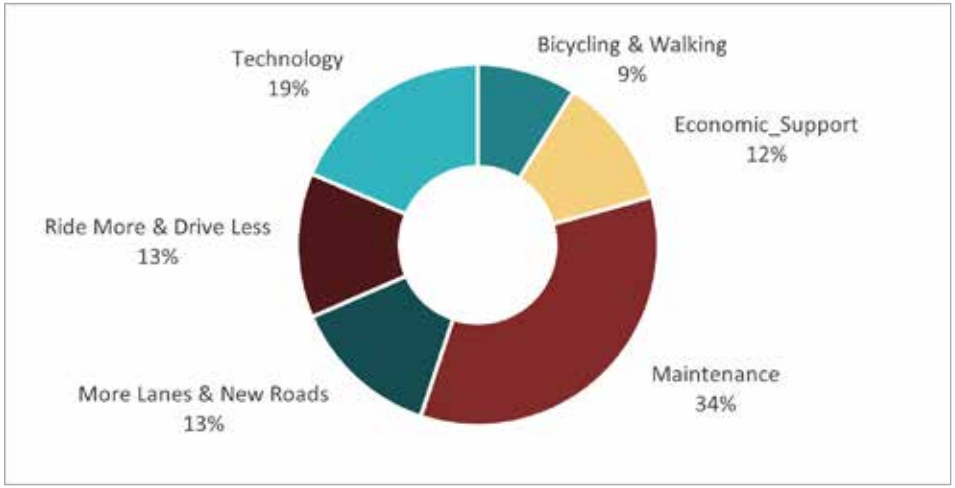


Figure 36: Survey Respondents' Priority Investment Areas



Interactive Map: Identifying Transportation Issues

- The survey included an interactive map that allowed respondents to drop "pins" and describe their transportation concerns. In the Northwest region, 38 comments were received on the interactive map (Figure 37). A majority of the interactive map comments were placed within Crawford County, which received 21 comments in total. Figure 38 presents a "word cloud," where the words used most frequently in the descriptions of transportation issues appear the largest in the graphic.
- The comments covered a wide range of topics, including road maintenance, bridge repair, intersection hazards, and trail connectivity. Roadway corridors mentioned most frequently were PA 77, PA 666, PA 8, PA 18, US 6, and US 62.

Figure 37: Interactive Map Pins by Category

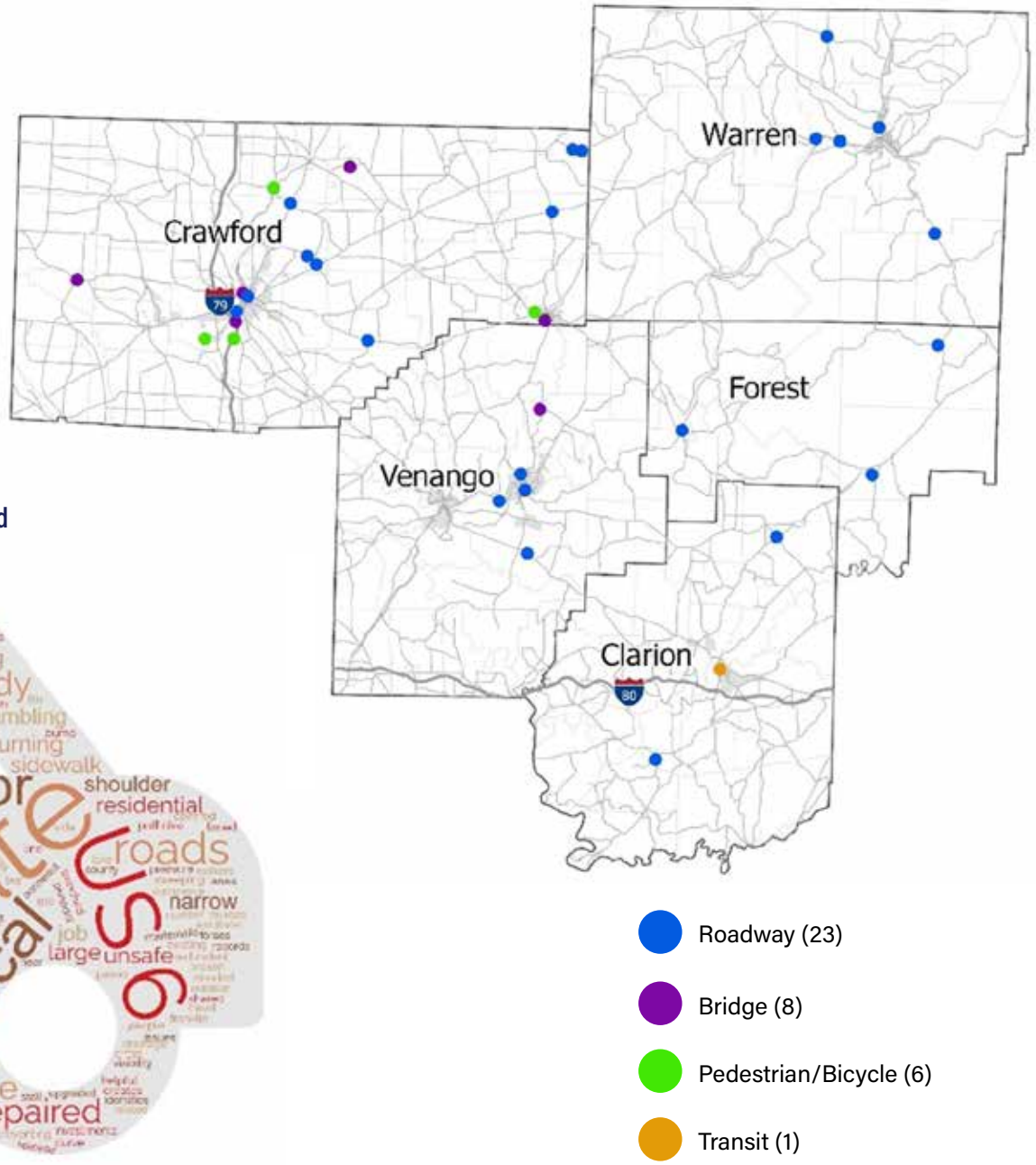


Figure 38: Transportation Issues Word Cloud

Strategic Directions

2050 Long-Range Transportation Plan

Northwest COMMISSION

Introduction

The Northwest RPO LRTP's strategic directions aim to articulate the region's transportation priorities. The goal areas listed to the right will be used as a guide for projects and actions in the future. These principles are directly linked to transportation needs and issues in the region.

The strategies outlined in this section complement and expand upon those already established in previous county plans. The RPO, in conjunction with its partners at the local, county, state, and federal levels, as well as the public, will be guided by the long-range transportation plan when implementing these strategies.

- Asset Management
- Travel and Tourism
- Transit Mobility
- Environment and System Resiliency
- Economic Development Planning
- Bicycle and Pedestrian Accommodation
- Safety and Security
- Highway and Bridge

Interstate 80, Exit 29, Venango County

Asset Management

Proper maintenance of the region's transportation assets is vital for ensuring their optimal performance, longevity, and cost-effectiveness. The public too has recognized the importance of system maintenance, as it was the highest need identified during the State Transportation Commission's (STC's) biennial statewide transportation survey. PennDOT and the RPO have made progress implementing a lowest life-cycle cost (LLCC) approach for project and investment decision-making, as required by FHWA.

Maintain roadway pavements.

- The RPO will continue to work with PennDOT to maintain the region's roadways at an acceptable condition by using a data-driven approach to asset management.

Assist municipalities and counties in maintaining local infrastructure.

- Many municipalities, particularly those in rural areas, have difficulty meeting local match requirements for state and federal grants and programs. Repairing and replacing poor-condition bridges is crucial for ensuring public safety. The RPO has placed a high priority on this initiative.
- The RPO will educate municipal officials regarding funding options and opportunities. Without adequate maintenance and reinvestment, the region's aging bridge infrastructure could worsen. Use of Act 89 funding sources for transportation, such as the $5 local use fee or retro reimbursement program, can help municipalities fund local bridge improvements.

Pennsylvania Avenue, Warren

Travel and Tourism

In recent years, federal transportation policy has evolved to include considerations of travel and tourism in long-range transportation planning. The RPO acknowledges the significance of travel and tourism in the region and the importance of making the system easy for visitors and tourists to use in accessing the region's numerous destinations. The Northwest Commission's Comprehensive Economic Development Strategy (CEDS) Plan includes strategies related to tourism development and promotion.

Coordinate with tourism agencies during project design.

- The PennDOT Connects program, initiated in December 2016, seeks input on local priorities as state transportation projects are being planned and designed. The RPO will continue its collaboration with PennDOT and local project sponsors to ensure that considerations related to travel and tourism are included in the project development and delivery processes.

Support infrastructure projects that create or enhance connections to the region's major travel destinations, including its state parks and national forests.

- To enhance the quality and connectivity of the region's trails, the RPO will collaborate with stakeholders who are invested in these areas. By improving connectivity to trails such as the Ernst Trail and the Erie to Pittsburgh Trail, more travelers will be attracted to these community assets, boosting the local economy.

PA 666, Forest County

Transit Mobility

Public transportation services are important in fostering regional mobility, access, and equity. Ridership has yet to fully recover from the impacts of the COVID-19 pandemic in 2020; however, transit service in the region continues to adapt and evolve. The LRTP advances priority actions to increase mobility throughout the region by promoting improvements and enhancements to public transportation.

Support improvements to fixed-route and human-service transportation.

- The RPO will continue to work with the region's public transit providers to plan for fixed-route and human-service (shared-ride) transportation. Engaging municipalities in the transportation planning and programming processes is important and beneficial for optimizing service and gauging demand. Maintaining the region's Local Coordinated Plan is an important part of this challenge.

Improve public transit connectivity and equity.

- The RPO will encourage collaboration among public transit agencies, as well as private and non-profit transportation providers, to find ways to connect underserved communities and disadvantaged populations with larger public transit systems and essential services. This could include strategies such as expansion of on-demand microtransit service to underserved communities and/or assessment of replacing underperforming fixed routes with on-demand microtransit.

Implement the recommendations of the RPO's Micromobility Study.

- In February 2023, the RPO initiated development of a Micromobility Feasibility Study. The report culminated with several options for services that could enhance mobility and transportation access for riders who walk or bike around northwestern Pennsylvania. The RPO will continue to collaborate with the region's transit providers and stakeholders to implement the recommendations of the study and provide innovative solutions for providing public transportation.
- Micromobility is a general term that refers to a small, low-speed, human- or electric-powered transportation device. Existing micromobility initiatives in the region include CATA's bikeshare program, which began in 2021. The bikeshare is funded by a non-profit organization it controls. The RPO will continue to support CATA and other transit providers on these initiatives and others identified within the 2023 Micromobility Feasibility Study.

Encourage transit-oriented development.

- The RPO and its member counties will encourage municipal officials to consider land development plans that support the use of public transportation and other sustainable transportation modes.

Liberty Street, Franklin

Environment and System Resiliency

Transportation can have an enormous impact on the environment, and vice versa. Addressing these issues maximizes the resiliency of the natural and built environments. The RPO will work with environmental resource agencies at all levels (local, state, federal) to avoid, minimize, and mitigate impacts from transportation projects on the environment. The RPO's ongoing involvement in the PennDOT Connects process will further facilitate the identification of potential impacts of projects earlier in project delivery so that agencies can be contacted for review and comment on strategies to reduce negative impacts.

Support transit services' transition to alternative fuels.

- Increasing the number of vehicles using alternative fuels is beneficial for the environment. As outlined in the agency's Climate Action Plan, CATA has a strategic goal of converting 80 to 100 percent of its transit fleet (both fixed-route and paratransit) to operate on alternative fuels within the next five years. The RPO will support these goals by planning for infrastructure projects that support the implementation of alternative fuels.

Protect Threatened & Endangered Species.

- If a transportation project or program impacts critical environmental resources, the RPO will maintain its support for county- and municipal-level conservation initiatives aimed at improving environmental quality, preserving natural land connectivity and habitat corridors, and protecting agricultural land.

Educate municipal officials on stormwater management.

- Roadway management and resiliency are important to the roadway network's function—flooding can compromise a network and increase disruptions. The RPO will work with municipalities to develop a further understanding of Municipal Separate Storm Sewer System (MS4) strategies to reduce the negative impacts caused by stormwater.

Encourage the development of electric vehicle (EV) infrastructure.

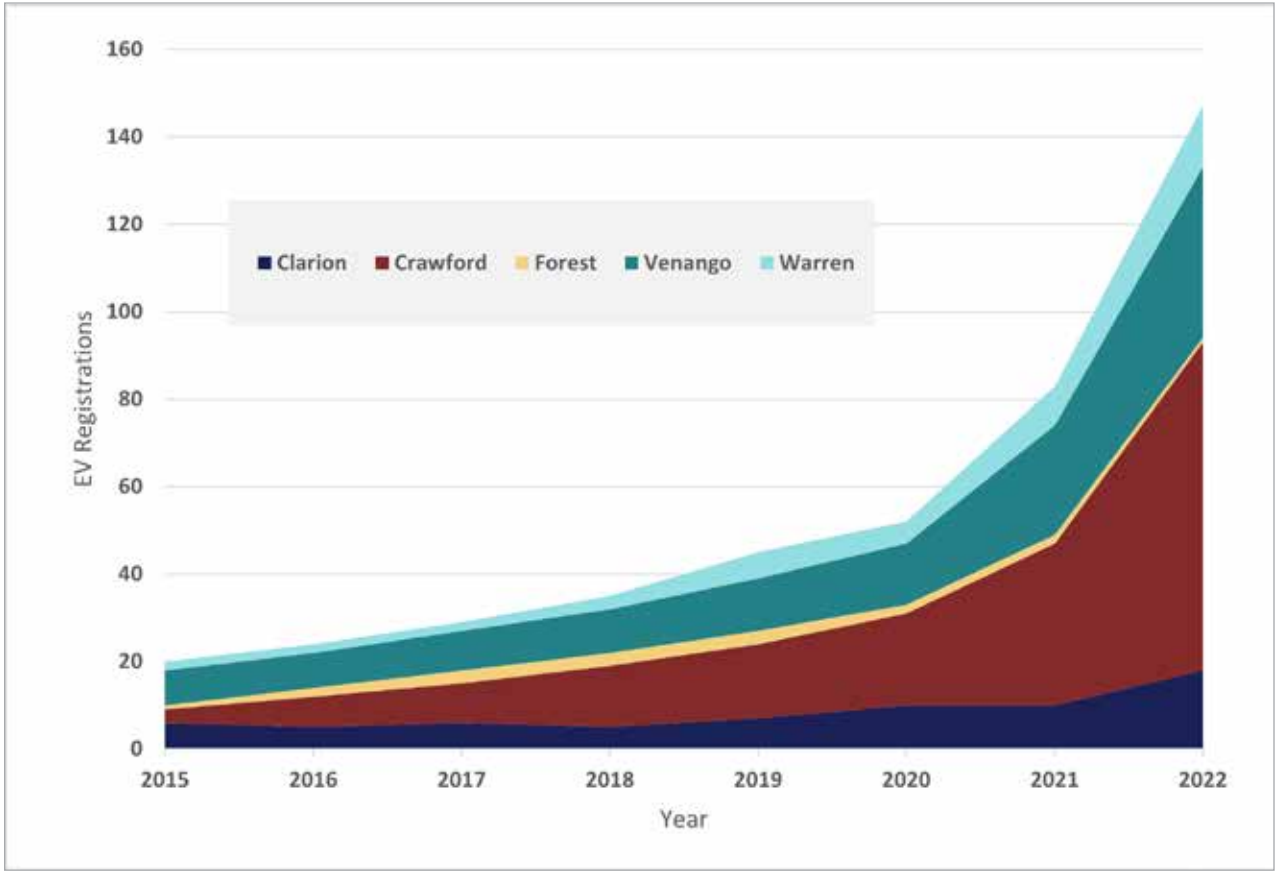
- PennDOT completed its first National Electric Vehicle Infrastructure (NEVI) plan in July 2022. Pennsylvania will receive $171.5 million in dedicated formula funding over the first five years of the NEVI Formula Program. As a next step, the RPO is considering the potential of administering a study to identify priority corridors and locations for EV charging station sites. Over the near term, PennDOT has identified Alternative Fuel Corridors

Sandy Creek Trail, Rockland Twp, Venango County

(AFCs), including Interstates 79 and 80, for EV charging station development. The RPO can play a role in facilitating this initiative.

- The RPO will encourage development of a comprehensive regional strategy to provide EV charging stations, with implementation at the municipal and county levels. Crawford County, for example, is examining EV considerations, funding, and partnerships as part of its comprehensive plan.

Figure 39: Electric Vehicle Registrations, 2015-2022



Source: PennDOT

Economic Development Planning

Maintaining and strengthening the region's economic vitality is an important priority. Transportation is one of the most important services that government provides. The Appalachian Regional Commission (ARC) has categorized Forest County as a Distressed County[2] (the only county in Pennsylvania with that designation), and the Crawford County communities of Bloomfield, Centreville, Titusville, Meadville, Rome, and Sparta as Distressed Areas. A portion of Oil City is also considered a Distressed Area.

Give funding priority to the region's CRFCs.

- The region designated several roadway segments as Critical Rural Freight Corridors (CRFCs), roadway segments that are eligible for National Highway Freight Program (NHFP) funding. These designations were certified by FHWA in February 2019 and are reserved for segments that provide important first- and last-mile connections to major shippers and receivers of raw materials and finished goods.

Advocate for good land use management practices and design.

- There are 145 municipalities in the Northwest PA region. A large majority of these municipalities do not maintain a comprehensive plan (47 percent) or a zoning ordinance (71 percent). Only 37 percent have a planning commission, and only 28 percent have a zoning hearing board. Good land use management is needed to protect the investments that the state and federal governments have made in the transportation system.

Work with the Pennsylvania Broadband Development Authority (PBDA) to secure high-speed Internet access for all areas.

- Areas throughout the region that lack adequate high-speed Internet access are disadvantaged when it comes to attracting workers for jobs, business, and other needs. Additionally, not having reliable Internet access can impede an individual's participation in community initiatives. Working to improve broadband development will help the region's economic competitiveness and equity goals.

Develop a "public funding road map" to help municipalities understand ways to engage state agencies in pursuing transportation grant funding.

- The passage of IIJA/BIL has created an abundance of funding opportunities for state and local jurisdictions seeking to invest in transportation. However, approximately 40 percent of the dollars available are through competitive grants, requir-

Liberty Street, City of Franklin

2 The ARC defines a "distressed county" as "the most economically depressed counties, ranking in the worst 10 percent of the nation's counties" (https://www.arc.gov/distressed-designation-and-county-economic-status-classification-system/#:~:text=Distressed%20counties%20are%20the%20most,percent%20of%20the%20nation's%20counties).

ing state and local matching funds and labor-intensive grant application development. A "road map" is needed to help guide municipalities seeking to engage PennDOT, the PA Department of Community and Economic Development (DCED), DCNR, and other state agencies for grants in support of transportation.

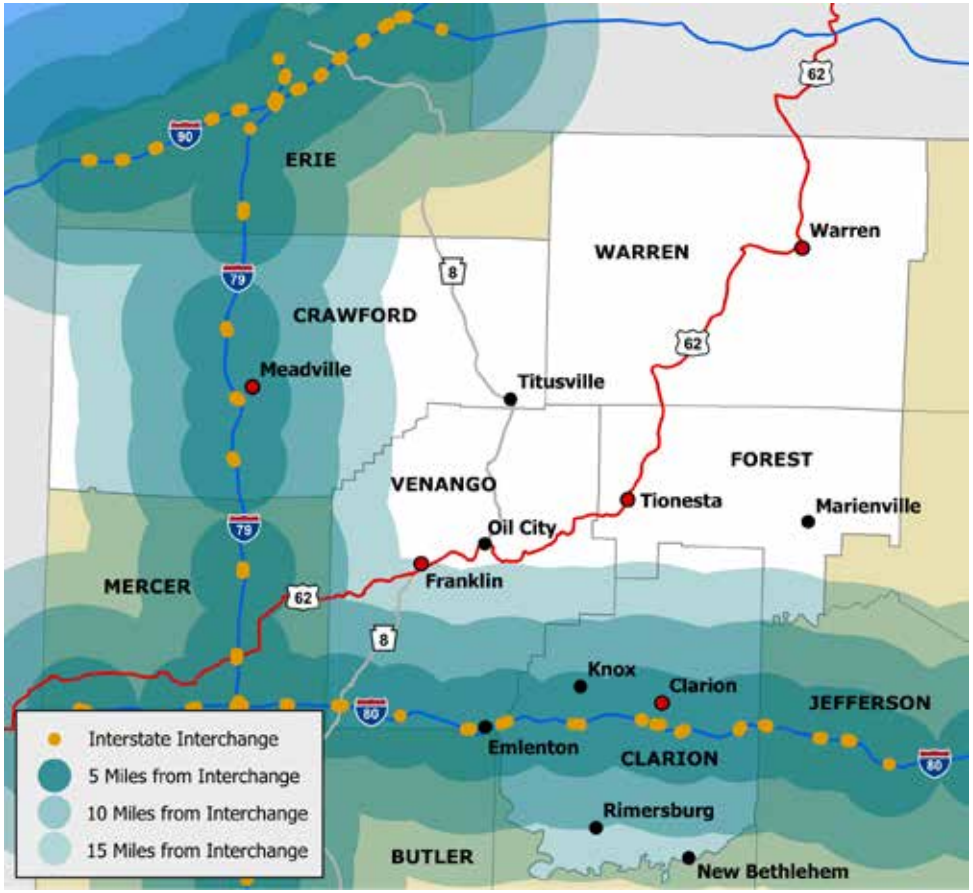
Educate and help municipalities obtain grant funding.

- Many of the region's municipalities do not have the staff support necessary to pursue available grant funding opportunities. The RPO will collaborate with agencies that offer assistance such as the Appalachian Regional Commission (ARC's) "Getting the Grant" program to help prospective applicants prepare applications for ARC's funding opportunities such as ARISE, INSPIRE, and POWER.

Improve access to the Interstate Highway System.

- The region is served by 55.2 linear miles of Interstate highway which currently supports 1.23 million vehicle-miles of travel daily. Interstates 79 and 80 connect the region to the national and global economy, yet a large majority of the region is remote and without direct access to this network. A key corridor of interest to the RPO includes US 62 from Warren to I-86 in New York State's Southern Tier. This corridor connects Warren County, a hub for mining and manufacturing, to the Interstate system (Figure 40).
- A second corridor of interest to the RPO includes that of PA 8 from the City of Franklin to Interstate 80. The corridor in 2018 was the subject of a study to identify issues related to the roadway, including existing and future traffic operations, safety, pavement conditions, and support of the region's economy.

Figure 40: Interstate Accessibility



Continue implementing the recommendations of the RPO's Regional Freight Study (2017).

- Key action strategies from the RPO's Regional Freight Study included initiatives related to truck parking, at-grade railroad crossing safety, and road safety audits on select NHS routes.
- Improving incident management along the region's Interstates is a major strategy within the Regional Freight Study to detect, respond to, and clear traffic incidents so that traffic can resume normal flow and operation.

Construct truck climbing lanes.

- There are many steep slopes within the region, which can pose difficulties in transporting heavy loads of freight by truck. Incorporating truck climbing lanes in these areas will alleviate congestion caused by heavy trucks slowly climbing steep grades along freight corridors. Several counties within the region have identified routes in need of a truck climbing lane, such as PA 948 in Forest County; PA 27 north of Pleasantville, Venango County; and PA 59 in Warren County.

Bicycle and Pedestrian

Creating walkable and bikeable networks in rural areas can be challenging due to the distances involved and the characteristics of rural roadways. The LRTP offers recommendations to improve network connectivity, safety, and overall use of the system. Since the COVID-19 pandemic, demand for active transportation has increased in the region and beyond.

Pursue policies to improve bicycle and pedestrian accessibility and walkability in downtown areas.

- The RPO will collaborate with localities to conduct Complete Streets studies to identify gaps and deficiencies in the pedestrian and bicycle networks.
- The PA WalkWorks initiative could also serve as a resource in policymaking for active transportation safety, mobility, and access.

Coordinate with the "Main Street" revitalization efforts to develop and enhance active transportation networks in those areas.

- The Northwest Commission's CEDS identifies a plan for "Main Street" revitalization efforts that will help small businesses upgrade their facades in addition to responding to and recovering from the impacts of the COVID-19 pandemic. Helping these identified areas develop multimodal infrastructure, including biking and walking networks, will benefit the local economy and the safety of all network users.

Install necessary bicycle infrastructure.

- The RPO supports the provision of bicycle-related infrastructure. For example, equipping fixed-route buses with bicycle racks and storage may help encourage bike riders to use transit, allowing them to use their bicycle for the first and last mile. Additionally, installing bicycle racks and amenities in downtown areas, including fixed-route transit shelters and transfer points, can promote biking as a reliable mode of transportation.
- The RPO supports the expansion of regional bikeshare services offered through CATA and the Northwest Pennsylvania Mobility Alliance to connect recreational trails, state parks, and downtown areas throughout the region with public bikeshare services.

Develop "Active Transportation" committees in each county to help guide bicycle/pedestrian planning efforts at a local level.

- Encouraging the use of bicycle and pedestrian networks is best achieved through improved connectivity. Counties and municipalities can more inclusively focus on networks through the development of an Active Transportation Committee in their area to improve these linkages. The RPO supports this initiative.
- In Crawford County, there is strong backing for a trail network that integrates recreational trails and active transportation, complete with amenities that connect to other modes of travel. A local employer supports establishing a multimodal infrastructure that enables young employees to walk or bike to work.

Diamond Park, Meadville

Safety and Security

Safety is the RPO's top priority across all modes of transportation. The region's safety record has been continually improving, with total crashes and roadway fatalities continuing to trend in a positive direction. Continuing to see a decrease will require the RPO to employ strategies like education and improved traffic operations. The RPO will continue to work with PennDOT and other organizations to improve system safety.

Work with PennDOT and other partners to incorporate new technologies into the transportation network.

- Technology can offer improvements to transportation safety and efficiency. This includes the installation and timing of traffic signals and cameras, data collection for operations and maintenance, and enhancements to transit systems such as the communication of real-time information (e.g., "Find My Bus").

Perform road safety audits.

- Corridors and intersections of safety concern can be evaluated for potential low-cost improvements to reduce crashes through the Road Safety Audit (RSA) process. The RPO will coordinate with local municipalities, counties, and PennDOT to conduct RSAs in areas in need of safety improvement. RSAs also assist in identifying candidate projects for the Highway Safety Improvement Program.

Improve safety for non-motorized modes of transportation.

- The RPO will address non-motorized safety concerns through the PennDOT Connects and project development processes. Multimodal transportation needs (beyond highway and bridge) are critical to consider during project planning to enhance the safety of all users.

Assess safety factors related to horse-and-buggy travel.

- The Northwest PA region has several areas with a high concentration of Amish residents. Safety issues related to horse-and-buggy use of the roadway network need to be addressed during project development and design to reduce conflicts with other modes of transportation. The RPO will consider accommodations for horse-and-buggy travel where feasible during roadway planning and design.

Evaluate highway crash cluster areas.

- The RPO will partner with PennDOT to assess crash data and identify roadway corridors and intersections in need of safety improvement. Identifying these locations through a data-driven process will assist both the RPO and PennDOT in identifying candidate Highway Safety Improvement Program (HSIP) projects, potential RSA locations, and areas that could benefit from further study.

SR 2005 Creveling Road,
Fairfield Township, Crawford County

PA 68, Monroe Township, Clarion County

Address truck parking along Interstate routes.

- The availability of adequate truck parking improves safety for all roadway users by enabling drivers of heavy trucks to meet federal requirements for rest and reducing illegal and dangerous truck parking along ramps and shoulders. On a national level, truck parking has been an area of concern for some time. In the Northwest PA region, Interstate 80 is a high-truck-traffic corridor that could benefit from having easy access to more truck stops and public rest areas. To get a better understanding of truck parking needs along the corridor, the RPO could analyze the closed weigh station between Knox and Shippenville on I-80 to gauge its potential as a future truck parking location.
- The State Transportation Advisory Committee (TAC) conducted a statewide analysis on truck parking in 2023. The assessment examined trends in truck parking capacity and utilization throughout the state to identify areas of parking need. As a result of the study, one segment within the Northwest RPO region was identified as a priority location: an eastbound segment of Interstate 80, immediately west of exit 53 in Beaver Township, Venango County.

Assess at-grade railroad crossing safety.

- According to the Federal Railroad Administration (FRA), 94 percent of rail-related fatal and injury crashes occur at at-grade railroad crossings (https://railroads.dot.gov/highway-rail-crossing-and-trespasser-programs/railroad-crossing-safety-trespass). To address at-grade railroad crossing safety in the region, the RPO and PennDOT could collaborate with the Pennsylvania Public Utilities Commission's (PUC's) Rail Safety Section as it conducts safety inspections for compliance with FRA regulations.

Highway and Bridge

The region's highway and bridge network is essential for maintaining connectivity and mobility. The roadway network supports many types of travel to various destinations, including interstate, regional, and local access to jobs, education, medical care, retail, and recreational facilities. The RPO will continue to work with PennDOT, its five counties, and transportation stakeholders on asset management programs and projects to maintain the system at an acceptable operating condition.

Implement technology to optimize travel time and safety.

- Technology-based improvements will help the RPO and PennDOT meet safety and travel-time performance measures. Technology can provide real-time travel updates and data that can be utilized for traffic studies. There are several technologies that can help improve traffic safety and operations, such as adaptive and connected traffic signals and traveler information systems that provide weather and incident warnings. To implement these technologies, the RPO will use the Regional Operations Plan (ROP) as a resource to continue its collaboration with PennDOT, counties, municipalities, and other stakeholders to plan and secure funding for technological advancements.

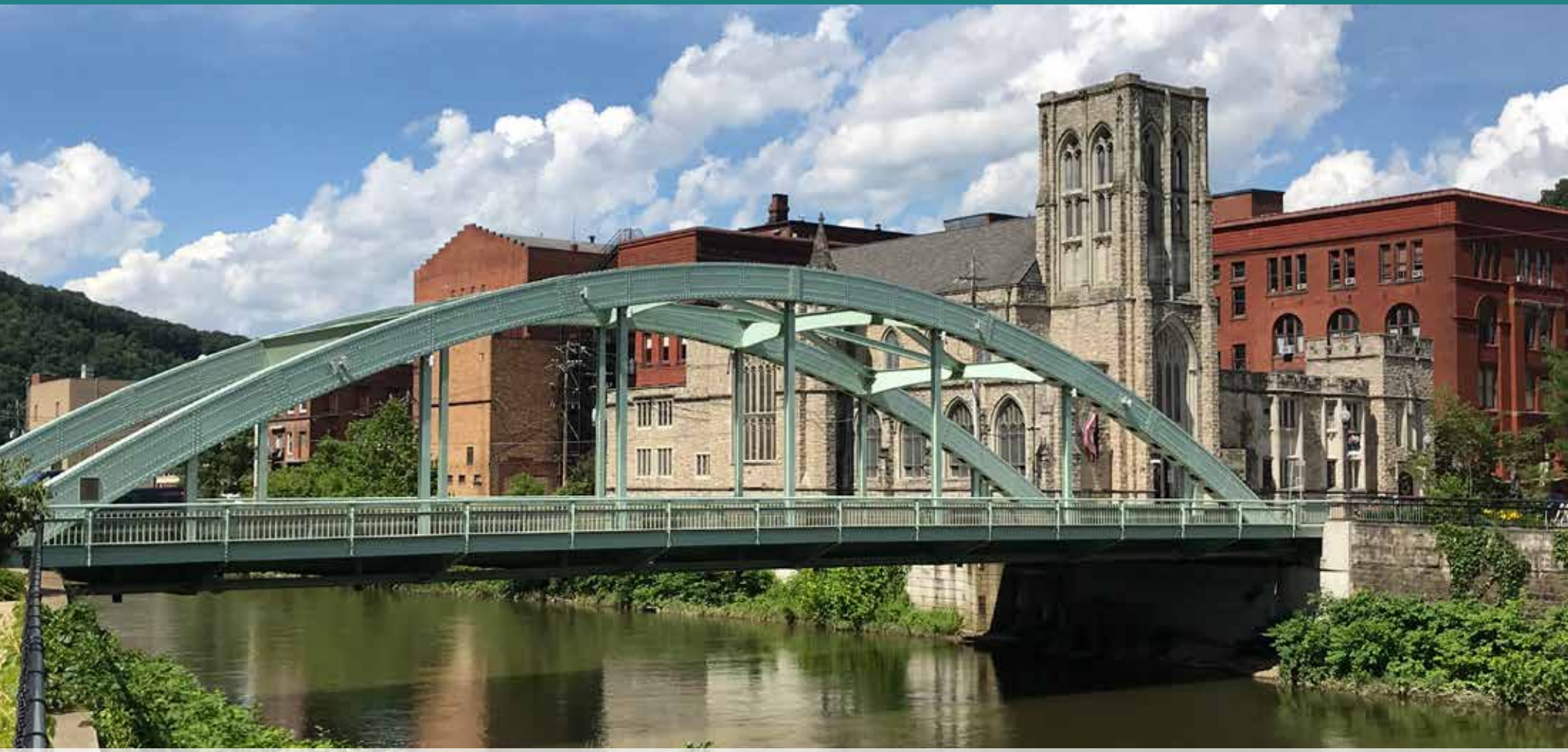
Revisit the 2016 County and Municipal Redundant Bridge Inventory Report for currency.

- The RPO's Redundant Bridge Inventory Report identified a portfolio of structures as candidates for closing. Bridges were identified based on numerous criteria, including annual average daily traffic (AADT), detour length, and other ratings. The listing of certain structures within the report may make it difficult for municipalities that are seeking to obtain non-state or federal grant funding for bridge improvements to those structures. Revisiting the 2016 study will equip the RPO with a refined list of "redundant" structures and may remove from the list certain bridges that may be of high priority to local communities.

Support Traffic Incident Management (TIM) and the improvement of first-responder response times.

- Roadway incidents often require detours and cause delays on major roadways. The resulting congestion leads to deterioration in the region's mobility. Some of the RPO's stakeholders noted that incident management needs to be improved on I-80, with congestion concerns specifically noted in Clarion, Strattanville, and Knox.
- Further, the RPO can coordinate with local communities and first responders to enhance existing response practices.

US 62 over the Allegheny River, Tionesta Township, Forest County



Center Street Bridge carrying Business PA 8 over Oil Creek, Oil City

Identify pre-established detours in case of incidents on the Interstate.

- Incidents on the Interstate system have the potential to impact traffic on adjacent and lower-tier roadway networks. To enhance traffic operations and overall efficiency, the RPO can work with PennDOT and first responders in communities along the region's Interstates to identify pre-established detours and traffic operations strategies.

Monitor and implement the recommendations of the RPO's special studies.

- The RPO has administered studies of the PA Route 27 corridor in eastern Crawford County and the half interchange of US 6 in Warren County. To improve congestion and safety along these corridors, the RPO will incorporate the recommendations of both studies into the LRTP for consideration in future TIP cycles.

Revenue Forecast

2050 Long-Range Transportation Plan

Northwest COMMISSION

Overview

- The LRTP includes a forecast of the amount of revenue the RPO could reasonably expect to receive over the LRTP planning horizon. The forecast draws from available Financial Guidance documentation from PennDOT.
- Statewide, funding for highways and bridges is $754 million higher over the first four years (2025-2028). This is attributed to a greater funding allocation from the Motor License Fund for transportation investments and a reduction in the amount budgeted to the Pennsylvania State Police (PSP) from the Motor License Fund.
- Federal funds for 2025 and 2026 reflect expected apportionments through IIJA/BIL and are conservatively assumed to remain flat over the remaining years of the LRTP period due to unknowns surrounding reauthorization legislation after FFY 2026.
- The forecast includes funding from new formula programs created by IIJA/BIL, such as the new PROTECT and Carbon Reduction Program (CRP). Under the CRP, PennDOT will distribute funding based on a combination of vehicle-miles traveled, lane-miles, and vehicle registration data.
- Federal funds are distributed through formulas and policy decisions made by PennDOT's Financial Guidance Work Group. Funding distributions by funding type for the Northwest region are shown within this section.
- In lieu of specific projects, line-item amounts were determined for the plan's "out years" (2035-2050) in consultation with PennDOT and FHWA. The RPO used PennDOT's Financial Guidance documentation for the 2025 program to determine the shares of funding to go toward three project types: Roadway, Bridge, and Safety. These shares are based on the funding available for specific funding programs and remain within the forecasted revenue to ensure fiscal constraint.

Table 13: Revenue Forecast

Planning Period	Forecasted Funding
Transportation Improvement Program (TIP) (2023–2026)	$233,879,357
Twelve-Year Program (TYP) (2023–2034)	$638,505,357
Long-Range Transportation Plan (LRTP) (2023–2050)	$1,511,610,357

Source: PennDOT

Figure 41: Northwest RPO's Transportation Revenue (Historical and Forecasted)

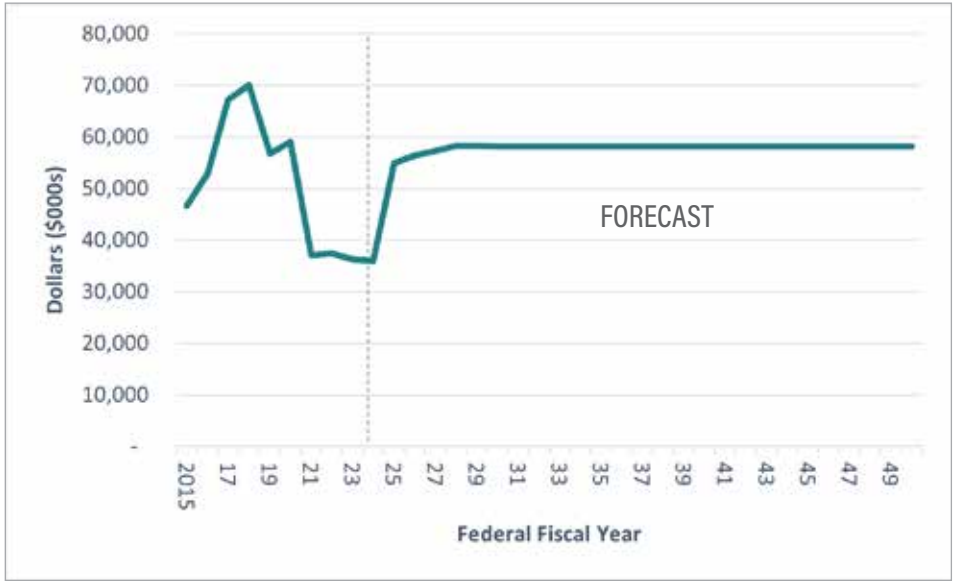
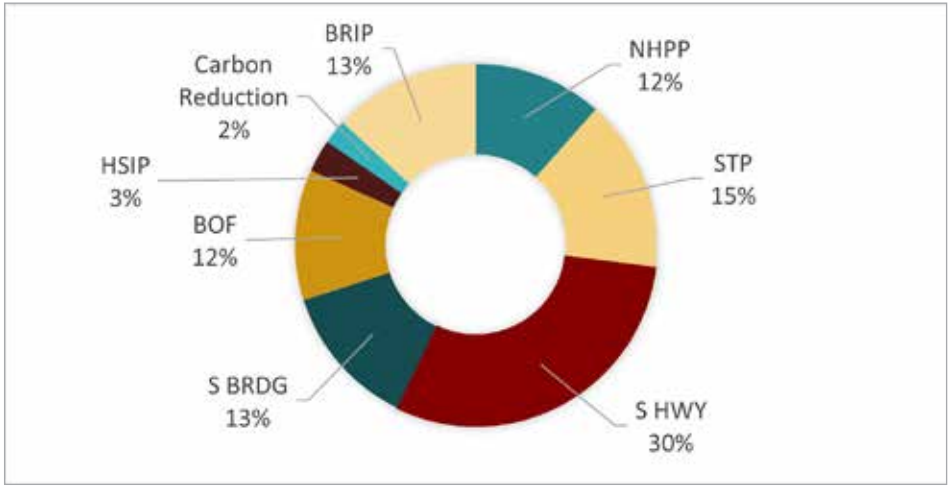


Figure 42: Forecasted Twelve-Year Program Revenue Shares



(funding program definitions next page)

TIP and TYP revenues reflect actual revenue numbers as of October 30, 2023. In addition to base allocations documented in PennDOT's financial guidance, the RPO has received federal funding in addition to its formula funds through discretionary programs (e.g., Bridge Off-System, Transportation Alternatives, Carbon Reduction Program) and earmarks for active projects. Northwest also receives a regional allocation for the Rapid Bridge Replacement Program which is shown separately from the State Highway and State Bridge funding distributions. LRTP revenue (2034 through 2050) is forecasted based on PennDOT's financial guidance documentation and accounts for the TYP value.

Table 14: Funding Sources for 12-Year Program (thousands)

	Source	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Federal	NHPP	$8,341	$7,879	$6,976	$6,303	$6,303	$6,303	$6,303	$6,303	$6,303	$6,303	$6,303	$6,303
	STP	$8,725	$8,981	$8,978	$8,975	$8,975	$8,975	$8,975	$8,975	$8,975	$8,975	$8,975	$8,975
	BOF	$6,751	$6,751	$6,751	$6,751	$6,751	$6,751	$6,751	$6,751	$6,751	$6,751	$6,751	$6,751
	HSIP	$1,641	$1,686	$1,686	$1,686	$1,686	$1,686	$1,686	$1,686	$1,686	$1,686	$1,686	$1,686
	CRP	$1,220	$1,251	$1,251	$1,251	$1,251	$1,251	$1,251	$1,251	$1,251	$1,251	$1,251	$1,251
	BRIP	$7,610	$7,610	$7,610	$7,610	$7,610	$7,610	$7,610	$7,610	$7,610	$7,610	$7,610	$7,610
	Subtotal	$34,288	$34,158	$33,252	$32,576	$32,576	$32,576	$32,576	$32,576	$32,576	$32,576	$32,576	$32,576
State	Highway	$13,111	$14,727	$16,645	$18,258	$18,257	$18,253	$18,251	$18,247	$18,245	$18,242	$18,239	$18,235
	Bridge	$7,560	$7,557	$7,423	$7,420	$7,418	$7,415	$7,412	$7,408	$7,407	$7,403	$7,400	$7,396
	Subtotal	$20,671	$22,284	$24,068	$25,678	$25,675	$25,668	$25,663	$25,655	$25,652	$25,645	$25,639	$25,631
Total		$54,959	$56,441	$57,318	$58,253	$58,250	$58,244	$58,238	$58,231	$58,227	$58,220	$58,214	$58,207

Source: PennDOT Financial Guidance, 2025 Program

Funding Source Descriptions

NHPP . . . . . The National Highway Performance Program is distributed with 60 percent for highways and 40 percent for bridges. The Interstate Management Program continues to be managed on a statewide basis with programming of funds occurring centrally at PennDOT.

STP . . . . . The Surface Transportation Block Grant Program.

BOF. . . . . Funding for Bridge Off-System bridges is available for state- and locally owned structures that are over 20 feet in length and functionally classified as local and minor collectors.

HSIP . . . . . Funding for the Highway Safety Improvement Program comes from $12 million distributed evenly among Pennsylvania's urban and rural planning regions as a means of addressing system-level safety projects.

CRP. . . . . A new funding program created by the Bipartisan Infrastructure Law, the Carbon Reduction Program provides $10 million in funding for statewide Transportation Systems Management and Operations (TSMO) initiatives.

BRIP . . . . . The Bridge Formula Investment Program provides funding for the replacement, rehabilitation, preservation, or construction of highway bridges over 20 feet in length.

State Highway . . State Highway funds are distributed based on regional share of VMT (25 percent), truck VMT (25 percent), and lane-miles (50 percent).

State Bridge . . . . PennDOT allocates state bridge funding for state-owned bridges over eight feet in length and locally owned bridges over 20 feet in length.

Appendices

2050 Long-Range Transportation Plan

Northwest
COMMISSION

Appendix A: Financially Constrained Project Listing

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
			Roadway					$628,635,600
			Bridges					$187,717,575
			Safety					$56,751,825
			Regional Line Item Totals					**$873,105,000**
CLARION COUNTY								
		70209	Clarion Hwy/Bridge Line	C	HRST	$1,685,993		
		70209	Clarion Hwy/Bridge Line	C	BRDG	$394,000		
		70209	Clarion Hwy/Bridge Line	C	HRST	$1,070,414	$335,969	
		70209	Clarion Hwy/Bridge Line	C	SAMI	$619,764	$2,351,783	
		70209	Clarion Hwy/Bridge Line	C	BRDG	$1,118,222		
		118370	Sligo Pedestrian Bridge	P	TENH	$32,000		
		118370	Sligo Pedestrian Bridge	C	TENH	$614,500		
		119693	D10/Clarion Carbon Reduction Line Item	C	HCON	$412,000		
		120140	Clarion Area Congested Corridor Improvements	+P	HCON	$600,000		
	381	118364	Brady Tunnel Rehabilitation	C	TENH	$458,000		
	381	118364	Brady Tunnel Rehabilitation	C	TENH	$2,000,000		
28		25160	SR 28 Hawthorn Bridge #3	+P	BRDG		$200,000	
28		25160	SR 28 Hawthorn Bridge #3	+F	BRDG		$250,000	
28		25160	SR 28 Hawthorn Bridge #3	+U	BRDG		$30,000	
28		25160	SR 28 Hawthorn Bridge #3	+R	BRDG		$49,809	
28		25160	SR 28 Hawthorn Bridge #3	C	BRDG		$1,295,120	

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
28		111828	Clarion Co. Department Force Bridge Maintenance	C	BRDG	$476,200	$880,000	
28		117321	SR 28 Hawthorn Bridge #1 Latex Epoxy	+C	BRDG		$176,603	
28	311	117319	SR 28 Hawthorn Bridge North PM	C	HRST		$1,489,600	
28	352	117212	Clarion Bridge Epoxy Group	C	BRDG	$581,175	$67,525	
36		100156	PA 36 Frills Corner North	C	HRST		$2,810,710	
36		117322	Cooksburg Bridge Rehabilitation and Latex	P	BRDG		$107,523	
36		117322	Cooksburg Bridge Rehabilitation and Latex	F	BRDG		$107,522	
36		117322	Cooksburg Bridge Rehabilitation and Latex	C	BRDG		$1,868,804	
36		117329	SR 36/SR 208 Ramp Removal	C	SAMI		$200,000	
66	ST1	120043	District 10/NW High Friction Surface Treatment	C	SAMI	$675,000		
66		99593	New Bethlehem North PM	+C	HRST		$3,171,331	
66		115141	SR 66 I 80 North PM	C	HRST		$2,171,488	
66	310	112946	SR 66 PM Phase 2	C	HRST	$2,251,183		
66	311	100175	PA66-Snydersburg North	C	HRST	$40,031		
68		115177	SR 68 Sligo to Reidsburg Resurf	C	HRST		$2,900,000	
68		177318	East Sligo Bridge	C	BRDG		$85,715	
68		117740	SR 68 Clarion Oaks Bridge	+P	BRDG		$463,106	
68		117740	SR 68 Clarion Oaks Bridge	+F	BRDG		$440,779	
68		117740	SR 68 Clarion Oaks Bridge	+U	BRDG		$154,368	
68		117740	SR 68 Clarion Oaks Bridge	+R	BRDG		$154,369	
68		117740	SR 68 Clarion Oaks Bridge	+C	BRDG		$2,849,196	
68		117740	SR 68 Clarion Oaks Bridge	+C	BRDG		$926,120	
68	362	25170	Little Licking Creek Bridge #1	F	BRDG	$165,441	$358,959	
68	362	25170	Little Licking Creek Bridge #1	U	BRDG	$56,300		
68	362	25170	Little Licking Creek Bridge #1	R	BRDG	$90,100		
68	362	25170	Little Licking Creek Bridge #1	C	BRDG		$1,720,873	
68	376	106502	PA 68 Dolby Street to Trout Run	+F	HRST	$125,124		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
68	376	106502	PA 68 Dolby Street to Trout Run	+F	HRST	$194,876		
68	376	106502	PA 68 Dolby Street to Trout Run	U	HRST	$646,365		
68	376	106502	PA 68 Dolby Street to Trout Run	R	HRST	$727,198		
68	376	106502	PA 68 Dolby Street to Trout Run	R	HRST	$1,002,962		
68	376	106502	PA 68 Dolby Street to Trout Run	+C	HRST	$3,000,000		
68	376	106502	PA 68 Dolby Street to Trout Run	+C	HRST	$4,029,645		
68	376	106502	PA 68 Dolby Street to Trout Run	+C	HRST	$1,170,355		
157		117328	SR 157/SR 208 Ramp Removal	C	SAMI		$200,000	
208	303	114522	SR 208 County Line to Knox Phase 1	C	HRST		$997,021	
208	305	115147	SR 208 Shippenville to Fryburg	C	HRST		$3,578,784	
208	353	117547	Pilgrimham Bridge #1	+F	BRIP	$360,918		
208	353	117547	Pilgrimham Bridge #1	U		$51,500		
208	353	117547	Pilgrimham Bridge #1	R		$30,900		
208	353	117547	Pilgrimham Bridge #1	+C	BRIP	$1,093,636		
322		117303	Frank James Walls Memorial Bridge	+P			$470,000	
322		117303	Frank James Walls Memorial Bridge	+F	BRDG		$529,810	
322		117303	Frank James Walls Memorial Bridge	+C	BRDG		$6,102,458	
322	308	114858	US 322 Elmo to Shippenville	+C	HRST		$1,233,166	
322	309	114875	US 322 Shippenville to Clarion	C	HRST		$2,500,000	
322	310	99659	US 322 Clarion to Strattanville Resurfacing	C	HRST	$1,120,100	$2,715,936	
322	311	115154	US 322 Strattanville to County Line Resurf	C	HRST	$3,094,700		
322	312	115163	US 322 County Line East PM	C	HRST	$1,657,881	$1,177,979	
322	353	110093	US 322 Paint Creek Bridge	F	BRDG	$382,764		
322	353	110093	US 322 Paint Creek Bridge	U	BRDG	$235,000		
322	353	110093	US 322 Paint Creek Bridge	R	BRDG	$34,800		
322	353	110093	US 322 Paint Creek Bridge	+C	BRDG	$356,264	$1,517,578	
322	353	110093	US 322 Paint Creek Bridge	+C	BRDG		$1,810,620	

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
322	355	117549	Clarion River Arch Bearings	+P	BRDG	$24,484		
322	355	117549	Clarion River Arch Bearings	+C	BRDG	$796,118		
322	355	117549	Clarion River Arch Bearings	+C	BRDG	$1,051,360		
322	355	117549	Clarion River Arch Bearings	+C	BRDG	$5,052		
322	396	117211	US 322 Bus Mong Intersection ITS	F	SAMI	$15,000		
322	396	117211	US 322 Bus Mong Intersection ITS	C	SAMI	$190,000		
338		99588	Knox North PM	+C	HRST		$2,285,958	
338	303	91307	Knox Resurfacing	C	HRST	$199,402	$1,815,698	
861	302	99596	Leatherwood East PM	C	HRST	$2,237,825		
1005	350	117569	Wayne Richard Weaver Preservation	+C	BRDG	$2,619,792		
1007		98386	Greenville Pike Culvert	C	BRDG		$2,648,050	
1007	307	91864	SR1007 Greenville Pike Resurf	C	HRST		$1,500,000	
2001		117293	Piney Creek Bridge	+P	BRDG		$422,673	
2001		117293	Piney Creek Bridge	+F	BRDG		$350,000	
2001		117293	Piney Creek Bridge	+U	BRDG		$50,000	
2001		117293	Piney Creek Bridge	+R	BRDG		$50,000	
2001		117293	Piney Creek Bridge	+C	BRDG		$92,988	
2007		117309	Huckleberry Ridge Bridge	+C	BRDG		$419,482	
2009		114396	Cherry Run Camp Bridge #2	+C	BRDG		$1,901,274	
2009	351	110092	SR 2009 Rimersburg Bridge	F	BRDG	$237,800		
2009	351	110092	SR 2009 Rimersburg Bridge	U	BRDG	$589,488		
2009	351	110092	SR 2009 Rimersburg Bridge	R	BRDG	$26,200		
2009	351	110092	SR 2009 Rimersburg Bridge	C	BRDG	$1,537,100		
2009	352	116596	SR 2009 Cherry Run Church Bridge	+F	BRDG	$360,500		
2009	352	116596	SR 2009 Cherry Run Church Bridge	+U	BRDG	$42,500		
2009	352	116596	SR 2009 Cherry Run Church Bridge	+R	BRDG	$53,100		
2009	352	116596	SR 2009 Cherry Run Church Bridge	+C	BRDG	$1,644,901		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
2016		117748	SR 2016 East Limestone Bridge	+C	BRDG		$1,109,346	
3013	350	117325	Craig Road Bridge	+C	BRDG		$1,332,872	
3016		117752	Piney Dam Road Bridge	+C	BRDG		$2,491,358	
3020		117313	Alum Rock Bridge #3	+C	BRDG		$134,841	
3020	352	117213	Kahle Bridge Rehabilitation	+C	BRDG	$480,125		
4001		25121	Groce Hill Bridge	+C	BRDG		$2,585,118	
4004	351	83251	Tylersburg Bridge #2	+C	BRDG	$203,680		
4005		117316	Canoe Furnace Bridge	+C	BRDG		$143,556	
4008		25249	Huefner Bridge #2	+P	BRDG		$422,866	
4008		25249	Huefner Bridge #2	+F	BRDG		$300,193	
4008		25249	Huefner Bridge #2	+U	BRDG		$15,000	
4008		25249	Huefner Bridge #2	+R	BRDG		$10,000	
4008		25249	Huefner Bridge #2	+C	BRDG		$700,193	
4008		117751	Huefner Bridge #1	C	BRDG		$215,045	
4017	350	83262	Wolfs Corner Bridge	C	BRDG		$934,724	
4029		117749	SR 4029 Little Paint Creek Bridge	C	BRDG		$724,184	
4029	350	117296	Paint Mills Bridge	F	BRDG	$350,000		
4029	350	117296	Paint Mills Bridge	+U	BRDG	$22,600		
4029	350	117296	Paint Mills Bridge	+R	BRDG	$33,800		
4029	350	117296	Paint Mills Bridge	+C	BRDG		$446,827	
4029	350	117296	Paint Mills Bridge	+C	BRDG		$1,292,366	
			Totals for Clarion County			**$45,376,138**	**$74,845,236**	

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
CRAWFORD COUNTY								
		120173	Water Street Traffic Signal Modernization 2	C	SAMI	$583,670		
	ACT	120266	Rynd Road Bridge - Act 13	C	BRDG	$15,063		
	R01	111140	Mead Ave RR Crossing	+C	SAMI	$200,000		
	R13	106162	Mt Pleasant Rd RR Crossing	+C	SAMI	$318,500		
6	A06	85776	US 6: Reynolds St - Baldwin St Ext	P	HRST	$228,679		
6	A06	85776	US 6: Reynolds St - Baldwin St Ext	F	HRST	$920,000		
6	A06	85776	US 6: Reynolds St - Baldwin St Ext	C	HRST	$10,015,516		
6	A06	85776	US 6: Reynolds St - Baldwin St Ext	C	HRST	$1,222,429		
6	A06	85776	US 6: Reynolds St - Baldwin St Ext	C	HCON	$823,000		
6	B08	78836	US 6 over West NY & PA RR	P	BRDG	$385,000		
6	B10	82113	Cussewago St/French Creek	+F	BRDG	$400,000		
6	B10	82113	Cussewago St/French Creek	+R	BRDG		$110,000	
6	B10	82113	Cussewago St/French Creek	C	BRDG		$5,500,000	
6	B12	57945	US 6 French Ck #3	P	BRDG	$20,000		
6	B12	57945	US 6 French Ck #3	+F	BRDG	$400,000		
6	B12	57945	US 6 French Ck #3	+R	BRDG	$100,000		
6	B12	57945	US 6 French Ck #3	C	BRDG	$6,006,456		
6	B13	573	US 6 French Creek Br #1	C	BRDG	$6,000,000		
6	B14	117798	US 6 Bridge over French Creek Trib	+F	BRDG	$100,000		
6	B14	117798	US 6 Bridge over French Creek Trib	+R	BRDG	$10,000		
6	B14	117798	US 6 Bridge over French Creek Trib	+C	BRDG	$600,000		
6	B15	117807	Crawford County Waterproofing Bridge Group	+F	BRDG	$100,000		
6	B15	117807	Crawford County Waterproofing Bridge Group	+C	BRDG		$800,000	
6	SL1	90275	US 6 Slide (#3)	P	SAMI	$30,000		
6	SL1	90275	US 6 Slide (#3)	C	SAMI	$350,000		
6	TS2	116591	I-79/SR 6 Crawford County ITS Addition - TSMO	P	HRST	$12,250		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
6	TS2	116591	I-79/SR 6 Crawford County ITS Addition - TSMO	U	HRST	$10,000		
6	TS2	116591	I-79/SR 6 Crawford County ITS Addition - TSMO	C	HRST	$219,916		
6	TS2	116591	I-79/SR 6 Crawford County ITS Addition - TSMO	C	HRST	$79,625		
6	01M	110842	US 6: SR 618 to US 19	P	XRST	$50,000		
6	01M	110842	US 6: SR 618 to US 19	C	XRST	$9,300,000		
6	26M	562	US 6: SR 198 to Brink Drive	P	HRST		$125,000	
6	26M	562	US 6: SR 198 to Brink Drive	C	HRST		$5,624,000	
6	27M	90274	US 6: Baldwin St. Ext. to SR 198	P	HRST		$100,000	
6	27M	90274	US 6: Baldwin St. Ext. to SR 198	+C	HRST		$1,897,588	
8	B01	84921	SR 8 East Branch of Oil Creek	F	BRDG	$200,000		
8	B01	84921	SR 8 East Branch of Oil Creek	R	BRDG	$25,000		
8	B01	84921	SR 8 East Branch of Oil Creek	C	BRDG	$2,210,430	$589,570	
8	B03	514	PA 8 Bridge over Thompson Ck	P	BRDG		$100,000	
8	B03	514	PA 8 Bridge over Thompson Ck	R	BRDG		$50,000	
8	B03	514	PA 8 Bridge over Thompson Ck	C	BRDG		$750,000	
8	S01	109996	PA 8 and PA 77 Intersection	F	SAMI	$300,000		
8	S01	109996	PA 8 and PA 77 Intersection	R	HRST	$252,000		
8	S01	109996	PA 8 and PA 77 Intersection	C	SAMI	$1,892,561		
8	11M	97878	SR 8: Venago Co. Ln. to SR 408	P	HRST		$125,000	
8	11M	97878	SR 8: Venago Co. Ln. to SR 408	C	HRST		$2,728,000	
18	B09	479	PA 18 over Cemetery Run	P	BRDG	$14,286		
18	B10	97107	PA 18 Brdg/Conneaut Ck Trib	+P	BRDG		$20,000	
18	B10	97107	PA 18 Brdg/Conneaut Ck Trib	+F	BRDG		$20,000	
18	B10	97107	PA 18 Brdg/Conneaut Ck Trib	+R	BRDG		$10,000	
18	B10	97107	PA 18 Brdg/Conneaut Ck Trib	+C	BRDG		$400,000	
18	B11	98653	SR 18 Brdg/Inlet Ck Brnch	P	BRDG	$120,000		
18	B11	98653	SR 18 Brdg/Inlet Ck Brnch	R	BRDG	$10,000		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
18	B11	98653	SR 18 Brdg/Inlet Ck Brnch	C	BRDG	$750,000		
18	11M	98899	SR 18: Conneautville - Erie Co. Ln.	P	HRST		$100,000	
18	11M	98899	SR 18: Conneautville - Erie Co. Ln.	+C	HRST		$5,000,000	
18	12M	115353	SR 18: Mercer Co. Line to US 322	P	HRST		$125,000	
18	12M	115353	SR 18: Mercer Co. Line to US 322	C	HRST		$3,757,424	
19	05M	115366	US 19: SR 285 to US 6	P	HRST		$100,000	
19	05M	115366	US 19: SR 285 to US 6	C	HRST		$4,600,000	
27	B09	97057	SR 27 Brdg over Mill Run	+F	BRDG		$250,000	
27	B09	97057	SR 27 Brdg over Mill Run	+R	BRDG		$50,000	
27	B09	97057	SR 27 Brdg over Mill Run	+C	BRDG		$750,000	
27	20M	32166	SR 27: SR 173 to Guys Mills Road	C	HRST	$910,085		
77	B03	78841	PA 77 over Trib Muddy Ck	+F	BRDG		$80,000	
77	B03	78841	PA 77 over Trib Muddy Ck	+R	BRDG		$50,000	
77	B03	78841	PA 77 over Trib Muddy Ck	+C	BRDG		$400,000	
77	17M	117505	SR 77: Leslie Rd to SR 8	P	HRST		$100,000	
77	17M	117505	SR 77: Leslie Rd to SR 8	C	HRST		$3,994,798	
102	01M	114035	SR 102 (Cussewago Rd): US 6 to SR 98	P	HRST	$100,000		
102	01M	114035	SR 102 (Cussewago Rd): US 6 to SR 98	C	HRST	$4,600,000		
285	06M	89173	SR 285: SR 19 to SR 173	P	HRST	$100,000		
285	06M	89173	SR 285: SR 19 to SR 173	C	HRST	$2,958,389	$2,504,723	
322	TBR	97092	Crawford County Tbeam Rehab Group	P	BRDG	$100,000		
322	TBR	97092	Crawford County Tbeam Rehab Group	R	BRDG	$12,324		
322	TBR	97092	Crawford County Tbeam Rehab Group	+C	BRDG	$726,941	$23,059	
322	14M	99603	US 322: Pine Rd to US 6	P	HRST	$150,000		
322	14M	99603	US 322: Pine Rd to US 6	C	HRST	$1,900,000		
322	16M	110853	US 322: Linden St to Wilson Chute Rd	P	HRST	$100,000		
322	16M	110853	US 322: Linden St to Wilson Chute Rd	C	HRST	$2,400,000		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
322	17M	563	US 322: Wilson Chute to Mercer Co. Line	+F	HRST		$100,000	
322	17M	563	US 322: Wilson Chute to Mercer Co. Line	+C	HRST		$4,948,794	
322	18M	117468	US 322: from Crawford County Line to US 6	P	HRST		$100,000	
322	18M	117468	US 322: from Crawford County Line to US 6	C	HRST		$12,820,000	
408	B05	84927	SR 408 over Mohawk Run	R	BRDG	$10,000		
408	B05	84927	SR 408 over Mohawk Run	C	BRDG	$752,324		
408	01S	118455	Northwest RPO HFST - 2022	+C	SAMI	$650,801		
1007	DF1	420	SR 1007 over Federal Run	P	BRDG	$100,000		
1007	DF1	420	SR 1007 over Federal Run	C	BRDG	$200,000		
1015	DF1	97065	SR 1015: Bridge over French Creek Tributary	P	BRDG	$100,000		
1015	DF1	97065	SR 1015: Bridge over French Creek Tributary	F	BRDG		$100,000	
1015	DF1	97065	SR 1015: Bridge over French Creek Tributary	R	BRDG	$10,000	$10,000	
1015	DF1	97065	SR 1015: Bridge over French Creek Tributary	C	BRDG	$195,000	$250,000	
1016	R14	106283	Cambridge Springs RR Corridor	+C	SAMI	$18,350		
1024	B02	585	SR 1024 Bridge over Britton Run	+F	BRDG		$10,000	
1024	B02	585	SR 1024 Bridge over Britton Run	+C	BRDG		$150,000	
1025	WPB	117180	Crawford County Bridge Waterproofing	C	BRDG	$701,967		
1032	B00	114138	SR 1032 Bridge over Shirley Run (D.D.P.)	P	BRDG	$70,000		
1032	B00	114138	SR 1032 Bridge over Shirley Run (D.D.P.)	+C	BRDG	$1,311,000		
1033	B01	57972	SR 1033: Muddy Ck Brdg	F	BRDG		$150,000	
1033	B01	57972	SR 1033: Muddy Ck Brdg	R	BRDG		$25,000	
1033	B01	57972	SR 1033: Muddy Ck Brdg	C	BRDG		$1,000,000	
1037	B00	57973	SR 1037/Lil Federal Run	R	BRDG	$10,727		
1037	B00	57973	SR 1037/Lil Federal Run	C	BRDG	$750,000		
1039	B01	57975	SR 1039: Mosey Run Brdg	F	BRDG		$150,000	
1039	B01	57975	SR 1039: Mosey Run Brdg	R	BRDG		$10,000	
1039	B01	57975	SR 1039: Mosey Run Brdg	C	BRDG		$750,000	

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
2005	RRX	113216	Shaw's Landing RRX	+C	SAMI	$375,000		
2012	B01	116743	SR 2012 Bridge over Hunter Run	C	BRDG	$625,000		
2012	DF1	74672	SR 2012 over Hunter Run	P	BRDG	$65,000		
2018	B02	57978	Deckards Run Br #2	+C	BRDG	$250,000	$250,000	
2019	B01	57979	SR 2019 Bridge over East Branch of Sugar Creek	F	BRDG	$50,727		
2019	B01	57979	SR 2019 Bridge over East Branch of Sugar Creek	+C	BRDG	$750,000		
2031	B01	119704	SR 2031 over Thompson Run Repair	C	BRDG	$60,000		
2031	B01	119704	SR 2031 over Thompson Run Repair	C	BRDG	$20,376		
2034	B00	78780	SR 2034 Brdg over I-79	C	BRDG	$1,006,396	$1,500,000	
2034	B02	413	SR 2034: Spring Street Viaduct	C	BRDG		$10,000,000	
2039	B00	516	SR 2039: Dunham Rd Br	U	BRDG	$100,000		
2039	B00	516	SR 2039: Dunham Rd Br	C	BRDG	$5,602,324		
3004	B00	97056	SR 3004 Bridge over I-79	F	BRDG	$55,000		
3004	B00	97056	SR 3004 Bridge over I-79	+R	BRDG	$10,000		
3004	B00	97056	SR 3004 Bridge over I-79	+C	BRDG		$1,000,000	
3004	B02	97122	SR 3004 Brdg/Crooked Ck	+P	BRDG		$260,000	
3004	B02	97122	SR 3004 Brdg/Crooked Ck	+R	BRDG		$25,000	
3004	B02	97122	SR 3004 Brdg/Crooked Ck	+C	BRDG		$900,000	
3011	B01	57984	Pymatuning Reservoir Br	C	BRDG	$1,000,000	$1,000,000	
3016	B00	88440	Harmonsburg Rd Br/I-79	F	BRDG	$75,000		
3016	B00	88440	Harmonsburg Rd Br/I-79	+C	BRDG		$1,350,000	
3016	B03	589	SR 3016 Brdg/B&LE RR	C	BRDG	$396,000		
4001	B05	47491	SR 4001/Connt Ck E Brnch	F	BRDG		$150,000	
4001	B05	47491	SR 4001/Connt Ck E Brnch	R	BRDG		$10,000	
4001	B05	47491	SR 4001/Connt Ck E Brnch	C	BRDG		$750,000	
4001	DF1	88461	SR 4001/Conneaut Ck E Brch	P	BRDG	$50,000		
4001	DF1	88461	SR 4001/Conneaut Ck E Brch	+C	BRDG	$400,000		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
4004	B00	74563	SR 4004 over Summit Run	+F	BRDG		$125,000	
4004	B00	74563	SR 4004 over Summit Run	+R	BRDG		$25,000	
4004	B00	74563	SR 4004 over Summit Run	+C	BRDG		$500,000	
4004	B02	97123	SR 4004 Bridge over Paden Creek	P	BRDG	$331,902		
4004	B02	97123	SR 4004 Bridge over Paden Creek	P	HRST	$93,098		
4004	B02	97123	SR 4004 Bridge over Paden Creek	C	BRDG	$1,500,000		
4008	DF1	74579	SR 4008/Conneaut Ck E. Brch	C	BRDG		$250,000	
7210	L00	323	Wightman Road Bridge (T-620)	F	BRDG	$210,000		
7210	L00	323	Wightman Road Bridge (T-620)	U	BRDG	$5,000		
7210	L00	323	Wightman Road Bridge (T-620)	R	BRDG	$25,000		
7210	L00	323	Wightman Road Bridge (T-620)	C	BRDG	$1,265,000		
7214	L00	328	Dotyville Rd (T-926) Br	F	BRDG	$175,000		
7214	L00	328	Dotyville Rd (T-926) Br	U	BRDG	$5,000		
7214	L00	328	Dotyville Rd (T-926) Br	R	BRDG	$25,000		
7214	L00	328	Dotyville Rd (T-926) Br	C	BRDG	$1,189,055		
7301	ACT	120267	Clinton Count Bridge - Act 13	C	BRDG	$68,950		
			Totals for Crawford County			**$78,996,117**	**$79,502,956**	

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
FOREST COUNTY								
36	B00	74693	PA 36 over Tionesta Creek	F	BRDG		$250,000	
36	B00	74693	PA 36 over Tionesta Creek	C	BRDG		$4,000,000	
36	B01	114139	PA 36 Bridge over Hunter Run	F	BRDG	$5,441		
36	B01	114139	PA 36 Bridge over Hunter Run	C	BRDG	$417,140		
36	07M	51185	SR 36: Taylor-Smokey Hill	P	HRST		$100,000	
36	07M	51185	SR 36: Taylor-Smokey Hill	C	HRST		$3,591,415	
62	B05	88475	US 62 Bridge over Prather Run	F	BRDG	$53,882		
62	B05	88475	US 62 Bridge over Prather Run	C	BRDG	$400,000		
62	B06	117808	Forest County Waterproofing Bridge Group	F	BRDG	$60,000		
62	B06	117808	Forest County Waterproofing Bridge Group	C	BRDG		$1,000,000	
62	M01	116650	US 62: SR 3004 to SR 127	P	HRST	$10,000		
62	M01	116650	US 62: SR 3004 to SR 127	+C	HRST	$800,000		
62	01S	117439	Forest and Warren High Friction Surface Treat 2024	P	SAMI	$10,000		
62	01S	117439	Forest and Warren High Friction Surface Treat 2024	C	SAMI	$652,562		
66	M01	116652	SR 66: SR 2003 to SR 899	+P	HRST	$100,000		
66	M01	116652	SR 66: SR 2003 to SR 899	+C	HRST	$3,500,000		
66	10M	109134	PA 66: PA 899 to Forest St.	C	HRST	$270,000		
66	13M	32309	State Route 66 North to Elk County	P	HRST		$100,000	
66	13M	32309	State Route 66 North to Elk County	+C	HRST		$4,186,285	
666	10M	47278	SR 666: US 62 to Brecht Road	F	XRST	$100,000		
666	10M	47278	SR 666: US 62 to Brecht Road	C	XRST	$1,743,827	$2,282,385	
666	11M	47276	SR 666: Brecht Rd. to Old Kelletville Rd.	+F	XRST	$100,000		
666	11M	47276	SR 666: Brecht Rd. to Old Kelletville Rd.	C	XRST		$4,280,000	
666	12M	117482	SR 666: Yellow Hammer Road to 1 mi into Howe Twp	P	HRST		$100,000	
666	12M	117482	SR 666: Yellow Hammer Road to 1 mi into Howe Twp	C	HRST		$11,070,697	
2002	B02	84944	SR 2002 over Coleman Run	P	BRDG	$100,000		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
2002	B02	84944	SR 2002 over Coleman Run	R	BRDG	$25,000		
2002	B02	84944	SR 2002 over Coleman Run	C	BRDG	$473,000		
3004	B04	57935	SR 3004 Brdg/Piney Run	F	BRDG		$150,000	
3004	B04	57935	SR 3004 Brdg/Piney Run	R	BRDG		$10,000	
3004	B04	57935	SR 3004 Brdg/Piney Run	C	BRDG		$750,000	
			Totals for Forest County			**$8,820,852**	**$31,870,782**	

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
VENANGO COUNTY								
		67098	On Demand Bridge Repair Contract - 2025	C	BRDG	$500,000		
		90446	Northwest Safety Line Item	C	SAMI	$250,000		
		90446	Northwest Safety Line Item	C	RF	$250,000		
		98262	NW Local Brdg Line Item	C	BRDG	$21,967	$18,200,000	
		106422	NW Highway/Bridge Line Item	C	HRST	$1,738,746	$2,892,106	
		106422	NW Highway/Bridge Line Item	C	HRST	$4,168,601	$7,754,645	
		106422	NW Highway/Bridge Line Item	C	BRDG	$179,049	$7,322,683	
		106422	NW Highway/Bridge Line Item	C	SAMI	$4,131,873	$12,087,248	
		106581	NW Local Fed Aid Rt Line Item	C	HRST	$1,800,000	$8,000,000	
		113720	Northwest 2023 RPM	C	HRST	$118,536		
		113721	Northwest 2024 RPM	C	HRST	$160,000		
		116197	Northwest 2025 RPM	C	HRST	$160,000		
		116198	Northwest 2026 RPM	C	HRST	$160,000		
		120179	Liberty & 12th Streets Intersection - Full Rebuild	C	SAMI	$314,760		
	F04	119193	City of Franklin LFAR 2023-2024	C	HRST	$324,283		
	L00	2161	Dean Road over Little Sandy Creek	F	BRDG	$175,000		
	L00	2161	Dean Road over Little Sandy Creek	U	BRDG	$5,000		
	L00	2161	Dean Road over Little Sandy Creek	R	BRDG	$25,000		
	L00	2161	Dean Road over Little Sandy Creek	C	BRDG	$765,000		
	L00	2263	Miller Farm (T-635) Br	C	BRDG		$1,000,000	
	RES	73294	BRIP Bridge Line Item Reserve	C	BRDG		$16,296,809	
	RES	73294	BRIP Bridge Line Item Reserve	C	BRDG	$11,318	$29,957,599	
	RES	79494	Northwest IIJA Line Item Reserve	C	HCON	$2,867,000		
	SLR	75597	Slide Repair Resrv	C	HRST	$68,996	$4,000,000	
	WLB	70310	Polk WHISL Site	C	HRST	$45,000		
8	B13	88510	PA 8 Bridge over Cherry Run	P	BRDG	$25,000		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
8	B13	88510	PA 8 Bridge over Cherry Run	C	BRDG	$192,057		
8	B14	97365	PA 8 Bridge/Oil Creek	C	BRDG	$346,982		
8	B18	2143	Venango County Waterproofing Bridge Group	F	BRDG	$80,000		
8	B18	2143	Venango County Waterproofing Bridge Group	+C	BRDG		$1,500,000	
8	SL2	113253	SR 8 Slide (#2)	P	SAMI	$50,000		
8	SL2	113253	SR 8 Slide (#2)	C	SAMI	$300,000		
8	S02	117993	Venango Co. HFST	P	SAMI	$15,000		
8	S02	117993	Venango Co. HFST	C	SAMI	$521,468		
8	10M	76890	PA 8: Polk Cutoff to US 62	+C	HRST	$138,000		
8	16M	85442	SR 8: Halyday Run Rd. to SR 227	P	HRST		$100,000	
8	16M	85442	SR 8: Halyday Run Rd. to SR 227	+C	HRST		$2,777,062	
27	02M	116633	SR 27: Crawford Co. Line to Crawford Co. Line	P	HRST		$100,000	
27	02M	116633	SR 27: Crawford Co. Line to Crawford Co. Line	C	HRST		$4,800,000	
38	DF1	97361	PA 38 Bridge/Richey Run 2	C	BRDG	$400,000		
62	B10	58248	Venango County TBeam Rehab Group	F	BRDG	$250,000		
62	B10	58248	Venango County TBeam Rehab Group	+C	BRDG		$1,000,000	
62	S00	98571	Allegheny Blvd. Multimodal Trail Project	C	TENH	$578,444		
62	T01	118375	City of Franklin TASA Project 2022	+P	TENH	$260,000		
62	T01	118375	City of Franklin TASA Project 2022	C	TENH	$1,110,000		
62	T21	111433	Franklin Ped Streetscape Safety Project	+C	TENH	$100,000		
62	10M	116632	US 62: SR 157 - SR 2025	P	HRST		$100,000	
62	10M	116632	US 62: SR 157 - SR 2025	+C	HRST		$4,000,000	
62	11M	98544	US 62: Washington Crossing-Halyday	P	HRST	$100,000		
62	11M	98544	US 62: Washington Crossing-Halyday	C	HRST		$400,000	
62	11M	98544	US 62: Washington Crossing-Halyday	C	HRST	$6,059,671	$1,550,000	
62	13M	109153	US 62 & 322 from PA 8 to US 322	P	HRST	$600,000		
62	13M	109153	US 62 & 322 from PA 8 to US 322	C	HRST	$3,900,569		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
157	STY	117990	SR 157 & Horse Creek Rd.Intersection Improvements	S	SAMI	$150,000		
157	04M	100152	SR 157: SR 62-Sr 2017 (Sawtown Rd)	P	HRST	$100,000		
157	04M	100152	SR 157: SR 62-Sr 2017 (Sawtown Rd)	C	HRST	$1,050,175	$7,449,825	
208	B04	2232	SR 208 Brdg over I-80 EB/WB	R	BRDG	$25,000		
208	B04	2232	SR 208 Brdg over I-80 EB/WB	C	BRDG	$1,500,000		
208	B05	116865	SR 208 Bridge #2 over UNT to Scrubgrass Creek	P	BRDG	$2,209		
208	B05	116865	SR 208 Bridge #2 over UNT to Scrubgrass Creek	U	BRDG	$300,000		
208	B05	116865	SR 208 Bridge #2 over UNT to Scrubgrass Creek	R	BRDG		$25,000	
208	B05	116865	SR 208 Bridge #2 over UNT to Scrubgrass Creek	+C	BRDG		$1,500,000	
257	02M	90271	SR 257: N. Main St to US 62	P	HRST		$100,000	
257	02M	90271	SR 257: N. Main St to US 62	+C	HRST		$1,504,000	
322	RRX	113217	13th Street Franklin RRX	C	SAMI	$500,000		
322	04M	51195	Liberty St - 8th St Br	+P	HRST		$100,000	
322	04M	51195	Liberty St - 8th St Br	+C	HRST		$1,120,000	
322	16M	100171	US 322: Whippoorwill Rd. - Clarion Co.	P	HRST	$100,000		
322	16M	100171	US 322: Whippoorwill Rd. - Clarion Co.	C	HRST	$4,400,000		
417	03M	98532	PA 417: Keeley Rd - PA 8	P	HRST	$100,000		
417	03M	98532	PA 417: Keeley Rd - PA 8	C	HRST		$6,424,000	
417	04M	86950	SR 417: SR 322 - Keely Rd	P	HRST		$82,447	
417	04M	86950	SR 417: SR 322 - Keely Rd	+C	HRST		$500,000	
427	05M	98524	PA 427: Factory-Deeter	P	HRST	$25,000		
427	05M	98524	PA 427: Factory-Deeter	C	HRST	$7,100,000		
428	02M	109151	PA 428: PA 8 to Cherrytree Rd	P	HRST	$154,994		
1001	RRX	118221	Oil City Corridor WNYPA	C	SAMI	$800,000	$700,000	
1004	B00	2107	Petroleum Center Bridge	R	BRDG		$100,000	
1004	B00	2107	Petroleum Center Bridge	+C	BRDG	$2,550,000		
1006	B01	58266	SR 1006 Brdg/Allender Run	+F	BRDG		$100,000	

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
1006	B01	58266	SR 1006 Brdg/Allender Run	+R	BRDG		$10,000	
1006	B01	58266	SR 1006 Brdg/Allender Run	C	BRDG		$300,000	
2006	01M	116631	SR 2006: SR 322 to SR 257	P	HRST		$100,000	
2006	01M	116631	SR 2006: SR 322 to SR 257	+C	HRST		$5,264,000	
2023	B00	2235	SR 2023 over Porcupine Ck	+P	BRDG	$500,000		
2023	B00	2235	SR 2023 over Porcupine Ck	+U	BRDG	$50,000		
2023	B00	2235	SR 2023 over Porcupine Ck	C	BRDG	$1,800,000		
3003	B00	97364	SR 3003 Bridge over I-80 EB	+C	BRDG	$1,553,460		
3017	B04	97379	SR 3017 Brdg/Lil Sandy Ck	P	BRDG	$120,000		
3017	B04	97379	SR 3017 Brdg/Lil Sandy Ck	+C	BRDG		$400,500	
3023	B00	1979	SR 3023 Bridge over Mill Creek	U	BRDG	$65,000		
3023	B00	1979	SR 3023 Bridge over Mill Creek	R	BRDG	$50,000		
3023	B00	1979	SR 3023 Bridge over Mill Creek	C	BRDG	$850,000		
3101	B00	97340	SR 3101 Bridge over I-80	+F	BRDG	$50,000		
3101	B00	97340	SR 3101 Bridge over I-80	+C	BRDG		$1,000,000	
3102	B00	97380	SR 3102 Bridge over PA 8	+F	BRDG		$50,000	
3102	B00	97380	SR 3102 Bridge over PA 8	+C	BRDG		$1,000,000	
4009	B01	97388	SR 4009/Sugar Ck Waterproof	F	BRDG	$25,000		
4009	B01	97388	SR 4009/Sugar Ck Waterproof	+C	BRDG		$200,000	
7214	L00	78464	Williams Road over Middle Branch of Sugar Creek	F	BRDG	$190,000		
7214	L00	78464	Williams Road over Middle Branch of Sugar Creek	R	BRDG	$25,000		
7214	L00	78464	Williams Road over Middle Branch of Sugar Creek	C	BRDG	$1,100,000		
7220	L00	78465	Fisherman's Cove (T-370) Bridge	C	BRDG	$227,367		
7302	L00	115570	State Street Rehab (Veteran's Bridge)	+F	BRDG	$263,158		
7302	L00	115570	State Street Rehab (Veteran's Bridge)	C	BRDG	$2,900,000		
7302	L00	115570	State Street Rehab (Veteran's Bridge)	C	BRDG	$193,944		
7401	ACT	120127	Donaldson Road Bridge - Act 13	C	BRDG	$100,000		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
7401	ACT	120127	Donaldson Road Bridge - Act 13	C	BRDG	$120,000		
			Totals for Venango County			**$62,307,627**	**$151,867,924**	

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
WARREN COUNTY								
	F03	119191	City of Warren LFAR 2023-2024	C	HRST	$1,275,717		
6	B12	57178	US 6: Bridge over Dutchman Run #1	F	BRDG	$150,000		
6	B12	57178	US 6: Bridge over Dutchman Run #1	R	BRDG		$10,000	
6	B12	57178	US 6: Bridge over Dutchman Run #1	C	BRDG		$750,000	
6	B18	97449	US 6 Warren Co. Bridges	+C	BRDG	$2,460,481		
6	B18	97449	US 6 Warren Co. Bridges	+C	BRDG	$560,819		
6	B20	97458	US 6 Br/Dutchmans Run #1	F	BRDG	$150,000		
6	B20	97458	US 6 Br/Dutchmans Run #1	R	BRDG	$10,000		
6	B20	97458	US 6 Br/Dutchmans Run #1	+C	BRDG		$750,000	
6	B21	117809	Warren County Waterproofing Bridge Group	F	BRDG	$70,000		
6	B21	117809	Warren County Waterproofing Bridge Group	+C	BRDG		$500,000	
6	M01	98032	US 6: Youngsville to Railroad Street	C	HRST	$1,079,369		
6	28M	109626	US 6: Yankee Bush - Main Ave	+P	XRST	$90,000		
6	28M	109626	US 6: Yankee Bush - Main Ave	C	HRST	$9,332,680		
6	28M	109626	US 6: Yankee Bush - Main Ave	C	HRST	$246,076		
6	31M	47289	US 6: Railroad St. to SR 62	P	HRST	$100,000		
6	31M	47289	US 6: Railroad St. to SR 62	C	HRST		$3,894,990	
6	32M	47290	US 6: Sheffield to Clarendon	+P	HRST	$125,000		
6	32M	47290	US 6: Sheffield to Clarendon	+C	HRST		$5,236,820	
6	33M	32411	US 6: Willow St. to Serenity Ln	+F	HRST	$200,000		
6	33M	32411	US 6: Willow St. to Serenity Ln	+C	HRST		$2,000,000	
6	35M	2313	SR 6: SR 62 Intchg to PSP	P	HRST		$100,000	
6	35M	2313	SR 6: SR 62 Intchg to PSP	C	HRST		$2,410,955	
27	A00	98579	PA 27 & US 6 Intersection	+F	XRST	$400,000		
27	A00	98579	PA 27 & US 6 Intersection	+C	XRST		$1,918,879	
27	B11	58298	PA 27: Matthews Run Bridge	U	HRST	$30,000		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
27	B11	58298	PA 27: Matthews Run Bridge	C	BRDG	$1,100,000		
27	B12	2477	SR 27: Grand Street Bridge	F	BRDG	$150,000		
27	B12	2477	SR 27: Grand Street Bridge	R	BRDG	$10,000		
27	B12	2477	SR 27: Grand Street Bridge	C	BRDG		$750,000	
27	M01	32412	PA 27: US 6 to Youngsville Boro Line	+C	HRST	$912,286		
27	03M	97920	PA 27: Hosmer Rn Rd - PA 426	P	HRST	$36,761		
27	10M	115377	SR 27: Brown Road to Hosner Run Rd.	+P	HRST	$125,000		
27	10M	115377	SR 27: Brown Road to Hosner Run Rd.	+C	HRST	$2,800,000		
27	621	116443	Warren Group 621	P	HRST		$100,000	
27	621	116443	Warren Group 621	C	HRST		$7,400,000	
59	B03	58301	PA 59: Morrison Run Bridge	F	BRDG	$150,000		
59	B03	58301	PA 59: Morrison Run Bridge	R	BRDG	$10,000		
59	B03	58301	PA 59: Morrison Run Bridge	+C	BRDG		$469,177	
59	B03	58301	PA 59: Morrison Run Bridge	+C	HRST		$280,823	
59	B07	110818	James Morrison Bridge Rehabilitation Phase 2	+P	BRDG	$215,000		
59	B07	110818	James Morrison Bridge Rehabilitation Phase 2	+F	BRDG	$200,000		
59	B07	110818	James Morrison Bridge Rehabilitation Phase 2	+C	BRDG	$1,901,941		
62	B02	74673	Warren County TBeam Rehab Group	F	BRDG	$50,000		
62	B02	74673	Warren County TBeam Rehab Group	C	BRDG	$500,000		
62	B06	2581	SR 62 Brdg over Bully Run	P	BRDG		$150,000	
62	B06	2581	SR 62 Brdg over Bully Run	F	BRDG		$10,000	
62	B06	2581	SR 62 Brdg over Bully Run	+C	BRDG		$750,000	
62	B07	117804	SR 62 Bridge over Wiltse Run	F	BRDG		$100,000	
62	B07	117804	SR 62 Bridge over Wiltse Run	R	BRDG		$10,000	
62	B07	117804	SR 62 Bridge over Wiltse Run	C	BRDG		$650,000	
62	B09	58300	SR 62 Bridge over Lenhart Run	+F	BRDG	$110,000		
62	B09	58300	SR 62 Bridge over Lenhart Run	R	BRDG	$24,394		

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
62	B09	58300	SR 62 Bridge over Lenhart Run	C	BRDG	$319,746		
62	B09	58300	SR 62 Bridge over Lenhart Run	C	BRDG	$1,710,799		
62	M02	106658	US 62: Main Street - NY Line	C	HRST	$1,186,774		
62	24M	117459	US 62: Fourth Ave. to Hatch Run (SR 1008)	P	HRST		$100,000	
62	24M	117459	US 62: Fourth Ave. to Hatch Run (SR 1008)	C	HRST		$6,954,058	
62	32M	47291	SR 62: Forest County to Myres Run	+C	HRST	$3,300,000		
62	631	115252	Warren Group 631	C	HRST		$2,335,718	
69	02M	116870	SR 69: SR 62 to SR 1003	P	HRST		$100,000	
69	02M	116870	SR 69: SR 62 to SR 1003	C	HRST		$3,682,744	
127	B01	97419	PA 127 Bridge/Allegheny River	R	BRDG	$25,000		
127	B01	97419	PA 127 Bridge/Allegheny River	C	BRDG	$541,618	$1,511,365	
127	B01	97419	PA 127 Bridge/Allegheny River	C	BRDG		$4,947,017	
426	B04	2474	PA 426: Corry Road Bridge	F	BRDG		$100,000	
426	B04	2474	PA 426: Corry Road Bridge	R	BRDG		$10,000	
426	B04	2474	PA 426: Corry Road Bridge	C	BRDG		$650,000	
426	B05	74610	PA 426/Brokenstraw Br #3	P	BRDG	$35,000		
426	B05	74610	PA 426/Brokenstraw Br #3	R	BRDG	$32,000		
426	B05	74610	PA 426/Brokenstraw Br #3	C	BRDG	$660,000		
958	01M	116656	State Route 958	P	HRST		$125,000	
958	01M	116656	State Route 958	C	HRST		$6,400,000	
1012	B03	97446	SR 1012 Brdg/Akeley Run	+C	BRDG	$51,883		
1013	02M	100445	SR 1013: BUS US 6 (PA Ave) to 1012	P	HRST		$125,000	
1013	02M	100445	SR 1013: BUS US 6 (PA Ave) to 1012	C	HRST		$6,840,000	
1017	A00	100323	Pennsylvania Ave/Market St Intersection	C	XRST	$32,868		
3009	B05	78962	SR 3009 Brdg/Tidioute Creek	+C	BRDG		$300,000	
3009	B06	78976	SR 3009 Brdg/Tidioute Ck	+F	BRDG		$50,000	
3009	B06	78976	SR 3009 Brdg/Tidioute Ck	+C	BRDG		$300,000	

S.R.	Section	Project	Project Title	Phase	Area	FFY 23-26 TIP Total	FFY27-34 Mid-Range Total	FFY35-50 Long-Range Total
3012	B00	2343	SR 3012: Cemetery Rd Brdg	C	BRDG	$400,000		
3014	B01	97448	SR 3014 Br/Brokenstraw Ck	+P	BRDG	$500,000		
3014	B01	97448	SR 3014 Br/Brokenstraw Ck	+F	BRDG	$133,444	$16,556	
3014	B01	97448	SR 3014 Br/Brokenstraw Ck	+R	BRDG		$25,000	
3014	B01	97448	SR 3014 Br/Brokenstraw Ck	+C	BRDG	$1,350,727	$2,000,000	
3022	B04	88491	SR 3022 Bridge over Brokenstraw Creek	+F	BRDG		$100,000	
3022	B04	88491	SR 3022 Bridge over Brokenstraw Creek	+R	BRDG		$25,000	
3022	B04	88491	SR 3022 Bridge over Brokenstraw Creek	+C	BRDG		$1,000,000	
3022	B05	97443	SR 3022 Brdg/Brknstrw Ck	C	BRDG		$350,000	
3022	B06	97447	SR 3022 Brdg/B&P Railroad	+C	BRDG		$250,000	
3022	M01	100521	SR 3022: National Forge Rd	C	HRST	$2,478,114		
4004	B00	78945	SR 4004 Brdg/Pine Valley	+C	BRDG	$400,000		
4015	B00	78952	SR 4015 Brdg/Mill Brook	U	HRST	$50,000		
4015	B00	78952	SR 4015 Brdg/Mill Brook	+C	BRDG	$400,000		
7203	L00	2560	Stewart Rd (T-639) Br	F	BRDG	$150,000		
7203	L00	2560	Stewart Rd (T-639) Br	U	BRDG	$5,000		
7203	L00	2560	Stewart Rd (T-639) Br	R	BRDG	$25,000		
7203	L00	2560	Stewart Rd (T-639) Br	C	BRDG	$600,000		
			Totals for Warren County			**$38,963,497**	**$66,539,102**	
			Region Totals			**$233,879,357**	**$404,626,000**	

Appendix B: Candidate Projects

Note that the following projects are unfunded and illustrative only.
The RPO will consider candidates from this project listing as future programs are being developed.

County	Project Name	Description	Rating High-Medium-Low
Clarion	PA 68 Bicycle/Pedestrian Improvements	Addition of bicycle/pedestrian facilities that connect commercial district, hospital, and YMCA to downtown Clarion. The YMCA recently received a MTF grant to address these concerns. The project would include safety and landscape improvements, bike signage and pavement markings, and replacing rumble strips.	H
Clarion	Bicycle/Pedestrian Connectivity between Clarion and Trail 66	Improved bicycle/pedestrian facilities connecting downtown Clarion to Trail 66 trailhead, including safety improvements, sidewalks, curbing, ADA accessibility, bike signage and pavement markings, and landscape improvements.	H
Clarion	PA 208 Pavement Conditions	Poor road condition, minimal shoulders	H
Clarion	Main Street and 5th Avenue Intersection	Pedestrian safety improvements	H
Clarion	Upgraded Trail 66 Facilities	Trail 66 road crossing safety improvements (signage, advanced warning signals). This project could be a possible candidate for a Transportation Alternatives Set Aside application.	H
Clarion	US 322 and PA 66 Intersection	Traffic tends to back up at this intersection, with conditions worsening when there is an accident on I-80. There are two manufacturing sites located to the south of the intersection and turning radii are not wide enough for trucks. Potential roundabout location.	H
Clarion	I-80 Interchange (Exit 70) Safety Improvements	The eastbound ramp onto I-80 has poor visibility. The merge lane is short into high traffic volumes that include heavy trucks. The project would include acceleration ramp improvements and would need to be funded via the Interstate Management Program.	H
Clarion	PA 68 to I-80 Improvements	Various roadway/signal improvements to accommodate new traffic from approved developments off of Commerce Road (add turning lanes or new pavement markings, adding stop sign, etc.)	H

County	Project Name	Description	Rating High-Medium-Low
Crawford	North Main Street Safety Improvements	The project would address recommendations from a recent safety study conducted by PennDOT District 1-0. Some recommendations may not require programming on the TIP. Small-scale, near term projects should be completed first, with other larger scale safety projects programmed on the TIP.	H
Crawford	PA 8 and PA 27 Safety Study (1996) Intersection Improvements	Improvements to the intersection of PA 8 and PA 27 were originally identified as a recommendation in the 1996 study.	H
Crawford	PA 77 and PA 8 Roundabout	This project is currently programmed on the Northwest RPO TIP (MPMS 109996). This intersection safety improvement will realign the intersection to eliminate the skew of the existing intersection and change the vertical alignment to improve line of sight and sight distance. The existing flashing beacon will be upgraded in combination with the realignment.	H
Crawford	Titusville Trail Town Master Plan Recommendations	Implement infrastructure projects identified in the Titusville Trail Town Master Plan	H
Crawford	Muddy Creek Bridge Repairs	Bridge classified as "poor condition" by PennDOT	H
Crawford	Mead Ave and French Creek Pkwy Intersection	Possible road diet	H
Crawford	Ernst Trail Connection with Bicentennial Park	Connect Ernst Trail in Vernon Township with Meadville's Bicentennial Park, which involves crossing the Poplar Street Bridge.	H
Forest	US 62 Roadway Geometry	Roadway geometry of US 62 and turning radii at intersections/curves lead to truck backups around Tionesta	H
Venango	Liberty Street Multimodal Improvements	This project is currently programmed on the Northwest RPO TIP (MPMS 111433). The project is a bicycle and pedestrian safety improvement located on Liberty Street (US 62/322 & SR 8) between 12th Street and an area just west of 13th Street in the Central Business District of Franklin. Work will include repair/replacement of deteriorated concrete pavement, placement of new decorative street lights, and placement of new mast arms.	H
Venango	Front Street and Second Street Intersection Improvements	Front Street and Second Street Intersection Improvements	H
Venango	Multimodal Improvements for Adult Living Community	Sidewalk and transit connections to a proposed adult living community	H
Venango	SR 3024 and PA 8 Intersection	The intersection has experienced multiple fatalities, severe injuries, and near misses. Safety improvements are needed.	H
Venango	13th Street Multimodal Improvements	Multimodal improvements to 13th Street and 13th Street Bridge	H
Venango	PA 8 Betterment	Widen roadway and add sidewalks (Rouseville Study with PA 8)	H

County	Project Name	Description	Rating High-Medium-Low
Venango	Liberty Street and PA 8 Intersection Improvements	STC survey participants expressed a desire for pedestrian safety improvements at this intersection. There are two active TIP projects in the area (MPMS 98544 and 109153) that include roadway resurfacing/restoration and a betterment project.	H
Venango	City of Franklin - Sharrows and Signage	Sharrows and bicycle signage (These improvements could potentially be incorporated into active and/or future projects.)	H
Venango	PA 8 and Front Street Intersection Improvements	PA 8 and Front Street Intersection Improvements	H
Venango	Front Street (Oil City) Multimodal Improvements	Multimodal improvements along Front Street in Oil City	H
Venango	Front Street, Wilson Avenue, First Street Intersection Improvements	Intersection Improvements	H
Venango	PA 8 Capacity Addition	Widen to four lanes to I-80 interchange	H
Venango	8th Street Multimodal Improvements	Address Riverfront Park Bike Path and 8th Street Mid-block Crossing	H
Venango	Front Street (Franklin) Multimodal Improvements	Multimodal improvements along Front Street	H
Venango	9th Street Bicycle Improvements	Sharrows and signs on 9th Street	H
Venango	PA 8 and SR 3013 Intersection	Offset intersection with sight distance and geometric issues	H
Venango	US 322, PA 417 and Meadville Pike Intersection Improvements	Multimodal improvements at US 322, PA 417, and Meadville Pike intersection	H
Venango	PA 257 and US 62 Intersection Safety Improvement	Address signal timing. Signal tends to change quickly when traffic is moving downhill at high speeds. PennDOT is conducting a study of the intersection to determine a preferred alternative that will improve safety at the intersection.	H
Warren	US 62 Safety Study	Safety concerns along US 62 lead many drivers to use PA 27 as an alternate route. Currently programmed for slide repairs; however, a safety study would be beneficial to identify other improvements.	H
Warren	Pennsylvania Avenue and Conewango Avenue Intersection	Signal improvements	H
Warren	PA 957 Widening and Resurfacing	Widening and resurfacing of PA 957	H
Warren	Bicycle Trail from Youngsville to US 62	Possible bike trail between Youngsville and US 62 at the east side of Irvine	H
Warren	5th Avenue and Conewango Street Intersection	Intersection safety improvements; construction of additional left turn lanes and other safety improvements	H

County	Project Name	Description	Rating High-Medium-Low
Warren	US 62 and PA 957 Intersection	This intersection is unsafe due to poor sight distances caused by a high bank.	H
Warren	US 62 On-road Bicycle Improvements	Improved bicycle facilities connecting North Warren to the Hike Bike Trail	H
Warren	US 62 Road Repairs	Pavement conditions are poor, with potholes and cracking. The roadway is also very narrow.	H
Warren	US 6 Bicycle and Pedestrian Connectivity	Bicycle and pedestrian connectivity improvements connecting local businesses at the intersection of US 6 and Kinzua Road with other destinations in Warren.	H
Clarion	PA 338 Sight Distance Issues	It is difficult to see oncoming traffic when turning onto PA 338 due to the elevation in the area. Project would include bank cutting at Knox Road and narrowing the intersection; possibly HSIP eligible.	M
Clarion	Route 36 and 66 Repaving	These roadways are in need of paving. They experience high tourist and camp visitor volumes on the weekends.	M
Clarion	Armstrong Trail-Brady Tunnel Trail Gap	Address the Armstrong Trail-Brady Tunnel Trail Gap, which has been identified as one of DCNR's Top 10 Trail Gaps	M
Clarion	On-road Bicycle Facilities Improvements for Clarion Highlands Trail Detour	Improved on-road bicycle facilities for Clarion Highlands Trail Detour	M
Clarion	Bicycle/Pedestrian Connectivity to ATA Bus Stop	ATA has a bus stop near cottages in this area. Bicycle/pedestrian accommodations or trails could connect the development to the hospital and serve as emergency access.	M
Clarion	Erie-to-Pittsburgh Trail Gap Closure - Emlenton to Foxburg	High priority trail gap in Erie-to-Pittsburgh Trail System	M
Clarion	Public Transportation and Bicyclist Safety Concerns	STC Survey respondents noted concerns about poor public transportation in addition to several roadways being identified as unsafe for bicycles	M
Crawford	PA 173 and PA 27 Intersection Safety Improvements	A turning lane is needed at this intersection per a safety/operations study for PA 27. The results of the study call for investment in this intersection.	M
Crawford	Spring Street Bridge over French Creek Repairs	This bridge is classified as "poor condition" and needs repairs.	M
Crawford	French Creek Parkway - Potential Road Diet	The project is currently programmed on the Northwest RPO TIP (MPMS 85776) and includes five miles of improvements and roadway reconstruction on US Route 6 (French Creek Parkway) from Reynolds Street to Baldwin Street Extension in Meadville. Work involves a reduction in travel lanes from four to two and geometric improvements at the interchange at the northern limit of the project. A new multi-use trail is also proposed adjacent to proposed two-lane traffic.	M
Crawford	Erie-to-Pittsburgh East Branch Trail Extension - Spartansburg to Centerville	Erie-to-Pittsburgh East Branch Trail Extension from Spartansburg to Centerville. The extension would improve safety by removing conflicts between vehicles and horse & buggy users.	M

County	Project Name	Description	Rating High-Medium-Low
Crawford	PA 27 Truck Climbing Lane	Construction of a climbing lane in the vicinity of the Wayland Road intersections was originally identified as a recommendation in the 1996 study.	M
Crawford	Safety Improvements at First District Elementary School	Safety and congestion issues have been identified near First District Elementary School. Congestion issues occur during drop off/pick up times at the school. There are concerns about traffic backing up on other roadways as well as safety concerns with the number of walking students as well as buses. This project could be a potential candidate for the Safe Streets for All program.	M
Crawford	PA 27 and PA 8 Intersection	Intersection improvements	M
Crawford	PA 8 and Skyline Drive Improvements	Project would install a walkway connecting the City of Titusville to the Walmart in Oil Creek Township, Crawford County. There are individuals who walk to the Walmart and traffic is heavy in the area. This project could be a candidate for the Safe Streets for All program.	M
Crawford	SR 2040 Flooding Concerns	The Spring Street Extension is prone to flooding during major rain events. One option would be to elevate the roadway.	M
Crawford	US 322 and SR 2005 Intersection	Intersection has experienced a significant number of crashes, including fatalities. Safety improvements are needed.	M
Crawford	PA 102 and Pennsylvania Ave Intersection	The intersection has offset geometry, leading to sight distance issues.	M
Crawford	PA 77 and SR 1024 Intersection	Widening of the south side of Canadohta Lake Road to improve horse and buggy safety and site clearance on southern side of PA 77 on curve heading east.	M
Crawford	Walnut Street and North Cottage over Mill Run (ID 20730188294107)	Spalls and overlay deck need patched with approved material; near abutment and far abutments need underpinned; bearing seats along the near and far abutments need repaired' 9 steel beams need replaced or repaired	M
Crawford	PA 27 and PA 173 Intersection	Addition of an eastbound left turn lane at the intersection of PA 173 and PA 27. This project was a recommendation in the 1996 study of PA 27.	M
Crawford	Delano Rd and Perry Highway Intersection	Intersection has poor visibility	M
Crawford	Sportsman Road County Bridge Replacement (ID 20722208963028)	Complete bridge replacement; Priority #3	M
Crawford	Bicycle/Pedestrian Connectivity in Titusville	An existing bridge was removed over the Oil Creek at Perry Street. People to the south of Titusville are only able to access Titusville via the Franklin Street Bridge. This bridge was not redundant for foot and bicycle traffic. A covered bridge or pedestrian bridge in this area would be helpful. This project could be a potential candidate for the Safe Streets for All Program.	M
Crawford	Erie-to-Pittsburgh East Branch Trail Extension - Centerville to Hydetown	Erie-to-Pittsburgh East Branch Trail Extension - Centerville to Hydetown	M

County	Project Name	Description	Rating High-Medium-Low
Crawford	Erie-to-Pittsburgh East Branch Trail Extension - Hydetown to Titusville	Erie-to-Pittsburgh East Branch Trail Extension - Hydetown to Titusville. Addressing this trail gap would connect the ETP Trail with existing Queen City Trail.	M
Crawford	US 322 and PA 173 Intersection	The current configuration of ths intersection has tight turning radii for lumber trucks turning left onto 322 as well as sight distance concerns	M
Crawford	PA 198 Pavement Conditions	There has been an increase in freight traffic on this route. A weight restriction is in place south of the fairgrounds, which leads to trucks rerouting onto PA 198. Heavy truck traffic is accelerating pavement deterioration, leading to poor conditions.	M
Crawford	Grove Street over Mill Run (ID 20730188124001)	The bridge requires a full replacement. District 10-0 has inspected the structure and concluded it is beyond its useful lifespan.	M
Crawford	Pennsylvania Avenue and Mercer Pike Intersection Safety Improvement	Road has an intersection sightline issue because of how the two roads are connected. Concern with safety and increased traffic in the area due to development pressure.	M
Crawford	Waylands Corner Intersection	Intersection improvements	M
Crawford	Erie-to-Pittsburgh East Branch Trail Extension - Black Bridge to Spartansburg	Erie-to-Pittsburgh East Branch Trail Extension - Black Bridge to Spartansburg	M
Crawford	Hogback Road Bridge (ID 20721808404000)	As recommended in the 2012 Annual Routine Bridge Inspection Report, this project covers the entire bridge structure replacement.	M
Crawford	PA 408 and SR 1010 Roundabout	Intersection improvement	M
Crawford	SR 3004 and Victory Blvd Intersection	The project would include safety improvements for vehicles entering the PGW plant as well as traffic traveling on Adamsville Rd.	M
Crawford	Creek Road County Bridge Replacement (ID 20720607513008)	Complete bridge replacement; Priority #1.	M
Crawford	PA 86 Speed Limits	The speed limit is posted at 45 MPH in Woodcock; however, motorists tend to travel at higher speeds	M
Forest	PA 899 and PA 66 Intersection	Realignment of the intersection to a 90 degree angle	M
Forest	PA 66 Widening	Widening to four lanes through Marienville	M
Forest	PA 666 Roadway Improvements	PA 666 is narrow and uneven. It also experiences drainage problems.	M
Forest	US 62 and Elm Street Intersection	Turning radii are not adequate for larger vehicles.	M
Venango	Elk Street Shared Lanes	Elk Street Extension - Shared Lanes	M

County	Project Name	Description	Rating High-Medium-Low
Venango	Sandy Creek/Clarion Highlands Trail Crossing Improvements	Improve facilities at the Sandy Creek Trail/Clarion Highlands Trail Crossing	M
Venango	PA 8 Intersection at Dollar General	Accidents have increased at the intersection	M
Venango	Reopen/Repair Oil Creek Bridge	This single-lane bridge was recently reopened to bicycle and pedestrian traffic; however, it is still closed to vehicular traffic.	M
Venango	PA 27 and Lesh Road Intersection Improvements	PA 27 and Lesh Road Intersection Improvements	M
Venango	Erie-to-Pittsburgh Trail Gap Closure in Oil Creek State Park	Bicycle/pedestrian improvements along SR1007 to improve safety for Erie-to-Pittsburgh trail users.	M
Venango	Central Elementary School Pedestrian Improvements	Pedestrian safety improvements around Central Elementary School in the City of Franklin	M
Venango	Rouseville Signal	Review warrant for the signal at this location.	M
Venango	SR 1007 Flooding	Beaver dams have led to flooding on SR 1007. Drainage improvements are needed.	M
Venango	SR 3024 Drainage Issues	A dip in the road has led to drainage issues	M
Venango	PA 427 Flooding	PA 427 experiences flooding during rainfall events	M
Warren	Youngsville Streetscape and Bicycle/ Pedestrian Improvements	Downtown streetscape & pedestrian facility upgrades as identified in the Youngsville Revitalization Plan (2008)	M
Warren	SR 4019 Shoulder Widening	Widen shoulders along SR 4019 to accomodate horse and buggy traffic	M
Warren	PA 957 Pavement Conditions	The roadway has poor pavement conditions. Plowing has removed top coat and potholes are present.	M
Warren	US 6 and Main Avenue Interchange	Construct missing access ramps on east side of overpass	M
Warren	SR 4009 Betterment	SR 4009 Betterment	M
Warren	US 6 and PA 27 Intersection	Intersection Improvements	M
Warren	North Road over Little Brokenstraw Creek (Bridge ID 61-7210-0561-4001)	Bridge replacement	M
Warren	PA 59 Truck Climbing Lane	Construction of truck climbing lane	M
Warren	Kidder Road over Little Brokenstraw Creek (Bridge ID 61-7210-0551-4004)	Bridge replacement	M

County	Project Name	Description	Rating High-Medium-Low
Warren	SR 1019 and Quaker Hill Road Intersection	Intersection improvement to address roadway geometry, including a sharp bend on SR 1019 and poor sight distances at the intersection	M
Warren	Depot Road (Bridge ID 61-7216-0378-4009)	Bridge replacement	M
Warren	Baker Hill Road over Brokenstraw Creek (Bridge ID 61-7203-0521-4000)	Bridge replacement	M
Warren	Eureka Road over West Branch Caldwell Creek (Bridge ID 61-7207-0377-4005)	Bridge replacement	M
Warren	Mount Hope Road (Bridge ID 61-7219-0306-4003)	Bridge replacement	M
Warren	PA 59 Bike/Ped Connectivity to Jakes Rocks	There is community desire to link newly constructed mountain bike trails (Jakes Rocks) to downtown via PA 59.	M
Warren	Saybrook Road over Four Mile Run	Bridge replacement	M
Clarion	Allegheny River Trail - Parker to Upper Hillville	Trail gap in Allegheny River Trail - Parker to Upper Hillville	L
Clarion	Route 68 Safety Improvements	Low visibility in the corridor increases safety risk for southbound traffic.	L
Crawford	Joiner Road Bridge Replacement Project (ID 20720208834003)	The project involves the complete replacement of the bridge, which was deficient in load-carrying capacity and in generaly poor condition with a new two-lane bridge that meets current PennDOT design standards. Min approach roadway work will be required.	L
Crawford	Jerusalem Road County Bridge Replacement (ID 20720408993004)	Complete replacement of bridge. Priority #2	L
Crawford	SR 2014 Sight Distance Issues	Line of sight issues that would be beneficial to resolve.	L
Crawford	Utilize inactive railroad property in Titusville	Need to utilize inactive railroad property and private lands to connect the end of the Queen City Trail in Titusville to Hydetown.	L
Crawford	Racop Road Bridge (ID 20722908734002)	Carryover bridge replacement project from 2015 NW LRTP	L
Crawford	West Road over Linesville Creek (ID 20720506054001)	Carryover bridge replacement project from 2015 NW LRTP	L
Crawford	I-79 Roadway Repairs	The roadway has several potholes and is in need of maintenance	L
Crawford	US 6 and US 19 Sidewalk Improvements	US Routes 6 and 19 bring heavy commuter and commerce related traffic through a small residential community. Sidewalk improvements are needed to improve safety for residents walking, running, and/or biking on the shoulder of US 619. The project could be a candidate for the Safe Streets for All program.	L

County	Project Name	Description	Rating High-Medium-Low
Crawford	Ernst Trail Extension to Conneaut Lake	Need to extend the Ernst Trail to Conneaut Lake and cross multiple local and state roads.	L
Crawford	Old PA 77 Maintenance	Repave and widen Old PA 77 from PA 426 to PA 77	L
Crawford	Ernst Trail - Safety Improvements	Trail crossing improvements and investments in local roadways/bridges. Sight line issues exist on some local roads due to curves, making it difficult to see trail crossings. The existing feasibility study identifies solutions that the local government is attempting to find a way to implement.	L
Crawford	Plank Road Bridge Replacement (ID 20720905173011)	Full bridge replacement. The Sufficiency Rating computed for this structure is 17.4, which is well below the threshold for replacement eligibility. County Priority #4.	L
Crawford	Hamilton Road over Muddy Creek (ID 20720107433001)	Carryover bridge replacement project from 2015 NW LRTP	L
Crawford	East Spring Road Bridge (ID 20722304664002)	Carryover bridge replacement project from 2015 NW LRTP	L
Crawford	Jay Road Bridge (ID 20722704774002)	Carryover bridge replacement project from 2015 NW LRTP	L
Crawford	Rocky Glen Road Drainage	Restore roadway drainage ditch and berms and line drainage ditch with the appropriate stone, concrete, culverts, or other method necessary to correct the constant erosion of ditch and berm.	L
Crawford	PA 77 Repaving	PA 77 to Springcreek	L
Crawford	Deeter Hill Road Bridge (ID 20722704254003)	Carryover bridge replacement project from 2015 NW LRTP	L
Crawford	New Access Road in Vernon Twp	The access road would connect Baco Road, Moss Road, Port Road and Airport Road for a distance of approximately .946 miles on new articulation, running between SR 98 and Cotton Road.	L
Crawford	Repair US 6 Bridge over Linesville Creek	The bridge is in poor condition. Sidewalks are in poor condition and the bridge structure appears questionable.	L
Crawford	PA 89 Repaving	Horse and buggy traffic has trenched part of the road, which fills with water during rain events. Several potholes along road also need repaved.	L
Crawford	Stitzerville Bridge (ID 20720703993010)	Bridge is in need of repairs on approach from both sides.	L
Forest	Guitonville Road Flooding	Flooding issues	L
Venango	Rail Bridge Improvement - Oil City	The bridge has a posted weight limit and should be upgraded to accommodate movement of freight; carryover from 2015 LRTP.	L
Venango	SR 4003 Drainage Issues	Drainage issues have led to washouts, erosion of the roadway.	L

County	Project Name	Description	Rating High-Medium-Low
Venango	SR 3026 Drainage Issues	Drainage issues along the roadway have led to washouts.	L
Venango	SR 2004 over Deer Lick Run - Bridge Replacement	Bridge is weight posted without an adequate detour. It is in need of replacement.	L
Venango	PA 27 and Cherrytree Plumline Road Intersection Improvements	PA 27 and Cherrytree Plumline Road Intersection Improvements	L
Venango	Rail Bridge Improvement - Sugar Creek	Railroad bridge should be upgraded to accommodate heavier trains; carryover from the 2015 LRTP	L
Venango	PA 417 Multimodal Improvements	Multimodal improvements along PA 417 in Rocky Grove	L
Venango	US 62 around Oil City	Pavement is in poor condition and in need of repair/repaving.	L
Warren	Gossville Road over West Caldwell Creek (Bridge ID 61-7207-0355-4004)	Local bridge replacement	L
Warren	Chappel Hill Road over Caldwell Creek (Bridge ID 61-7207-0355-4001)	Local bridge replacement	L
Warren	Western Road over Little Brokenstraw Creek (Bridge ID 61-7210-0547-4005)	Local bridge replacement	L
Warren	Werner Park Entrance (US 62)	Intersection Improvements	L
Warren	Valastiak Road over Railroad (Bridge ID 61-7210-0539-8007)	Local bridge replacement	L
Warren	Schell Road over Gar Run (Bridge ID 61-7216-0397-4006)	Local bridge replacement	L
Warren	Barton Run Road over Little Brokenstraw Creek (Bridge ID 61-7216-0441-4003)	Local bridge replacement	L
Warren	Stoddard Road over Stillwater Creek (Bridge ID 61-7221-0460-4007)	Local bridge replacement	L
Warren	Old State Road over Kiantone Creek (Bridge ID 61-7209-0589-4003)	Local bridge replacement	L
Warren	Ludwick Road over Kiantone Creek (Bridge ID 61-7209-0508-4002)	Local bridge replacement	L
Warren	Marshianne Road (Bridge ID 61-7216-0395-4008)	Bridge replacement	L
Warren	Local Bridge Replacement Creek Road Road over Brokenstraw Creek (Bridge ID 61-3012-0030-0000)	Bridge replacement	L

County	Project Name	Description	Rating High-Medium-Low
Warren	Hyde Road over Spring Creek (Bridge ID 61-7219-0306-4003)	Bridge replacement	L
Warren	Creek Road Road over Brokenstraw Creek (Bridge ID 61-3012-0030-0000)	Bridge replacement	L
Warren	Youngsville Road over Tidioute Creek (Bridge ID 61-7222-0362-4001)	Bridge replacement	L
Warren	Brennan Road Maintenance	Pavement conditions are poor and the roadway has "bad bumps"	L

Appendix C: Interstate TIP

Project Information							FFY 2023 Costs			FFY 2024 Costs			FFY 2025 Costs			FFY 2026 Costs		County Totals
County	S.R.	Sec.	Project	Project Title	Phase	Area	Federal	State	Total	Federal	State	Total	Federal	State	Total	State	Total	
Clarion	80		109300	Clarion River Bridge	F	IMAN		$450,000	**$450,000**									
Clarion	80		109300	Clarion River Bridge	C	IMAN				$3,645,253		**$3,645,253**						
Clarion	80	34B	106030	I-80 Strattanville Reconstruction	P	IMAN										$2,076,352	**$2,076,352**	
Clarion	80	365	90021	I-80 Canoe Creek Bridges	U	IMAN		$481,500	**$481,500**									
Clarion	80	365	90021	I-80 Canoe Creek Bridges	R	SPFED		$65,000	**$65,000**									
Clarion	80	365	90021	I-80 Canoe Creek Bridges	C	IMAN		$35,000,000	**$35,000,000**		$35,000,000	**$35,000,000**		$33,809,065	**$33,809,065**			
Clarion	80	366	116492	Boyd Run Culvert Rehab	P	IMAN					$412,000	**$412,000**						
Clarion	80	366	116492	Boyd Run Culvert Rehab	F	IMAN								$424,360	**$424,360**			
Clarion	80	366	116492	Boyd Run Culvert Rehab	U	IMAN										$131,127	**$131,127**	
Clarion	80	366	116492	Boyd Run Culvert Rehab	R	IMAN										$109,273	**$109,273**	
Totals for Clarion County								$35,996,500	**$35,996,500**	$3,645,253	$35,412,000	**$39,057,253**		$34,233,425	**$34,233,425**	$2,316,752	**$2,316,752**	**$111,603,930**
Crawford	79	A09	76858	I-79: Mercer Co Ln to the Geneva Swamp Br	P	IMAN		$220,000	**$220,000**									
Crawford	79	A09	76858	I-79: Mercer Co Ln to the Geneva Swamp Br	F	IMAN					$280,000	**$280,000**						
Crawford	79	A09	76858	I-79: Mercer Co Ln to the Geneva Swamp Br	+C	IMAN				$5,450,853		**$5,450,853**	$5,000,000		**$5,000,000**			
Crawford	79	A28	109812	I-79 MM 154 - 165 - #12	C	IMAN	$340,569		**$340,569**	$12,098		**$12,098**						
Totals for Crawford County							$340,569	$220,000	**$560,569**	$5,462,951	$280,000	**$5,742,951**	$5,000,000		**$39,233,425**			**$45,536,945**
Overall Totals:							$340,569	$36,216,500	**$36,557,069**	$9,108,204	$35,692,000	**$44,800,204**	$5,000,000	$34,233,425	**$39,233,425**	$2,316,752	**$2,316,752**	**$122,907,450**

Key to Phases:
R = Right-of-Way Acquisition
U = Utility Relocation
P = Preliminary Design
F = Final Design
C = Construction

Appendix D: Transit TIP

County	Project	Project Title	Area	Year	Federal	State	Local	Total
Crawford	110576	Bus Shelters	PT	2025	$144,000	$34,839	$1,161	**$180,000**
Crawford	114974	Support Vehicles	PT	2025		$115,000		**$115,000**
Crawford	89724	Revenue Fleet Vehicles - Paratransit	PT	2026	$329,600	$2,332,400		**$2,662,000**
Crawford	110573	IT Infrastructure	PT	2026		$40,000	$1,452	**$41,452**
Crawford	110573	IT Infrastructure	PT	2026		$63,548		**$63,548**
Crawford	110574	Revenue Fleet Vehicles - Fixed-Route	PT	2025	$1,320,000	$220,678	$7,323	**$1,548,000**
Crawford	114977	Titusville Operations Facilities	PT	2024	$320,000	$77,420	$2,580	**$400,000**
Crawford	110578	Maintenance Equipment	PT	2023		$50,000		**$50,000**
				Total for Crawford County:	**$2,113,600**	**$2,933,885**	**$12,516**	**$5,060,000**
Warren	110572	Parking Lot	PT	2023		$20,000		**$20,000**
Warren	106432	Shared-Ride Bus Procurement	PT	2026		$310,000		**$310,000**
				Total for Warren County:		**$330,000**		**$330,000**
				Overall Totals	**$2,113,600**	**$3,263,885**	**$12,516**	**$5,390,000**

Appendix E: Environmental Justice Assessment

Introduction

The public involvement efforts for MPO/RPOs are guided by several federal mandates to ensure nondiscrimination in federally funded activities. These mandates are designed so that planning and public involvement activities are conducted equitably and in consideration of all citizens, regardless of race, nationality, sex, age, ability, language spoken, or economic status. These mandates include:

- **Title VI of the Civil Rights Act of 1964** - Title VI of the Civil Rights Act states that "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefit of, or be subjected to discrimination under any program or activity receiving federal financial assistance." MPOs are committed to providing open and inclusive access to the transportation decision-making process for all persons, regardless of race, color, or national origin.
- **Executive Order on Environmental Justice (Executive Order 12898 February 11, 1994)** - Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. MPOs/RPOs are committed to providing opportunities for full and fair participation by minority and low- income communities in the transportation decision-making process.
- **Americans with Disabilities Act (ADA)** - The Americans with Disabilities Act of 1990 stipulates involving persons with disabilities in the development and improvement of services. Sites of public involvement activities as well as the information presented must be accessible to persons with disabilities. MPOs/RPOs are committed to providing full access to public involvement programs and information for persons with disabilities. All public meetings are held in ADA-accessible locations. With advance notice, special provisions can be made for hearing-impaired or visually impaired participants.
- **Executive Order on Limited English Proficiency** - Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency," was signed on August 11, 2000. Recipients of federal funding "are required to take reasonable steps to ensure meaningful access to programs and activities by LEP person." MPOs/RPOs will make special arrangements for the provision of interpretative services upon request.

FHWA introduced the Environmental Justice Core Elements Methodology to ensure an MPO/RPO can meaningfully assess the benefits and burdens of plans and programs. The Northwest RPO is committed to following the Core Elements approach, which includes efforts to:

- Avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations.
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

By integrating the Core Elements into the planning process, state and local agencies are better equipped to carry out the investment strategy and project selection. The EJ process should be comprehensive and continuous with each task informing and cycling back to influence the next step.

Identifying Minority and Low-Income Populations

In development of its 2050 Long Range Transportation Plan (LRTP), the Northwest RPO conducted an Environmental Justice Benefits and Burdens analysis. A distributive geographic analysis was conducted to identify the locations and concentrations of minority, low-income and other Traditionally Underserved Populations (TUP). The environmental justice evaluation process begins with developing an understanding of the geographic concentrations of minority and low-income populations. During the development of the 2050 LRTP, the statewide methodology developed by Williamsport MPO, in consultation with PennDOT Central Office was utilized. Census block groups were classified into intervals based on the ratio of census block group minority/low income percentage to county or region overall minority/low income percentage rather than the actual percentages, resulting in a uniform scale usable across all counties or regions in the state. These intervals are defined as follows:

- **Interval 1**: Census block group minority/low-income population percentage is less than or equal to half of regional minority/low income population percentage (Ratio <= 0.5)
- **Interval 2**: Census block group minority/low-income population percentage is greater than half and less than or equal to regional minority/low income population percentage (Ratio > 0.5 and <= 1)
- **Interval 3**: Census block group minority/low income population percentage is greater than regional minority/low income percentage and less than or equal to twice the regional minority/low income population percentage (Ratio > 1 and <= 2)
- **Interval 4**: Census block group minority/low income population percentage is greater than twice and less than or equal to four times the regional minority/low income population percentage (Ratio > 2 and <= 4)
- **Interval 5**: Census block group minority/low income population percentage is greater than four times the regional minority/low income population percentage (Ratio > 4)

The identification of these populations is essential to establishing effective strategies for engaging them in the transportation planning process. When meaningful opportunities for interaction are established, the transportation planning process can effectively draw upon the perspectives of communities to identify existing transportation needs, localized deficiencies, and the demand for transportation services. Mapping of these populations not only provides a baseline for assessing impacts of the transportation investment program, but also aids in the development of an effective public involvement program.

A “minority population” is defined as any readily identifiable group of Black, Hispanic, Asian American, American Indian, and Alaskan Native who

live in geographic proximity and who would be similarly affected by a proposed FHWA program, policy, or activity. A "low income population" is defined as any readily identifiable group of persons at or below the Department of Health and Human Services poverty guidelines who live in a geographic proximity who would be similarly affected by a proposed FHWA program, policy, or activity.

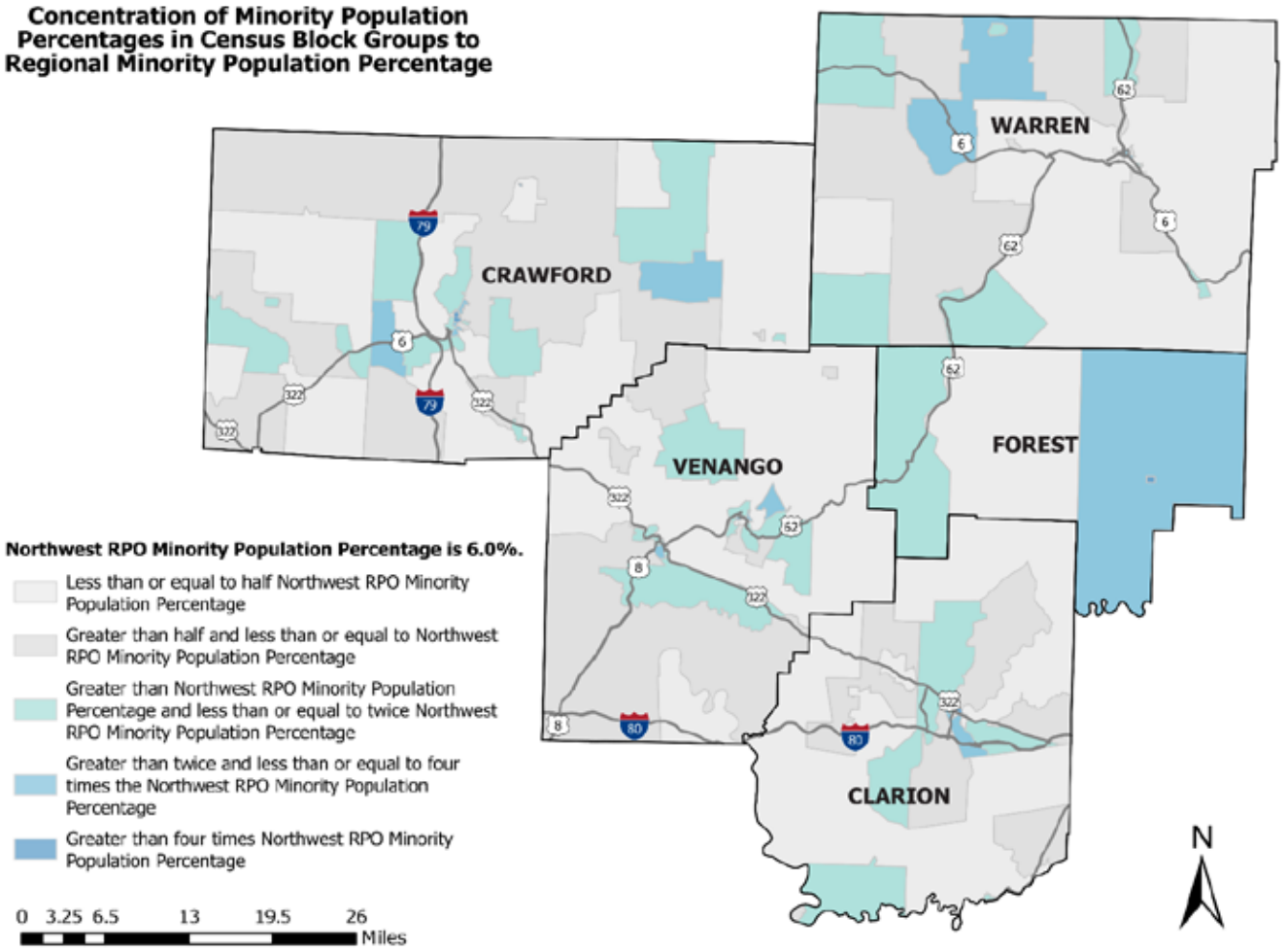
Based on 2017-2021 American Community Survey (ACS), minority populations in the five-county Northwest PA region account for 6 percent of the region's total population. Table 1 and Figure 1 show these concentrations of minority populations.

Table 1: Minority Concentrations by Interval

Population	Minority Population Interval Shares					Total
	Interval 1	Interval 2	Interval 3	Interval 4	Interval 5	
Total Population	86,246	59,628	47,204	19,567	6,143	**218,788**
Total Population (%)	39.4%	27.3%	21.6%	8.9%	2.8%	**100%**
Minority Population	1,180	2,519	3,789	3,004	2,649	**13,141**
Minority Population (%)	1.4%	4.2%	8.0%	15.4%	43.1%	**6.0%**

Source: 2017-21 ACS 5-Year Estimates

Figure 1: Minority Population Concentrations



Source: 2017-22 ACS 5-Year Estimates

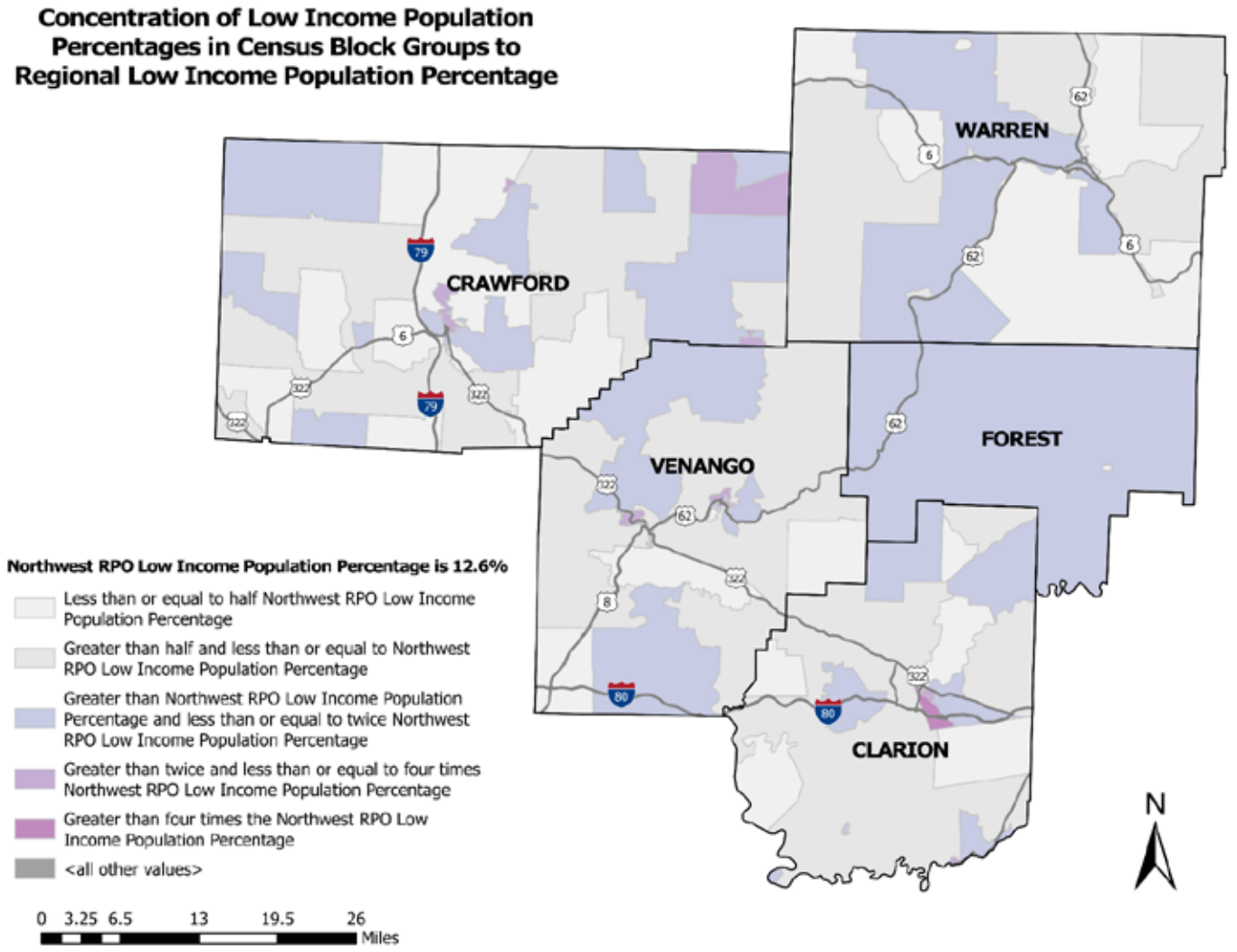
The low income population in the Northwest PA region is 12.6 percent of the region's total population. Table 2 and Figure 2 show these concentrations, also based on 2017-2021 ACS data.

Table 2: Low Income Concentrations by Interval

Population	Low Income Population Interval Shares					Total
	Interval 1	Interval 2	Interval 3	Interval 4	Interval 5	
Total Population	53,026	74,970	72,372	16,314	2,106	**218,788**
Total Population (%)	24.2%	34.3%	33.1%	7.5%	1.0%	**100%**
Low Income Population	720	1,924	2,990	1,184	158	**27,625**
Low Income Population (%)	1.4%	2.6%	4.1%	7.3%	7.5%	**12.6%**

Source: 2017-21 ACS 5-Year Estimates

Figure 2: Low Income Population Concentrations



Source: 2017-22 ACS 5-Year Estimates

Condition Assessment

To meaningfully analyze benefits and adverse effects of the transportation program, the Northwest RPO examined the existing conditions of transportation assets throughout the region, as well as determining their locations in reference to the region's minority and low-income populations. The results of this assessment will allow the RPO to track number of crashes, poor condition bridges, and poor pavement mileage in the region as well as identify safety gaps and distribution disparities between minority and low income populations and those that are not considered minority or low income.

There may be a slight disparity in the total number of assets and crashes due to their location on the border of Census block groups. For the purposes of evaluating the distribution of poor asset conditions and crashes in among minority populations, high minority areas will include intervals 3, 4, and 5 since these intervals have ratios that show they are greater than the regional average. Similarly, in evaluating poor asset conditions and crashes in among low income population, high low income areas will also include intervals 3, 4 and 5 because the ratios show they are greater than the regional average.

Bridges

Tables 3 and 4 provide the number and percentage of bridges by condition and by the concentration of minority and low-income populations. Comparing the distribution of total bridges and poor condition bridges between low and high minority and low-income areas helps provide insights on potential equity issues.

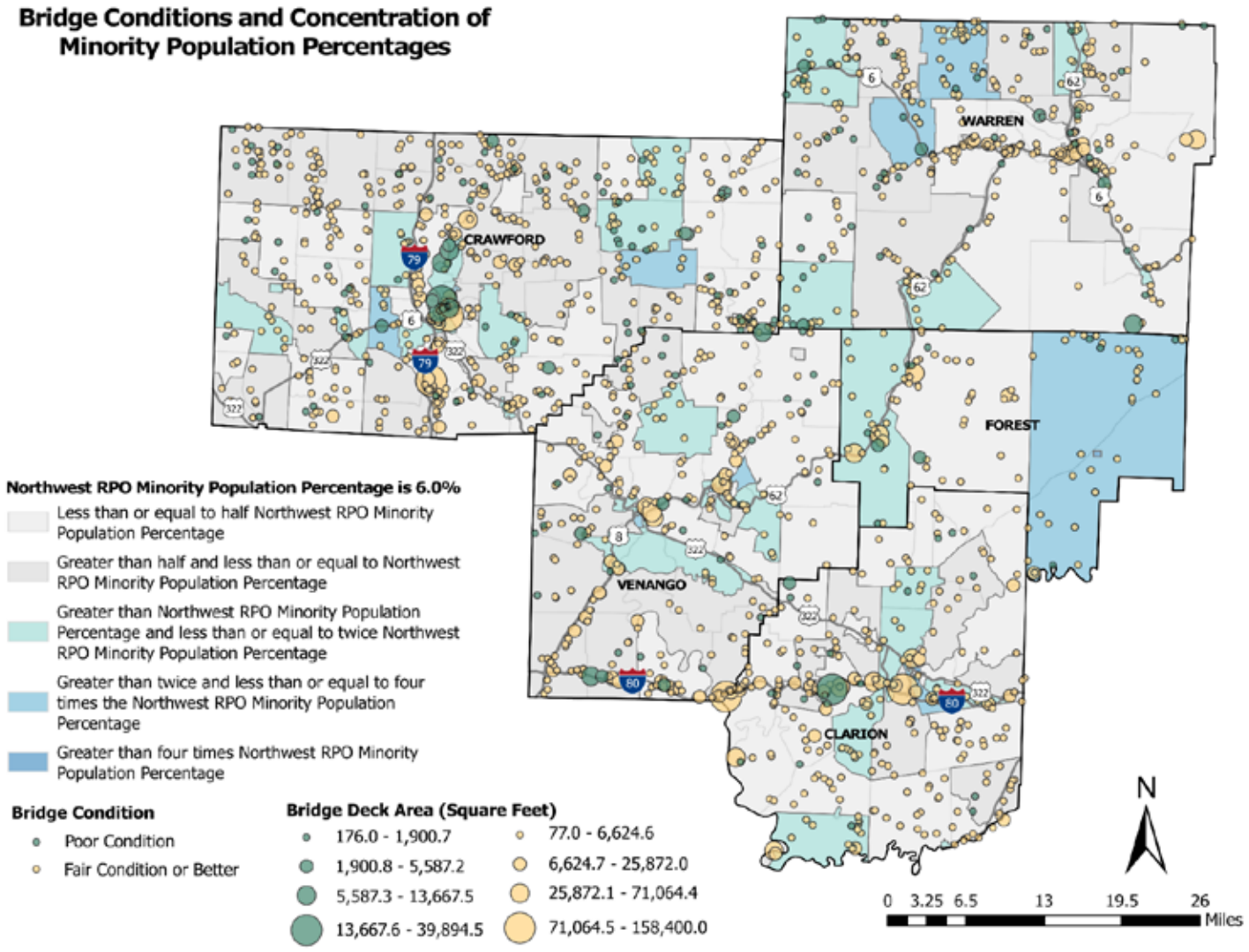
Overall, there is not a disparity between the condition of bridges and the concentration of minority populations. The percentage of bridges in poor condition located in high minority areas (intervals 3, 4, and 5) is lower than the regional average of 8.31 percent. When considering bridge deck area, the percentage of deck area in poor condition is lower than average in areas with high minority concentrations.

Table 3: Distribution of Bridge Assets by Minority Population Intervals

Asset	Minority Population Interval Shares					Total
	Interval 1	Interval 2	Interval 3	Interval 4	Interval 5	
Bridges in Poor Condition	59	33	19	6	0	**117**
Bridges in Poor Condition (%)	10.17%	6.95%	7.20%	6.98%	0.00%	**8.31%**
Bridges in Fair Condition or Better	521	442	245	80	3	**1,291**
Bridges in Fair Condition or Better (%)	89.83%	93.05%	92.80%	93.02%	100%	**91.69%**
Bridge Deck Area in Poor Condition (ft^2)	180,215.0	82,084.5	38,471.9	8,605.9	0.0	**309,377.3**
Bridge Deck Area in Poor Condition (%)	8.06%	6.15%	3.89%	2.90%	0.0%	**6.34%**
Bridge Deck Area in Fair Condition or Better (ft^2)	2,056,158.78	1,252,086.22	949,486.42	288,572.10	23,948.90	**4,570,252.41**
Bridge Deck Area in Fair Condition or Better (%)	91.94%	93.85%	96.11%	97.10%	100%	**93.66%**

Source: 2017-22 ACS, PennDOT

Figure 3: Bridge Conditions and Minority Concentrations



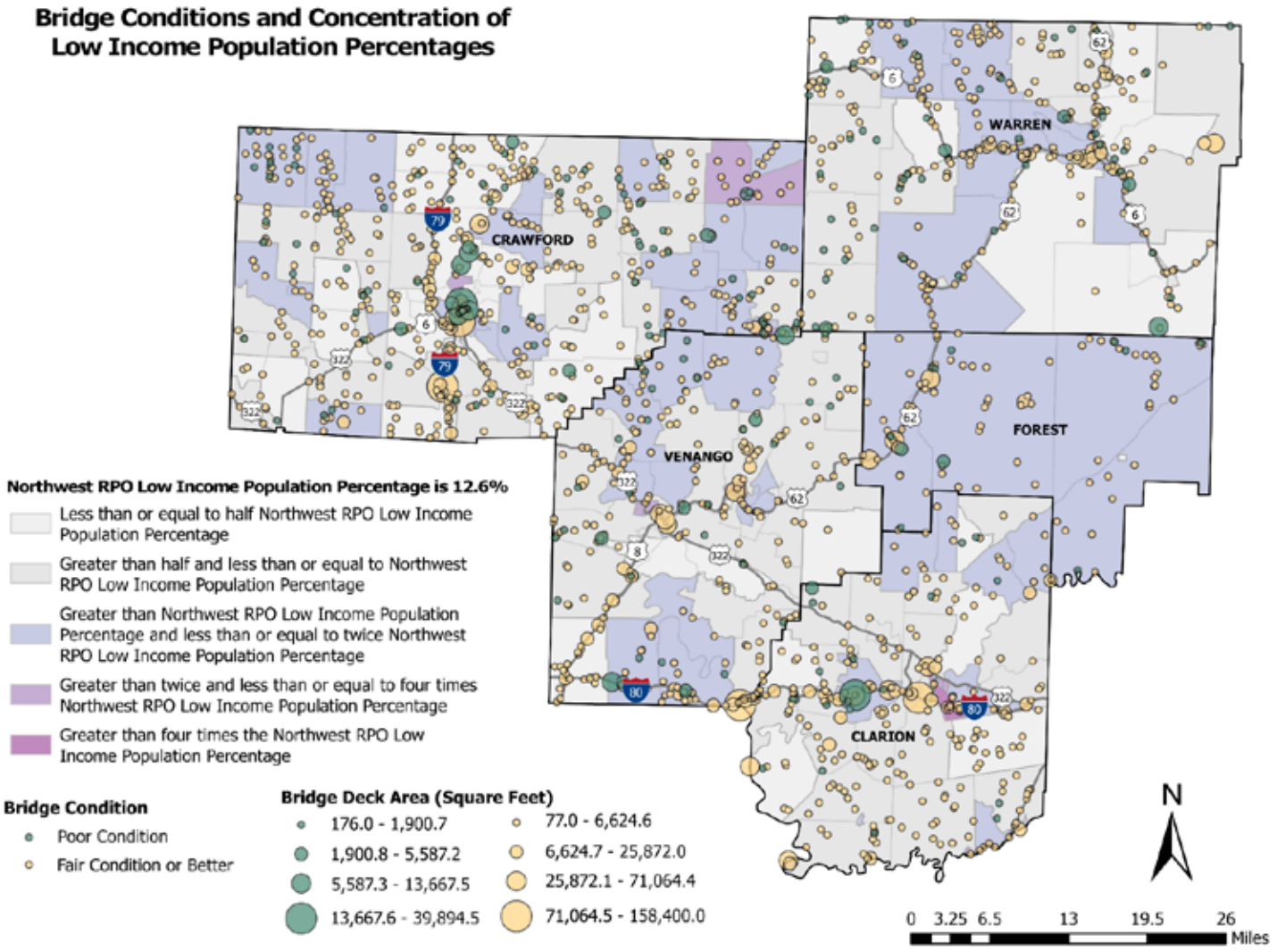
Source: 2017-22 ACS; PennDOT

Similarly, there is not a significant disparity in percentage of bridges and bridge deck in poor condition located in areas with a higher concentration of low income populations. Poor condition bridge deck area in Intervals 3 and 4 are higher than the regional average (6.2%) at 8.9 percent and 12.2 percent respectively. While poor condition bridge deck area in Interval 4 is double the regional average, this interval has the lowest number of poor condition bridges (2).

Asset	Low Income Population Interval Shares					Total
	Interval 1	Interval 2	Interval 3	Interval 4	Interval 5	
Bridges in Poor Condition	29	53	38	2	0	**122**
Bridges in Poor Condition (%)	8.84%	9.23%	8.14%	5.56%	0.0%	**8.61%**
Bridges in Fair Condition or Better	299	521	429	34	12	**1,295**
Bridges in Fair Condition or Better (%)	91.16%	90.77%	91.86%	94.44%	100%	**91.39%**
Bridge Deck Area in Poor Condition (ft^2)	58,983.1	64,854.8	144,491.70	38,378.0	0.0	**306,707.60**
Bridge Deck Area in Poor Condition (%)	5.97%	3.40%	8.89%	12.15%	0.0%	**6.20%**
Bridge Deck Area in Fair Condition or Better (ft^2)	928,883.13	1,844,961.16	1,481,141.92	277,542.40	110,818.30	**4,643,346.91**
Bridge Deck Area in Fair Condition or Better (%)	94.03%	96.60%	91.11%	87.85%	100%	**93.80%**

Source: 2017-22 ACS, PennDOT

Figure 4: Bridge Conditions and Low Income Concentrations



Source: 2017-22 ACS; PennDOT

Pavement Condition

Poor pavement condition data for the Northwest RPO region may indicate a need for increased roadway resurfacing and reconstruction. Overall, there is not a significant disparity in pavement condition of federal aid segment miles in areas with high concentrations of minority populations. When considering segment miles in poor conditions, Interval 5 has the highest percentage of mileage with poor IRI at 13.01 percent, which is higher than the regional average of 1.48 percent; however, this interval only has 4.5 federal aid segment miles. In addition, the percentage of federal aid segment miles with excellent IRI in Interval 3 is slightly lower and Interval 4 is slightly higher than the regional average of 69.9 percent. Interval 5's percentage of excellent IRI falls significantly below the regional average at 15.5 percent.

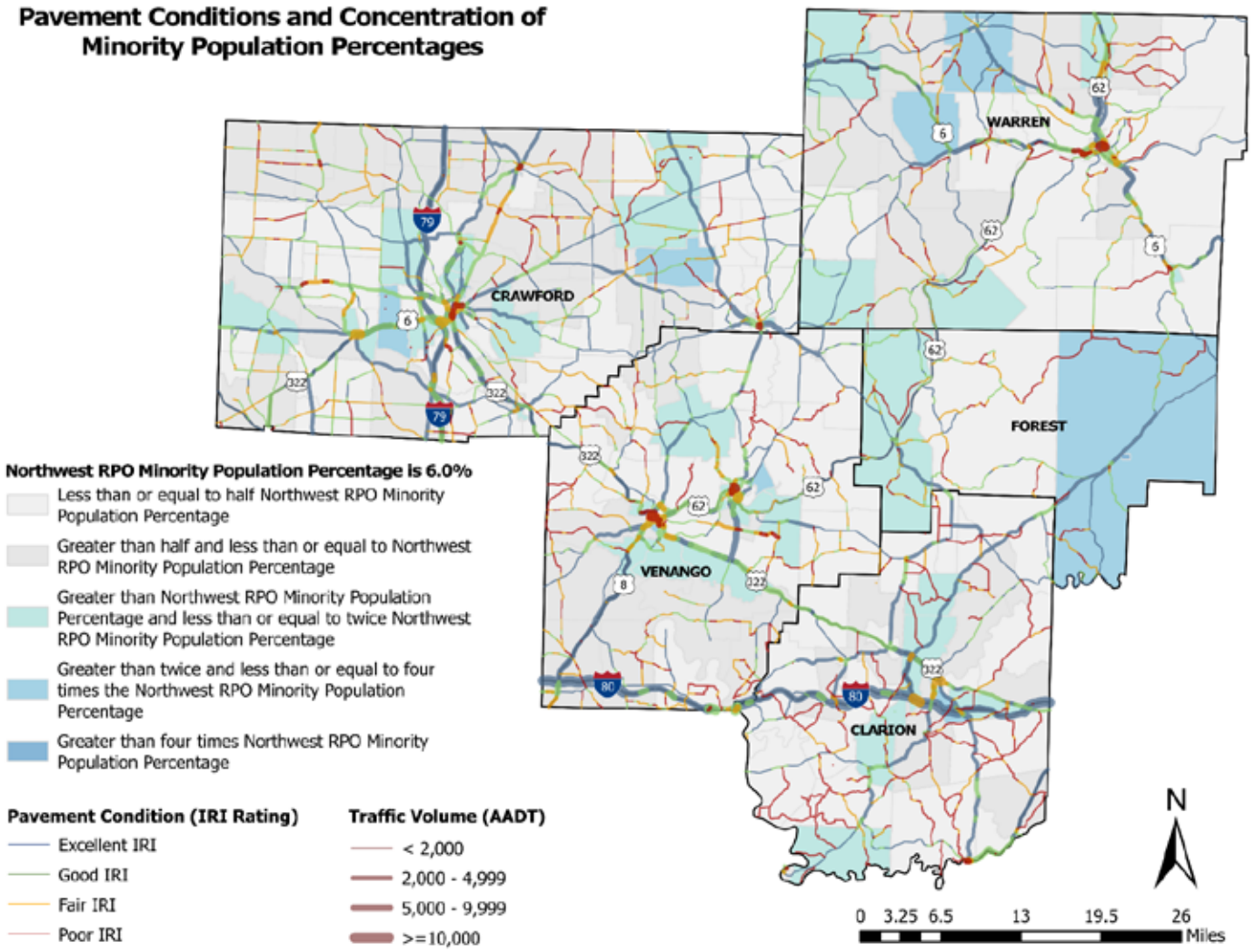
Table 4: Distribution of Pavement Condition by Minority Population Interval

Asset	Minority Population Interval Shares					Total
	Interval 1	Interval 2	Interval 3	Interval 4	Interval 5	
Federal Aid Segment Miles	467.8	325.3	275.4	78.1	4.5	**1,151.1**
Federal Aid Segment Miles with Poor IRI	5.7	4.0	5.0	1.8	0.6	**17.1**
Federal Aid Segment Miles with Poor IRI (%)	1.23%	1.22%	1.83%	2.25%	13.01%	**1.48%**
Federal Aid Segment Miles with Fair IRI	15.3	10.0	17.4	4.6	1.1	**48.4**
Federal Aid Segment Miles with Fair IRI (%)	3.27%	3.08%	6.30%	5.90%	24.60%	**4.20%**
Federal Aid Segment Miles with Good IRI	118.1	73.9	70.6	12.8	2.1	**277.5**
Federal Aid Segment Miles with Good IRI (%)	25.24%	22.71%	25.62%	16.45%	46.92%	**24.12%**
Federal Aid Segment Miles with Excellent IRI	328.2	236.4	181.0	57.9	0.7	**804.1**
Federal Aid Segment Miles with Excellent IRI (%)	70.15%	72.69%	65.71%	74.11%	15.47%	**69.85%**
Federal Aid Segment Miles with "Other" IRI	0.5	1.0	1.5	1.0	0.0	**4.1**
Federal Aid Segment Miles with	0.12%	0.31%	0.55%	1.29%	0.0%	**0.35%**

Asset	Minority Population Interval Shares					Total
	Interval 1	Interval 2	Interval 3	Interval 4	Interval 5	
"Other" IRI (%)						

Source: 2017-21 ACS 5-Year Estimates; PennDOT

Table 5: Pavement Conditions and Minority Population Concentrations



Source: 2017-21 ACS 5 Year Estimates; PennDOT

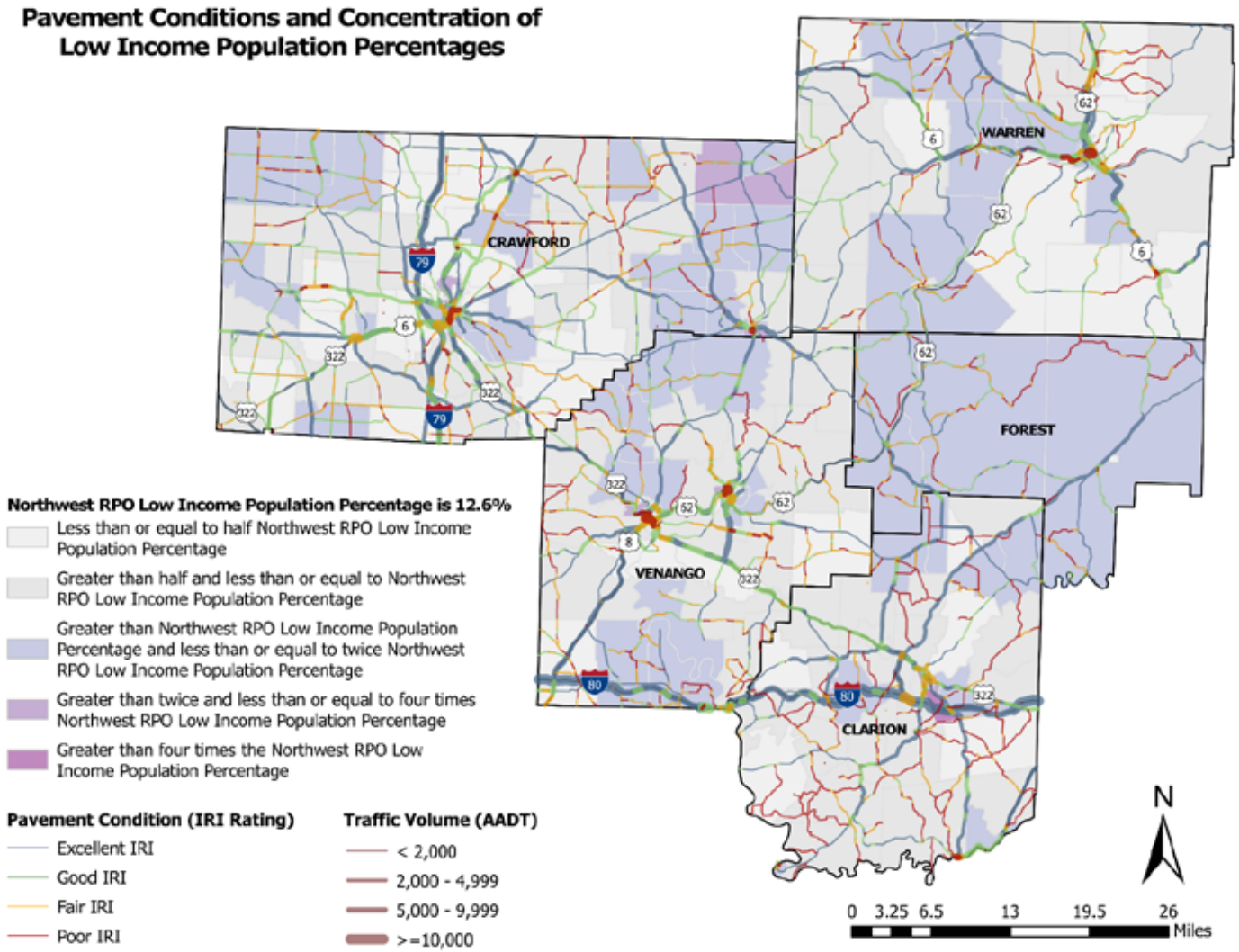
In areas with a high concentration of low income populations, the percentage of federal aid segment miles with poor IRI is higher than the regional average, notably in Interval 4. Interval 3 has a percentage of segment miles that is only slightly higher than the regional average and there are no poor segment miles present in Interval 5.

Table 6: Distribution of Pavement Condition by Low Income Population Interval

Asset	Low Income Population Interval Shares					Total
	Interval 1	Interval 2	Interval 3	Interval 4	Interval 5	
Federal Aid Segment Miles	274.1	476.2	346.5	36.7	11.7	**1,145.2**
Federal Aid Segment Miles with Poor IRI	2.4	5.4	7.8	4.1	0.0	**19.8**
Federal Aid Segment Miles with Poor IRI (%)	0.86%	1.14%	2.26%	11.31%	0.0%	**1.73%**
Federal Aid Segment Miles with Fair IRI	12.1	17.0	13.8	4.4	1.6	**48.9**
Federal Aid Segment Miles with Fair IRI (%)	4.43%	3.57%	3.99%	11.94%	13.55%	**4.27%**
Federal Aid Segment Miles with Good IRI	72.9	103.9	79.5	14.0	1.6	**271.9**
Federal Aid Segment Miles with Good IRI (%)	26.58%	21.82%	22.95%	38.21%	13.49%	**23.74%**
Federal Aid Segment Miles with Excellent IRI	186.7	348.4	244.2	14.1	8.6	**802.0**
Federal Aid Segment Miles with Excellent IRI (%)	68.11%	73.15%	70.49%	38.53%	72.96%	**70.03%**
Federal Aid Segment Miles with "Other" IRI	0.0	1.5	1.1	0.0	0.0	**2.6**
Federal Aid Segment Miles with "Other" IRI (%)	0.02%	0.33%	0.30%	0.0	0.0	**0.23%**

Source: 2017-21 ACS 5-Year Estimates; PennDOT

Figure 5: Pavement Condition and Low Income Concentrations



Source: 2017-21 ACS 5 Year Estimates; PennDOT

Reportable Crashes

Overall, there is not a higher incidence of reportable crashes and fatalities within high minority and low income areas. There are fewer reportable crashes in areas with higher concentrations of minority populations, with 4,416 out of 12,929 reportable crashes in Intervals 3, 4, and 5 combined in the five year period of 2017 through 2021. In addition, there are fewer fatalities in these areas, with 48 out of 187 fatalities across the region. Similarly, there were 4,739 out of 12,780 reportable crashes in areas with higher concentrations of low income populations. Low income intervals 3, 4, and 5 combined experienced 61 out of 194 fatalities across the region.

Table 7: Distribution of Crashes by Minority Population Intervals, 2017-2021

Asset	Minority Population Interval Shares					Total
	Interval 1	Interval 2	Interval 3	Interval 4	Interval 5	
Total Reportable Crashes	4,919	3,594	3,197	1,064	155	**12,929**
Persons Involved in Crashes	9,341	6,577	6,537	2,180	364	**24,999**
Crash Fatalities	76	63	35	13	0	**187**
Crash Suspected Serious Injuries	237	188	137	57	4	**623**
People on Bicycles Involved In Crashes	12	5	10	3	0	**30**
People on Bicycles Involved In Crashes, Fatalities	1	0	1	0	0	**2**
People on Bicycle Involved in Crashes, Suspected Serious Injuries	3	0	2	0	0	**5**
Pedestrians Involved in Crashes	49	30	70	32	7	**188**
Pedestrians Involved in Crashes, Fatalities	4	2	3	0	0	**9**
Pedestrians Involved in Crashes, Suspected Serious Injuries	15	8	13	7	1	**44**
Total Persons Using Nonmotorized Modes Involved in Crashes	141	66	93	50	8	**358**
Total Persons Using Nonmotorized Modes Involved in Crashes, Fatalities	8	4	3	0	0	**15**
Total Persons Using Nonmotorized Modes Involved in Crashes, Suspected Serious Injuries	33	10	15	7	1	**66**

Source: PennDOT

Table 8: Distribution of Crashes by Low Income Population Intervals, 2017-2021

Asset	Low Income Population Interval Shares					Total
	Interval 1	Interval 2	Interval 3	Interval 4	Interval 5	
Total Reportable Crashes	3,234	4,807	3,749	874	116	**12,780**
Persons Involved in Crashes	6,096	9,049	7,233	1,962	239	**24,579**
Crash Fatalities	46	87	58	3	0	**194**
Crash Suspected Serious Injuries	149	250	175	34	8	**616**
People on Bicycles Involved in Crashes	2	11	13	4	0	**30**
People on Bicycles Involved in Crashes, Fatalities	0	1	1	0	0	**2**
People on Bicycle Involved in Crashes, Suspected Serious Injuries	1	3	2	0	0	**6**
Pedestrians Involved in Crashes	27	39	61	53	2	**182**
Pedestrians Involved in Crashes, Fatalities	4	2	3	0	0	**9**
Pedestrians Involved in Crashes, Suspected Serious Injuries	5	12	17	9	0	**43**
Total Persons Using Nonmotorized Modes Involved in Crashes	57	73	142	80	3	**355**
Total Persons Using Nonmotorized Modes Involved in Crashes, Fatalities	6	3	6	0	0	**15**
Total Persons Using Nonmotorized Modes Involved in Crashes, Suspected Serious Injuries	8	16	29	15	0	**68**

Source: PennDOT

BENEFITS & BURDENS OF THE 2050 LONG RANGE TRANSPORTATION PLAN

Northwest RPO reviewed transportation projects located in areas that were determined to have higher than average minority and low-income levels. When evaluating the potential benefit or burden of a project, it should be noted that each type of project has a unique set of impacts and will affect individual populations differently. For example, maintenance projects tend to cause the least amount of impact on the population since they typically involve highway resurfacing or repaving work on existing roadways. Although these projects can cause delayed travel time and transit service, traffic detours, and work zone noise and debris, the projects are typically shorter in duration and result in improvements to the functionality of the roadway network by providing smoother driving surfaces and new roadway markings. While most bridge projects are identified as either a rehabilitation or replacement, both types of projects can lend itself to significant traffic detours, traffic delay, and noise. However, the benefits of these types of improvements result in safer bridge structures, improved roadway conditions and updated signage.

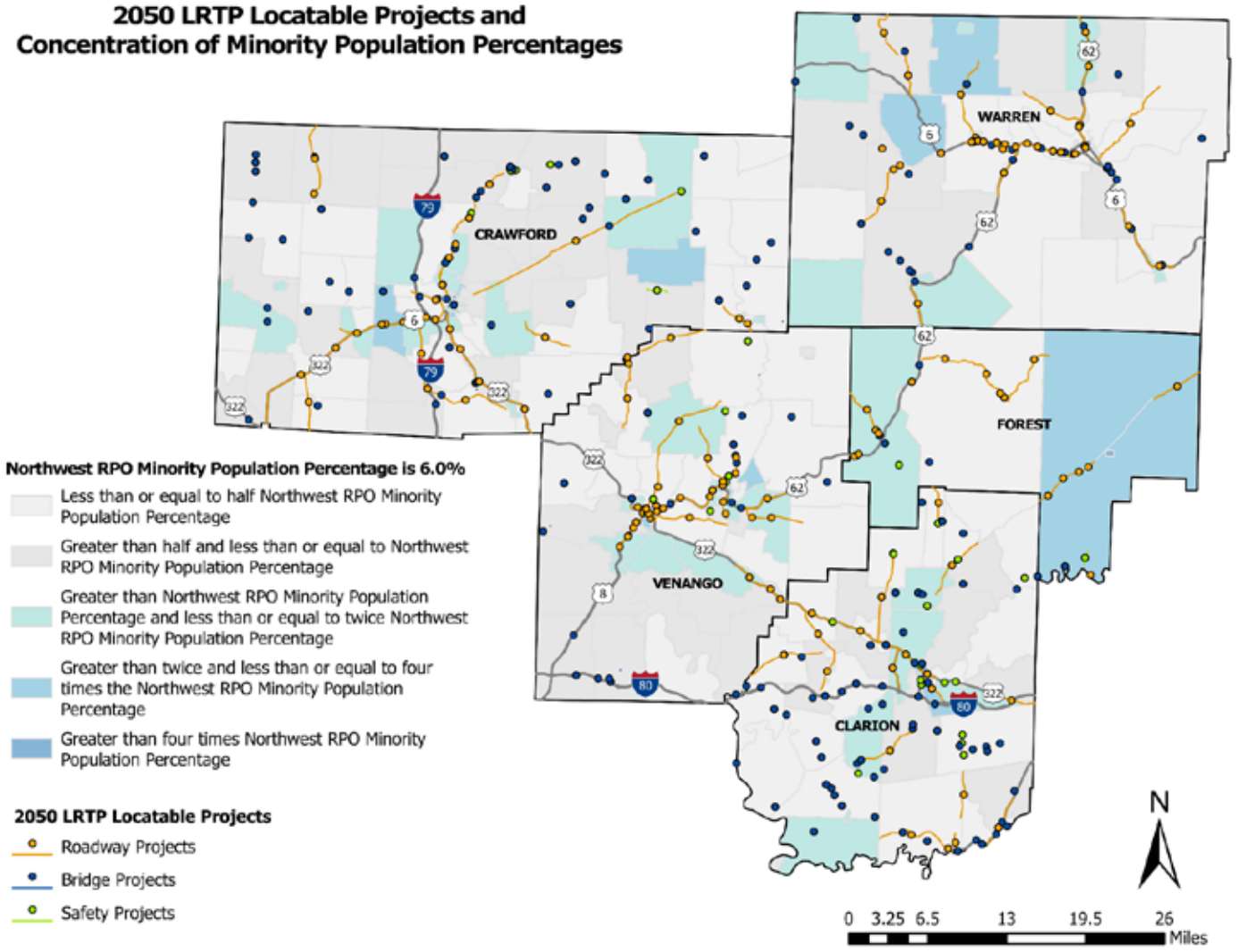
Capacity projects, which can involve the addition of new lanes to existing roadways, new roadways to the existing network, or at times the realignment of intersections or interchanges, in an effort to provide for more traffic mobility. Special attention needs to be made when planning capacity projects, especially to low-income and minority populations. Not only can these projects result in right-of-way acquisitions to account for the additional capacity, but also construction impacts are normally more severe due to longer construction periods, travel pattern shifts, and delayed travel times among others. The consequences of the completion of capacity projects can involve the loss of property, increased traffic volumes, and decreased air quality, while other benefits can include improved transit service time, decreased travel delay, and safer roadway conditions which will result in improved quality of life for all residents and users of the roadway system.

Of all locatable projects in the Northwest RPO's 2050 LRTP, the number of projects in minority or low-income areas is lower than the number of projects located in non-minority and non-low-income areas. **Tables 9 and 10** depict the types of projects and funding investments in each minority/income interval. **Figures 6 and 7** illustrate the geographic proximity between different LRTP projects and the concentrations of minority and low-income populations by Census block groups based on 2017-2021 ACS data. Northwest RPO will continue to evaluate needs and investment opportunities in these areas to ensure all communities share in transportation investment benefits.

Table 9: Distribution of 2050 LRTP Locatable Projects by Minority Population Interval

		Ratio of Minority Population Percentage in Census Block Group (project location) to Regional Average Minority Percentage				
		0.0 – 0.5 Very Low Minority %	0.5 – 1.0 Low Minority %	1.0 – 2.0 Medium Minority %	2.0 – 4.0 High Minority %	> 4.0 Very High Minority %
Roadway Projects	Amount of Funding	$287,637,291.00	$236,511,191.00	$200,863,634.00	$72,644,327.50	$3,520,000.00
	Per Capita Funding	$3,335.08	$3,966.45	$4,255.22	$3,712.59	$573.01
	Number of Projects	62	47	41	17	2
Bridge Projects	Amount of Funding	$85,873,219.00	$85,873,219.00	$54,780,664.00	$13,734,764.00	$1,955,097.00
	Per Capita Funding	$995.68	$1,440.15	$1,160.51	$701.94	$318.26
	Number of Projects	68	44	33	7	2
Safety Projects	Amount of Funding	$5,214,836.00	$13,985,637.00	$6,827,269.00	$10,185,801.00	$0.00
	Per Capita Funding	$60.46	$234.55	$144.63	$520.56	$0.00
	Number of Projects	9	8	6	4	0
All Projects	Amount of Funding	$378,725,346.00	$336,370,047.00	$262,471,567.00	$96,564,892.50	$5,475,097.00
	Per Capita Funding	$4,391.22	$5,641.14	$5,560.37	$4,935.09	$891.27
	Number of Projects	139	99	80	28	4

Figure 6: 2050 LRTP Locatable Projects and Minority Population Concentrations

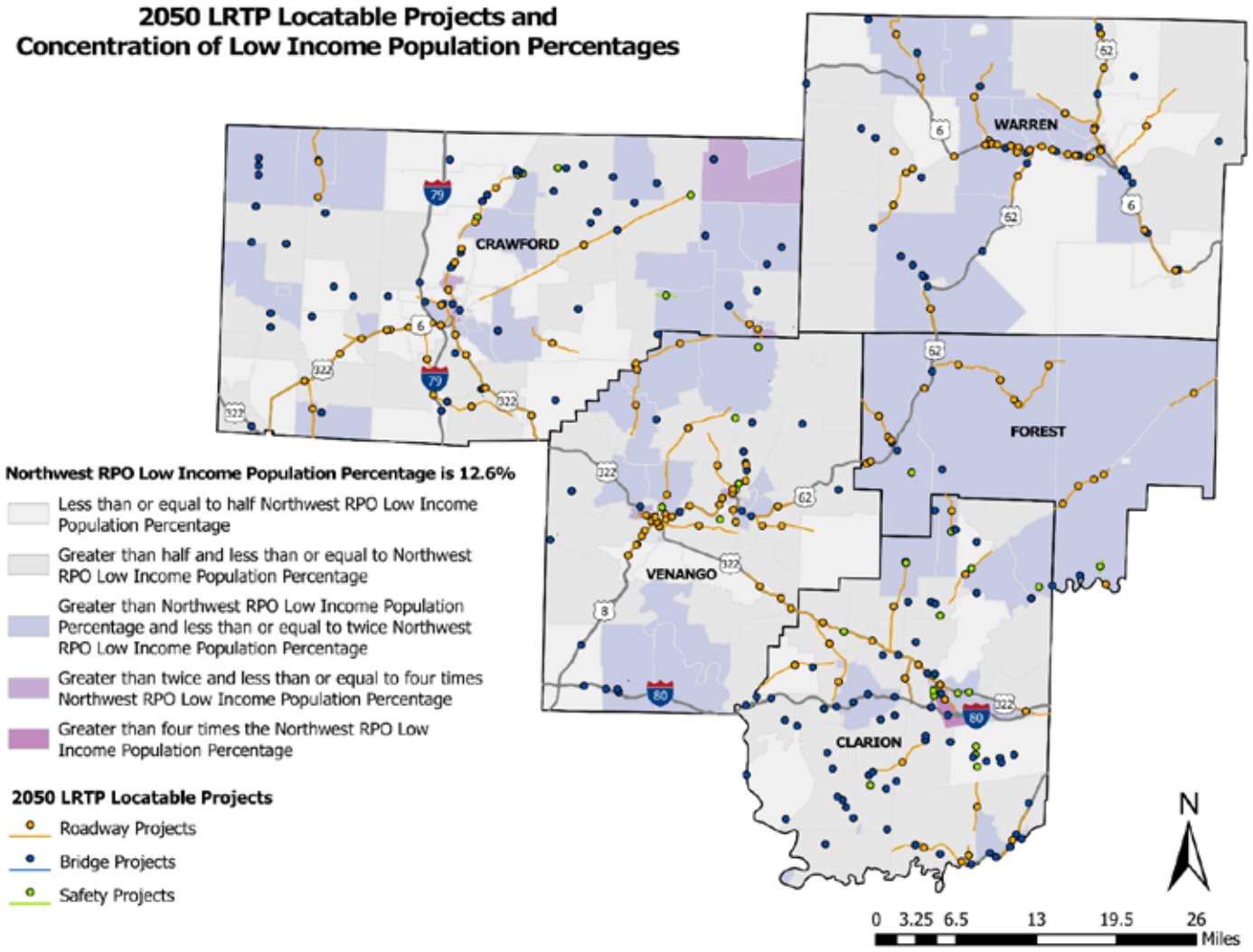


Source: 2017-21 ACS 5 Year Estimates, PennDOT

Table 10: Distribution of 2050 LRTP Locatable Projects by Low Income Population Interval

		Ratio of Low Income Population Percentage in Census Block Group (project location) to Regional Average Low Income Percentage				
		3.0 – 0.5 Very Low Low Income %	0.5 – 1.0 Low Low Income %	4.0 – 2.0 Medium Low Income %	5.0 – 4.0 High Low Income %	> 4.0 Very High Low Income %
Roadway Projects	Amount of Funding	$144,180,927.00	$259,051,379.00	$256,564,502.50	$59,548,907.00	$4,000,000.00
	Per Capita Funding	$2,719.06	$3,455.40	$3,545.08	$3,650.17	$1,899.34
	Number of Projects	27	55	54	13	2
Bridge Projects	Amount of Funding	$42,783,892.00	$79,631,979.00	$55,266,739.00	$15,543,970.00	$9,157,760.00
	Per Capita Funding	$806.85	$1,062.18	$763.65	$952.80	$4,348.41
	Number of Projects	31	64	51	8	3
Safety Projects	Amount of Funding	$1,225,000.00	$19,720,637.00	$7,610,637.00	$3,903,368.00	$8,875,000.00
	Per Capita Funding	$23.10	$263.05	$105.16	$239.26	$4,214.15
	Number of Projects	3	11	10	2	2
All Projects	Amount of Funding	$188,189,819.00	$358,403,995.00	$319,441,878.50	$78,996,245.00	$22,032,760.00
	Per Capita Funding	$3,549.01	$4,780.63	$4,413.89	$4,842.24	$10,461.90
	Number of Projects	61	130	115	23	7

Figure 7: 2050 LRTP Locatable Projects and Minority Population Concentrations



Source: 2017-21 ACS 5 Year Estimates, PennDOT

Appendix F: Public Comment Summary and Response

Commenter	Page/Section	Comment	Response
City of Oil City	Appendix G: Local Federal-Aid Roadways	There are a few possible errors on page 132 under the Oil City Streets section as well as an old excel chart with how the streets were broken down in 2019.	The roadway extents within Oil City have been corrected based on the revisions provided by the City.
FHWA	General	Please have your ADA Accommodation contact language added after the cover page.	The RPO's ADA Notice and Grievance Procedure has been added and can be found on pages 3 and 4.
FHWA	Revenue Forecast	The county totals for the "FFY 23-26 TIP Total" column from Appendix A add up to $234,464,231, which differs from the TIP Forecasted Funding total of $233,879,357. The TYP Forecasted Funding total shows $404,626,000, but the range specified in Table 13 indicates that this number should be the entire 12-year period of 2023-2034, not just the 8-year period of 2027-2034. The LRTP Forecasted Funding would need to be updated, based on the changes.	The funding totals in Table 13 have been reviewed and revised accordingly. TIP/TYP funding amounts reflect values as of October 30, 2023.
FHWA	Revenue Forecast	Also, if you can add a statement similar to the one found in the NEPA 2050 LRTP (page 71), this would cover any additional funding outside of financial guidance.	The RPO has coordinated with PennDOT to account for additional funds outside of financial guidance. A statement accounting for these funds has been added to page 71 of the plan.

Appendix G: Locally Owned Federal-Aid Routes

County	Municipality	Road Name	Begin	End	Linear Mileage (Estimated)
Clarion	Strattanville Borough	Ridge Avenue	Strattanville Line (SR 1009)	US 322	0.52
	Madison Township	Long Lane Road	PA 68	Lawsonham Street (SR 2009)	0.77
	Clarion Borough	Liberty Street	US 322	Eighth Avenue	0.77
	Clarion Borough	8th Avenue	Liberty Street	US 322	0.09
	Clarion Borough	Wood Street	Greenville Avenue (SR 1007)	Second Avenue	0.63
	Clarion Borough	2nd Avenue	Wood Street	US 322	0.09
Crawford	City of Meadville/ West Mead Township	Leslie Road	PA 77	PA 86	1.42
	City of Meadville/ West Mead Township	Allegheny Street/Limber Road	Baldwin Street (SR 2037)	Jefferson Street	0.65
	City of Meadville	Jefferson Street	Limber Road	State Street	0.79
	City of Meadville	State Street	Jefferson Street	PA 27	0.1
	City of Meadville/ Vernon Township	Rogers Ferry Road	Dunham Road (SR 2039)	Lincoln Avenue	0.52
	City of Meadville	Lincoln Avenue	Rogers Ferry Road	Spring Street (SR 2034)	0.46
	City of Meadville	Terrace Street	Spring Street (SR 2034)	Market Street	0.34
	City of Meadville	Market Street	Terrace Street	North Street	0.1
	City of Meadville	North Street	Water Street	PA 27	0.11
	City of Meadville	Water Street	Terrace Street	Willow Street	0.76
	City of Meadville/ Vernon Township	Willow Street/Mercer Street	Water Street	Cussewago Road (PA 102)	0.2
	City of Meadville/ Vernon Township	Arch Street/Mead Avenue	Water Street	Cussewago Road (PA 102)	0.4
	City of Meadville	Chestnut Street	Water Street	Main Street/Diamond Park Square	0.26

County	Municipality	Road Name	Begin	End	Linear Mileage (Estimated)
Crawford, cont'd.	City of Meadville	Diamond Park Square	Main Street/Walnut Street	Chestnut Street	0.14
	City of Meadville	Main Street	North Street (PA 27)	Linden Street (US 322)	0.82
	City of Meadville	Poplar Street	Park Avenue (SR 1001)	Liberty Street (SR 2035)	0.25
	City of Meadville	Grove Street	Poplar Street (SR 2035)	State Street (PA 27)	0.54
	City of Titusville	Perry Street	Terminus	Bloss Street	0.04
	City of Titusville	Bloss Street	Perry Street	PA 8 (Franklin Street)	0.2
	City of Titusville	Bank Street	Bloss Street (SR 2024)	Brown Street	0.37
	City of Titusville	Brown Street	Bank Street	Spruce Street	0.5
	City of Titusville	Spruce Street	Brown Street	Spring Street (PA 8)	1.07
	City of Titusville	Main Street	Spring Street (PA 8)	Central Avenue (PA 27)/ Murdock Blvd	1.17
	Emlenton/ Richland Township	Kerr Avenue	Airport Road (SR 2001)/ Whitehall Road (SR 2003)	Main Street/5th Street (PA 38)	1.27
Venango	Oil City	7th Street	Innis Street (SR 2027)	Central Avenue	0.2
	Oil City	Central Avenue	7th Street	Front Street (US 62)	0.49
	Oil City/Woodland Heights	Allegheny Avenue/E. 4th Street	City Line	Pine Street	1.35
	Oil City	Pine Street	E. 4th Street	E. 2nd Street	0.13
	Oil City	Seneca Street/State Street	Center Street	US 62	0.4
	Oil City	Elm Street	Seneca Street	Clifford Street	0.34
	Oil City	Duncomb Street/Spruce Street	Seneca Street	Cooper Avenue	0.29
	Oil City	Cooper Avenue	Spruce Street	Plummer Street (SR 1001)	0.39
	Oil City	Colbert Avenue	SR 1003	Siverly Avenue	1.4
	Oil City	Siverly Avenue	Colbert Avenue	Oak Grove Street	0.46
	Oil City	Oak Grove Street	Colbert Avenue	Lynch Boulevard	1.1
	Oil City	Lynch Boulevard	Oak Grove Street	Bissell Avenue (SR 1003)	0.37
	Sugarcreek	Shaffer Run Road	Halyday Run Road (PA 428)	First Street	3.79
	Sugarcreek	Shaffer Run Road	First Street	Allegheny Blvd (US 62)	0.07
	Sugarcreek	Egbert Street/Maple Street	Front Street (SR 4002)	Park Street	0.45

County	Municipality	Road Name	Begin	End	Linear Mileage (Estimated)
Venango, cont'd.	Sugarcreek	Park Street	Maple Street	2nd Avenue	0.18
	Sugarcreek	Second Avenue	Park Street	PA 417/US 322	0.32
	Sugarcreek	Bell Avenue	Meadville Pike (SR 4006)	Prospect Avenue	0.04
	Sugarcreek	Prospect Avenue	Bell Avenue	Spruce Street	0.03
	Sugarcreek	Spruce Street	Prospect Avenue	Circle Street	0.03
	Sugarcreek	Circle Street	Spruce Street	Walnut Drive	0.29
	Sugarcreek	Walnut Drive	Circle Street	Palmer Avenue	0.04
	Sugarcreek	Palmer Avenue	Meadville Pike (SR 4006)	Rocky Grove Avenue (PA 417)	0.46
	City of Franklin	Washington Street	Meadville Pike (SR 4006)	Tyler Street	0.49
	City of Franklin	Tyler Street	Washington Street	Adams Street	0.08
	City of Franklin	Adams Street	Tyler Street	Madison Street	0.08
	City of Franklin	Madison Street	Adams Street	Lincoln Street	0.02
	City of Franklin	Lincoln Street	Madison Street	Taylor Street	0.19
	City of Franklin	Taylor Street	Lincoln Street	Washington Street	0.11
	City of Franklin	Franklin Avenue/14th Street	US 322	US 62	0.31
	City of Franklin	Elk Street	14th Street	3rd Street	1.65
	City of Franklin	3rd Street	Elk Street	Liberty Street (SR 3021)	0.07
	City of Franklin	Otter Street/11th Street	13th Street (US 322)	Elk Street	0.6
	City of Franklin	8th Street	US 322	Buffalo Street	0.07
	City of Franklin	Buffalo Street	8th Street	US 62	0.96
	City of Franklin	11th Street	US 62	Elm Street	0.22
	City of Franklin	Elm Street	11th Street	13th Street	0.13
	City of Franklin	Eagle Street	13th Street	US 62	0.25
	City of Franklin	13th Street	Elm/Eagle Street	US 62	0.24
	City of Franklin	Gurney Road	PA 8 (15th Street)	Woodland Avenue	0.35
	City of Franklin	Woodland Avenue	Gurney Road	Pinoak Drive	0.13
	City of Franklin	Pinoak Drive	Woodland Avenue	Moreland Drive	0.31

County	Municipality	Road Name	Begin	End	Linear Mileage (Estimated)
Venango, cont'd.	City of Franklin	Moreland Drive	Pinoak Drive	Wintergreen Drive	0.09
	City of Franklin	Wintergreen Drive	Moreland Drive	PA 8 (15th Street)	0.09
Warren	City of Warren	Struthers Street	Pennsylvania Avenue (SR 3024)	Allegheny Avenue	0.09
	City of Warren	Allegheny Avenue	Struthers Street	US 62	0.12
	City of Warren	Sill Street	US 62	Levee Street	0.37
	City of Warren	Pine Street	Levee Street	US 62	0.18
	City of Warren	Main Avenue	Harmar Street	St. Clair Street	0.28
	City of Warren	St. Clair Street	Main Avenue	Crescent Park Road	0.16
	City of Warren	Crescent Park Road	Pleasant Drive at Warren City Limits	US 6	0.46
	City of Warren	Hickory Street	US 6	US 62	0.18
	City of Warren	3rd Avenue	US 6	Conewago Avenue (SR 1011)	0.81
	City of Warren	Laurel Street	US 62/4th Avenue	5th Avenue	0.1
	City of Warren	5th Avenue	Laurel Street	US 62/Market Street	0.5
	City of Warren	5th Avenue	Conewago Avenue (SR 1011)	Warren City Limits	0.39
	City of Warren	Prospect Street	5th Avenue	US 6/Pennsylvania Avenue	0.96
	City of Warren	Buchanan Street	Jackson Avenue (SR 1021)	Madison Avenue	0.1
	City of Warren	Madison Avenue	Buchanan Street	Park Avenue (SR 1013)	1.11
	City of Warren	Maple Street	Park Avenue (SR 1013)	US 6/Pennsylvania Avenue	0.14
	City of Warren	Marion Street	Madison Avenue	US 6/Pennsylvania Avenue	0.13
	City of Warren	Lexington Avenue	US 6/Pennsylvania Avenue	Parker Street	0.86
	City of Warren	Parker Street	Lexington Avenue	US 6/Pennsylvania Avenue	0.13
	Conewango Township	Vine Street	US 62/Market Street	State Street	0.29
	Conewango Township	State Street	Jackson Run Road (SR1029)	US 62/Market Street	0.77
				Total	**42.54**

Source: PennDOT and calculations

Appendix H: System Performance Reports (2022)

2022 Performance Measures Annual Report -- Pavements

Northwest

2022 MAP-21 Pavement Performance by Business Plan Network (Based on Total PA Lane Miles*)

MAP-21 Pavement Performance Measures	Good		Fair		Poor		Missing (Max 5%)	
	Lane Miles	%	Lane Miles	%	Lane Miles	%	Lane Miles	%
Interstate	231.0	92.58%	18.5	7.40%	0.0	0.02%	19.2	7.16%
NHS, Non-Interstate	190.3	33.19%	360.8	62.91%	22.4	3.90%	2.5	0.44%

MAP-21 Pavement Performance Measure Targets	Good				Poor			
	2023 Target	2024 Target	2025 Target	2026 Target	2023 Target	2024 Target	2025 Target	2026 Target
Interstate	86%	92%	92%	90%	1%	1%	1%	1%
NHS, Non-Interstate	39%	42%	47%	51%	3%	4%	4%	5%

· MAP-21 pavement performance measures required for FHWA reporting include four distress components which translate to good, fair, or poor condition scores. See table on reverse of this page for distress and thresholds. Three conditions apply to each pavement type.

· A pavement 10th mile section is considered in good condition if all three distress components are rated as good. A pavement 10th mile section is considered in poor condition if two or more of its three distress components are rated as poor.

· FHWA requires that no more than 5 percent of a state's NHS Interstate lane-miles be in poor condition. Additionally, state DOTs are required to establish targets.

· FHWA has not established a minimum condition for NHS non-Interstate roadways, but requires the state DOT to establish targets.

· FHWA requires that no more than 5 percent of a state's mileage be unreported or missing.

· Conditions are assessed and analyzed for pavement "sections" that cannot exceed 0.10 miles in length, which differs from PennDOT's historic segment level data.

· MAP-21 performance measures apply to all Interstate and NHS Non-Interstate miles in PA, regardless of ownership. Therefore, PA Turnpike and local-owned miles are in Statewide totals, but not in each District's totals. Local-owned miles are included in MPO/RPO totals as appropriate.

· MAP-21 rulemaking requires that states develop and implement a risk-based asset management plan to achieve and sustain a state of good repair over the life cycle of transportation assets and to improve or preserve the condition of the NHS. Asset Management encompasses two related means of doing so: making infrastructure last as long as reasonably possible, and keeping up on preservation activities to minimize costlier major repairs. Together, these practices extend the life of assets and reduce the cost of maintaining them in the desired state of good repair. This is known as operating the network at the lowest life-cycle cost (LLCC).

· MAP-21 performance measures are not to drive planning and programming, but rather be an indication of performance achieved by states operating at the LLCC.

2022 Pavement Smoothness (IRI) Summary by Business Plan Network (Based on PennDOT Segment Miles)

Business Plan Network	Excellent		Good		Fair		Poor		Median IRI	Tested Seg-Mi
	Seg-Mi	%	Seg-Mi	%	Seg-Mi	%	Seg-Mi	%		
Interstate	119.1	91.41%	9.3	7.11%	1.9	1.48%	0.0	0.00%	44	130.3
NHS, Non-Interstate	136.1	48.06%	118.8	41.95%	21.1	7.45%	7.2	2.54%	78	283.2
Non-NHS, ≥ 2000 ADT	246.5	65.95%	93.6	25.05%	26.7	7.14%	7.0	1.86%	88	373.7
Non-NHS, < 2000 ADT	514.0	26.40%	471.0	24.19%	470.6	24.17%	491.5	25.24%	168	1,947.2
Total - Roadway	1,015.7	37.15%	692.7	25.33%	520.3	19.03%	505.7	18.49%	118	2,734.4

2022 Overall Pavement Index (OPI) Summary by Business Plan Network (Based on PennDOT Segment Miles)

Business Plan Network	Excellent		Good		Fair		Poor		Median OPI
	Seg-Mi	%	Seg-Mi	%	Seg-Mi	%	Seg-Mi	%	
Interstate	53.1	41.79%	72.0	56.66%	2.0	1.54%	0.0	0.00%	95
NHS, Non-Interstate	45.8	16.28%	132.7	47.19%	75.8	26.96%	26.9	9.57%	85
Non-NHS, ≥ 2000 ADT	107.2	28.68%	125.0	33.43%	118.3	31.66%	23.3	6.22%	83
Non-NHS, < 2000 ADT	402.6	20.69%	863.5	44.37%	479.5	24.64%	200.6	10.31%	76
Total - Roadway	608.7	22.31%	1,193.2	43.73%	675.6	24.76%	250.8	9.19%	81

Total Miles

PennDOT Seg-Mi	PA Lane Miles
139.8	268.7
284.0	576.0
375.9	
1,953.2	
2,752.9	

- The IRI and OPI data presented herein is segment level.

- For the Interstate and NHS, Non-Interstate Business Plan Networks, the IRI and OPI data is for 2022. For the Non-NHS Business Plan Networks, the IRI and OPI data for most recent year captured, either 2021 or 2022.

- PennDOT has historically classified Good Interstate IRI as ≤100, and Poor Interstate IRI as >150; for NHS Non-Interstate, Good is ≤120 and Poor is >170. This practice is maintained in the IRI data presented herein, but differs from the MAP-21 definitions defined in the table on the reverse of this page.

2022 Out-Of-Cycle (OOC) Assessment by Business Plan Network (Based on PennDOT Segment Miles)

Business Plan Network	High Level Bituminous		Low Level Bituminous				Concrete			
	Seg-Mi	OOC Mi[1]	Seg-Mi	OOC Mi[2]	OOC Mi[3]	Total	Seg-Mi	OOC Mi[4]	OOC Mi[5]	Total
Interstate	139.20	22.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NHS, Non-Interstate	296.58	117.46	0.00	0.00	0.00	0.00	1.72	0.00	0.34	0.34
Non-NHS, ≥ 2000 ADT	348.29	111.30	41.31	25.00	0.63	25.63	1.45	0.00	0.96	0.96
Non-NHS, < 2000 ADT	353.69	91.45	1,494.76	52.04	607.63	659.66	0.65	0.63	0.63	1.27
Total - Roadway	1,137.76	342.56	1,536.08	77.04	608.25	685.29	3.83	0.63	1.94	2.57

- Out-Of-Cycle Categories:
  - 1 - High Level Bituminous Pavement with Age > 12 Years or > 17 Years with Interim Surface Seal
  - 2 - Low Level Bituminous Surface with Age > 7 Years
  - 3 - Low Level Bituminous Pavement with Age > 20 Years or no Structural Layers
  - 4 - Concrete Pavements with Age > 30 Years
  - 5 - Concrete Pavements with Age > 20 Years and No Concrete Pavement Restoration (CPR)

- Total Low Level OOC represents the miles that are OOC for either Category 2 or 3. Segments that are OOC for both categories are not double counted. Total Concrete OOC represents the miles that are OOC for either Category 4 or 5. Segments that are OOC for both categories are not double counted.

2018-MPO/RPO, 6/16/2023

End of Calendar Year 2022 Performance Measures Annual Report -- Bridges

Northwest

MAP-21 Bridge Performance (Based on all NHS Bridge Owners Greater than or Equal to 20' in Length)

MAP-21 Bridge Performance Measure												
	Good				Fair				Poor			
	Count	Count %	Deck Area (Msf)	Deck Area %	Count	Count %	Deck Area (Msf)	Deck Area %	Count	Count %	Deck Area (Msf)	Deck Area %
Interstate (Including Ramps)	14	21.21%	0.093	8.95%	51	77.27%	0.905	87.21%	1	1.52%	0.040	3.84%
NHS, Non-Interstate	33	38.37%	0.208	25.05%	47	54.65%	0.609	73.37%	6	6.98%	0.013	1.58%
Total NHS	47	30.92%	0.301	16.10%	98	64.47%	1.514	81.06%	7	4.61%	0.053	2.84%

	Map-21 Goal	End of Year 2022 Value	2021 Target	2023 Target	2025 Target
Total NHS Deck Area Poor %	10.00%	2.84%	5.75%	6.50%	5.00%

	Count	Deck Area (Msf)
Interstate (Including Ramps)	66	1.038
NHS, Non-Interstate	86	0.830
Total NHS	152	1.868

- MAP-21 bridge data is assessed and analyzed by National Bridge Inventory Standards (Bridges 20' and greater), which differs from PennDOT's 8' and greater reporting.
- MAP-21 performance measures apply to all Interstate and NHS Non-Interstate bridges in PA, regardless of ownership. Therefore, PA Turnpike and local-owned bridges are included in totals.

- MAP-21 bridge performance measures required for FHWA reporting include good, fair, or poor condition scores for each bridge.
  End of Calendar Year 2022 Status of Bridges in Region (Based on 8' and greater)
  fair if the minimum condition rating is 6 or 5, and poor if the minimum condition rating is 4 or less.
- FHWA requires that no more than 10 percent of a state's total NHS Bridge Deck Area be in poor condition. Additionally, state DOTs are required to establish biennial targets for poor deck area.
- FHWA has not established a minimum condition for Interstate only bridges or NHS non-Interstate bridges, but requires the state DOT to establish targets.
- FHWA requires that no more than 5 percent of a state's bridge data be unreported or missing.
- MAP-21 rulemaking requires that states develop and implement a risk-based asset management plan to achieve and sustain a state of good repair over the life cycle of the asset to improve or preserve the condition of the NHS. Asset Management encompasses two related means of doing so: making infrastructure last as long as reasonably possible through keeping up on preservation activities to minimize costlier major repairs, and utilizing a structure for its entire service life. These practices allow the department to operate to lowest life cycle cost (LLCC) on the network level.
- MAP-21 performance measures are not to explicitly drive planning and programming, but rather be an indication of performance achieved by states operating at the LLCC.

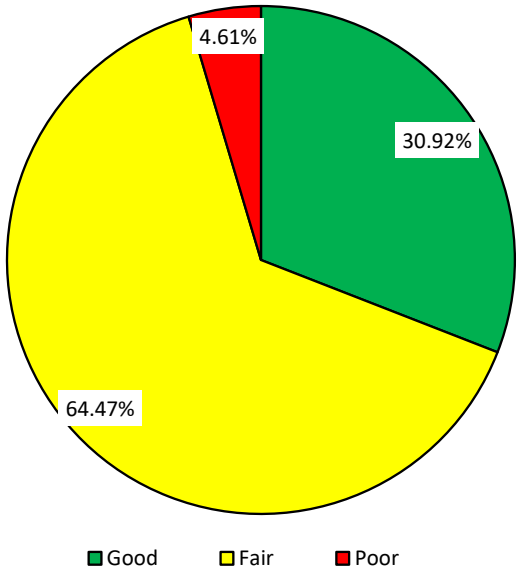
Business Plan Network	Total Bridge Count	Total Deck Area (Msf)	Aver. Bridge DA (sf)	Closed Bridges	Posted Bridges	Poor Count	% Poor by Count	Poor-Deck Area (Msf)	% Poor by Deck Area	Non-Poor Bridges with a "5" Condition Rating
State ≥8'; Interstate/Ramps	88	1.0533	11,970	0	0	3	3.41%	0.0424	4.03%	37
State ≥8'; NHS (non-Interstate)	162	0.8739	5,395	0	1	7	4.32%	0.0135	1.55%	63
State ≥8'; non-NHS > 2000 ADT	194	0.5908	3,045	0	2	21	10.82%	0.0833	14.09%	70
State ≥8'; non-NHS < 2000 ADT	831	1.5453	1,860	2	15	71	8.54%	0.1035	6.70%	233
Total - State Bridges (≥8')	**1,275**	**4.0633**	**3,187**	**2**	**18**	**102**	**8.00%**	**0.2427**	**5.97%**	**403**
Local≥20'	315	0.4926	1,564	10	76	94	29.84%	0.0925	18.77%	95

Reducing Rate of Deterioration through Investment (Non-Replacement) (Based on 8' and greater)

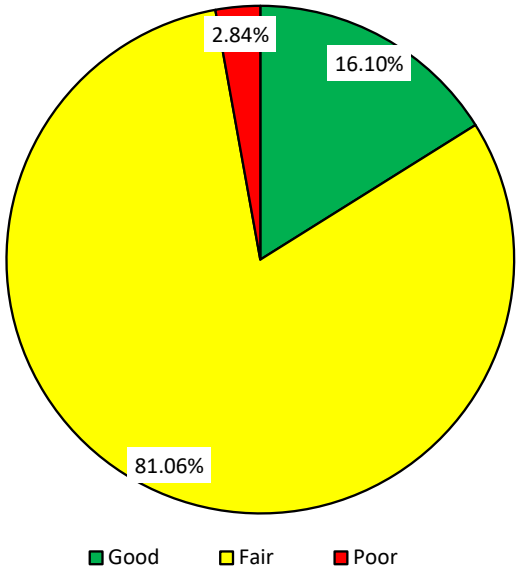
Business Plan Network	Annual New Poor Count (Poor "on")	Annual New Poor Count (Poor "off")	Annual New Poor DA (Poor "on")	Annual New Poor DA (Poor "off")	Preservation (million$)	Preservation (#bridges)
State ≥8'; Interstate/Ramps	0	0	0.00%	0.00%	$0.00	8
State ≥8'; NHS (non-Interstate)	1	0	0.31%	0.00%	$0.00	0
State ≥8'; non-NHS > 2000 ADT	5	2	3.28%	1.11%	$0.00	0
State ≥8'; non-NHS < 2000 ADT	12	7	1.25%	0.78%	$0.00	0
Total - State Bridges (≥8')	**18**	**9**	**1.02%**	**0.46%**	**$0.00**	**8**
Local≥20'	3	5	0.57%	1.52%	$0.00	0

MAP-21 Bridge Performance (Based on all NHS Bridge Owners Greater than or Equal to 20' in Length)

By Count

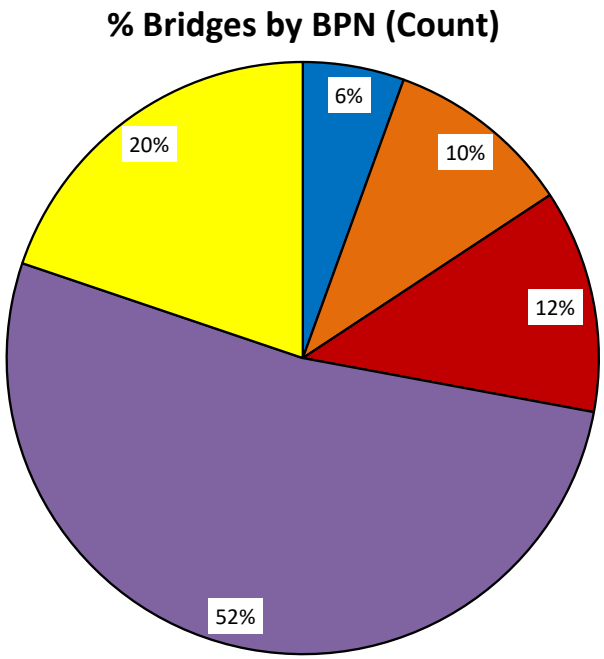


By Deck Area

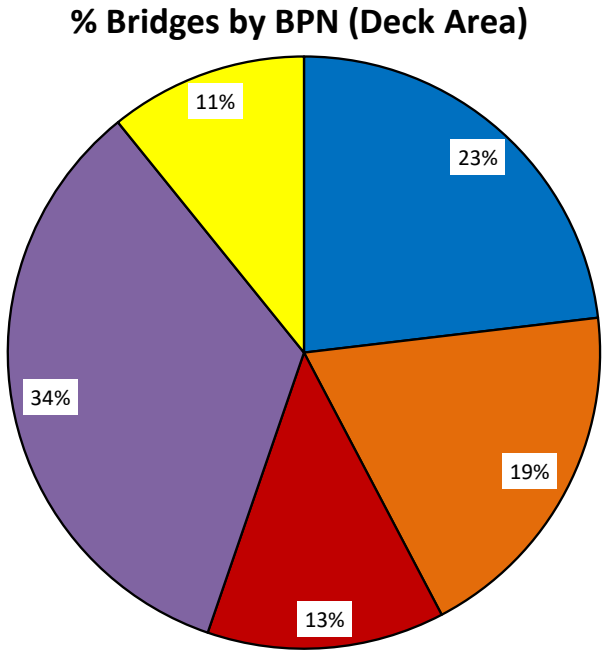


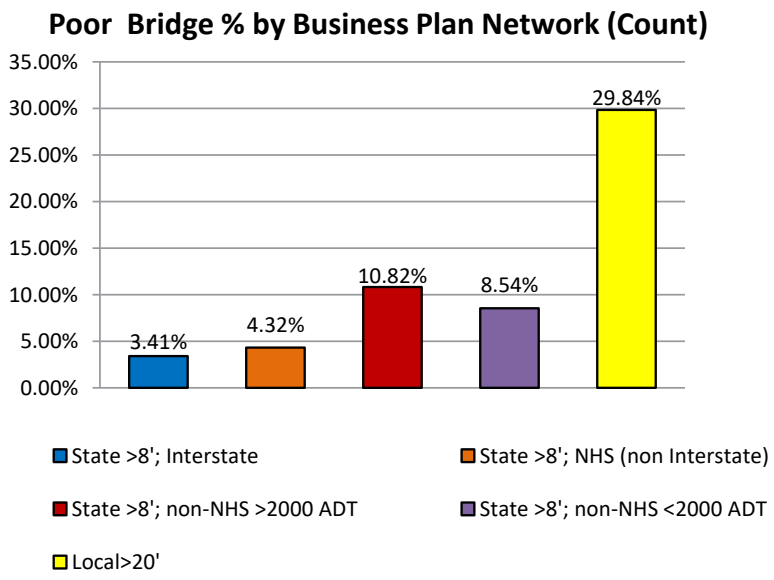
End of Calendar Year 2022 Status of Bridges in Region (Based on 8' and greater)

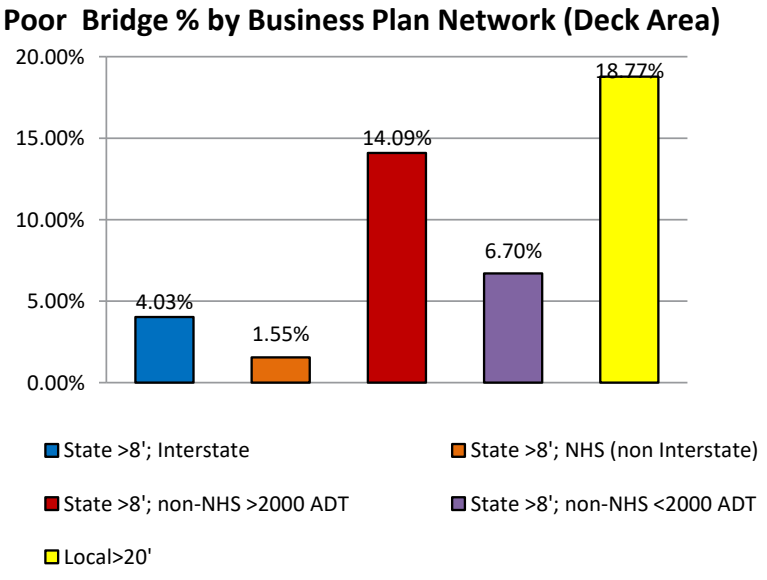
PennDOT Data 8' and Greater By Business Plan Network



PennDOT Data 8' and Greater By Business Plan Network




Poor Bridge % by Business Plan Network (Count)
35.00%
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
3.41%
4.32%
10.82%
8.54%
29.84%
State >8'; Interstate
State >8'; NHS (non Interstate)
State >8'; non-NHS >2000 ADT
State >8'; non-NHS <2000 ADT
Local>20'


Poor Bridge % by Business Plan Network (Deck Area)
20.00%
15.00%
10.00%
5.00%
0.00%
4.03%
1.55%
14.09%
6.70%
18.77%
State >8'; Interstate
State >8'; NHS (non Interstate)
State >8'; non-NHS >2000 ADT
State >8'; non-NHS <2000 ADT
Local>20'