

# Environmental Justice Documentation

2023-2026 TIP



## Introduction—What is Environmental Justice?

Environmental justice (EJ) 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. Presidential Executive Order 12898 of 1994 requires Federal agencies to achieve Environmental Justice by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations.



Like other federal agencies, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) are responsible for implementing an EJ-compliant program. This includes ensuring that Metropolitan and Rural Planning Organizations (MPOs and RPOs, e.g. SVATS MPO) and Departments of Transportation (e.g. PennDOT) adhere to the principles of EJ. These include the following directives:

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.

To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.

To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

FHWA Order 6640.23A defines disproportionately high and adverse effects as:

the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of human-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects;

displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of FHWA programs, policies, or activities.

A disproportionately high and adverse effect:

1. is predominately borne by a minority population and/or a low-income population; or
2. will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or non-low-income population.

The SVATS MPO is the agency responsible for the planning and programming of federal funds for transportation projects and programs, and therefore must determine if the investment of those federal funds results in disparate impacts to minority and low-income populations. The following analysis explains this process.

### Core Elements—An Approach for Pennsylvania Planning Partners

In April 2019, the FHWA PA Division, FTA Region III, PennDOT Central Office, PennDOT Engineering District 8-0, and six MPOs within District 8-0 Pennsylvania, jointly developed the *South Central Pennsylvania Environmental Justice Unified Process and Methodology Guide*. This was developed to help these agencies collaboratively analyze potential EJ impacts to minority and low-income populations in a straightforward manner. This guidance was then shared with the remaining MPOs and RPOs for consideration of their future programs including their respective Transportation Improvement Programs (TIP) and the Long Range Transportation Plans (LRTP).

The Guide outlines several strategies for accomplishing the core elements of an EJ analysis acceptable to FHWA and FTA. The Guide identifies specific core activities that MPOs in Pennsylvania should complete in an EJ analysis. Although the guide encourages some level of standardization and best-practices, it also allows for tailored approaches between different MPOs and RPOs. To this point, the guide provides an incremental approach to follow, with consideration given to variances in regional staff expertise and regional needs. The guide provides a number of strategies and tools to support the core elements.

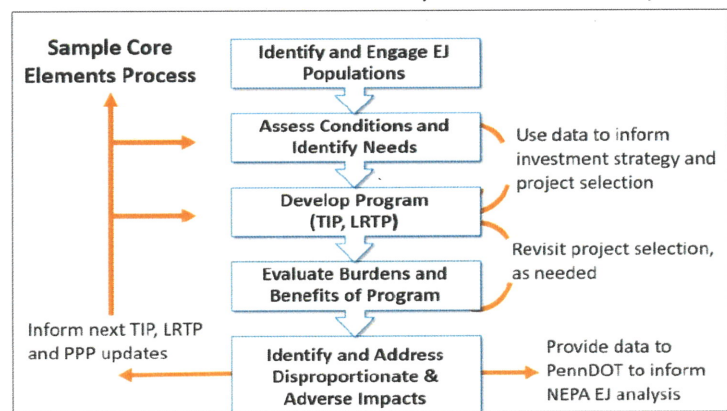


Chart from *South Central Pennsylvania Environmental Justice Unified Process and Methodology Guide*

These Core Elements, which also correspond to the organizational structure of this document, are the:

1. Identification of EJ populations
2. Assessment of conditions and identification of needs
3. Evaluation of burdens and benefits
4. Identification and addressing of disproportionate and adverse impacts, which will inform future planning efforts



## SVATS MPO's Approach to the Core Elements Methodology

The SVATS MPO, along with other MPOs and RPOs in Pennsylvania, were introduced to the aforementioned approach in 2018 and awaited further guidance from PennDOT and FHWA about how this might inform our program. The April 2019 Guidebook, along with access to data sets, were also shared a year later, just before the release of the *General and Procedural Guidance* and *Financial Guidance* for the prior (2021-2024) TIP. MPO staff worked with PennDOT District 1, PennDOT CPDM, and FHWA to incorporate this more robust EJ methodology despite a strong new direction toward performance-based programming mandates, reduced overall funding, and other challenges. FHWA was well-aware and understanding of the unexpected burdens placed on the 2021 TIP update, and reiterated that the Core Elements guidance was in its infancy and would continue to be refined. Indeed, in early 2021, several EJ discussions were held between planning partners across Pennsylvania. These meetings functioned as an after-action review of the 2021 process, assessing what worked and what could be improved.

While many of the challenges from before still exist heading into the 2023 update, earlier planning and the increased fine-tuning have allowed for a more meaningful, somewhat more proactive EJ process. The starting point was a review of the prior (2021) EJ maps and analysis to gain a refreshed understanding of areas of higher



concentrations of impoverished and minority populations. Later in 2021, updated data was produced and made available to the MPO. PennDOT CPDM was able to produce the updated maps found in this report. All of this new (2023) and old (2021) information was able to be shared with District 1-0 staff and be used as a conversation point when discussing specific projects.

Concurrently, the MPO completed their Long-Range Transportation Plan (LRTP) toward the end of 2021. A much more robust EJ process using the Core Elements approach was used to analyze new capital projects. Moreover, how the MPO considers EJ into its project selection criteria was refined.

Like just about every MPO across the Commonwealth, the vast majority of TIP projects are carryover asset-management projects (e.g. preserving pavement or improving bridges) and selection of these generally simpler projects tends to be more on condition than on other factors. However, with the few new projects on the TIP, EJ has become an important consideration. And even on the asset management projects, the EJ process below allows us to ensure that even the preservation of our overall system does not unfairly harm or underinvest in communities of lower income or higher minority rates.

The next four sections of this document demonstrate the SVATS MPO's current approach to meeting the Core Elements Methodology. Despite the aforementioned challenges and limitations, the EJ analysis on the following pages includes several steps taken to continually improve the MPO's EJ process.

### Core Element #1—Identification of EJ Populations

For the purposes of this analysis, two population groups are considered—racial minority and low-income members of the population. It is important to note that there is technically no such thing as an “Environmental Justice Population,” though this section title is used to align with the developed Pennsylvania Core Element framework. The table on the following page contains definitions used for the purposes of the EJ Analysis:



Population	Definition
Minority	Person who is: 1) Black/African American; 2) Hispanic or Latino; 3) Asian American; 4) American Indian/Native American and Alaskan Native; 5) Native Hawaiian and Pacific Islander
Low Income	Person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines

## Data

When reading through the following analysis, it is important to pay attention to the source and timeframe of data, as various data sources were used in this analysis. Each has its advantages and limitations:

U.S. Census Data, 2010 and 2020—At the time of this document’s writing, the decennial census (2020) data was only partially released. The data that was released was only for certain communities within Mercer County, and was not available at a Block Group or even Census Tract level of geography. Moreover, as has been the case since 2010, the decennial census does not provide any data on income. Census data is highly accurate, as the entire population is attempted to be counted.

American Community Survey (ACS) 5-Year Estimates, 2013-2017 and 2015-2019—ACS data contains a much larger margin of error than census data, but is available for many different metrics and is updated on a much more frequent basis. Statistics from the ACS are taken from samplings of the population each year, and are grouped into a five-year rolling average. Because of the smaller sample sizes, these can, for all intents and purposes, be considered rough estimates. Income data is collected purely through the ACS.

In order to ensure that minority and low-income data are collected with the same methodology and during the same timeframe, 2015-2019 ACS data is used as the primary data source for this analysis. 2010 and 2020 Census data is used as an additional way of analyzing (only) the minority population, and comparing to the ACS data that serves as the primary data source. Some of the higher-level ACS demographic data relating to this EJ analysis is shown below on the table to the right.

For this TIP (as well as the prior 2019 and 2021 TIPs), the prevalence of minority and low-income populations was analyzed at a U.S. Census Tract Block Group level of geography. Typically, Census Tracts (CTs) correspond to some degree with municipal borders. A more populous municipality might have several CTs within its jurisdictional boundaries, while very rural municipalities may share a CT. Most CTs contain several Block Groups (BGs). The borders of BGs often correspond to more significant geographical borders that separate neighborhoods. Examples include waterways,

Profile of Mercer County Minority and Low-Income Populations <i>2015-2019 ACS, 5-Yr. Estimates</i>		
Demographic Indicator	Number	Percent
County Total Population	111,518	N/A
County Minority Population	10,952	9.82%
County Low Income Population	14,470	12.98%
Total Households	46,340	N/A
Low Income Households	5,795	12.51%
Average Census Block Minority Population	10.79%	10.79%
Average Census Block Low Income Population Rate	N/A	16.04%
Total Population, White Alone	95,859	85.96%
Total Population, Black or African American Alone	5,288	4.74%
Total Population, American Indian and Alaska Native Alone	115	0.10%
Total Population, Asian Alone	744	0.67%
Total Population, Native Hawaiian and Other Pacific Islander Alone	3	0.00%
Total Population, Some Other Race Alone	220	0.20%
Total Population, Two or More Races	1,837	1.65%
Total Population, Hispanic or Latino Origin (of Any Race)	1,131	1.01%
Total Population, White Alone and not Hispanic or Latino	95,008	85.20%



railroad tracks, and more significant roadways (such as arterials or collector roads). All of these can also correspond to CTs. Within BGs, there can be numerous blocks found within. A “block” is simply an area surrounded completely by roads. In an urban area, city blocks are commonplace, while blocks may be much larger in suburban or rural areas with fewer roads and/or no-outlet streets. Getting down to this level of geography can provide many inconsistencies, and data is not always available at this level. Therefore CT BGs were determined to be the most practical and detailed level of data available for this analysis.

### Minority Population

According to Five-Year Average (2015-2019) ACS data, Mercer County’s minority rate is 9.82% of the entire population. This rate was 8.97% during the 2010 Census and 9.69% during the prior (2013-2017) 5-year rolling average. Like many other regions, there is a tremendous geographic variance in the minority rate within the county. Areas of highest minority populations are found in portions of the Shenango Valley—the geographic area that includes the urbanized cluster of municipalities in the southwestern portion of Mercer County. Much of the City of Farrell and portions of the City of Sharon have minority rates well above the county average. The tables below show the top-five minority population rate BGs in Mercer County, using both the more reliable Census data, and the newer but less accurate ACS data. In these five BGs, the minority population (as defined on the previous page) is actually the majority of the overall population.

2020 U.S. Census			2015-19 5yr Avg., American Community Survey		
Rank	CT/BG/Municipality	Minority Rate	Rank	CT/BG/Municipality	Minority Rate
1.	CT 334, BG 4—Farrell City	72.08%	1.	CT 334, BG 4—Farrell City	88.89%
2.	CT 334, BG 3—Farrell City	71.37%	2.	CT 334, BG 3—Farrell City	74.22%
3.	CT 334, BG 1—Farrell City	69.33%	3.	CT 332, BG 2—Sharon City	64.7%
4.	CT 332, BG 2—Sharon City	61.34%	4.	CT 334, BG 1—Farrell City	60.48%
5.	CT 309, BG 1—Farrell City	53.35%	5.	CT 309, BG 1—Farrell City	54.85%

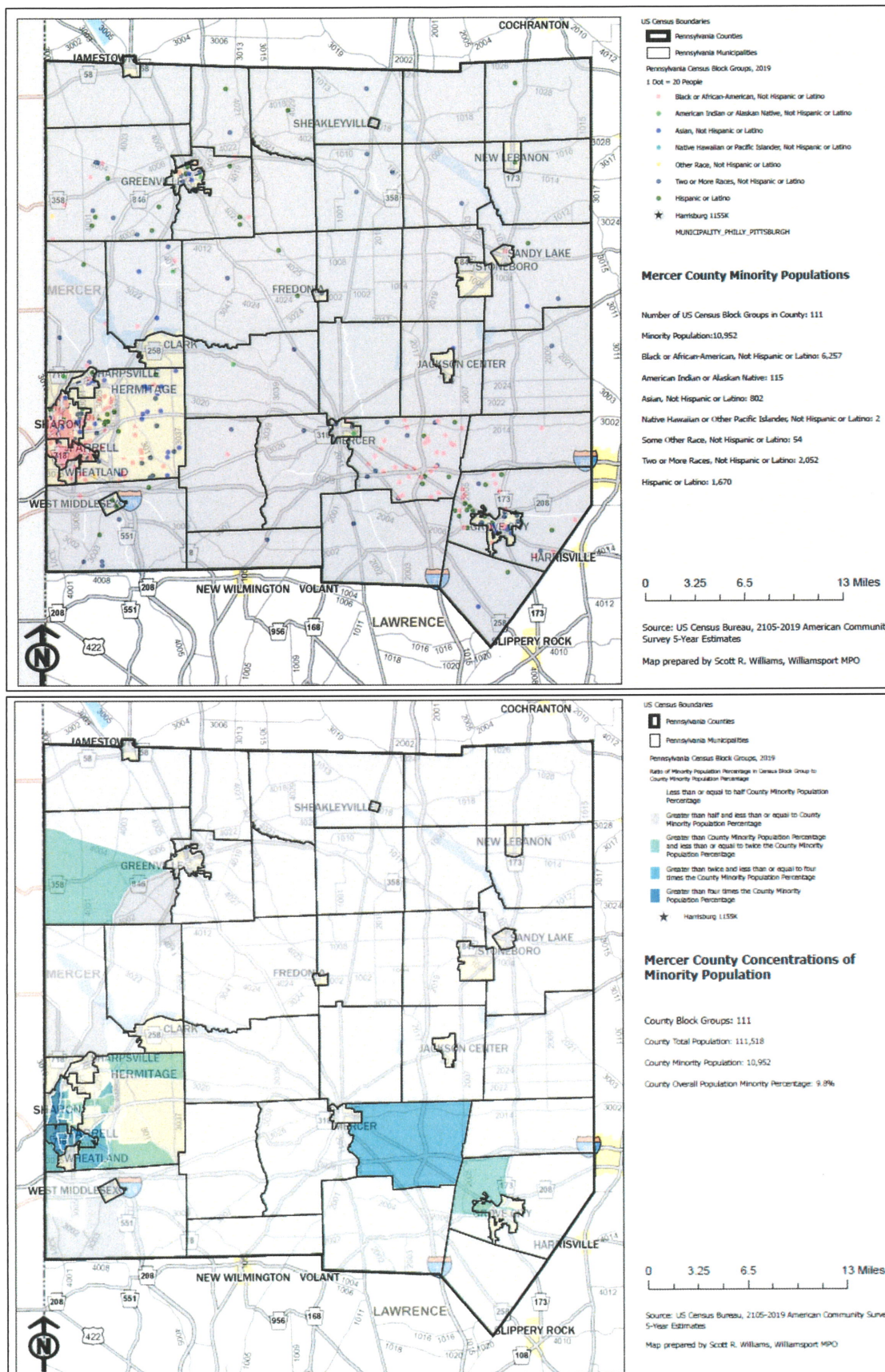
Other, pronounced clusters that are well-above the county average can be found in portions of the adjacent Shenango Valley communities: the City of Hermitage, Sharpsville Borough and Wheatland Borough. There are also two Block Groups in southeastern Mercer County that show up as significantly above countywide averages, with minority rates higher than many of the BGs in the Shenango Valley. These both, however, are presumed to be anomalies: (1.) CT 326.02, BG 2, covering all of Findley Township, contains a large state prison as well as Mercer County’s jail. Since surrounding areas have very low minority rates and older (1990 and earlier—pre-prison) Census data indicates a very low minority rate, it can be assumed that these prisons, built in the mid-1990s, are responsible for the spike in the minority rate. (2.) CT 328, BG 2, which generally covers the northwest quadrant of Pine Township is likewise surrounded by low-minority BGs. However, this BG contains the George Junior Republic, a large residential treatment facility for adjudicated delinquent and dependent school-aged boys. This institution has a high minority population and is therefore considered the primary reason for this BG’s high minority rate. Overall, 33 out of the 111 BGs in Mercer County contained minority population rates in excess of the countywide average of 9.82% when the 2015-2019 ACS estimates were prepared. These BGs, in total population, comprise 27.97% (31,190) of the overall county population (111,518).

The maps on the following page show the geographic distribution of the minority population within Mercer County. The first map is a dot map, where one dot represents 20 people, and different colored dots correspond to different races as indicated in the legend. The other map shows minority population concentrations by CT BG.

In Mercer County, the black population (6,257, or 5.43%) is by far the largest minority population, accounting for over 57% of the overall minority population. This is consistent with minority population figures in the aforementioned high-minority CT BGs (such as those in Farrell and Sharon). For example, in the highest minority Block Group in Mercer County—CT 334, BG 4 (Farrell)—the black population was 100% of the total minority population of 352 according to the 2015-2019 ACS (and 325 out of 352 per the 2010 Census). Looking at the rest



of the top-ten highest-minority BGs in Mercer County, black residents comprise between 60% and 92% of their respective BG's overall minority population. When totaling up these top-10 BGs, the black population is 76.8% of the total minority population for these same BGs.





Most rural areas within Mercer County, and generally the areas outside of the Shenango Valley region, contain very low minority population numbers. In fact, 44 out of 111 BGs in Mercer County contained fewer than 3% minority populations during the most recent ACS analysis. In total, these 44 BGs account for 44,142—or 39.58%—of Mercer County’s total population of 111,518.

As mentioned earlier in this document, the Decennial Census data for 2020 was only partially released at the time this report was prepared. However, when comparing the tables on the previous page, it’s important to note how the actual census numbers compare to the ACS figures used in this analysis. Of particular importance, the highest minority BG’s (CT 334, BG 4) minority rate differs by nearly 17% between the Census and the ACS estimates—72.08% vs. 88.89% minority rates. This underscores the imperfections of relying on ACS data’s full accuracy.

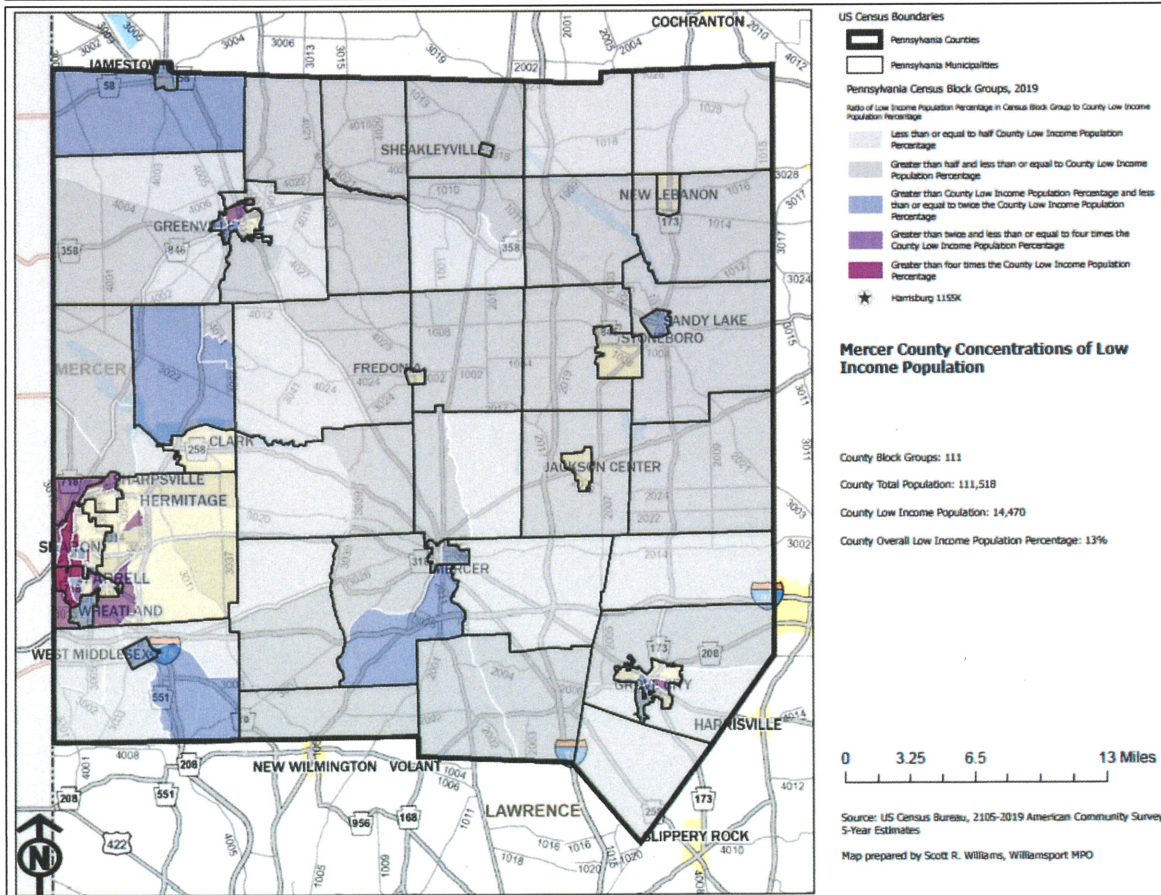
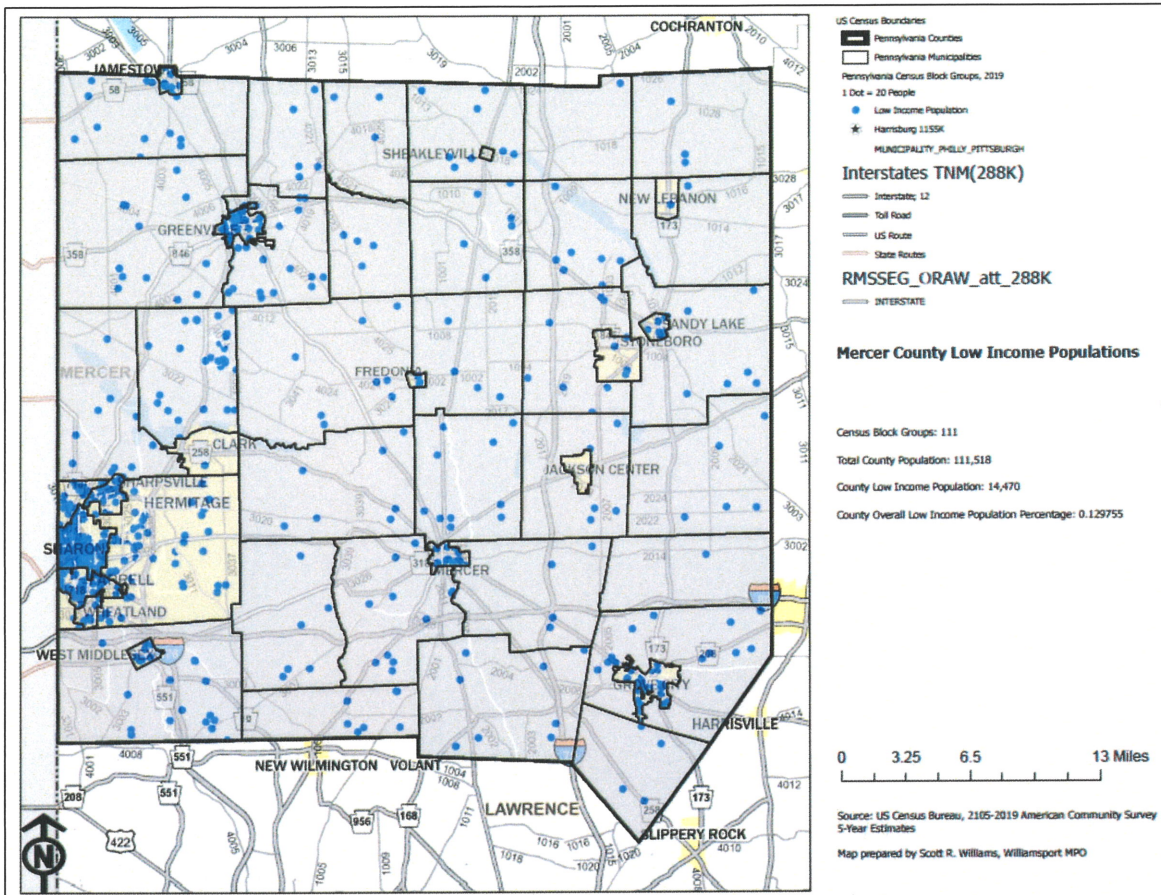
### **Low Income Population**

According to Five-Year Average (2015-2019) ACS data, Mercer County’s low-income population is 14,470, or 12.98% of the entire population. Much of the impoverished population is concentrated within the Shenango Valley communities, particularly the Cities of Sharon and Farrell. Less pronounced but still very notable concentrations exist in the City of Hermitage, the Town of Greenville, and the Reynolds section of Pymatuning Township. Several BGs in rural townships and small boroughs throughout Mercer County, have incomes below the county’s average. Out of 111 BGs in Mercer County, 42 exceed the average rate of 13.90%. These 40 BGs contain a population of 31,651, or 30.41% of the total measured\* county population estimate of the same time period (104,066).\*

*\* - Note that the measured population for the poverty metric totals only 104,066, as opposed to the 111,518 population. While this analysis did not measure why the entirety of the population was not counted, it is assumed to be because poverty is often measured only in populations over a certain age (often 5 years of age). To be consistent with the data available, all percentages for poverty are based on the 104,066 number.*

The **two maps on the following page** show the geographic incidence and concentrations of poverty in Mercer County. As with the minority maps, a dot map and graduated-color map display two ways of looking at these concentrations.

As in just about any county, income disparity is immediately evident by a quick glance at the maps. **In fact, 4 BGs in Mercer County have a 0% incidence of poverty—representing 4,832, or 4.64% of the population.** 19 additional BGs contain poverty rates above 0% but below 5%. Together, all (23) BGs with less than a 5% poverty rate account for nearly one-quarter (24.87%, 25,882) of the measured population.





Conversely, the 10 most impoverished BGs in Mercer County all contain low-income rates *at least* triple the county average, and six BGs have poverty rates in excess of 50%. Statistics for these BGs are shown in the table below:

Rank	CT/BG/Municipality	Low-Inc. Rate	Rank	CT/BG/Municipality	Low-Inc. Rate
1.	CT 332, BG 2—Sharon City	77.31%	6.	CT 330, BG 3—Grove City Borough	54.12%
2.	CT 303, BG 3—Sharon City	75.68%	7.	CT 309, BG 2—Farrell City	43.63%
3.	CT 334, BG 1—Farrell City	70.95%	8.	CT 334, BG 3—Farrell City	40.10%
4.	CT 332, BG 1—Sharon City	65.88%	9.	CT 333, BG 2—Hermitage City	40.04%
5.	CT 321, BG 2—Town of Greenville	54.56%	10.	CT 301, BG 3—Sharon City	39.08%

It is noteworthy that all of these top-10 BGs are in urbanized/high-density communities. While more rural poverty is also prominent in Mercer County, the most marked concentrations of poverty are all in these older, core communities, (or, in Hermitage's case, in an older-denser section the city known as the Patagonia neighborhood). Further, all but three are located in particularly in the Shenango Valley communities of Sharon and Farrell. The dot map above illustrates just how prevalent the low-income population is in these communities.

### Poverty Among Minorities

A keen observer may notice that many of the BGs on the previous table were also listed among the most racially diverse. Indeed, there is a strong correlation between poverty and minority status. This is true in Mercer County just as it is in many areas across the United States. The table on the following page shows how poverty rates vary among different racial groups within Mercer County. This is most meaningful when looking at White and Black populations, and significantly less meaningful for minority racial groups small in number. For example, there is a nearly 67% poverty rate amongst the County's Native Hawaiian population, yet only three members identifying as this race live in Mercer County. Particularly noteworthy is that Mercer County's Black population has a poverty rate is nearly four times higher than what exists for the White population.

Taking this information into account, and reviewing the dot maps on the previous pages, leads to the realization that there is a very strong correlation between the minority and low-income populations. This is particularly important to be mindful of, both when programming decisions are made (*e.g.* making sure investment occurs in such areas) and as project scopes are refined (*e.g.* making a concerted effort to take into

Poverty Rate Among Racial/Ethnic Groups in Mercer County <i>2015-2019 ACS, 5-Yr. Estimates</i>		
Demographic Indicator	Number	Percent
County Minority Population	10,952	9.82%
County Low Income Population	14,470	13.90%
White Alone, Low Income	11,250	10.81%
Black or African American Alone, Low Income	2,290	43.31%
American Indian and Alaska Native Alone, Low Income	11	9.57%
Asian Alone, Low income	231	31.05%
Native Hawaiian and Other Pacific Islander Alone, Low Income	2	66.67%
Some Other Race Alone, Low Income	37	16.82%
Two or More Races, Low Income	649	35.33%
Hispanic or Latino Origin (of any race), Low Income	209	18.48%
White alone (not Hispanic or Latino), Low income	11,074	11.66%



consideration—through PennDOT Connects and other public involvement processes—any particular needs that may exist among these members of the population).

### Other Potentially Disadvantaged Populations

While the focus of this EJ analysis is on race and income, several other indicators might be used to understand differences within the total county population. It is beyond the scope of this document to delve deeply into further analysis, yet it's important to consider indicators such as those listed in the table below when equity is brought into the planning and programming process. The data does not tell us why somebody, for example, does not own a vehicle or why they do not have internet access, or whether their disability becomes an issue that intersects with their individual transportation needs. Certainly, many of these populations do so by choice—making the conscious decision to *not* own a car or to *not* utilize computers, for example. Factors like age or

geography (access to transit or walkable communities) come into play. But it's safe to assume that many households without personal vehicles, computers or internet access are without these items because of affordability. Regardless of reason, factors many people consider to be standard practices (e.g. owning a car) are by no means ubiquitous.

Other Potentially Disadvantaged Populations in Mercer County <i>2015-2019 ACS, 5-Yr. Estimates</i>		
Demographic Indicator	Number	Percent
Housing Units with No Vehicle	4,630	10.00%
Housing Units with No Computer	6,989	15.08%
Housing Units with No Internet	9,626	20.77%
Persons with Disability	18,990	17.70%
Limited English Proficiency Households	254	0.55%

## Core Element #2—Assessment of Conditions and Identification of Needs

The following section assesses the performance and condition of transportation assets in Mercer County, relative to the prevalence of low-income and minority populations. Essentially, this marries the concept of performance based planning (see the Transportation Performance Measures section of this TIP) with EJ. The following information can be used to determine the unmet needs and any gaps in the transportation system and its investment.

Myriad maps and data were made available to the MPO through the Statewide EJ project in order to provide a snapshot of transportation asset conditions and safety needs throughout the region. The information analyzed includes the following four components, and the correlation of each with populations defined as minority and low-income:

Metric	Description of What Is Analyzed
Pavement Condition	Excellent (best) and Poor (worst), based on International Roughness Index (IRI) ranking
Bridge Condition	Poor (worst), based on International Bridge Inventory (NBI) ranking (0-4 out of 9 pt scale)
Bike/Ped Crashes	Location of each occurrence, based on 5 years of data (2015-2019)
Injury/Fatal Crashes	Location of each occurrence, based on 5 years of data (2015-2019)
All Reportable Crashes	Location of each occurrence, based on 5 years of data (2015-2019)

These five metrics are analyzed (beginning on the following page) as follows:



(1.) A brief summary table shows the existence of various conditions/issues both countywide and in CT BGs exceeding the countywide average rates for minority and low-income populations, as defined via the ACS 2015-2019 Estimates (9.82% and 13.90%, respectively). Such BGs constitute 27.97% and 30.41% of the total county population. In theory, a negative metric (such as poor condition of an asset) with a percentage exceeding the county average rate represents a potential underinvestment or need for future investment in these EJ-defined areas. Conversely, a positive metric (i.e. Excellent Condition Pavement) *not exceeding* the county average rates could indicate the need for further investment. For easier analysis, if a benchmark is not met/underinvestment exists cells are highlighted in red, while those meeting the benchmark are highlighted in green. The sample table below shows how this works:

**Sample Condition Table**

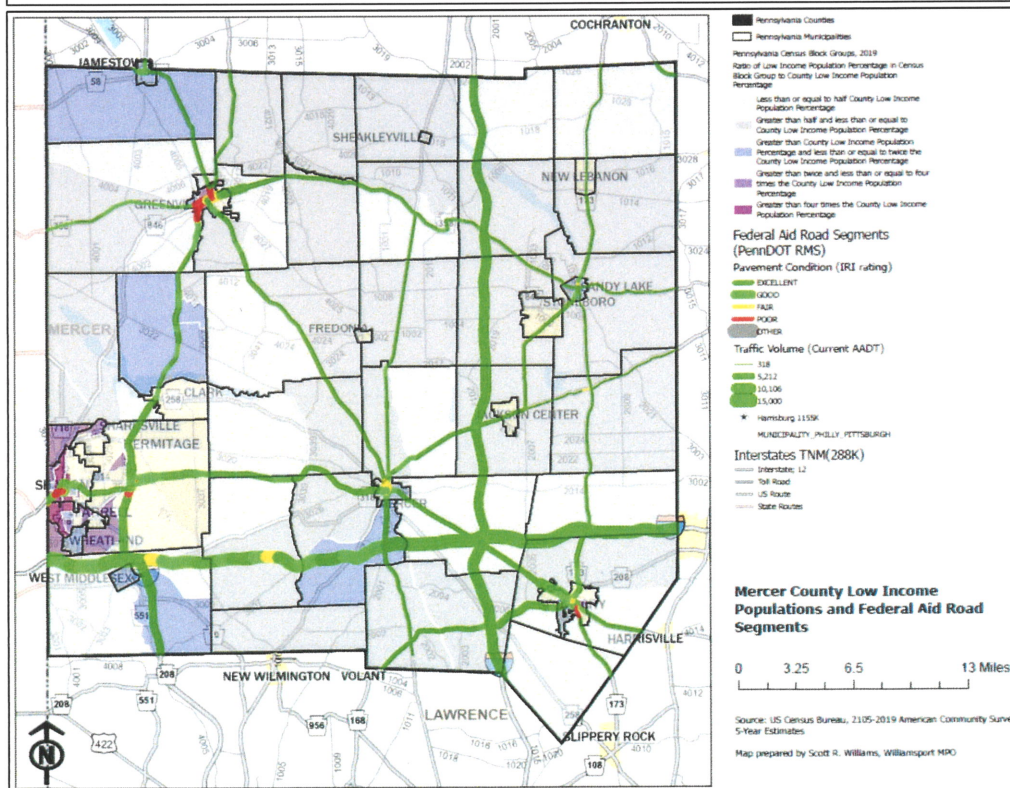
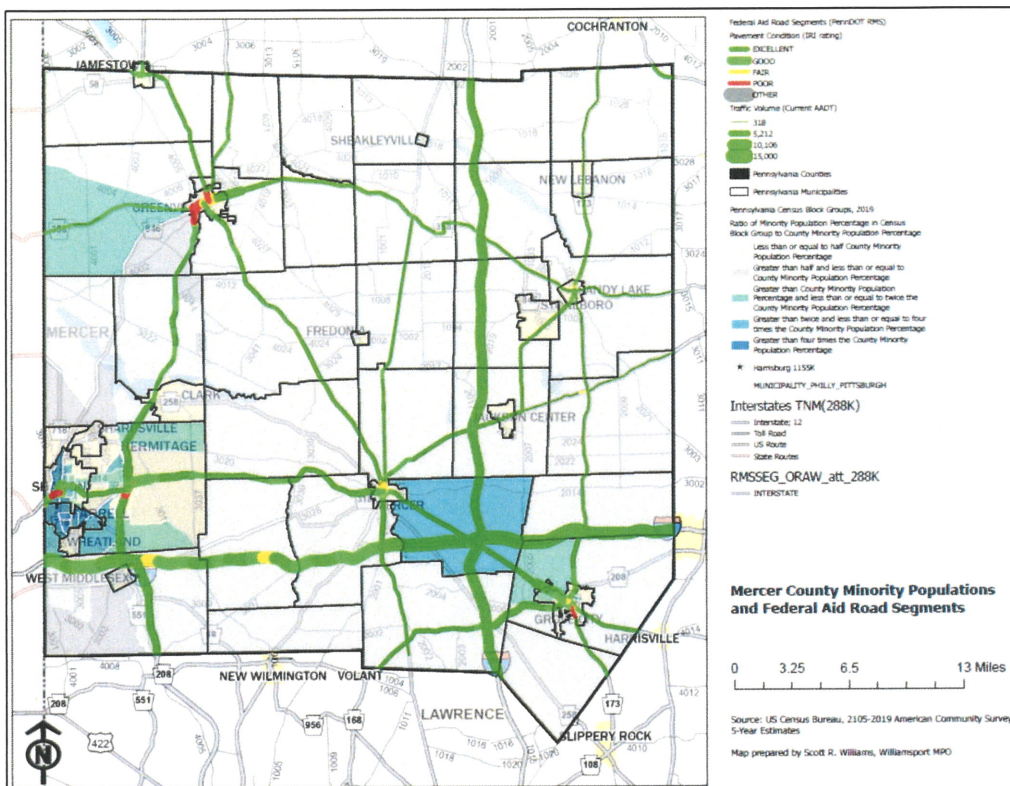
Sample Condition	Total Mileage/Number	BGs w/Minority Rate Above County Avg. (27.97% of Total Pop.)		BGs w/Poverty Rate Above County Avg. (30.41% of Total Pop.)	
		Mileage/No.	Percent	Mileage/No.	Percent
Something Positive	50	15	30%	15	30%
Something Negative	60	17	28.33%	17	28.33%

In the “positive” row, a number exceeding the corresponding above-average population rate for either minority or low-income populations (27.97% and 30.41%) is good. 30% exceeds 27.97%, but 30% does not exceed 29.87%. In the negative row, the opposite is true. 28.33% does exceed 27.97% but that same number doesn’t quite exceed 30.41%.

(2.) Two maps for each metric show how the specific location of an asset or incidence (e.g. poor condition bridges or pedestrian crashes) correlate with the rate of minority and low-income populations.

# Pavement Condition—International Roughness Index (IRI) on Federal-Aid Roadways

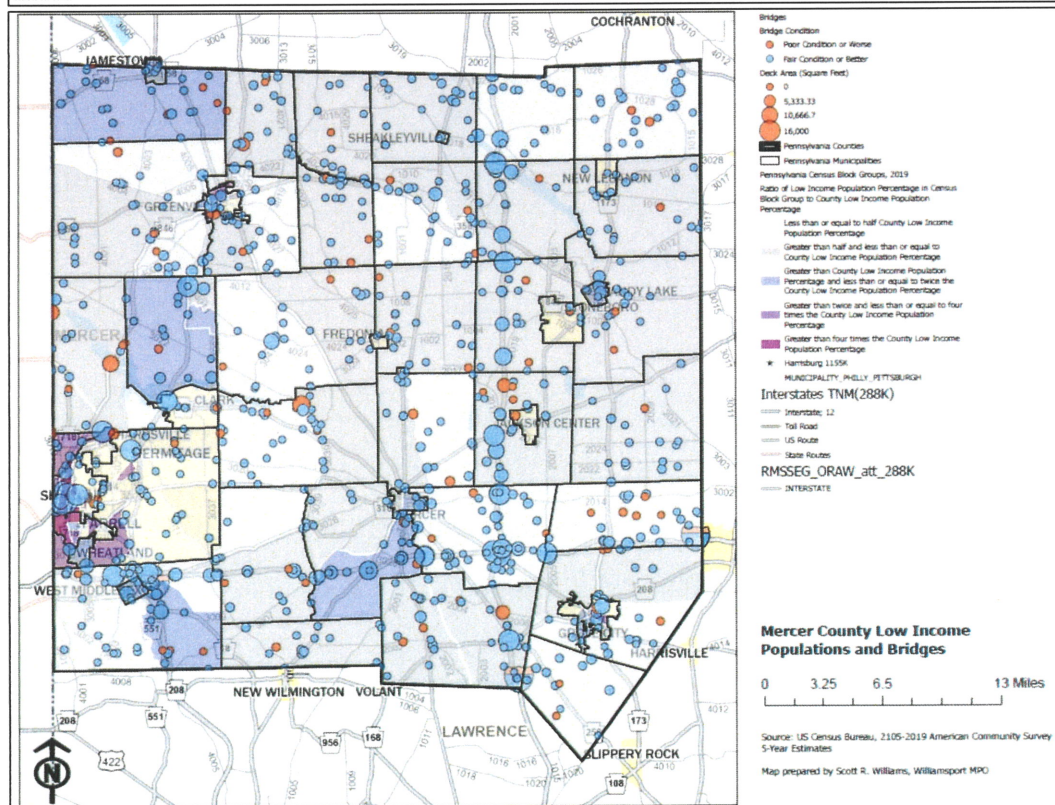
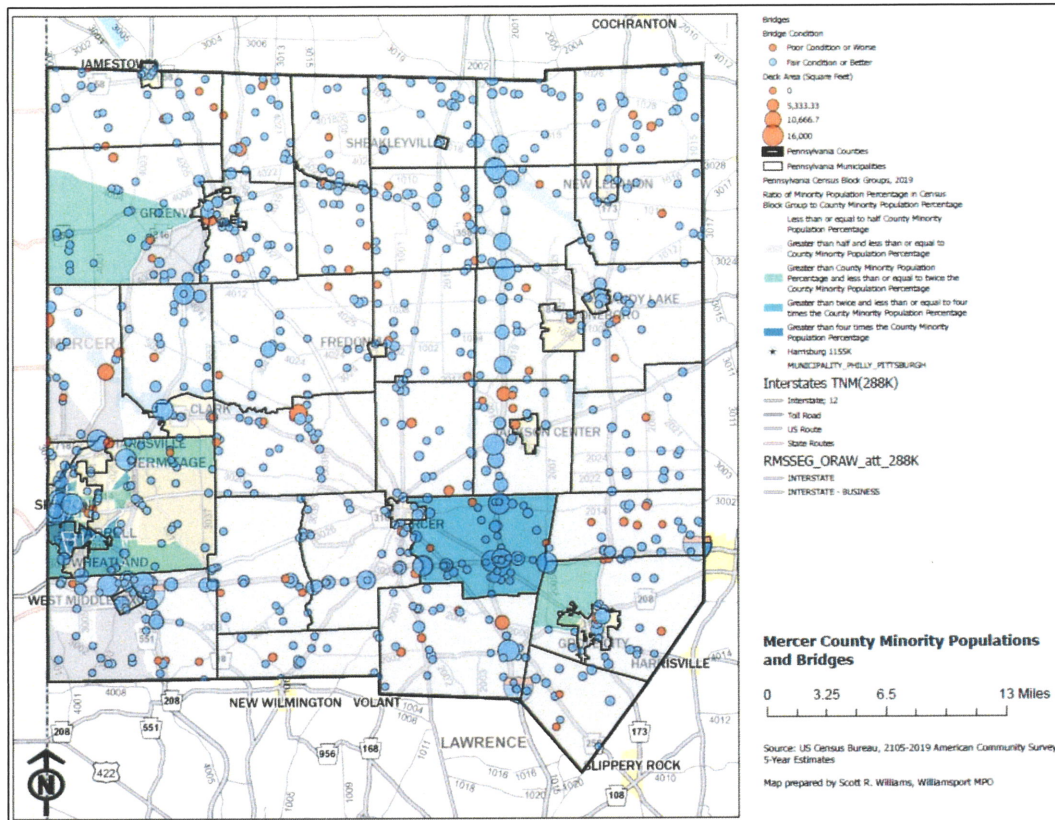
Pavement Condition	Total Mileage	BGs w/Minority Rate Above County Avg. (27.97% of Total Pop.)		BGs w/Poverty Rate Above County Avg. (30.41% of Total Pop.)	
		Mileage	Percent	Mileage	Percent
Excellent	300.45	53.18	17.7%	49.21	16.4%
Poor	8.44	2.98	35.3%	5.62	66.6%





## Bridge Condition

Bridge Condition	Total Number	BGs w/Minority Rate Above County Avg. (27.97% of Total Pop.)		BGs w/Poverty Rate Above County Avg. (30.41% of Total Pop.)	
		Number	Percent	Number	Percent
Poor	111	16	14.4%	24	21.6%





## Bicycle and Pedestrian Crashes

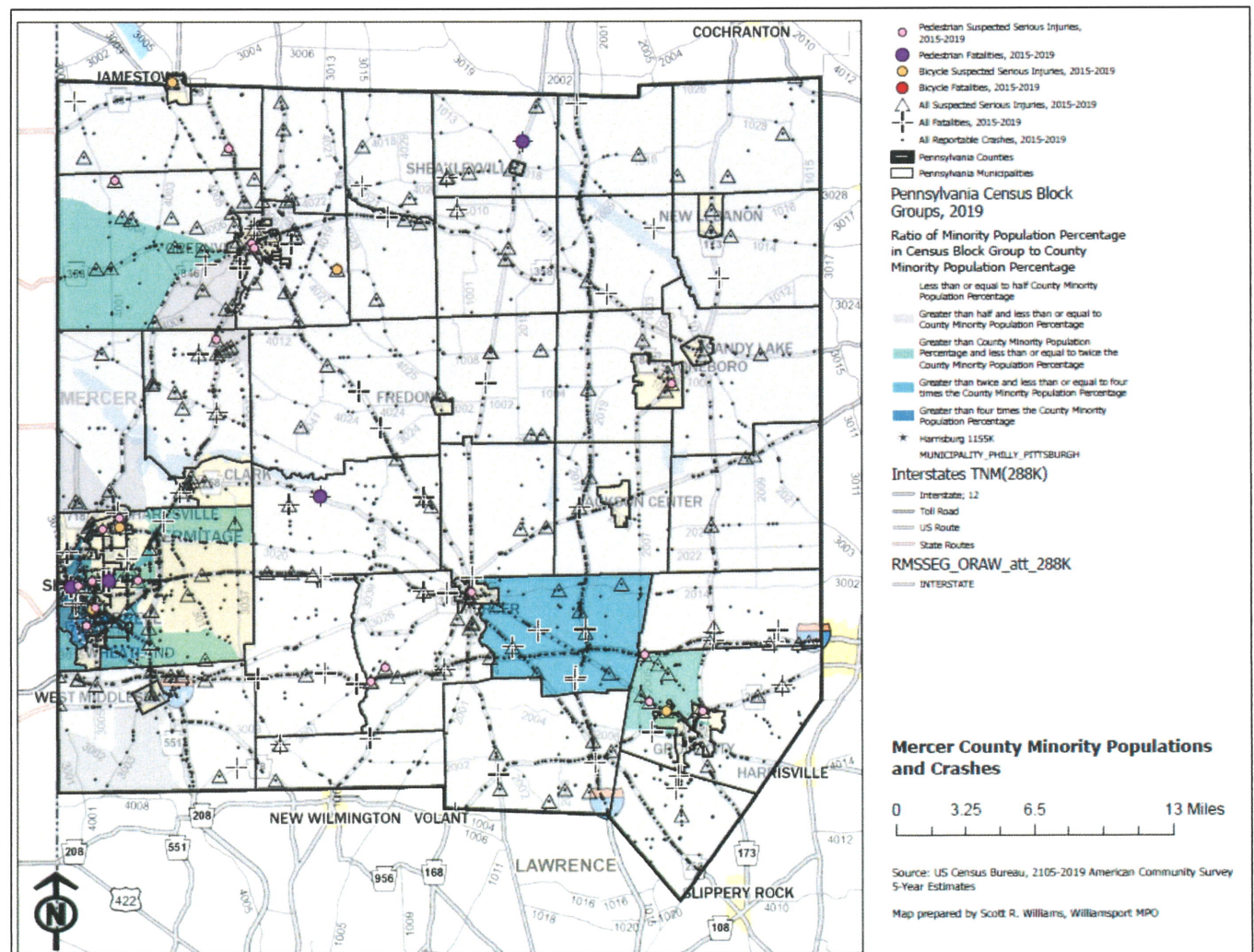
Ped. and Bike	Total Number	BGs w/Minority Rate Above County Avg. (27.97% of Total Pop.)		BGs w/Poverty Rate Above County Avg. (30.41% of Total Pop.)	
		Number	Percent	Number	Percent
Crashes	111	50	45.0%	62	55.9%

## Total Injury and Fatal Crashes

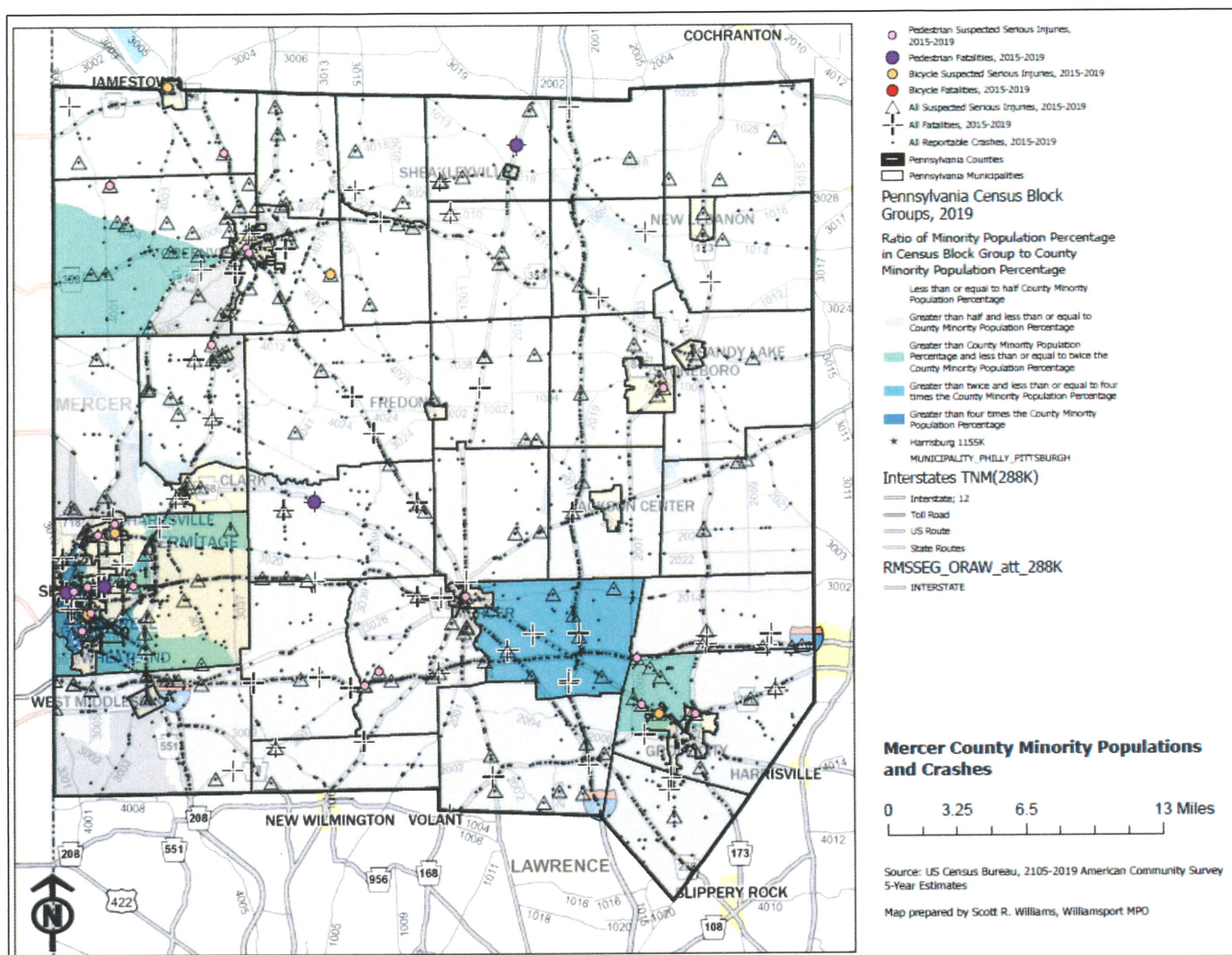
Injury and Fatal	Total Number	BGs w/Minority Rate Above County Avg. (27.97% of Total Pop.)		BGs w/Poverty Rate Above County Avg. (30.41% of Total Pop.)	
		Number	Percent	Number	Percent
Crashes	347	89	25.6%	100	28.8%

## Total Reportable Crashes

Reportable	Total Number	BGs w/Minority Rate Above County Avg. (27.97% of Total Pop.)		BGs w/Poverty Rate Above County Avg. (30.41% of Total Pop.)	
		Number	Percent	Number	Percent
Crashes	7349	2205	30.0%	2161	29.4%







## Summary of Core Element # 2

**Condition:** From this initial analysis, it appears there is some catching up to do in terms of pavement condition. Fortunately, the paving projects in this TIP update will likely help close this gap significantly. Some of the more high-profile paving projects are in areas of higher underserved population block groups. It should also be noted that the total mileage of poor condition roadways is so low (just over 8 miles total) that even one or two segments of roadway can easily skew these metrics from adequate to inadequate investment.

Bridge condition fares better when viewed from an EJ lens. The number of Poor Condition bridges is lower than what might be expected in areas of both high minority and high poverty populations.

**Safety:** Crash data is also mixed. Bicycle and Pedestrian crashes are significantly higher in BGs with high EJ populations. It is important to consider that many of the highest-minority and lowest-income populations in Mercer County reside in the more urbanized communities, such as Sharon, Farrell, and Greenville. While no data currently exists on the full extent of bicycle and pedestrian activity, it can logically be assumed that the vast majority of activity exists within these denser, more urbanized locations. These communities contain much higher traffic volumes than smaller towns or rural areas as well. The fact that many of these crashes occur in these areas is therefore not at all surprising. On the other hand, this does present an opportunity for further investment in projects that lead to safer walking or bicycling conditions.

The overall rate of injury and fatal crashes is lower in those BGs with higher-than-average minority populations, as well as the above-average low-income BGs. The vast majority of the county's minority population and much of the lower-income populations live within the Shenango Valley, which itself has most of the county's busiest



roads (both in number and traffic volume), contains the majority of the county’s traffic signals, and many of the county’s highest-crash corridors. But despite this, rates are somewhat lower than might be expected. Reportable crashes (including those without serious injuries and fatalities) are mixed; high minority rate BGs are a few percentage points higher than what might be expected.

### Core Element #3—Evaluation of Benefits and Burdens

The passage of the federal Infrastructure Investment and Jobs Act (IIJA)/Bipartisan Infrastructure Law (BIL) provided a much-needed infusion to Mercer County’s overall funding, which actually had been decreasing over several TIP periods (the impact of which was even higher when accounting for inflation). Our annual program increased from \$13m per year to about \$18m per year. In reality, however, the copious increase in dollars is being used toward catching up in areas where the transportation network had been falling behind—plugging the gap.

Therefore, it becomes just as important as before to prioritize investments based on where there is the greatest need and level of anticipated impact. This is where performance-based planning comes into play (see separate Transportation Performance Measures Document within the TIP). This could mean prioritizing a more-traveled road, bridge, or sidewalk over a less-traveled one. Or it could mean prioritizing a project that is likely to yield a significant safety benefit or travel time improvement. But, perhaps just as important, the MPO and PennDOT must always consider the impact a given project will have on the population. To this point, this section provides a framework for understanding the likely benefits and burdens of all 2023-2026 TIP projects on identified minority and low-income populations.

Analysis of the level of benefit or burden that a particular project may have is determined through several methods. First, the scope of project and what modes it will affect is considered. A simple in-place bridge replacement, for example, won’t typically have a major beneficial effect on the lives of surrounding residents (unless it contains sidewalks where they didn’t exist before), but perhaps a new bus shelter or new pedestrian amenities will. A new or substantially widened road that would increase traffic significantly (not that we have any such projects on our current TIP) may have detrimental quality-of-life, noise, or pedestrian safety burdens to the public, while a simple road resurfacing usually won’t alter the current functionality very much at all.

Just about all of the non-asset management projects on the MPO’s TIP (i.e. anything that is altering any asset beyond simple maintenance or preservation) requires a planning study. And when these studies are undertaken, a concerted effort is made to engage the public during the planning process. This process varies significantly depending upon the scope and size of the study, but a typical process looks something like this:

FINISH ← START	Public Input	Planning Process
	Listening tours, surveys, public meetings, etc. used to elicit project ideas	Issue Brought Up During LRTP Development
		Issue or Planning Study Recommendation Identified on LRTP
	Defined public outreach throughout the life of a plan (public meetings, surveys, pop-up events, stakeholder interviews, etc.)	Planning Study Initiated
		Project Alternatives Developed and Refined
		Preferred Alternative Selected, Listed as Recommended Projects
		Recommended Projects Prioritized (based on several factors)
	TIP EJ Analysis Completed, project Initiation forms via PennDOT Connects process	Projects Are Added to TIP through MPO/PennDOT collaboration
	Public comment opportunities (plan displays, meetings, etc.)	Project Progresses through Design
		Project Bid and Constructed

Whether or not it’s formally defined as “Environmental Justice,” the needs and impacts of/on people—including those traditionally underserved—are repeatedly considered throughout any planning process. Moreover, technology has allowed for many new and often more effective ways of reaching a larger number of people. In



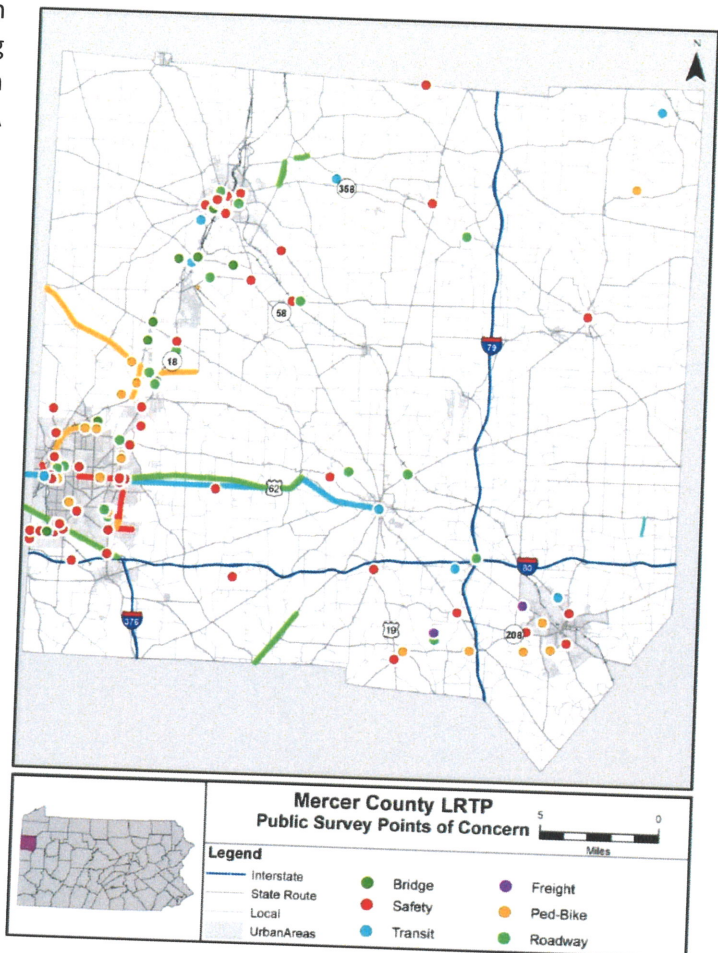
addition to traditional meetings or mailing out letters, various online meetings are held, project webpages are often created, and online surveys become easier to access and understand, particularly when modern marketing techniques are used to advertise a plan or project. At the same time, traditional methods of reaching people are not ignored, as it's important to remember that there are still many people who do not have access to computers or smartphones.

One particularly good example of success in obtaining the public's opinion regarding transportation in Mercer County can be found in our recent Long-Range Transportation Plan. A survey with online and paper components yielded nearly 400 responses. This not only provided us with invaluable input on where there are perceived needs (as shown on the graphic to the right), but also provided great information on travel behaviors, how the pandemic affected transportation, and what types of projects are most important to the public.

When a project eventually advances to be programmed on the TIP, it is specifically analyzed as part of the EJ Core Elements process. There are a few approaches used to conduct this project-level analysis. One method used to assess such impacts is mapping the location of each TIP project along with the corresponding rates of minority and low-income population. These maps are shown on the following pages.

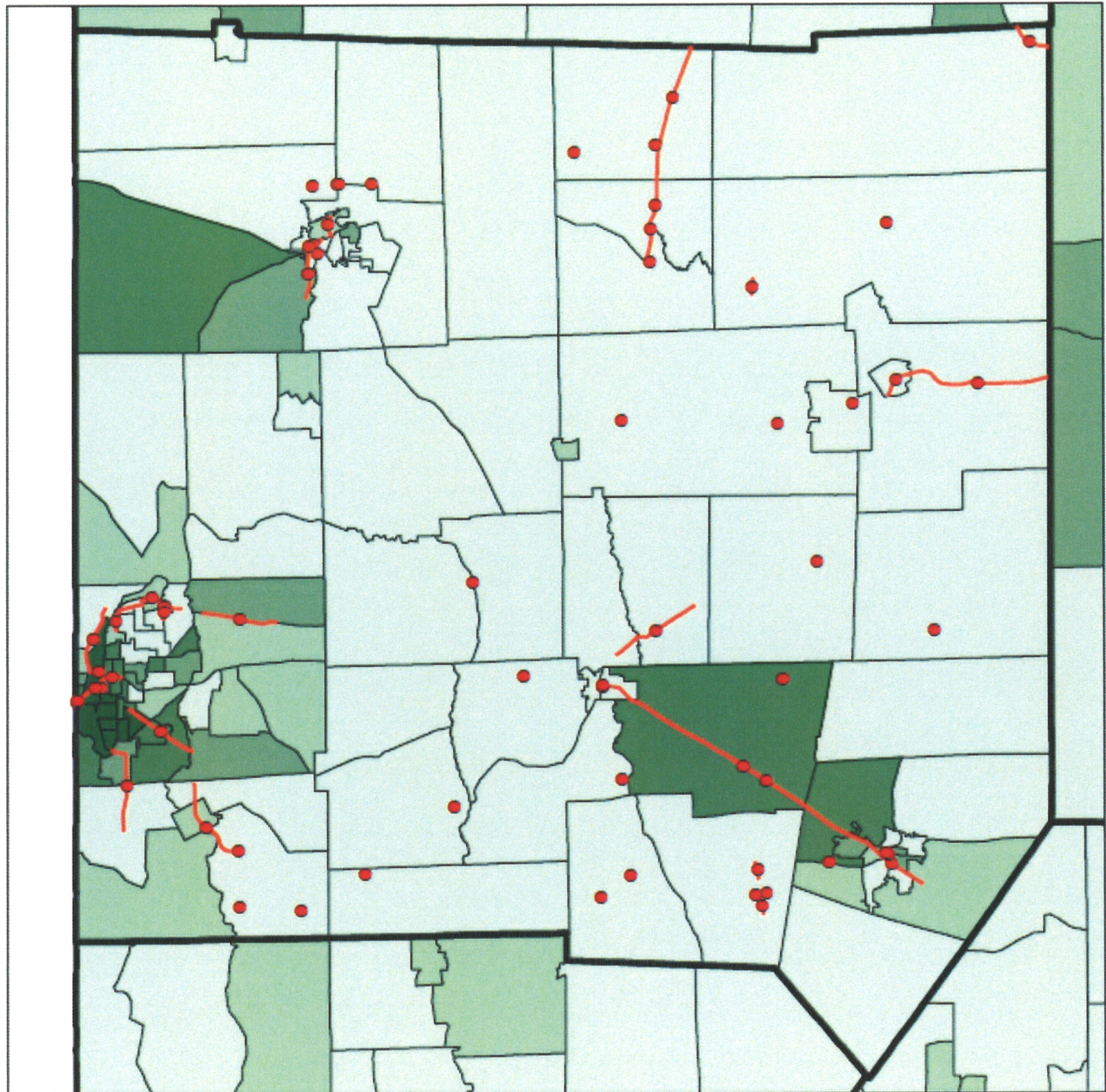
Not every TIP project can be mapped, and those that cannot fall into two categories: First, budget line items exist on the TIP in order to create reserves due to project overages, delays, and even the occasional new project. Any new projects that are programmed out of line items subsequent to TIP adoption are collaboratively processed according to the MPO's Memorandum of Understanding for TIP Revision Procedures (see MOU document within this TIP). Examples of line item categories include but are not limited to local bridges, all weather pavement markings, and (locally-selected) STU projects.

The second category includes most transit projects. The Shenango Valley Shuttle Service (SVSS) provides fixed-route transit services within the Mercer County urbanized area, which includes the Cities of Farrell, Hermitage and Sharon, and the Boroughs of Sharpsville and Wheatland. Routes are intentionally determined to better connect neighborhoods with high minority and poverty rates to places of business and employment throughout the urbanized area of Mercer County (i.e. the Shenango Valley). In addition to this service, Mercer County Community Transit (MCCT) offers an on-demand, shared ride service as well as an exclusive ride service (operating much like a taxi) to residents living throughout the county. The Mercer County Regional Council of Governments (MCRCOG) manages both of these services. The only Transit TIP projects that could potentially be mapped are geographically-specific capital improvements such as bus shelters. However, no such projects exist on the 2023-2026 TIP.





## Concentrations of Minority Populations in Mercer County



### Legend

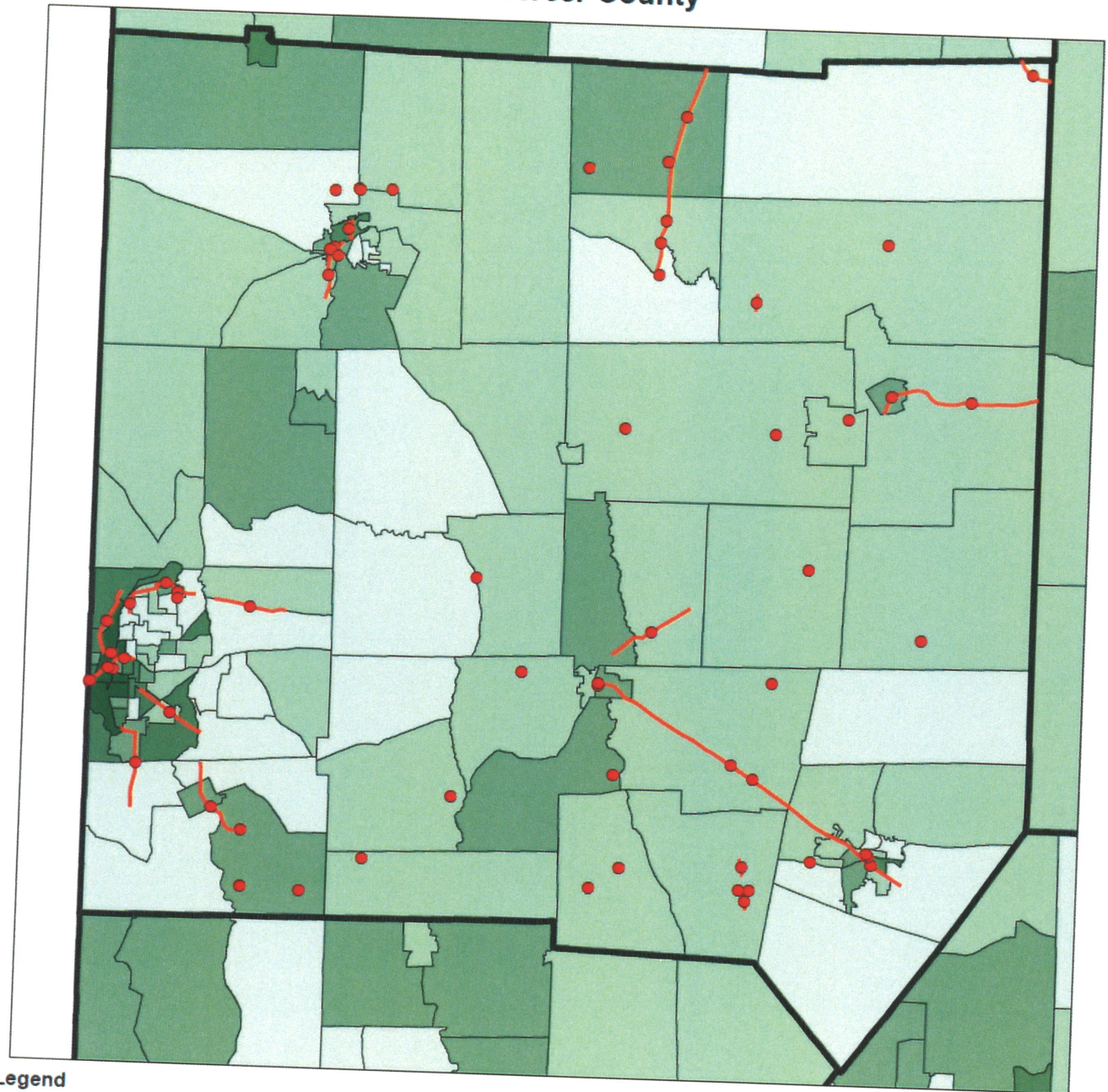
- SVTS Draft TIP - Points
- SVTS Draft TIP - Lines

### Ratio of Minority Population Percentage in Census Block Group to Planning Partner Minority Population Percentage

- Less than or equal to half Planning Partner Minority Population Percentage
- Greater than half and less than or equal to Planning Partner Minority Population Percentage
- Greater than Planning Partner Minority Population Percentage and less than or equal to twice the Planning Partner Minority Population Percentage
- Greater than twice and less than or equal to four times the Planning Partner Minority Population Percentage
- Greater than four times the Planning Partner Minority Population Percentage



## Concentrations of Low Income Populations in Mercer County



### Legend

● SVTS Draft TIP - Points

— SVTS Draft TIP - Lines

### Ratio of Low Income Population Percentage in Census Block Group to Planning Partner Low Income Population Percentage

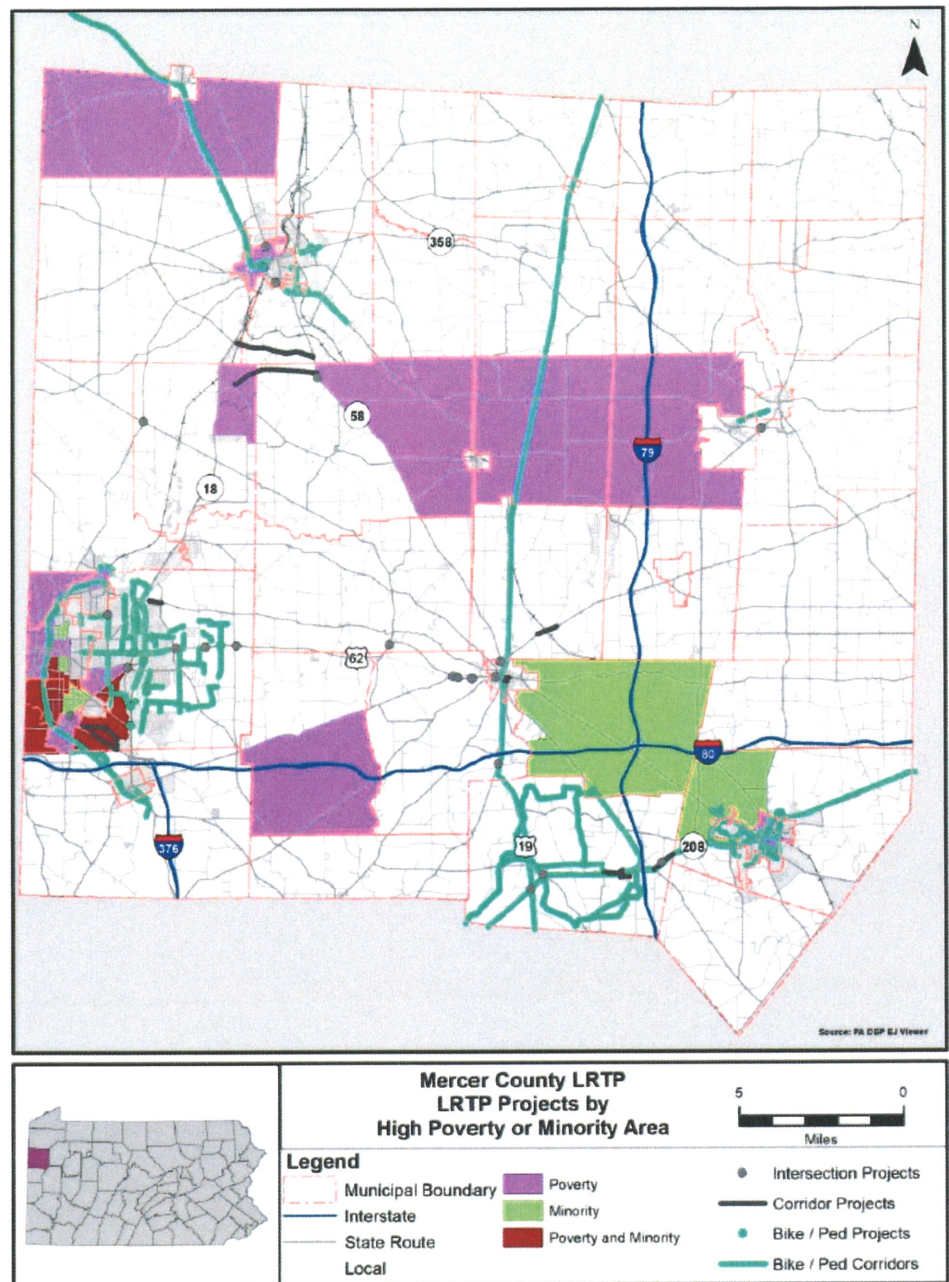
- Less than or equal to half Planning Partner Low Income Population Percentage
- Greater than half and less than or equal to Planning Partner Low Income Population Percentage
- Greater than Planning Partner Low Income Population Percentage and less than or equal to twice the Planning Partner Low Income Population Percentage
- Greater than twice and less than or equal to four times the Planning Partner Low Income Population Percentage
- Greater than four times the Planning Partner Low Income Population Percentage



It should be noted that the County's Long-Range Transportation Plan (LRTP) also took a deep dive into EJ analysis. The recent update (finalized toward the end of 2021) created several similar maps showing the location of then-current conditions. This plan also followed the Core-Elements four factor analysis in identifying the location of populations (element #1), assessment and identification of the system and needs (element #2) and maps similar to those on the previous pages which show specific projects superimposed over areas of higher disadvantaged populations. An example of the latter can be found in the image to the right.

In addition to these maps, the *Benefits and Burdens Analysis Tables* on the following pages are a formalized inventory used to capture any likely benefits and burdens of all highway and transit projects, with the exception of TIP line items. All TIP projects are listed by the Project ID (MPMS) Number, the affected State Routes where applicable (projects are listed in

ascending SR order), project title and the location. Project types are color-coded. The next columns are color-coded assessments of the low income and minority populations within a project area; how prevalent such populations are and the most likely level of impact (beneficial or burdensome) to be realized to these population groups. Because both of these columns can be somewhat subjective, additional notes and justifications are provided, where applicable, in the final column.





## Project Benefits and Burdens Analysis, SVATS MPO 2023-2026 TIP

### Project Type

Bridge Replacement or Removal
Bridge Rehabilitation or Maintenance
Roadway Betterment/Paving
Roadway Safety Project/Other
Bicycle/Pedestrian
Transit Capital - Vehicles
Transit Capital - Facilities/Equipment
Transit Operational/Maintenance

### Population Rate

Pop. Rate Below Countywide Average
Pop. Rate Above Countywide Average
Pop. Rate Well-Above Countywide Average

### Predicted level of benefit or burden

Significant Positive Benefit Expected
Minor Net-Positive Benefit Expected
Neutral/No Tangible Benefit or Burden Expected
Neutral, with Opportunity for Significant Benefit
Neutral, with Opportunity for Minor Benefit
Minor Net-Negative Burden Expected

Page 1 of 3

PROJECT INFORMATION (light grey shading represents carryover project from previous TIP)					UNDERSERVED POPULATIONS		ANTICIPATED IMPACT
STATE ROUTE	PRJCT. ID	PROJECT TITLE	LOCATION	PROJECT TYPE(S)	MINORITY	LOW INCOME	JUSTIFICATION AND ADDITIONAL NOTES
N/A	1745	Ohl Street Bridge (removal)	Greenville				Bridge has been closed over a decade, but removal will permanently cut off access from SW Greenville to downtown. However, a viable alternate route exists.
N/A	111434	Alan Avenue Sidewalk Project	Greenville				Project creates safe pedestrian access between town and college, and also provides good link to town's main park.
18	84913	Mercer County T-Beam Rehab Project	Countywide		N/A	N/A	Scope limited to rehabilitation of various bridges.
18	110764	PA 18/SR 4005 Intersection	Greenville				Low-income population well above county average; project nature includes signal improvements and pedestrian accommodations.
18	110234	PA 18/SR 4006 Intersection	Hempfield				Both populations below county average; project involves realignment of existing intersection; expected to improve safety.
18	109773	PA 18: PA 358 - Mill Hill Rd.	Greenville				Low-income pop. well-above county avg., nearby college pop. with heavy ped. traffic; Betterment proj. w/ ped. & safety benefits.
18	114013	SR 18: SR 358 to Four Lane	Greenville, West Salem				Low-income population above county average; project nature limited to resurfacing.
18	99878	SR 18: Roman to Wilson	Shenango, West Middlesex				Low-income population above county average; project nature limited to resurfacing.
19	84914	SR 19 over Johnston Run	Springfield				Both populations below county average; project limited to maintenance/preservation of existing bridge.
19	97277	US 19 Bridge over Otter Creek Trib #3	Fairview				Both populations below county average; project limited to maintenance/preservation of existing bridge.
19	1725	SR 19 Bridge over Shenango River Tributary	Perry				Both populations below county average; Bridge replacement of similar design and along existing alignment.
19	113974	SR 19: SR 358 to SR 1011	Perry, Sandy Creek				Both populations below county average; project largely limited to resurfacing and will not significantly change existing conditions.
19	86060	SR 19: Sheakleyville Boro Ln - Crawford Cty Ln	Sheakleyville, Sandy Creek				Both populations below county average; project largely limited to resurfacing and will not significantly change existing conditions.
58	97305	PA 58 Bridge/Mathay Run	Hempfield				Both populations below county average; project limited to maintenance/preservation of existing bridge.
58	97317	PA 58 Bridge over Munnel Run	Coolspring				Both populations below county average; project limited to maintenance/preservation of existing bridge.
58	58003	SR 58: Wolf Creek Bldg	Grove City				Both populations below county average; project includes rehab of existing bridge. Opportunity for better bicycle access as per SE Mercer Co. Bike/Ped Master Plan.
58	51188	SR 58: US 19 to end of 4-lanes	Findley, Pine				Minority population significantly above county average; project limited to roadway resurfacing and will not significantly change existing conditions.
62	109340	US 62 Tunnel under Bessemer and LE RR	Coolspring				Both populations below county average; tunnel likely to be replaced along a slightly different alignment and geometric improvements to approaches/intersections.
62	58052	US 62 Bridge over I-79	Jackson				Both populations below county average; Bridge replacement of similar design and along existing alignment.
62	88486	US 62 Br over Spring Ck	Coolspring				Both populations below county average; project limited to maintenance/preservation of existing bridge.
62	88488	US 62 Bridge over Fox Run	Jackson				Both populations below county average; project limited to maintenance/preservation of existing bridge.
62	97306	US 62 Bridge over Lackawannock Creek	East Lackawannock				Both populations below county average; project limited to maintenance/preservation of existing bridge.
62	97327	US 62 Bridge over a Shenango River Trib.	Hermitage				Both populations below county average; project limited to maintenance/preservation of existing bridge.
62	72658	US 62 Bridge over Sandy Creek Trib	Sandy Lake (Twp.)				Both populations below county average; project limited to maintenance/preservation of existing bridge.



# Project Benefits and Burdens Analysis, SVATS MPO 2023-2026 TIP

## Project Type

Bridge Replacement or Removal
Bridge Rehabilitation or Maintenance
Roadway Betterment/Paving
Roadway Safety Project/Other
Bicycle/Pedestrian
Transit Capital - Vehicles
Transit Capital - Facilities/Equipment
Transit Operational/Maintenance

## Population Rate

Pop. Rate Below Countywide Average
Pop. Rate Above Countywide Average
Pop. Rate Well-Above Countywide Average

## Predicted level of benefit or burden

Significant Positive Benefit Expected
Minor Net-Positive Benefit Expected
Neutral/No Tangible Benefit or Burden Expected
Neutral, with Opportunity for Significant Benefit
Neutral, with Opportunity for Minor Benefit
Minor Net-Negative Burden Expected

Page 2 of 3

PROJECT INFORMATION (light grey shading represents carryover project from previous TIP)					UNDERSERVED POPULATIONS		ANTICIPATED IMPACT
STATE ROUTE	PRJCT. ID	PROJECT TITLE	LOCATION	PROJECT TYPE(S)	MINORITY	LOW INCOME	JUSTIFICATION AND ADDITIONAL NOTES
62	117671	US 62 and Neshannock Intersection	Hermitage				Both populations below county average; project consists of safety improvements to the intersection, including the addition of turning lanes and additional signage.
62	97912	US 62: Ohio line to East Budd St	Sharon				Both populations well-above county average; project likely limited to resurfacing and other minor improvements; will not significantly change existing conditions.
62	32325	US 62: Franklin Road	Sandy Lake (Boro & Twp)				Low-income population above county avg. in borough; Betterment project may also include minor ped. Improvements.
79	116641	I-79 Mercer County ITS Addition at Grove City	Springfield				Both populations living in area below county average; though addition of real-time message boards will have safety benefits for all motorists.
173	97308	PA 173 Bridge over Black Run Trib	Pine				Minority population above county average; project limited to maintenance/preservation of existing bridge.
173	106281	Bessemer & Lake Erie RR Corridor	Pine, Grove City, Hempfield				Minority and low-income populations above county average in some portions of project area; but scope limited to improving rail crossings on existing roadways.
258	97318	PA 258 Bridge/Lackwink Ck	Jefferson				Both populations below county average; project limited to maintenance/preservation of existing bridge.
322	114012	SR 322: Venango Cty to Crawford Cty	Jamestown, French Creek				Low-income population above county avg. in Jamestown section; Betterment project will also include minor ped. Improvements.
N/A	97300	Mercer 2025 Bridge Shotcrete Group	Countywide		N/A	N/A	Project consists of reinforcing existing culverts across the county. Project nature will not substantially affect nearby populations permanently or even during construction.
518	99927	PA 518: Sharon to Sharpsville	Sharon, Hermitage, Sharpsville				Low-income and minority pops. Well above county avg. (partial). project near other above avg. BGs; Betterment project w/ped. & stormwater imprv.
518	111321	SR 518: SR 18 to Division Street	Farrell, Hermitage				Both populations well-above county averages; Resurfacing project with some minor ped. and safety improvements
518	111157	SR 518/3025 Intersection	Hermitage				Both populations below county average; project involves safety congestion mgmt. improvements (turning lane) at intersection; likely minor property impacts.
718	117537	SR 718 over Canal Creek	Sharon				Both populations are well-above county average; project limited to maintenance/preservation of existing bridge. May consider pedestrian impacts during construction.
718	109750	PA 718: Bank Pl - River Rd	Sharon, Hermitage				Both populations well-above county averages; Betterment project with some minor pedestrian, stormwater & safety improvements.
846	89123	PA 846 over Big Run Trib	West Salem				Minority population above county average; project limited to maintenance/preservation of existing bridge.
965	97319	PA 965 Bridge over Yellow Creek	Jackson				Both populations below county average; project limited to maintenance/preservation of existing bridge.
1004	89120	SR 1004 over Little Shenango River Tributary	Lake				Both populations below county average; Bridge replacement of similar design and along existing alignment.
1008	1463	SR 1008 Bridge over Otter Creek	Delaware				Both populations below county average; project limited to maintenance/preservation of existing bridge.
2002	58081	SR 2002: Neshannock Ck Br	Springfield				Both populations below county average; project involves bridge replacement of similar design and along existing alignment. Significant Amish population.
2013	118216	SR 2013 Bridge over Munnell Run	Mercer				Low-income population above county average; Bridge replacement of similar design and along existing alignment.
2014	1737	SR 2014 Brgd/Wolf Creek	Wolf Creek				Both populations below county average; Bridge replacement of similar design and along existing alignment.
2022	78937	SR 2022 Bridge over Wolf Creek	Worth				Both populations below county average; project limited to maintenance/preservation of existing bridge.
2103	88480	Millbrook Road Bridge over I-79	Jackson				Both populations below county average; project limited to maintenance/preservation of existing bridge.
3003	98390	SR 3003: Lawrence County Line to SR 718	Shenango				Both populations below county average; project consists of resurfacing and other minor roadway improvements.



# Project Benefits and Burdens Analysis, SVATS MPO 2023-2026 TIP

## Project Type

Bridge Replacement or Removal
Bridge Rehabilitation or Maintenance
Roadway Betterment/Paving
Roadway Safety Project/Other
Bicycle/Pedestrian
Transit Capital - Vehicles
Transit Capital - Facilities/Equipment
Transit Operational/Maintenance

## Population Rate

Pop. Rate Below Countywide Average
Pop. Rate Above Countywide Average
Pop. Rate Well-Above Countywide Average

## Predicted level of benefit or burden

Significant Positive Benefit Expected
Minor Net-Positive Benefit Expected
Neutral/No Tangible Benefit or Burden Expected
Neutral, with Opportunity for Significant Benefit
Neutral, with Opportunity for Minor Benefit
Minor Net-Negative Burden Expected

Page 3 of 3

PROJECT INFORMATION (light grey shading represents carryover project from previous TIP)					UNDERSERVED POPULATIONS		ANTICIPATED IMPACT
STATE ROUTE	PRJCT. ID	PROJECT TITLE	LOCATION	PROJECT TYPE(S)	MINORITY	LOW INCOME	JUSTIFICATION AND ADDITIONAL NOTES
3007	97292	SR 3007/W. Brch Nesh Ck	Wilmington				Both populations below county average; project limited to maintenance/preservation of existing bridge.
3008	109077	State St. Pedestrian Improvements	Hermitage				Low income population above county average; project adds missing ped. facilities along busy commercial corridor in Shenango Valley used by many in the region.
3011	97913	SR 3011: PA 318-Valley View	Hermitage, Shenango				Minority population above county average in portion of project area; project consists of resurfacing and other minor roadway improvements.
3012	74712	SR 3012 Brdg/Shenango River	Sharon				Both populations well above county average; project consists of maintenance/preservation of existing bridge.
3020	98388	SR 3020: SR 18 to SR 3011	Hermitage				Minority population above county average; project consists of full reconstruction, minor widening, elevation improvements and pedestrian access along Lamar Road.
3039	74670	SR 3039 Bridge over Lackawannock Creek	Jefferson				Both populations below county average; project limited to maintenance/preservation of existing bridge.
3039	97320	Little Neshannock Creek	East Lackawannock				Both populations below county average; project limited to maintenance/preservation of existing bridge.
3039	97332	Little Neshannock Cr Trib #1	East Lackawannock				Both populations below county average; project limited to maintenance/preservation of existing bridge.
4001	97268	SR 4001 Bridge over Sugar Run Trib #2	Greene				Low-income population above county average; Bridge replacement of similar design and along existing alignment.
4002	1475	SR 4002 Coal Hill Road Bridge over Big Run	West Salem				Both populations below county average; project limited to maintenance/preservation of existing bridge.
4020	97296	SR 4020 Bridge over Morrison Run	Sandy Creek				Both populations below county average; project limited to maintenance/preservation of existing bridge.
4021	58096	SR 4021: Morrison Run Bridge	Perry				Both populations below county average; project involves bridge replacement of similar design and along existing alignment.
4022	98172	SR 4022 Bridge over Sankeys Run	Sugar Grove				Both populations below county average; project limited to maintenance/preservation of existing bridge.
7204	1670	Old Mercer Rd (T-401) Br	East Lackawannock				Low-income population above county average; Bridge replacement of similar design and along existing alignment.
N/A	77148	ADA Related Expenses					Funding paid to the shared ride provider for transporting SVSS's eligible ADA passengers.
N/A	83653	Asset Management Expenses					Expenditure of Section 5307 funds to maintain transit assets.
N/A	83656	Shop/Garage Equipment			N/A	N/A	Purchase and replacement of shop and garage equipment necessary to the efficient operation of maintenance system; does not directly affect ridership base.
N/A	83658	Office Equipment			N/A	N/A	Upgrades to office equipment such as computers at the SVSS operational facility; does not directly affect ridership base.
N/A	95412	Safety & Security					Continuance of security enforcement relationship with local police departments to provide transit security services.
N/A	95413	Office and Garage Improvements			N/A	N/A	Interior and exterior improvements to facilities (paving, painting, landscaping, new doors and new cement work)
N/A	102638	Vehicle Purchase					Purchase of SVSS bus.
N/A	111059	Small Transit Buses					Purchase of shared ride buses for MCT.
N/A	111060	Operating Assistance					Funds necessary to run transit operations.
N/A	118412	Replace Service Vehicle			N/A	N/A	Purchase of support vehicles; does not directly affect customers/riders.



### Further Evaluation of Benefits and Burdens

Not counting line-item projects, the 2023-2026 TIP contains a total of 72 projects, 62 of which are on the Highway TIP and 10 of which are on the Transit TIP. Out of the 62 capital highway projects, 24—about 39%—are located in BGs that contain minority and/or low-income populations above the countywide average rate. The top-twelve most expensive TIP projects—all of the projects with at least \$2m committed in fiscal years 2023 through 2026—consist of three bridge projects and nine roadway Betterment/paving projects. Of these twelve projects, nine are located in CT BGs that have minority and/or low-income populations above or significantly above countywide-averages. Four of the top five-most-expensive projects are located in such BGs as shown in the table to the right. Three of these five projects are in the Shenango Valley communities where, as previously noted, some of the most notable levels of poverty and minority rates coexist.

Project	Cost
PA 518: Sharon to Sharpsville	\$3.24m
SR 18: SR 358 to Mill Hill Road	\$2.7m
SR 18: Romain to Wilson	\$2.61m
SR 19 Bridge over Shenango Tributary	\$2.48m
SR 3020: SR 18 to SR 3011	\$2.35m

Transit projects directly applicable to the recipients of transit services are automatically assumed to serve such populations, at least in part, because all four SVSS routes traverse the Shenango Valley, particularly in many of the highest-minority and economically disadvantaged neighborhoods. Locally and nationally, transit services often serve households without other means of transportation. While the reasons for not

### Number of Projects by Benefit/Burden Category

Predicted Level of Benefit or Burden	Highway TIP	Transit TIP
Significant Positive Benefit Expected	2	6
Minor Net-Positive Benefit Expected	9	0
Neutral/No Tangible Benefit or Burden Expected	48	4
Neutral, with Opportunity for Significant Benefit	1	0
Neutral, with Opportunity for Minor Benefit	1	0
Minor Net-Negative Burden Expected	1	0
<b>Total</b>	<b>62</b>	<b>10</b>

owning a vehicle are many (due to age or physical limitations, people choosing not to drive, etc.), quite often it is an indicator of a household's inability to procure safe and reliable personal transportation because of a household's economic circumstances.

In addition to demonstrating the TIP's investment in high-minority and low-income communities, it is also important to consider the overall level

of a project's anticipated benefit. The summary table to the left shows that most of the 2023-2026 TIP projects are anticipated to yield minor net-positive benefits or not significantly affect (positively or negatively) the defined population groups.

One TIP project, removal of the Ohl Street bridge, was determined to have a minor net-negative affect on underserved populations. A deeper look at this project is warranted in order to explain what aspects of the project might be burdensome to underserved populations and how any such burdens can and will be minimized or eliminated. The table on the following page further describes the Ohl Street bridge removal project and its EJ analysis.





<b>Project</b>	<b>Ohl Street Bridge Removal</b>
<b>BG Minority %*</b>	1.34%
<b>BG Poverty %*</b>	22.49% (26 <sup>th</sup> highest BG poverty rate in county)
<b>Explanation of Potentially Burdensome Element</b>	Permanent removal of this structure would potentially require residents living in the southwestern quadrant of the Town of Greenville to travel a greater distance to get to downtown or other areas east of the Shenango River.
<b>Additional Background</b>	This issue has been studied significantly since the bridge was closed to all traffic in 2008. Working with FHWA, various officials from PennDOT, the MPO, and Greenville conducted meetings and launched an extensive survey to assess how burdened residents might be by the removal of this structure. Analysis also took into consideration the relatively low traffic volume of the structure, the high cost of replacement, the presence of a nearby alternate route—the bridge on Main Street is 0.27 miles north—and the fact that the bridge has been closed for well over a decade. Ultimately, it was determined that the bridge was a redundant structure and that the cost of replacing it exceeded the benefit it would provide.
<b>Steps Taken to Mitigate Potential Burden</b>	Because the largest burden would likely be on pedestrians, including those who do not have access to a private vehicle. Removal of the bridge could create up to a 0.73 mile out-of-direction permanent detour, though most out-of-direction travel would be limited to less than ½ mile. It is important to ensure that access for all modes is maintained and safe for all users. This particularly includes future viability of the Main Street bridge to the north. Other steps that could be taken include periodic sidewalk repair or replacement in the neighborhoods between Ohl and Main Streets.

\* - 2015-2019 ACS Estimate

Two other projects are classified as being neutral in impact but having the *potential* to have modest or significant benefits. Moreover, both projects are located in areas of particularly high underserved populations. These projects are listed in the table below, which describes what aspects could create additional levels of benefit beyond a standard roadway betterment project or bridge repair.

<b>Project</b>	<b>SR 58 Bridge over Wolf Creek</b>	<b>SR 518: SR 18 to Division Street</b>
<b>BG Minority %*</b>	10.62% (#30 highest min BG rate in county)	45.76% (#7 highest BG min rate in county)
<b>BG Poverty %*</b>	54.12% (#6 highest pov BG rate in county)	43.63% (#7 highest BG pov rate in county)
<b>Explanation of Potential Benefit</b>	Additional bridge width could better-accommodate bicyclists.	Creating pedestrian facilities where they do not exist would carry significant benefits and increase safety.
<b>Additional Background</b>	The 2018 SE Mercer County Bicycle and Pedestrian Study identified this bridge as a pinch point in accommodating bicyclists adjacent to Grove City College. The planning process noted a need for better bicycle accommodations in this location, but there was realization that the bridge could not easily be accommodated to continue proposed bike lanes	The City of Farrell contains the highest levels of underserved populations in Mercer County. SR 518/Division Street is the city's most-traveled road and, accordingly, has significant pedestrian volumes as pedestrians walk to businesses along SR 518 and to the school facilities. Sidewalks do not exist on much of this corridor, yet there is a need based on current pedestrian volumes.
<b>Recommendation</b>	As project design begins, the PennDOT Connects process should investigate whether it might be technically feasible to widen the existing structure. If it is not, other, less convenient routes can be utilized for safe bicycle travel.	Sidewalks should be included as part of this project. The City of Farrell could pursue contributing a 20% local share toward sidewalks (a district policy) or may consider applying for competitive funds such as Transportation Alternative Set Aside funding.

\* - 2015-2019 ACS Estimate



Although there is always some level of subjectivity in determining the anticipated level of impact a project may have on any population group, the preceding section's multi-step process assists in bringing to light such impacts, which can then be used to further justify a project's inclusion on Mercer County's TIP.

#### Core Element #4—Identification and Addressing of Disproportionate and Adverse Impacts, Which Will Inform Future Planning Efforts

The *Benefits and Burdens* section above demonstrates that there are not any likely to be any disproportionate and adverse impacts on any 2023-2026 SVATS MPO TIP Projects, with the *likely* minor impacts to the Ohl Street project noted on the previous page. Strategies to avoid, mitigate or minimize any such impacts were listed above. Should any unforeseen impacts be shown to exist as any other 2023-2026 TIP projects continue through the project development and delivery process, the SVATS MPO will work closely with PennDOT District 1-0 and CPDM offices, FHWA, and FTA to ensure that any impacts can be avoided and/or minimized to the maximum extent possible. Modification of a project's scope or selecting additional projects that can be programmed through TIP line items are two possible strategies.

Looking forward, the SVATS MPO will continue to build upon the process outlined within this analysis as well as the detailed EJ analysis that was part of the 2021-2045 Long-Range Transportation Plan (LRTP). One benefit of the more robust LRTP EJ process is that it allowed the MPO staff and its planning partners more time to meaningfully consider not only how to mitigate any potential EJ impacts prior to the programming of projects, but also make more strategic decisions about investing in communities with significant levels of traditionally-disadvantaged populations. Through both the LRTP and other planning documents, a more overt consideration of EJ can be incorporated into project prioritization.

Several other strategies may be utilized to better-consider EJ within the TIP development process. A menu of potential options is listed in the table on the following page, and these can each be discussed prior to when the next (2025-2028) TIP process begins.

Strategy	Opportunities or Advantages	Challenges or Disadvantages
Explicitly consider geography when PennDOT District 1 chooses high-priority betterment projects to advance.	Better-ensures that projects are chosen based on location and the populations served in addition to condition-related data already used.	Major change to the status quo; PennDOT District 1 Maintenance noted that EJ is not a consideration when they recommend projects.
Continue focusing on LRTP project prioritization and the integration of the TIP and LRTP.	Projects selected based on the collaborative LRTP planning process. The current LRTP's project prioritization/ranking considers EJ specifically against various other metrics.	Integrating the two documents has proven challenging, despite a major focus on this. Advancing even the simplest project that goes beyond the maintenance of an existing asset can take a long time.
Have all TIP development partners carefully review this EJ analysis and the LRTP's EJ analysis prior to when TIP project selection occurs.	Easy to do this; already done to some degree.	Informal approach could allow for too much leeway in justifying one opinion vs. another.
Create a formal policy dictating that a certain percentage of dollars or projects are located in high minority or low-income block groups or toward projects that will significantly benefit underserved populations	The most direct way to ensure EJ remains an important part of the project selection process. A few other MPO's across PA have created similar formal policies.	Can be difficult to ensure that the right mix of projects is selected or take away from other aspects of sound project selection. A more proactive and informal process could work just as well.



Like other MPOs and RPOs in Pennsylvania, it is anticipated that strategies and additional analyses will continue to evolve on future TIP updates. The recommended framework developed out of the *South Central Pennsylvania Environmental Justice Unified Process and Methodology Guide* and utilized for the past two SVATS MPO TIPs, is still a relatively fresh process. Prior to this (2023-2026) TIP, planning partners were able to jointly assess what worked best, what didn't work well, and what other types of data analysis could assist in developing evermore-meaningful EJ documents. A similar after-action review will likely occur after this TIP update as well. As best practices around Pennsylvania are shared, guidance is refined, data becomes more accessible, and collaboration and training occurs; EJ analysis should continue to improve. As this transpires, the MPO and PennDOT will continue working together to make transportation investment decisions wisely, thoughtfully and as fairly as possible.

*Please note that TIP project layers are saved on PennDOT's OneMap interactive GIS mapping site and all other data used in this report is on file. If any members of the public or other stakeholders wish to see anything in detail that is difficult to see on smaller-scale county-level maps, or they would like to see more detailed demographic data for a specific block group, they are encouraged to contact Matt Stewart of the SVATS MPO/MCRPC ([mstewart@mcrpc.com](mailto:mstewart@mcrpc.com); 724-981-2412, x3206).*