



REGIONAL TRANSPORTATION PLAN 2050

MOVING SOUTH JERSEY FORWARD

APPROVED JANUARY 25, 2021

**South Jersey
Transportation
Planning Organization**

782 South Brewster Road, Unit B6
Vineland, New Jersey 08361

WWW.SJTPO.ORG

Photo: Route 52 Bridge,
Ocean City, New Jersey

SOUTH JERSEY TRANSPORTATION PLANNING ORGANIZATION

RESOLUTION: 2101-04: Adopting RTP 2050 as the 2020 Update to *Transportation Matters: A Plan for South Jersey*

WHEREAS, the South Jersey Transportation Planning Organization (SJTPO) is the Metropolitan Planning Organization (MPO) designated under federal law for the southern region of New Jersey including Atlantic, Cape May, Cumberland, and Salem Counties; and

WHEREAS, MPOs are responsible for the development of a Regional Transportation Plan (RTP) pursuant to 23 U.S.C. 450.322; and

WHEREAS, the Regional Transportation Plan must be updated at least every four years in air quality non-attainment areas, pursuant to 23 U.S.C. 450.322; and

WHEREAS, SJTPO has prepared RTP 2050, as the 2016 Update to *Transportation Matters: A Plan for South Jersey*, adopted on July 25, 2016; and

WHEREAS, the FHWA-NJ Division granted SJTPO a six-month extension in adoption of RTP 2050, due to COVID-19 and the inability to conduct in-person public meetings; and

WHEREAS, RTP 2050 guides SJTPO planning activities and investment decisions over the long term to help achieve an intermodal transportation system that facilitates the efficient movement of people and goods; and

WHEREAS, the transportation plans and programs developed by the SJTPO are required to conform to the purposes of the State Implementation Plan for air quality control and the Clean Air Act; and

WHEREAS, a Conformity Demonstration has been completed; this shows that RTP 2050 meets the current emissions budgets that are in effect; and

WHEREAS, the Conformity Demonstration is incorporated into RTP 2050; and

WHEREAS, the public, private transportation providers and all interested parties have now had an opportunity to participate and have their views considered in the development of RTP 2050 and its Conformity Demonstration; and

WHEREAS, a summary of the significant comments and SJTPO responses has been completed and is a part of RTP 2050 incorporated as Appendix H. Questions, Comments, and Responses from RTP 2050; and

WHEREAS, an Interagency Consultation process has been conducted on RTP 2050 and its Conformity Demonstration as required; and

WHEREAS, the RTP 2050 is fully consistent with federal planning regulations and guiding the metropolitan planning process; and

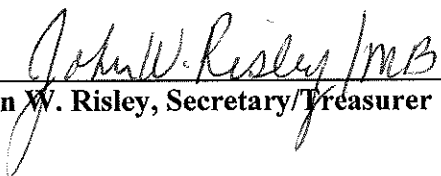
WHEREAS, the current SJTPO Transportation Improvement Program (TIP) is consistent with RTP 2050; such that the regional emissions analysis already performed for the plan applies to the TIP also, as documented the Plan; and

NOW, THEREFORE, BE IT RESOLVED, that the Policy Board of the South Jersey Transportation Planning Organization hereby adopts RTP 2050 including the Transportation Conformity Demonstration as the 2020 update to the Transportation Matters: A Plan for South Jersey.

BE IT FURTHER RESOLVED, that the Policy Board authorizes staff to include minor revisions in RTP 2050 and the Conformity Demonstration as may be necessary to carry out their purposes or respond to Federal comments, with subsequent notice to the Policy Board and Technical Advisory Committee.

Certification

I hereby certify that the foregoing is a correct and true copy of a resolution adopted by the Policy Board of the South Jersey Transportation Planning Organization at its meeting of January 25, 2021.



John W. Risley, Secretary/Treasurer



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A LETTER FROM THE EXECUTIVE DIRECTOR

Dear Regional Partner,

Thank you for your interest in SJTPO's Regional Transportation Plan, RTP 2050. This plan is an update to the previous plan, *Transportation Matters – A Plan for South Jersey*, adopted in July 2016. The RTP is federally required to be updated every four years, with the purpose of educating residents and stakeholders in the four-county region on the importance of the transportation investments necessary to keep all 5,233 miles of South Jersey's transportation network in a functional and reliable condition that allows for the efficient movement of people and goods. Further, RTP 2050 provides a framework for



what we, as a region, envision our transportation network to look like in the next 30 years. This vision is crafted through a collaborative process, which involves feedback from planners, engineers, elected officials, and residents alike.

Consistent with the previous plan, SJTPO intended RTP 2050 to be adopted by the Policy Board, SJTPO's governing body, in late-July 2020. However, the novel Coronavirus, also referred to as COVID-19, has presented itself as a barrier to adhering to this schedule. While staff have worked diligently over the past year to complete research, analysis, and draft content for the Plan, the impacts of COVID-19, including stringent social distancing practices and stay at home orders, beginning in March 2020, halted our plans for in-person public engagement opportunities.

Prior to COVID-19, in-person public input opportunities were scheduled to occur from mid-May through early June, while engaging new groups of non-traditional partners, who work with underserved, disadvantaged populations. These in-person meetings were meant to be complemented by virtual engagement opportunities, such as online comment forms available on the SJTPO website and social media platforms. It was never our intention to rely exclusively on virtual engagement to

gather public input. As roughly 1 in 5, or 43,000 households in the SJTPO region have little or no internet access, this approach is not an equitable way to reach a majority of our region's residents and stakeholders.

To ensure we allow ample opportunities for members of the public to voice their thoughts on RTP 2050, we contacted our partners with the Federal Highway Administration for a six-month deadline extension. This extension has allowed us to better educate ourselves on virtual public outreach and to ensure tools that will allow the public to be involved via internet and phone. Additionally, we currently plan to host in-person events throughout the four-county region later in the year, contingent upon the ability to safely convene public gatherings later in 2020.

We once again thank you for your interest in our Regional Transportation Plan, RTP 2050 and appreciate your understanding as we navigate through these unprecedented times in a way that is responsible, equitable, and safe for our staff, partners, and residents.

Sincerely,

A handwritten signature in black ink, appearing to read 'J Marandino', with a stylized, cursive script.

Jennifer Marandino, P.E.

Executive Director



ACKNOWLEDGEMENTS

The South Jersey Transportation Planning Organization's (SJTPO's) regional transportation plan, RTP 2050 was produced through a collaborative effort.

The SJTPO Policy Board, which is composed of local elected officials, drove the development of the RTP 2050 goals and objectives, and provided the endorsement of the RTP.

The SJTPO Technical Advisory Committee (TAC), which includes county and municipal planners and engineers, provided SJTPO with technical guidance during the planning process. Much of the data on system performance was provided by the New Jersey Department of Transportation (NJDOT) and New Jersey Transit, both members of the TAC.

Our appreciation extends to the many interested members of the public, elected officials, and agency representatives who contributed a great deal to the RTP.

The preparation of this report has been financed in part by the U.S. Department of Transportation, Federal Transit Administration, and the Federal Highway Administration. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or its use.

I. INTRODUCTION

About SJTPO

The South Jersey Transportation Planning Organization (SJTPO) is the Metropolitan Planning Organization (MPO) for southern New Jersey. Metropolitan planning organizations (MPOs) were introduced by the Federal-Aid Highway Act of 1962. Congress created MPOs in order to ensure that existing and future expenditures of governmental funds for transportation projects and programs are based on a continuing, cooperative, and comprehensive (“3-C”) planning process. MPOs are required in urbanized areas of over 50,000 people to enable access to federal transportation funds. Formed in 1993, SJTPO replaced three smaller MPOs while incorporating other areas not previously served. Covering [Atlantic](#), [Cape May](#), [Cumberland](#), and [Salem](#) Counties, SJTPO serves as a technical resource, provides access to funding, and works to provide a regional approach to address transportation planning and engineering issues.

SJTPO coordinates the planning activities of participating agencies and provides a forum for cooperative decision-making among state and local officials, transit operators, and the public. In addition, SJTPO adopts long-range plans to guide transportation investment decisions and maintains the eligibility of its member agencies to receive state and federal transportation funds for planning, capital improvements, and operations.

What is RTP 2050, and Why is it Important to South Jersey?

RTP 2050 serves as the official regional transportation plan (RTP) for the SJTPO region and guides the region’s transportation decision-making for the next 30 years. RTP 2050 identifies the region’s long-term needs and the projects and activities which seek to address them. In some cases, these future needs may lead to more detailed studies, which provide the technical and environmental analyses needed to enter projects into the federal and state funding pipeline. Only transportation projects found in the RTP are eligible for federal funding.

As was the case with its predecessor, *Transportation Matters: A Regional Plan for South Jersey*, the RTP 2050 emphasizes maintenance of the existing transportation system while addressing the future problems and needs of the region. There is more of an emphasis on operations and performance-based planning, supported by performance measures, and the establishment of performance targets. This is in accordance with the requirements of both the current transportation authorization bill, Fixing America’s Surface Transportation (FAST) Act, signed into law by President Obama on December 4, 2015, as well as its predecessor, the Moving Ahead for Progress in the 21st Century Act (MAP-21). In addition, the RTP 2050 continues to provide the basis for coordinated transportation planning around the region and identifies future needs so that more detailed studies may take place.

RTP 2050 guides South Jersey’s transportation decision-making for the next 30 years.



**Learn more about
FAST Act, our federal
legislation [Here>>](#)**

South Jersey Transportation Planning Organization

The RTP 2050 also includes a comprehensive review of current transportation resources in South Jersey. It includes highways, transit, bicycle, pedestrian, and intermodal facilities. For each travel mode, the demand for travel is reviewed, needs are assessed, and opportunities and strategies for improvement are discussed.

Plan Requirements – the FAST Act

The elements that must be included in the long-range transportation plan are specified by federal law. As cited above, the current law that prescribes plan elements is the FAST Act. The FAST Act requires each long-range transportation plan to:

- Cover a minimum 20-year period,
- Be updated at least every four years,
- Be ‘fiscally constrained’ – that is, plan based on *likely* funding levels rather than *unlimited* funding levels,
- Use up-to-date planning assumptions,
- Identify major transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, non-motorized transportation facilities, and intermodal connectors) that should function as an integrated regional system,
- Include a description of the performance measures and performance targets used in assessing the performance of the transportation system, and
- Include a system performance report, including targets supported by SJTPO and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets.

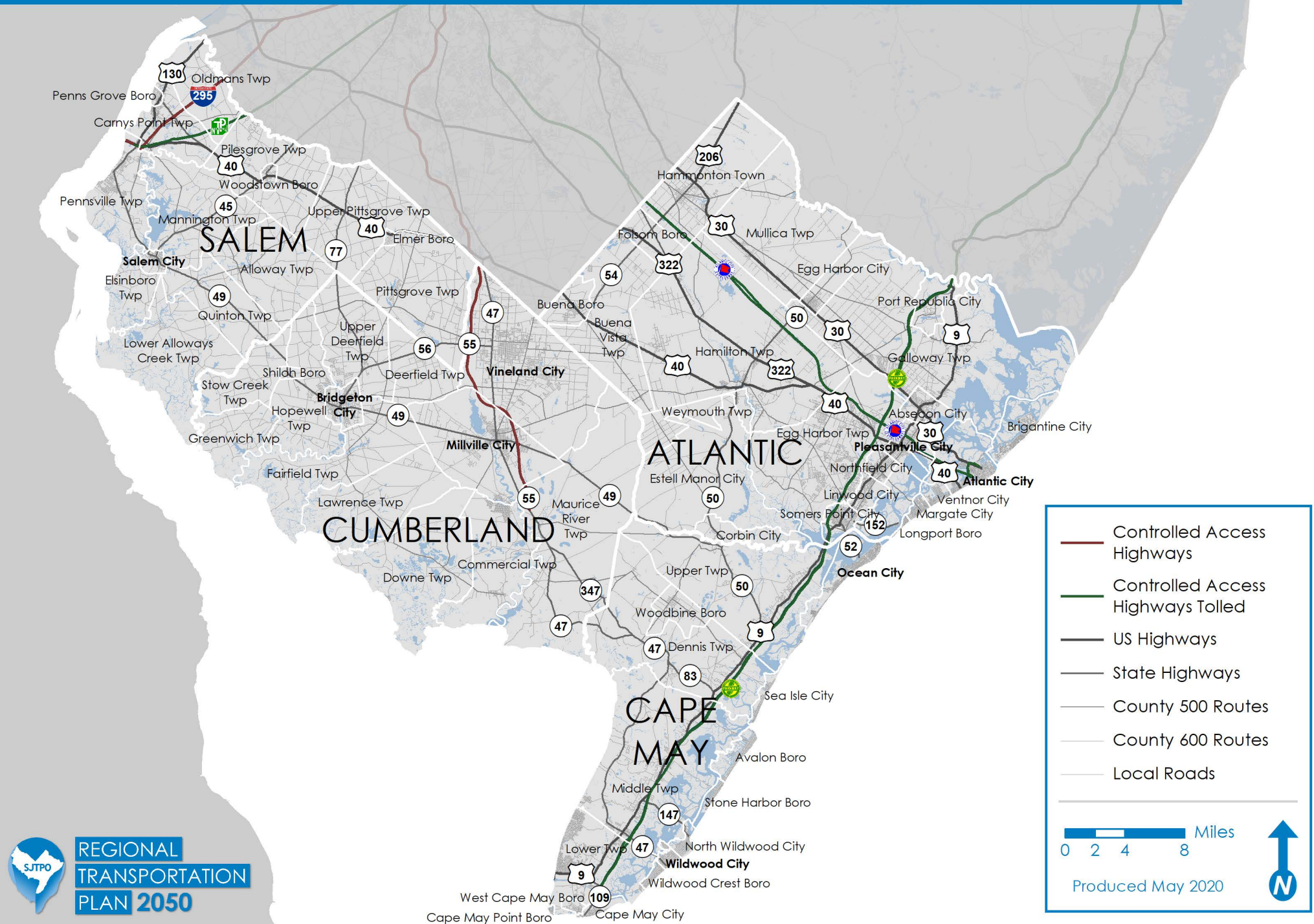
FAST Act authorizes [\\$305 billion](#) for all modes during federal fiscal years (FFY) 2016 to 2020. It expires on September 30, 2020. In providing five years of funding certainty for infrastructure planning and investment, it is the first long-term authorization act in more than a decade. As of now, while there are some long-term reauthorization bills being discussed in Congress, it is anticipated that nothing will get passed until at least after the 2020 election.

About the SJTPO Region

SJTPO is a federally designated MPO. MPOs are agencies responsible for long-range regional transportation planning through a collaborative and cooperative decision-making process. SJTPO covers a region comprised of 68 municipalities in the four counties of Atlantic, Cape May, Cumberland, and Salem ([Figure 1](#)). The region is about 1,778 square miles in total area, accounting for nearly 20 percent of New Jersey’s total area of 8,722 square miles but contains less than seven percent of the state’s year-round population. The much sparser population and employment density of the SJTPO region compared to the rest of the state can belie the fact that New Jersey is the densest state in the United States.

Figure 1

The SJTPO Region





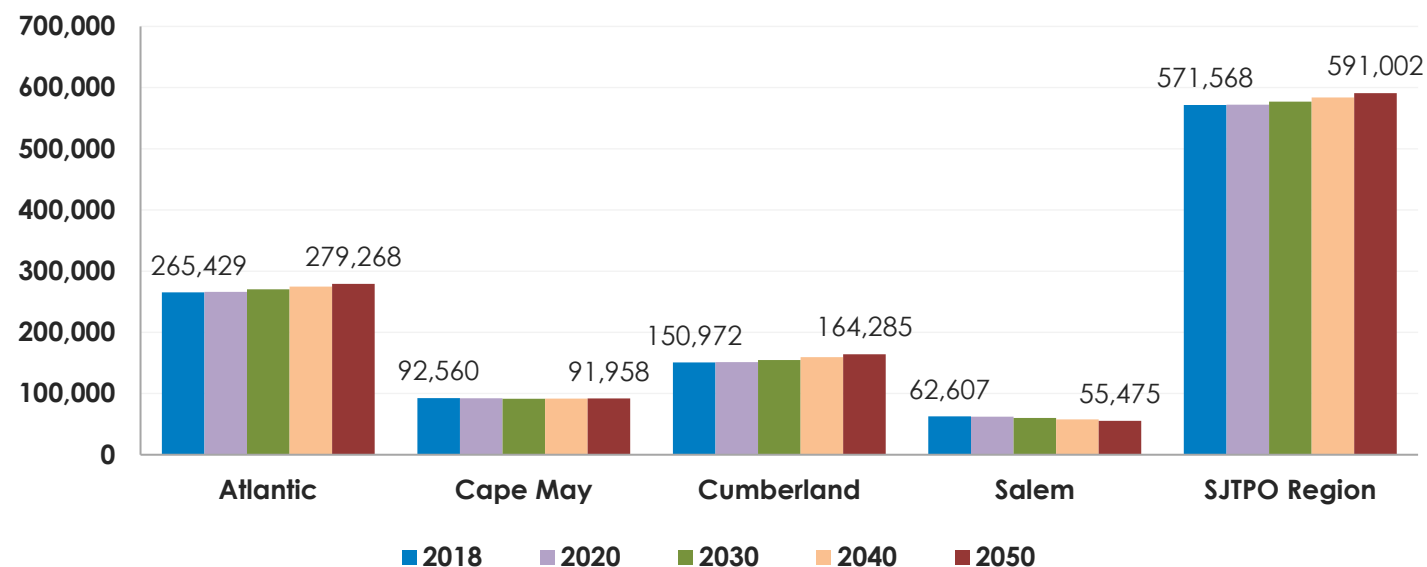
Regional Demographics and Economic Context

Long-range transportation planning requires understanding the demographic and economic characteristics that combine to create the demand for travel. In addition, to be considered are the unique challenges and influencing factors that shape the region. RTP 2050 examines the context for transportation planning and decision-making in South Jersey.

Demographic characteristics of an area influence the demand for travel and understanding the region's population and economy is key to planning for future travel needs. Changes in the population along with shifts in the number, type, and location of jobs can affect the number, length, and distribution of trips that must be made and consequently the need for transportation facilities and services.

The demand for travel in southern New Jersey differs from the rest of the state in several ways. Southern New Jersey is more rural. Its population and jobs are more widely dispersed, with the greatest concentration of employment in one location – Atlantic City – and tourism is an important industry. It is also more economically disadvantaged, relative to the rest of the state. In particular, tourism in the region follows seasonal patterns, resulting in significant increases in the number of residents and visitors during warmer weather. The four counties that comprise the planning area for SJTPO offer a wide range of land uses, and particular care must be taken to protect the natural resources that characterize the region, making it an attractive and desirable tourist destination.

Figure 2 – Projected Population in the SJTPO Region, 2018-2050

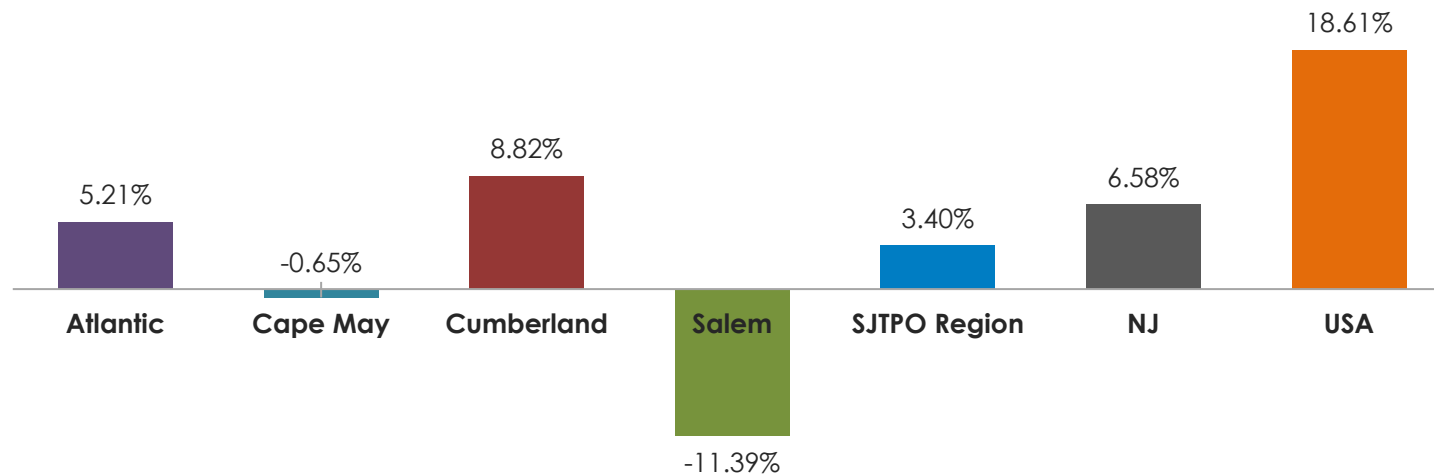


Source: Center for Governmental Research (CGR), RLS Demographics, 2010-2050, SJTPO. September 2019.

Tourism follows seasonal patterns, resulting in significant increases in the number of residents and visitors during warmer weather.

The current year-round population of the SJTPO region is approximately 571,568; 46.4 percent of whom live in Atlantic County. Annual population growth in the region averaged 0.52 percent between 2000 and 2010. Overall population growth in the region averaged 0.06 percent per year between 2000 and 2018 and is projected to increase slightly to approximately 0.11 percent per year between 2018 and 2050. [Figure 2](#), above, depicts the 2018 and 2050 projected year-round population for each of the four counties within the SJTPO region. [Figure 3](#), below, depicts the overall change in for the four-county SJTPO region. In absolute numbers, as shown in [Figure 2](#), this means that more than 19,000 residents will be added to the four counties between 2018 and 2050. Consistent with past growth, Atlantic County is projected to add the most residents in both decades, followed by Cumberland County. Cape May County and Salem County are both expected to lose residents over the next 30 years.

Figure 3 – Population Growth, 2018-2050



Source: US Bureau of the Census National Projections, 2019; NJ DOL. SJTPO Region data, SJTPORTP 2050 Approved Demographic Projections, September 2019.

The nature of tourism in the region means that the population fluctuates widely depending on the time of year and even time of week. Seasonal changes are similarly concentrated in Atlantic and Cape May Counties. Over the next 30 years, the SJTPO region is expected to grow at a significantly slower rate than the country as a whole, and slightly lower than population growth within New Jersey ([Figure 3](#)). While an increase in an older population can be expected to increase jobs in the healthcare sector, overall sectoral change is projected to be minor. That is, the distribution of jobs will remain largely the same as it is today.



Employment

In addition to the Leisure and Hospitality industry, to serve the tourism in the region, the SJTPO region has many jobs in the trade/transportation/utilities industry, as well as the education and health services industry. [Figure 4-Figure 7](#), below, and on the following pages, depict the current makeup of jobs for each of SJTPO's four counties.

Figure 4 – Total Jobs by Sector, Atlantic County

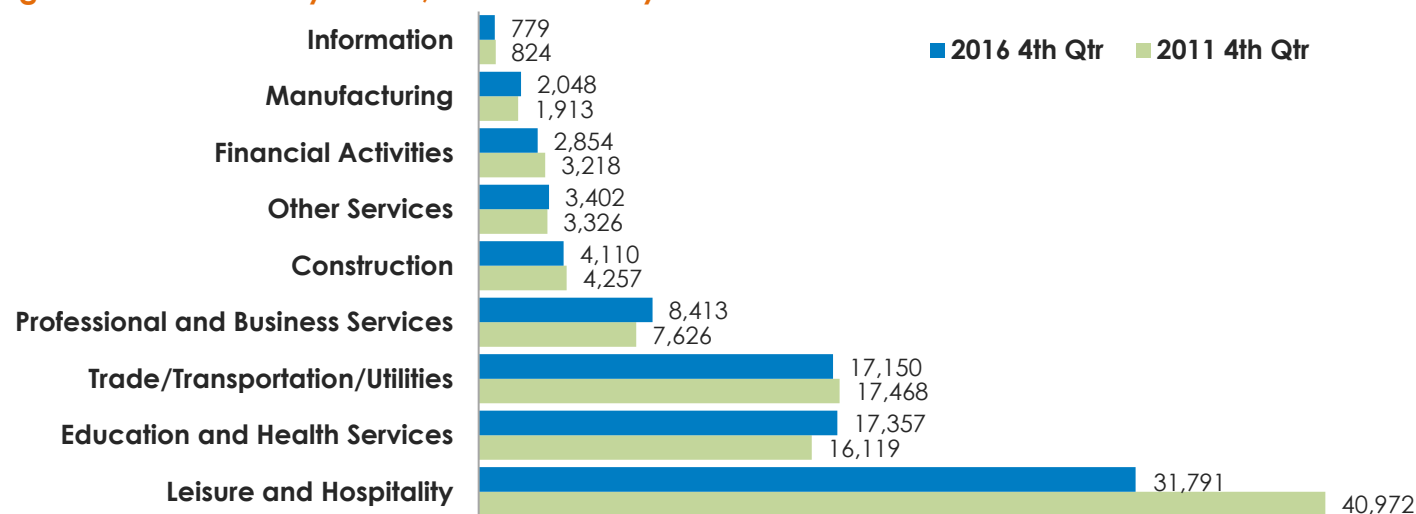


Figure 5 – Total Jobs by Sector, Cape May County

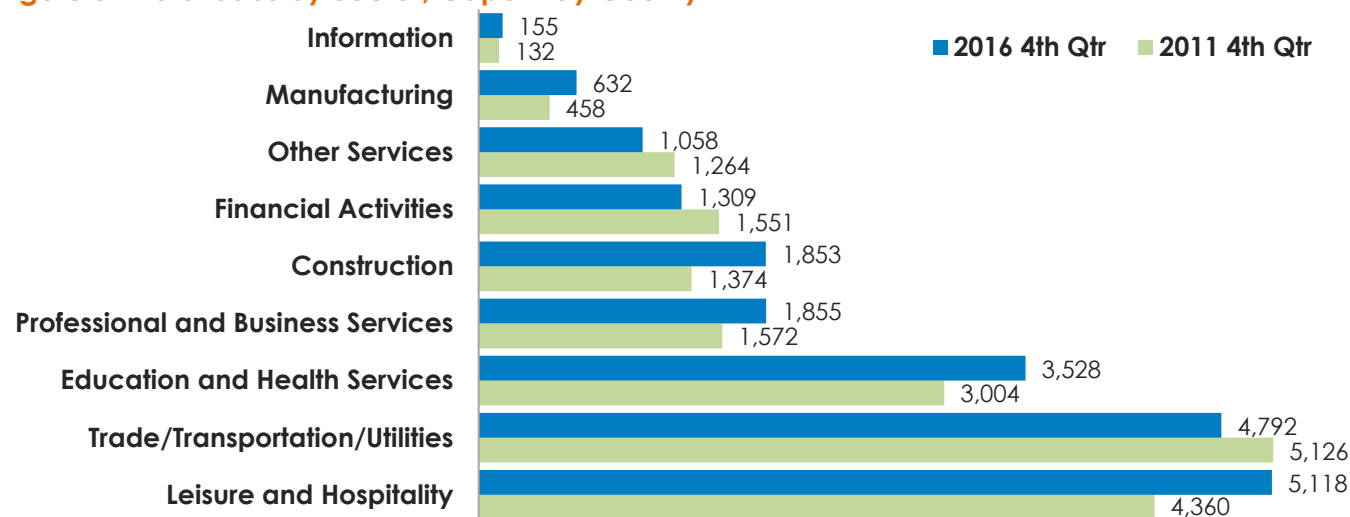
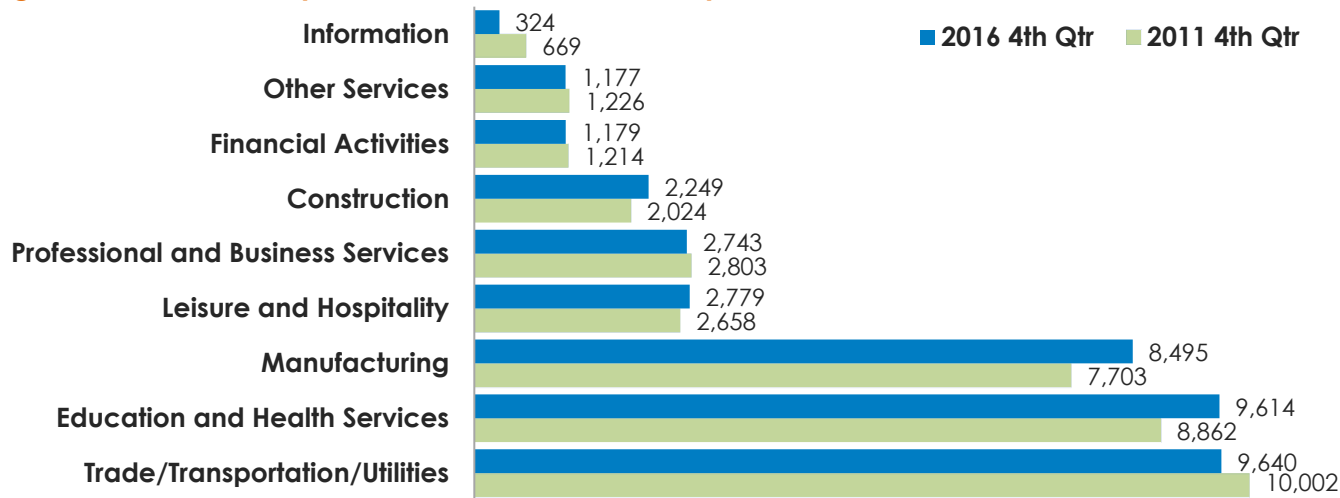
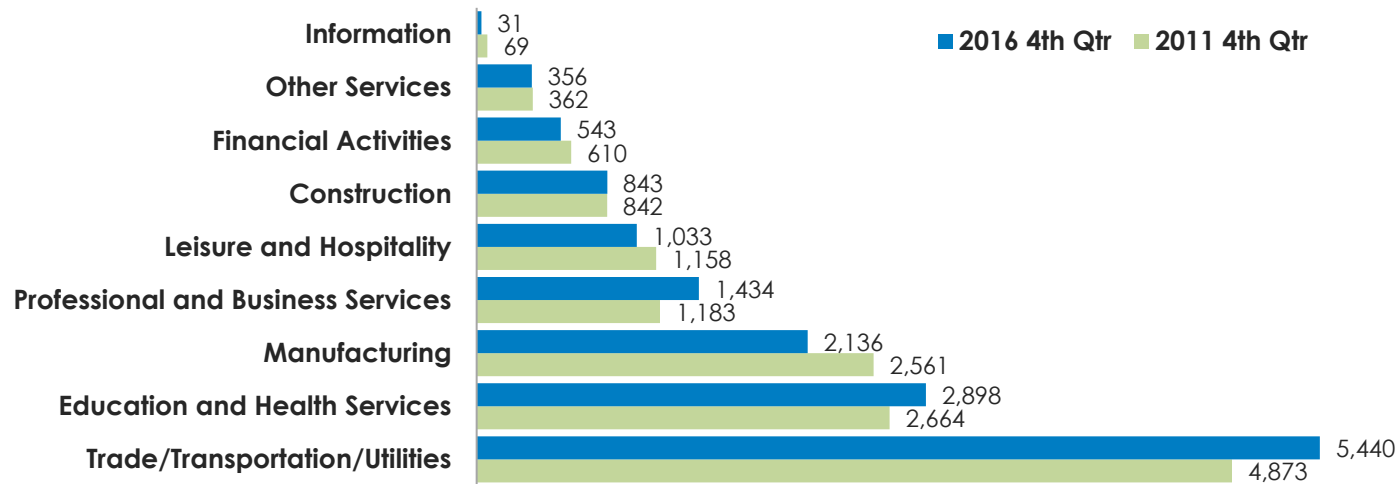


Figure 6 – Total Jobs by Sector, Cumberland County**Figure 7 – Total Jobs by Sector, Salem County**

Source: US Census Bureau. Center for Economic Studies. LEHD.

While Leisure and Hospitality has a presence in each SJTPO county, it is heavily concentrated in Atlantic and Cape May Counties. Wholesale Trade (North American Industry Classification System (NAICS) code 42) and Transportation and Warehousing (NAICS codes 48-49) are two of the more prominent sectors in the region, particularly in Cumberland and Salem Counties.



Trade is represented by NAICS code 42 and is defined as follows:

“The Wholesale Trade sector comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The merchandise described in this sector includes the outputs of agriculture, mining, manufacturing, and certain information industries, such as publishing.”

Transportation and Warehousing is represented by [NAICS codes 48-49](#) and is defined as follows:

“The Transportation and Warehousing sector include industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline.”

Education (NAICS code 61) and Health Services (NAICS code 62) are also prominent in the region. Stockton University is one of New Jersey’s state universities, with a total enrollment of more than 9,600 students. There are also several major hospitals, including Shore Medical Center in Somers Point and Inspira Medical Center in Vineland.

As far as projecting employment, [Table 1](#), below, depicts the industries with the highest projected growth rate in the SJTPO region. Construction is the highest, followed by Professional, Scientific, and Technical Services. [Table 2](#), on the following page, provides the industries with the lowest projected growth rate in the SJTPO region. Even though Atlantic City and the surrounding area has suffered economically in recent years, the beaches and shorefront towns within the SJTPO region remain a heavy tourist draw, and as such, retail, accommodation, and food services will continue to be a major sector.

Table 1 – Industries in SJTPO Region with Highest Projected Growth Rates

NAICS Code	Industry Title	2014 Estimated Employment	2024 Projected Employment	Numeric Change	Annual Growth Rate	Percent Change (10Yr)
230000	Construction	10,300	12,100	1,800	1.75%	17.48%
540000	Professional, Scientific, & Technical Svcs	7,250	8,350	1,100	1.52%	15.17%
621000	Ambulatory Health Care Services	12,100	13,900	1,800	1.49%	14.88%
710000	Arts, Entertainment, and Recreation	4,300	4,900	600	1.40%	13.95%
480000	Transportation and Warehousing	6,100	6,950	850	1.39%	13.93%
102400	Professional and Business Services	17,150	19,350	2,200	1.28%	12.83%
530000	Real Estate and Rental and Leasing	2,750	3,100	350	1.27%	12.73%
623000	Nursing and Residential Care Facilities	7,200	8,100	900	1.25%	12.50%
560000	Admin, Support, Waste Mgmt, Remediation	7,950	8,800	850	1.07%	10.69%

Source: New Jersey Department of Labor.

Table 2 – Industries in Region with Lowest Projected Growth Rates

NAICS Code	Industry Title	2014 Estimated Employment	2024 Projected Employment	Numeric Change	Annual Growth Rate	Percent Change (10Yr)
310000	Manufacturing	13,600	12,550	-1,050	-0.77%	-7.72%
900000	Government	24,750	22,750	-2,000	-0.81%	-8.08%
910000	Total Federal Government Employment	3,850	3,500	-350	-0.91%	-9.09%
999200	State Government, Excluding Education and Hospitals	6,400	5,750	-650	-1.02%	-10.16%
491100	Postal Service	1,000	850	-150	-1.50%	-15.00%
510000	Information	1,600	1,350	-250	-1.56%	-15.63%

Source: New Jersey Department of Labor.

As depicted in [Table 3](#), below, total employment for the SJTPO region is projected to increase by a little more than three percent between 2020 and 2050. [Appendix E](#) includes more details on the methodology used in developing these forecasts.

Table 3 – SJTPO Employment Projections

Employment	2020	2050	Change	Percentage
Atlantic	155,785	163,469	7,684	4.93%
Cape May	62,614	62,324	-290	-0.46%
Cumberland	68,778	74,626	5,848	8.50%
Salem	26,328	23,482	-2,846	-10.81%
Total	313,505	323,901	10,396	3.32%

Source: SJTPO, NJDOL, September 2019.

The region experienced a significant job market recession in 2014, when four casinos closed, resulting in a loss of more than 8,000 jobs. The casino industry continues to be challenged by increased competition for gaming consumers, as evidenced by casinos operating in Pennsylvania, Delaware, and New York, three of the largest market areas from which Atlantic City draws its customers. However, since the last RTP Update in 2016, there has been some rebound in the casino industry. In June 2018, the Revel Casino, one of the four casinos to close in 2014, reopened as the Ocean Casino Resort. Further, the Trump Taj Mahal Hotel, which originally closed in 2016, was purchased by Hard Rock International and reopened as a hotel and casino in June 2018. In August 2019, casino revenue was up 13 percent compared to the same month in 2018, the 15th consecutive month for gaming revenue increases in Atlantic City.¹ Furthermore, in July 2018, online sports betting in Atlantic City became legal, which has helped the casino industry, as well. In addition, there have been increased efforts to make Atlantic City more than just a gambling destination. In 2018, Stockton University opened its Atlantic City

¹ David Danzis. "Atlantic City Revenue Up 13% in August." [Press of Atlantic City](#). September 13, 2019.



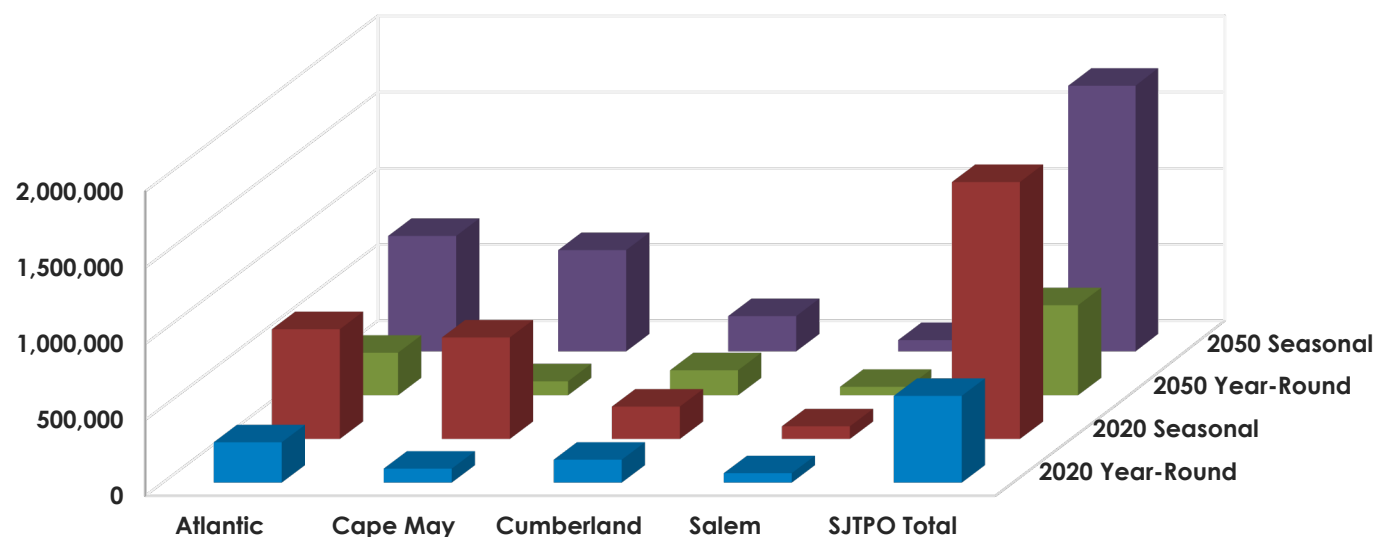
In 2050, the summer population is projected to increase by more than 180% from its year-round population total in Atlantic County & 600% in Cape May County.

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campus in downtown Atlantic City, with more than 500 students. Further, South Jersey Gas, formerly located in Folsom, NJ, moved its headquarters to Atlantic City in 2018, further contributing to the tax base.

As stated, the SJTPO region experiences a significant influx in population and employment, to a lesser extent, during the Summer because of its extensive beachfront area and other recreational attractions. As depicted in [Figure 8](#), below, in 2050, the summer population is projected to increase by more than 180 percent from its year-round population total in Atlantic County and 600 percent in Cape May County. Population can also increase more rapidly depending on whether it is a summer weekday or weekend. These rapid weekly and seasonal population changes can increase the stress on the regional transportation network and create regionally specific patterns of congestion.

Figure 8 – SJTPO Year-Round vs. Seasonal Population*



Source: RLS Demographics. CGR. 2016. NJDOL. SJTPO. 2019. *Seasonal Population represents the summer weekend population, visitors, households, plus employment.

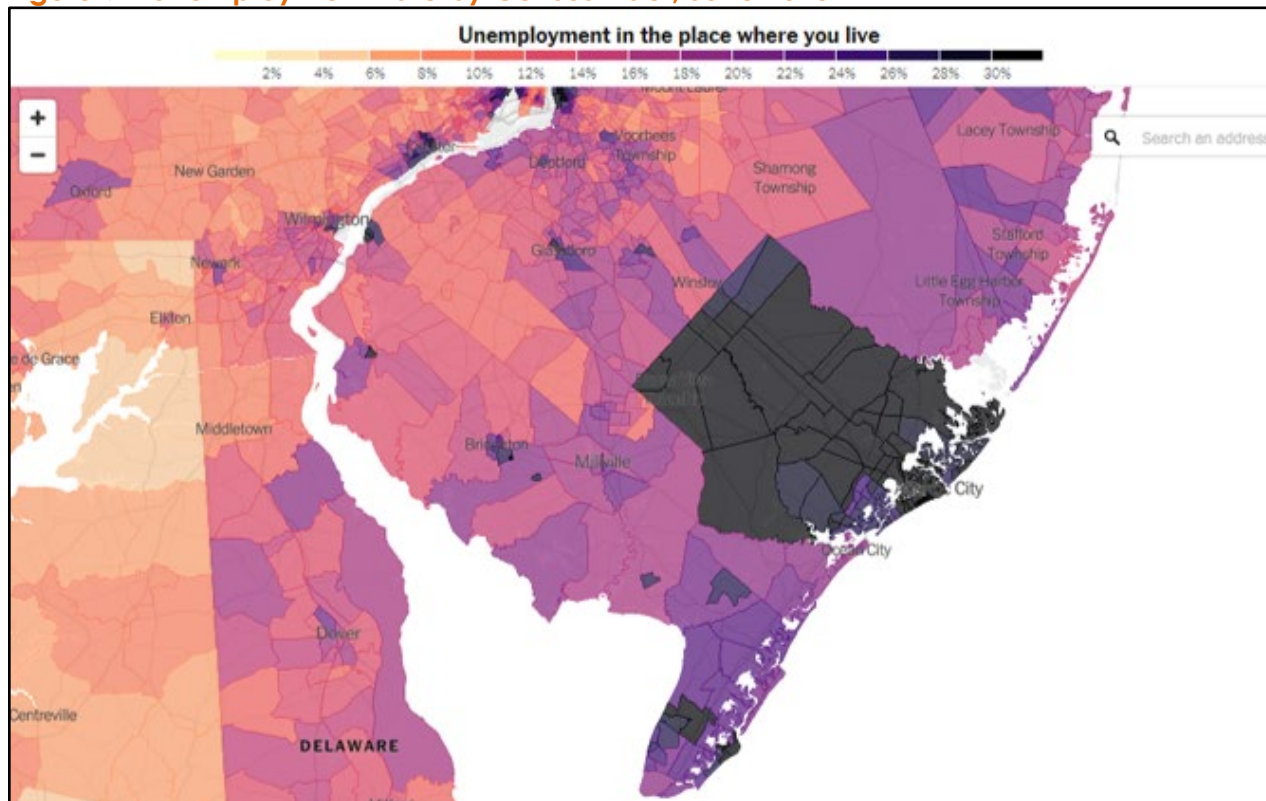
In 2014, SJTPO completed a [regional household travel survey](#). Data on travel behavior was collected from over 1,850 households. The survey covered travel during a typical weekday during the three-month period from February through May 2014. An examination of the primary trip purpose showed that, other than trips that originated from or to home, (the trip purpose of “home activities” was reported 33 percent of the time), the majority of trips were work or shopping related. Work trips accounted for 12 percent and everyday shopping accounted for 11 percent of all trips, while other activities like household and personal errands (7 percent), eating out (5 percent), and drop-off or pick-up of a passenger (32 percent) accounted for all remaining trips. Private auto travel, as the driver or a passenger, was the largest mode choice for all trips (87 percent) and for the mode to work trips (94 percent). To get a better sense of recreational travel, the survey also included

a series of questions pertaining to Jersey Shore visits. More than 33 percent of the households sampled lived at the Jersey Shore year-round, but 81 percent of the households reported visiting the Jersey Shore at least once during the May to September period. Though recreational trips may not constitute the most trips, especially in the February to May time period when this survey was administered, the Jersey Shore is a major generator of recreational trips, especially in the summer months.

COVID-19 Impact

In addition to its severe health effects that have resulted in the death of over 326,000 Americans, the COVID-19 pandemic has had a deleterious impact on the world economy, closing millions of small businesses and leading to tremendous job loss. Its impact has been particularly acute within the SJTPO region, especially Atlantic County, with its high concentration of leisure and hospitality jobs. As seen in [Figure 9](#), below, almost all of Atlantic County is experiencing unemployment rates of 30 percent or more.

Figure 9 – Unemployment Rate by Census Tract, June 2020



Source: Quoc Trung Bui and Emily Badger. "In These Neighborhoods, the Jobless Rate May Top 30 Percent." The New York Times. August 5, 2020.



SJTPO has identified five issues to work with federal, state, and local partners in the coming years to develop a workable solution.

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The COVID-19 pandemic has also led to workers leaving dense urban areas, such as New York City and Philadelphia, to Jersey Shore communities, including those in the SJTPO region. This exodus has been hastened with the increasing practice of companies shifting to a remote work business model. This has led to an increase in housing prices in some Jersey Shore communities. How far into the future this migration and accompanying economic impacts will continue are unknown at this time, but at the time of RTP 2050's release, the COVID-19 pandemic's full repercussions have yet to fully play out.

II. FIVE CRITICAL TRANSPORTATION ISSUES IN SOUTH JERSEY

As the MPO for Atlantic, Cape May, Cumberland, and Salem Counties, a central role of SJTPO is to provide assistance to member jurisdictions that enables them to advance improvements to the transportation network. A key element of this is to help jurisdictions navigate challenges that can make it more difficult to advance projects. To that end, in recent months and years, through these interactions, SJTPO has identified a number of issues that SJTPO will work with federal, state, and local partners in the coming years to develop workable solutions.

1. **Funding Imbalance**: The amount of transportation funding to jurisdictions in the SJTPO region is not in proportion to its population, seasonally adjusted population, vehicle miles travelled, roadway mileage, or persons in poverty.
2. **Major Projects**: Despite vast state revenue generated by Jersey Shore areas in Atlantic and Cape May Counties, localities face a heavy lift moving major shore-oriented infrastructure investments forward and are often left to bear the full costs of these improvements.
3. **Inequitable Access**: Relative to the rest of the state, vulnerable communities in the SJTPO region generally have limited access to mobility for their daily needs and face heavy burdens to improve mobility.
4. **Regulatory Burden**: Environmental regulations, especially in the Pinelands, are disproportionate to the impacts of projects and often make low-impact safety and quality of life projects difficult to advance.
5. **Infrastructure at Risk**: Sea level rise, increased storm severity, and increases in precipitation – all the result of climate change – put aging, already taxed infrastructure in the SJTPO region at great risk.

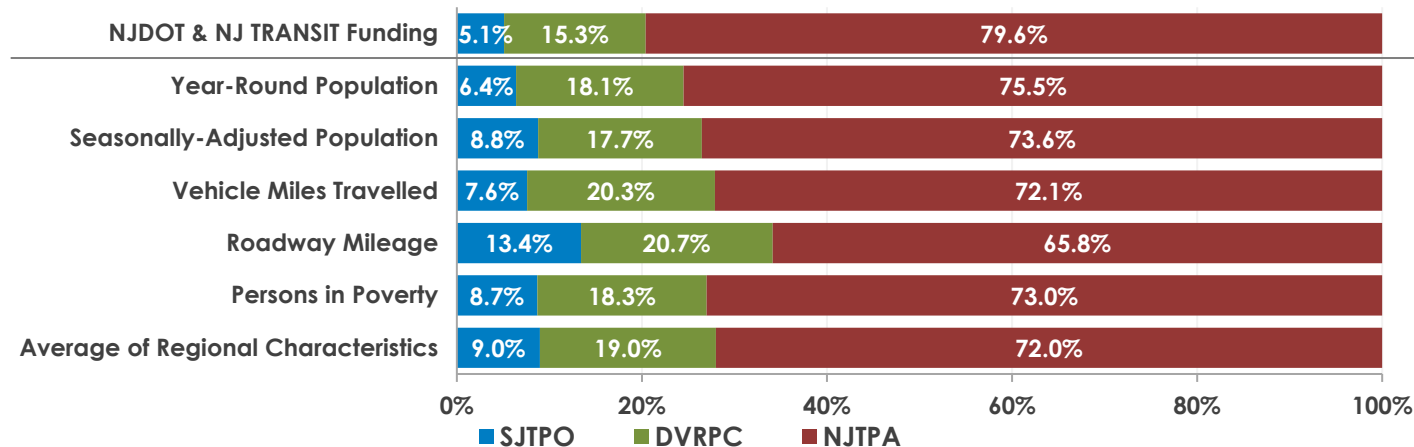
1. Funding Imbalance

The amount of transportation funding to jurisdictions in the SJTPO region is not in proportion to its population, seasonally adjusted population, vehicle miles travelled, roadway mileage, or persons in poverty.

No jurisdiction in New Jersey, or across the country, is unique in experiencing great transportation needs or a shortcoming of funds to address them. While there are a number of factors that could be reasonably applied to determine funding, the factors need to be transparent and reevaluated on a regular cycle.

In preparing the [financial section](#) of this plan, SJTPO observed what had been communicated by jurisdictions throughout the region, that it could not be reasonably stated that communities in the SJTPO region were receiving a share of transportation funds in proportion with the demands placed on their infrastructure, when looking at a variety of reasonable metrics. When SJTPO looked at five relevant metrics – population, population adjusted for the influx of seasonal visitors and residents, vehicle miles travelled, miles (centerline) of roadway, and the percentage of population in poverty – the SJTPO region continues to fall behind in transportation funding. The financial planning allocation of funds does not adequately assess the impact of the seasonal population on the needs of the infrastructure. Traffic volumes in the Atlantic and Cape May Counties increase by 35 to 60 percent on a summer weekday, and up to 100 percent on a summer weekend. Considering only the year-round population does not account for 1/3 of traffic along our region’s critical infrastructure, the needs of the region are drastically underestimated. It is important to note that this seasonal influx is not exclusive to the SJTPO region. Both Ocean and Monmouth Counties, within the NJTPA region, experience seasonal fluctuations in traffic during the summer months, which their infrastructure must also accommodate.

Figure 10 – Funding vs. Regional Characteristics



Sources: 1. Federal Fiscal Years 2004-2019; 2. 2019. US Census Bureau, 2018 Estimates.; 3. 2018. Seasonally Adjusted SJTPO Population Only. SJTPO RTP 2040 Seasonal Projections; 4. 2018. NJDOT Bureau of Transportation Data Development, Roadway Systems Section; 5. 2018. Centerline miles. NJDOT Bureau of Transportation Data Development, Roadway Systems Section; 6. US Census Bureau, 2018 Estimates.



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In [Figure 10](#), above, you can see that for all transportation dollars distributed to the three MPO regions in New Jersey between fiscal years 2004 and 2019, SJTPO received just 5.1 percent of these funds. By contrast, in 2019 the SJTPO region made up 6.4 percent of the state's population. It is of note that between 2004 and 2019, the SJTPO region was an annual average of 6.7 percent of the state's population. Upon looking at other factors, the discrepancies only grow more pronounced. When looking at population adjusted for seasonal residents and visitors, the SJTPO region was 8.8 percent of the state's population. When looking at miles travelled by vehicles in New Jersey, 7.6 percent were travelled in the SJTPO region and 13.4 percent of roadway miles in the state are in the SJTPO region. Finally, among all persons living in poverty in New Jersey, 8.7 percent live in the SJTPO region. Each of these traits add up to show that the need in the SJTPO region exceeds its share of demand; however, funding does not keep pace.

Federal funding formulas may be one critical barrier to fiscal equity in transportation for the SJTPO region. Based upon current and past Federal surface transportation legislation, the Federal Highway Administration (FHWA) sub-allocates Surface Transportation Block Grant program (STBG) funding to three different areas:

- **Urbanized areas of the state with a population over 200,000.** These funds are distributed among the individual areas based on their relative share of the population. These funds may be obligated in the metropolitan area established under 23 U.S.C 134 that encompasses the urbanized area. (23 U.S.C 133(d)(2)). In the SJTPO region, only the Atlantic City Urbanized Area contains over 200,000 year-round residents, and the only area in which those urbanized funds can be used.
- **Areas of the state with a population of 5,001 to 200,000.** Prior to obligating funds attributed to an area of this type, the state must consult with the regional transportation planning organizations that represent the area, if there are any. (23 U.S.C. 133(d)(3)).
- **Areas of the state with a population of 5,000 or less.** A state may obligate up to 15 percent of the STBG amounts sub-allocated for that year for use in areas with a population of 5,000 or less on roads functionally classified as minor collectors. For areas of 5,000 or less, the construction of a new bridge or tunnel at a new location on a rural minor collector is eligible for STBG funding, subject to the overall 15 percent limit. (23 U.S.C. 133(g)).

Note that the state and the relevant MPOs may jointly apply to the FHWA division office for permission to base distribution on other factors. Similarly, the Federal Transit Administration (FTA) apportions funds based on urbanized areas above or below 200,000 population. These formulas play an important role in determining funding levels.

On the surface transportation side, there are additional funds for statewide use in urbanized areas with between 5,000 and 200,000 people, and a separate funding pool, which may be made available in areas below the 5,000-person threshold. NJDOT has historically made these additional funds available to SJTPO member agencies, situated outside of the Atlantic City Urbanized Area, that would not otherwise have a specific sub-allocation of federal funds. All of these funding distributions account only for year-round population.

It is important to recognize that just as county or municipal boundaries do not factor into a person's overall mobility needs, neither does the jurisdiction of one agency versus another. Being a semi-rural area, transit is a huge challenge. Ridership on the Atlantic City Rail Line and many bus routes do not have the same ridership numbers as other regions of the state and require greater subsidies. It can be difficult to justify additional transit funding when the needs are so great throughout New Jersey. With that said, between 2004 and 2019, only 2.7 percent of NJ TRANSIT funds were invested in the SJTPO region, representing \$36.63 million each year compared to the \$1.34 billion across the state. In the end, the determination must be made if every user's needs are being adequately addressed when considering the totality of resources. If fewer users are able to make trips via transit, those trips must still happen, and thus they must largely happen on the roads using private automobiles or by other means. It is common to point to higher density, ridership, and farebox recovery² as a justification for not providing additional transit service. However, consideration of other metrics should be considered as users still need to make trips. This issue is exacerbated by the fact that the SJTPO region has a higher rate of poverty than other portions of the state, showing just how significant the need is. This also shows that communities in poverty in the SJTPO region are left in a very difficult position regarding mobility, as low-income communities have fewer resources available to fund separate public transportation, and low-income users are less able to afford private automobile travel.

HOW CAN SJTPO HELP?

SJTPO will work with federal, state, and local partners to initiate further conversations about the formulas that determine the distribution of funds and work to ensure the metrics used achieve a better balance in investment that reflect the needs of all planning partners. This may involve SJTPO working with partner organizations, such as the Association of Metropolitan Planning Organizations (AMPO) and others to promote conversations regarding federal funding formulas and to ensure funds are being distributed equitably to urban and rural areas alike. SJTPO will need to work to advance a more holistic dialogue that better integrates the discussions regarding roadway and transit funding to ensure that the totality of public mobility needs is considered. Finally, SJTPO will work to educate local elected officials, beginning with SJTPO Policy Board members about these discrepancies to ensure that decision makers throughout the process are aware of the issue.

² The farebox recovery ratio (also called fare recovery ratio, fare recovery rate or other terms) of a passenger transportation system is the fraction of operating expenses which are met by the fares paid by passengers. It is computed by dividing the system's total fare revenue by its total operating expenses. From: https://en.wikipedia.org/wiki/Farebox_recovery_ratio.



2. Major Projects

Despite vast state revenue generated by Jersey Shore areas in Atlantic and Cape May Counties, localities face a heavy lift moving major shore-oriented infrastructure investments forward and are often left to bear the full costs of these improvements.

The Jersey Shore communities are major economic engines, not only locally, but also for the State of New Jersey as a whole. As of 2018, tourism was the seventh-largest employer in the state, employing more than 330,000 people. Total visitor spending in 2018 amounted to \$44.7 billion, generating more than \$5 billion in state and local tax revenue.³ In 2018, Atlantic and Cape May Counties had the highest and second-highest number of tourism trips in the state, at 20.6 million, and 9.82 million, respectively. State and local government tax revenues associated with the tourism industry reduce the tax burden of each household in the state by \$1,545 per year.⁴

The economic impact of the Jersey Shore is positive and cannot be understated. This seasonal tourism results in a notable impact to local employment and brings investment into the area, generating local property tax revenue. However, this economic activity does come at a cost. Among other costs, the infrastructure needed to provide access to these millions of users poses a large burden on local governments. Local demand results in a dense land use pattern and transportation grid and local networks must be robust enough to handle seasonal traffic volumes. This means complex traffic signalization to handle intersection volumes, facilities with the capacity to accommodate vehicular, bicycle, pedestrian, and transit activity, in addition to parking, as well as bridges and other routes, which safely get people on and off the islands, both during seasonal travel as well as during evacuation. Many locally owned signals in Jersey Shore communities are old, as signals are costly to replace. Older signals often do not allow for coordination to optimize flow and manage speed, many do not accommodate bicyclists or pedestrians, or meet current design specifications. Replacing signals on an entire corridor can cost a community \$10 million or more – well beyond their means. In addition, bicycle and pedestrian volumes in Jersey Shore communities are very high, and often well in excess of the capacity of limited infrastructure. Many Jersey Shore communities are evaluating options, such as bike boardwalks or seawall trails, which provide a separated bicycle facility parallel to existing boardwalks or roadways along coastlines. These facilities serve critical needs given local demands but are ecologically complex, require years to plan, and cost millions to implement.

In addition, due to many of the Jersey Shore communities being uniquely situated relative to bodies of water and wetlands, the magnitude, cost, and complexity of bridge projects may greatly exceed the costs of typical bridge projects in other regions. In particular, the bridges that provide access between the mainland and the barrier island communities are an enormous expense. Not only do these bridges carry heavy traffic volumes and perform an essential evacuation need, but

3 Tourism Economics. “Economic Impact of Tourism in New Jersey, 2018.” March 2019. 3. At: www.visitnj.org/sites/default/files/2018-nj-economic-impact.pdf.

4 Ibid.39.

Many Jersey Shore communities are situated relative to water bodies and wetlands, which may cause the magnitude, cost, and complication of infrastructure projects to greatly exceed the costs of similar type projects in other regions.

they must also cross very wide waterways and do so in incredibly ecologically sensitive environments. All of this requires a great deal of expense to accomplish. For example, Cape May County has begun a process to rebuild the Ocean Drive bridges in Lower Township, which connects Cape May City with Wildwood Crest. Current construction estimates put that project at roughly \$215 million. Similarly, in 2013, NJDOT completed work to rebuild the Route 52 Bridge between Somers Point and Ocean City, a project costing roughly \$400 million. While bridge needs are oversubscribed throughout the state, [Figure 11](#), below, provides an overview of the number of bridges approaching the Jersey Shore areas of Atlantic and Cape May Counties, many of which fall under local jurisdiction. While not every Jersey Shore bridge cost will exceed \$200 million, many bridges approaching the Jersey Shore will be major projects and the cost will be tremendous, well beyond the cost and scope of more traditional inland bridge replacement projects.

Figure 11 – Bridges to Access Cape May and Atlantic County Shore Points



Currently, the only notable resource available to assist local governments with these kinds of major projects is the Infrastructure Bank or I-Bank. The I-Bank is an independent state financing authority that makes loans available for major projects like these at a reduced interest rate. It is important to note that aside from the reduced interest rate, there is no direct financial assistance associated with the I-Bank. The funding available is very minimal compared to the needs associated with the major projects described above. The result is that local governments are fully responsible for the costs of any project financed this way, even if the project has a statewide benefit.

The cost of projects like these are often difficult to put into perspective. A project on the scale of Ocean Drive, for example, at \$215 million, would place a direct financial burden of \$1,522 per household in Atlantic County or \$1,822 per household in Cape May County⁵. Costs like these are not appropriate to place solely on local governments when they have statewide benefits.

⁵ Cost per household figures were derived by identifying the median home price in each county, based on 2018 data from the National Association of Realtors and comparing those figures to the total of countywide ratables, as reported by each county. Figures do not account for additional costs associated with interest or inflation.



HOW CAN SJTPO HELP?

SJTPO will work with federal, state, and local partners to advance conversations about this issue, and identify the funding opportunities that are available. SJTPO will work to educate local elected officials, beginning with SJTPO Policy Board members, to ensure that decision makers are aware of the issue. SJTPO does not craft nor does it lobby for legislation, but SJTPO will work to better understand the value of revenues generated at the Jersey Shore and share that information with local elected officials, who may want to discuss possible ways to dedicate a portion of this revenue for critical infrastructure projects that make that revenue possible.

3. Inequitable Access

Relative to the rest of the state, vulnerable communities in the SJTPO region generally have limited access to mobility for their daily needs and face heavy burdens to improve mobility.

It is important to note that there are pockets of highly concentrated disadvantage in communities throughout New Jersey. It is equally important to note that the SJTPO region, made up of Atlantic, Cape May, Cumberland, and Salem Counties, is a disadvantaged region relative to the state as a whole, with great barriers related to mobility. Overall incomes are lower, even relative to cost of living, access is lower, traffic fatalities are higher, poverty is higher, educational attainment is lower, social issues associated with poverty are more pronounced, health outcomes are worse, and ultimately lifespan is lower. More information on these and other equity issues in the SJTPO region are discussed in [Chapter III](#). This combined with the funding imbalances, as described in [Critical Issue #1](#), exacerbates challenges already present in the region.

Transportation can put equitable opportunities within reach of people in need. One way to improve access is to increase the amount of public transit service within the region. Over the years, SJTPO has heard consistent themes from the public expressing concerns about access to transit, frequency of services, lack of transit facilities, and a general feeling that transit is not as available as in other parts of the state. In reviewing historical transit expenditures in the region, SJTPO observed a notable discrepancy between transit funding in the SJTPO region (2.7 percent) and population (6.4 percent) or persons in poverty (8.7 percent). From FFY 2004 to 2019, the SJTPO region has received an unadjusted average of \$36.63 million each year compared to the \$1.34 billion received annually across the state.

Figure 12 – NJ TRANSIT Funding (FFY 2004-2019)

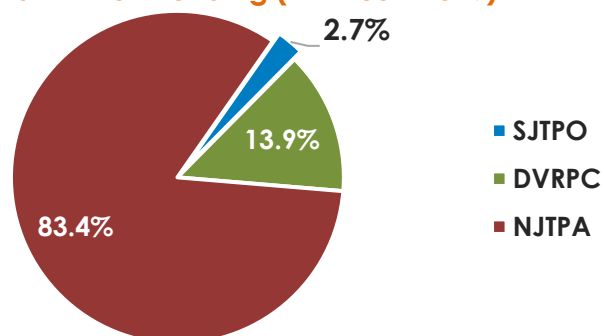
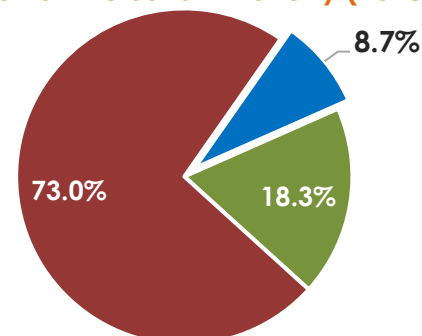


Figure 13 – Persons in Poverty (2018)



Source: US Census Bureau, 2018 Estimates

This discrepancy is explained by three factors, the greater population densities, which lead to greater ridership and subsequently more revenue for routes in North Jersey, federal transportation funding formulas, which are biased towards large urban areas, and the propensity for transit agencies to focus on reducing roadway congestion by competing to attract choice riders that commute to major urban centers, such as New York and Philadelphia. This means making transit appealing for high wage workers through higher speed service, such as rail, with fares lower than the cost of driving and parking. While the reduction in congestion and emissions is a commendable goal, it often comes at the expense of low-income riders, who by and large utilize bus transit for their daily needs.⁶ Figure 14 and Figure 15, below, show that nationwide rail transit users are wealthier and whiter and bus transit users are poorer and more often minority users.

Figure 14 – Ethnicity by Transit Mode

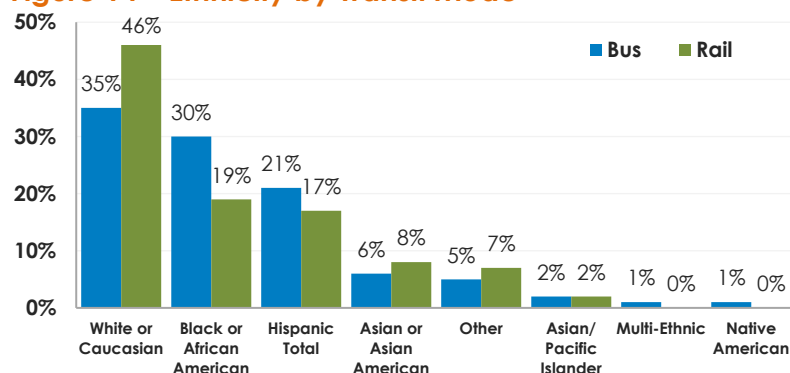
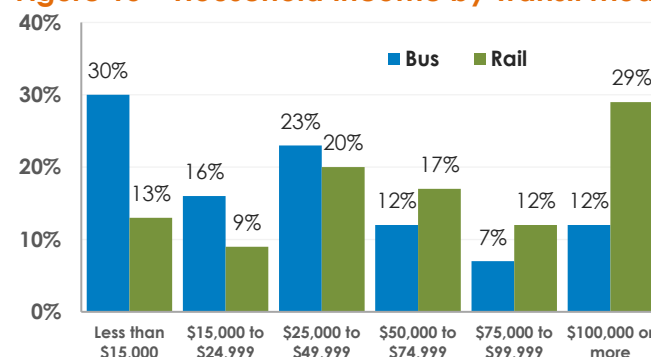


Figure 15 – Household Income by Transit Mode



Source: “Who Rides Public Transportation,” Hugh M. Clark, CJI Research Corp., American Public Transportation Association, 2017.

⁶ Brian D. Taylor and Eric A. Morris, “Public transportation objectives and rider demographics: are transit’s priorities poor public policy?” Springer, Science+Business Media, New York, 2014.



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It is of note that except for the Atlantic City Rail Line, which has four stations in the SJTPO region, all transit services in the region are conducted via bus. Most of the fixed route transit service in the region provides regional connectivity to and from Philadelphia and Atlantic City, with limited local connectivity. There are supplemental services, such as local community mobility programs that fund community-based transportation services for seniors, people with disabilities, low-income residents, and the general public. These services, also known as human services, as well as the providers of human services transportation, are described in more detail in [Chapter III](#). In addition, SJTPO's [2015 Coordinated Human Services Transportation Plan](#) describes the existing human services transportation system, identifies outstanding needs of the region and makes recommendations to meet those needs. Despite these human services transportation providers within the region, there is still a great need due to the above-average poverty in the region. Additional transit services to accommodate low-income residents in the SJTPO region are needed, as they have greater mobility barriers to transit services relative to residents in more densely populated metropolitan regions. It is important to acknowledge that the FTA regularly conducts reviews of NJ TRANSIT and has affirmed their compliance with Title VI of the Civil Rights Act of 1964.

Beyond the issue of transit service, there are a host of standard procedures and practices that, while well-intended in their purpose, hinder the ability of low-income communities to provide the same level of access and connectivity to their residents. Some examples of this include federal responsible charge requirements, which mandate that local governments must provide a “full-time public employee” to be in “charge” of the project. Broadly speaking, this requirement is important, as it is meant to ensure that when a jurisdiction receives federal funds, someone is responsible to see the project through to implementation. However, many jurisdictions are either too small or otherwise have too few resources to sustain the needed full-time professionals, often relying on part-time staff shared with neighboring jurisdictions, administrative public employees, or private consultants. By not allowing these staff who serve the community in an official capacity to represent the community, it puts these communities at a disadvantage. In addition, federal funds are notoriously difficult to administer, with many complex and often confusing requirements that again exceed the capacity of some resource-poor jurisdictions. Another issue relates to the policies of state and county governments that leave the responsibility of sidewalk maintenance and/or construction along their roadway corridors to local municipalities and property owners, which becomes problematic when a local community cannot bear the costs of these facilities and are often the communities with the greatest demand for them. Similarly, while the construction of bus shelters is funded by the state, the municipality must agree to bear full cost of maintenance. Not only does this put low-income communities at a disadvantage, but it puts bus infrastructure in lower standing relative to rail infrastructure, which does not require maintenance by local governments.

Some of these policies are examples of areas where barriers can simply be removed that provide more equitable conditions without taking anything from other users. These policies are what is known as a systemic barrier to equity, removing these kinds of barriers is a genuine “win-win.” For some, discussions need to begin or continue to find solutions to enable all communities to be on equal footing to benefit from state and federal programs.

Figure 16 – Equality


Everyone is being treated equally – it is assumed that everyone will benefit from the same supports.

vs.

Equity


Everyone is being treated equitably – individuals are given different support to make it possible for them to have equal access to the game.

vs.

Justice⁷


The systemic barrier has been removed – all three can see the game without any support or accommodation because the cause of the inequity was addressed.

HOW CAN SJTPO HELP?

SJTPO will work with federal, state, and local partners to advance conversations about these issues and to identify opportunities to remove these systemic barriers to mobility. This may include working with NJ TRANSIT, other transit providers and Cross County Connection to identify specific transit issues, requests, or improvements brought by the public for further investigation. SJTPO will also consult with NJ TRANSIT and other relevant transit agencies on bus shelter construction and maintenance and local government funding requirements for the bus stops. SJTPO will engage in conversations with impacted partners to incorporate additional factors surrounding equity into service decisions. SJTPO will also need to work with partner organizations, such as the Association of Metropolitan Planning Organizations (AMPO) and others to promote conversations regarding federal funding formulas to ensure that rural and small urban areas get their fair share. SJTPO will work to educate local elected officials, beginning with SJTPO Policy Board members, to ensure that decision makers are aware of the issues. SJTPO will also engage the New Jersey Office of Planning Advocacy on these issues. SJTPO does not craft nor does it lobby for legislation, but SJTPO will work to better bring the impact of these policies and practices to light and will work with implementing agencies to identify ways to assist communities in need to obtain equitable levels of access.

⁷ Advancing Equity and Inclusion, A Guide for Municipalities. June 2015. City for All Women Initiative (CAWI), Ottawa, Canada. www.cawi-ivtf.org/sites/default/files/publications/advancing-equity-inclusion-web_0.pdf.

4. Regulatory Burden

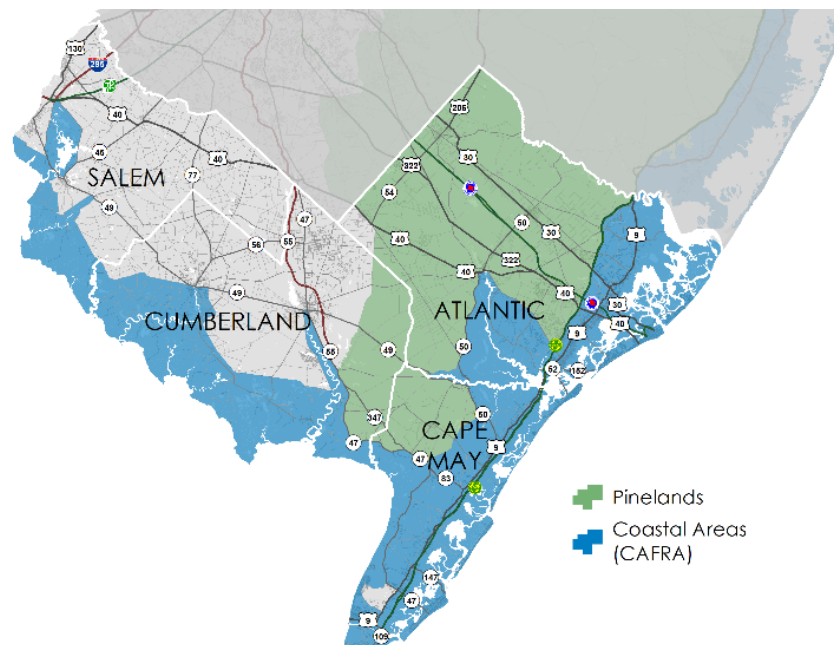
Environmental regulations, especially in the Pinelands, are disproportionate to the impacts of projects and often make low-impact safety and quality of life projects difficult to advance.

The SJTPO region largely falls under one of two very important environmental regulatory areas, the Pinelands and Coastal Area Facilities Review Act (CAFRA) of 1973. The Pinelands Area is a million-acre mosaic of forests, farms, and towns that lies above trillions of gallons of water. As seen in the map, at right, over 2/3 of Atlantic County falls within the Pinelands Area. The CAFRA is administered by the New Jersey Department of Environmental Protection (NJDEP) and covers waterfront development, freshwater wetlands, coastal wetlands, flood hazard areas, and tidelands that extend from Middlesex County down to the coastal areas of Salem County.

These environmental regulations serve to protect critical water sources and sensitive habitats where threatened and endangered species reside and bring visitors to the region, resulting in local as well as statewide benefits. While the benefits of the Pinelands are shared across the state, the costs and burdens associated with the Pinelands fall squarely on the shoulders of the municipalities and counties in this regulatory area, including those outside of the SJTPO region. SJTPO subregional partners have indicated several obstacles in completing essential transportation projects in the Pinelands area. Public entities must have projects approved by the 15-member Commission while developers are able to work with staff. However, private development must still adhere to Pinelands regulations, which are largely enforced through municipal planning boards. While these regulations aim to protect water supply and habitat, they also have severe impacts on municipal tax rates and economic development.

The Pinelands Commission has a pre-application conference provision provided by the Pinelands Comprehensive Management Plan (CMP), but these conferences are not granted without a complete set of plans, making early coordination difficult. The Commission has a series of exemptions for projects like repaving existing roads and surfaces through Memorandum of Agreements (MOAs) with the counties and municipalities. However, if a repaving project includes even

Figure 17 – Pinelands and CAFRA Areas in the SJTPO Region



minor expansion of the roadway then a full application is required for review. There is limited ability to compromise within the CMP, with roadways in the Pinelands jurisdiction often left in various stages of disrepair, in some instances not meeting current engineering standards, because to bring the road up to standard would require an expansion of the roadway. In addition to possible design changes as described above, this additional time required to move a project through the Commission causes hesitation among jurisdictions to use federal funds on roadway projects that may trigger Commission involvement, as the funds have a finite time frame, and no project sponsor wants to put their funding in jeopardy. The result can be an increase in unsafe and substandard road conditions in Pinelands communities.

In contrast to the Pinelands, the NJDEP has a very robust website for CAFRA. Some of the highlights worth discussing include the Pre-Application Conference and the multiple Permitting Options available. Often is the case that enhanced communication and increased transparency can ensure that applications can move smoothly and avoid delays that necessitate repeating previous efforts. The Pre-Application Conference affords the prospective applicant a meeting with the Department to discuss the applicant's project and the application procedures and standards that will apply to the project. If an applicant's project will require approvals from several DEP programs, there is an Office of Permit Coordination and Environmental Review.

For permitting options there are Permit-by-Rule and General Permits which allow an applicant to move a project forward if all the requirements are met, sometimes even without prior approval by the Department. Setting out clear procedures and regulations allows for applicants to advance projects in a more predictable manner while still protecting our environmental resources.

CAFRA is just one of many state regulations that complicate and increase the timeline of construction of transportation projects. Other regulations include those dealing with stormwater management, wetlands preservation, threatened and endangered species, and historic resources. The economic and infrastructural limitations placed on the region due to Pinelands, CAFRA, and other state environmental regulations should have greater flexibility to allow for faster review processes, and reasonable workarounds, particularly for lower-impact projects like sidewalks and minor geometric changes for safety.

It should be noted that while great progress has been made with agencies and local governments working together, there is always room for greater coordination and communication to ensure a community enjoys a safe and reliable transportation system.

HOW CAN SJTPO HELP?

SJTPO will work with regulatory agencies and its subregional partners to help ensure regional transportation projects are able to move forward effectively. Together with state and regional partners, SJTPO will work to convene a gathering of impacted agencies and jurisdictions to discuss issues and try to identify sensible solutions that allow projects to advance, while not compromising environmental protection. SJTPO will advocate for more municipal and county MOAs that would streamline the project approval process.

5. Infrastructure at Risk

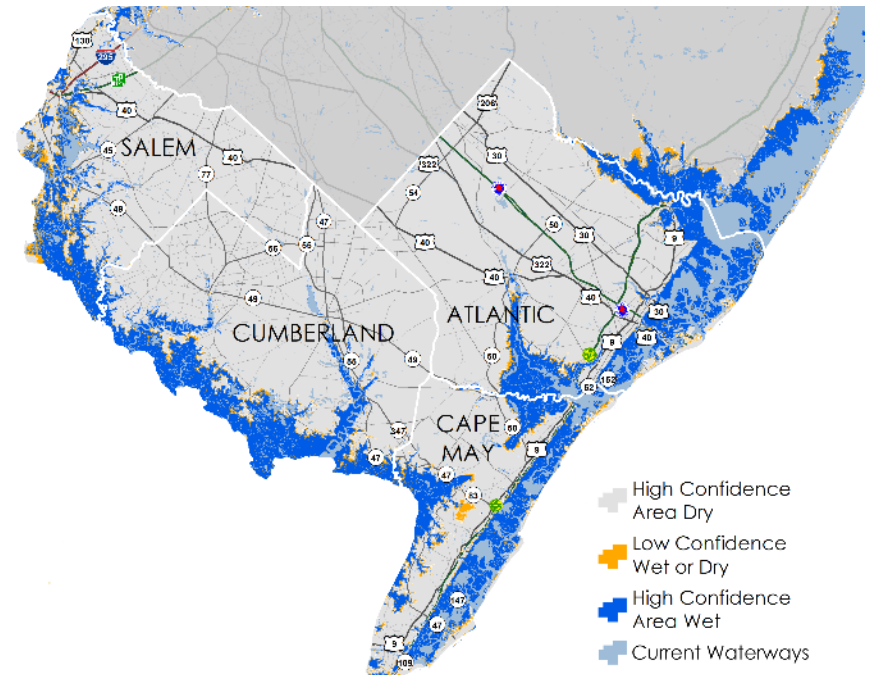
Sea level rise, increased storm severity, and increases in precipitation - all the result of climate change - put aging, already taxed infrastructure in the SJTPO region at great risk.

A major environmental concern within the SJTPO region, and worldwide, is the increase in average temperatures and the resulting changes to weather patterns. There is broad scientific consensus that greenhouse gas (GHG) emissions caused by human activity are affecting the earth's climate, and that increasing atmospheric GHG concentrations will result in significant adverse global, regional, and local environmental impacts. In New Jersey, average annual temperatures have increased by 2.2°F since 1900, with the ten warmest years on record in New Jersey all taking place since 1990.

Projected effects of climate change include rising sea levels, increased storm surge, increased frequency and severity of storms, and increased annual precipitation, all of which will have a significant effect on the region's transportation facilities.

Scientists predict New Jersey coastal areas are 66 percent more likely to experience a sea level rise of 0.5 to 1.1 feet by 2030, and 0.9 to 2.1 feet

Figure 18 – Areas of Impact: Potential Sea Level Rise By 2050



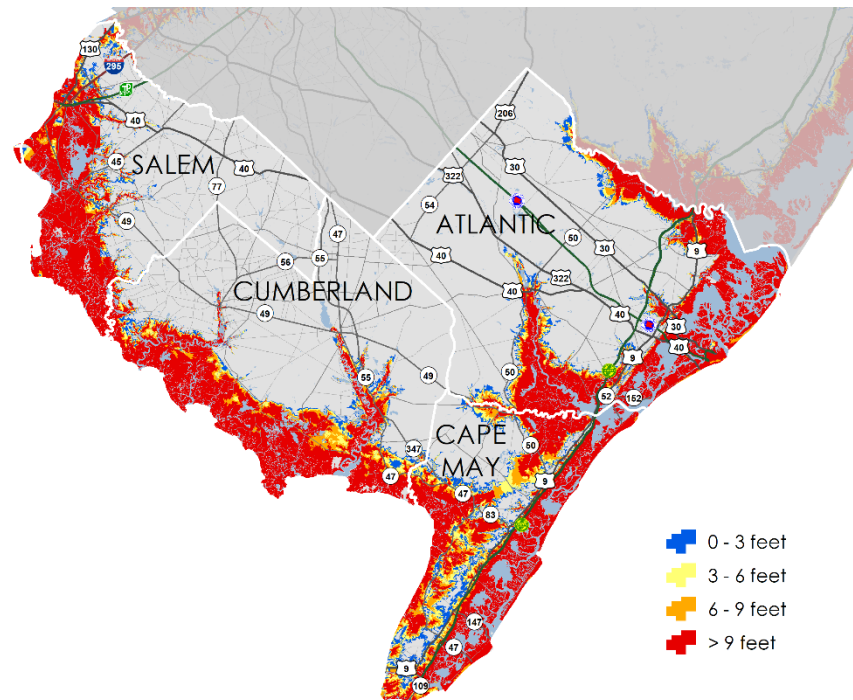
New Jersey Coastal areas are 66% more likely to experience a sea level rise of 0.5 to 1.1 feet by 2030, and 0.9 to 2.1 feet by 2050.

by 2050.⁸ The rate of sea level rise is further accelerated along New Jersey's coastline, impacting both the Delaware Bayshore and the Atlantic Ocean because the land is subsiding at the same time the water levels are rising⁹. The map, above, shows the areas of impact of two feet of sea level rise.

Storm surge is the abnormal rise in seawater level during a storm, measured as the height of the water above the normal predicted astronomical tide. The surge is caused primarily by a storm's winds pushing water onshore¹⁰. The map, below, depicts the impacts of storm surge from a Category 3 storm, the same classification as Superstorm Sandy. A Category 3 hurricane has wind speeds of 111 to 129 mph.

While superstorms like Sandy and sea level rise are the products of climate change that most frequently gain media attention, another lesser-known hazard is the increase in annual precipitation and resulting flooding. Annual precipitation has been on the rise in New Jersey. 2018 is on record as the most precipitation of any year in recorded history, despite absence of any big storm. In the past century, New Jersey has experienced an upward trend of 4.1 inches (9 percent increase) in precipitation per 100 years. Most scientists and researchers believe that the average intensity and frequency of storms in terms of maximum wind speed and rainfall is likely to increase, which can be expected to result in more flooding. Although many of SJTPO's subregions have engaged in effective adaptation measures, such as armoring coastlines with bulkheads or revetment walls, they are expensive and highly regulated,

Figure 19 – Degree of Impact: Storm Surge from Category 3 Hurricane



⁸ Rutgers, The State University of New Jersey. "New Jersey's Rising Seas and Changing Coastal Storms: Report of the 2019 Science and Technical Advisory Panel." November 2019. 2.

⁹ Rutgers Climate Institute. At: https://crssa.rutgers.edu/projects/njfloormappper/about_2.html.

¹⁰ At: <https://oceanservice.noaa.gov/facts/stormsurge-stormtide.html>. Accessed 29 December 2019.



slowing the opportunity to proactively address these issues.

[Chapter III](#) provides a more extensive discussion of climate change trends and resultant impacts such as flooding. [Chapter IV.5](#) contains further details on resilience and specific strategies to increase resilience, including mitigation and adaptation, with a discussion of emergency preparedness found in [Chapter IV.5](#) and [IV.10](#).

HOW CAN SJTPO HELP?

SJTPO will continue to promote projects and plans that reduce emissions from mobile sources, including CO₂, selecting projects for Congestion Mitigation and Air Quality Improvement Program (CMAQ) funding. These projects often facilitate the movement or flow of traffic, as opposed to an increase in capacity, thereby reducing overall travel time and vehicle idling, which increase emissions. SJTPO will initiate and collaborate with NJDOT and other partners to advance mitigation and adaptation planning efforts, including modelling of sea level rise and storm surge, as well as assessing vulnerability of infrastructure assets. These efforts will require dedicated funding to address major resiliency challenges, and while SJTPO does not craft nor does it lobby for legislation, it will work to better bring the needs to light and will work with partner agencies to identify best paths forward with and without additional funding. SJTPO will also engage with federal, state, and local efforts to advance emergency preparedness planning and education as well as best practices in stormwater management.

III. EXISTING CONDITIONS AND TRENDS

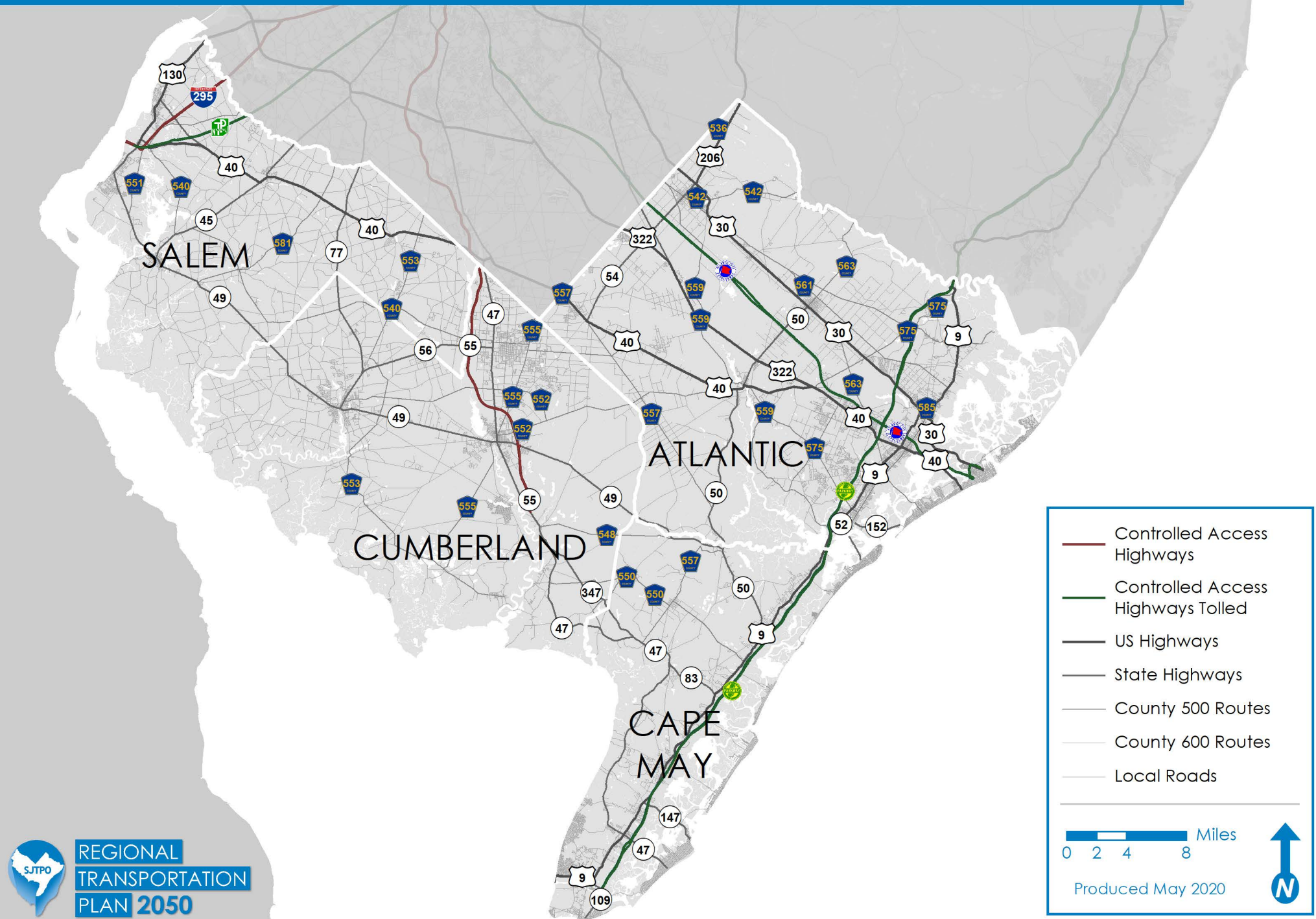
While there are certainly needs and challenges, as will be described later, the SJTPO region is served by an extensive transportation system, as will be described below.

Roadway System

The dominant mode of travel in the SJTPO region is the automobile, as is evidenced by its system of highways and roadways. As depicted in [Figure 20](#), below, the SJTPO region is served by several major limited access regional highways, including the major north-south routes of the Garden State Parkway, the New Jersey Turnpike and I-295, and NJ 55, and the major east-west route of the Atlantic City Expressway.

Figure 20

Existing Roadway Network





South Jersey Transportation Planning Organization

The major road system serving southern New Jersey also includes US and state routes that serve regional travel needs and provide local access. These major arterials include the east-west routes of US 40, NJ 49, and US 322/US 30, and the north-south routes of US 9 and NJ-47.

In addition, a network of county and municipal roads serves local, county, and regional travel needs, and provides local access to residential, commercial, industrial, and recreational and resort areas, including Delaware Bayshore towns and scenic areas. Total public road mileage in the SJTPO region by jurisdiction is shown in [Table 4](#), below.

Table 4 – SJTPO Public Road Mileage by Jurisdiction, 2018

	NJDOT	Authority	County	Municipal	Park	Federal Agency FWS, NPS, Military	Total
Atlantic	143	59	368	1,396	7	10	1,983
Cape May	74	31	209	724	8	0	1,046
Cumberland	89	0	534	684	9	0	1,316
Salem	86	9	356	430	6	1	888
SJTPO Region	392	99	1,467	3,234	30	11	5,233

Source: NJDOT.

Public Transit

Although transit service is available in every county of the SJTPO region, it is generally sparse due to low population densities and lower demand. Most of the region's transit service is concentrated in Atlantic County, specifically within Atlantic City. The thousands of commuters and tourists that work and visit Atlantic City on a daily basis provide the demand that is necessary for successful transit operations. Relatively low population densities for much of the SJTPO region mean that fixed route transit service is sparse because of lower demand and therefore, higher costs. However, in the area of local community mobility services, the SJTPO region has an extensive network of community shuttles operating throughout the region, which helps to supplement much of the longer-haul, fixed route service operated by NJ TRANSIT. While some of these shuttles are fixed route, many of these are deviated fixed route and/or demand-responsive with smaller vehicles that more effectively service smaller transit markets. [Figure 21](#), below, depicts the existing public transit system currently serving the SJTPO region.

Local and Intrastate Bus Service

NJ TRANSIT provides many local bus routes within the region, as indicated in [Table 5](#), below. These routes link cities within the SJTPO region. In addition to serving the needs of the transportation disadvantaged, these bus services also help the region meet other major goals, including congestion reduction and pollution. Most of the buses are powered with clean fuels as well as a smaller number of compressed natural gas-powered vehicles, and electric vehicles in the future.

Table 5 – NJ TRANSIT and Intercity Bus Service Routes

Route Number	Routes
468*	Penns Grove – Woodstown
501	Atlantic City – Brigantine Beach
502	Atlantic City – Hamilton Mall – Atlantic Cape Community College
504	Bungalow Park – Chelsea Heights - Ventnor Plaza
505	Atlantic City – Margate – Longport
507	Atlantic City – Ocean City
508	Atlantic City – Richard Stockton College -Hamilton Mall
509	Atlantic City – Somers Point
510	Cape May – Wildwood Shuttle (summer only)
552	Atlantic City – Cape May
553	Atlantic City – Upper Deerfield
554	Atlantic City – Lindenwold PATCO
559	Atlantic City – Lakewood

Source: NJ TRANSIT. Note: *Operated by Salem County Transit under contract with NJ TRANSIT.

Local Bus service is provided by NJ TRANSIT and other operators. In addition to NJ TRANSIT's local bus service, other operators also provide local bus service. In Atlantic City, mobility is fostered by the Atlantic City Jitneys, administered by the [Atlantic City Jitney Association](#) (ACJA). The ACJA provides service along four primary routes within Atlantic City, as well as service to and from Atlantic City to the Atlantic City Airport as well as the Atlantic City Rail Terminal. The service is operated 24 hours a day, 365 days a year. Additional shuttle bus services are operated in the region. These include Tropiano Transportation, a private carrier, which offers shuttle bus service from the Atlantic City International Airport to casinos within Atlantic City and the Shoreline Bus Company, which runs a shuttle service serving casinos and other hotels within Atlantic City.

The Delaware River and Bay Authority (DRBA) also provides bus shuttles from the Cape May Ferry Terminal to the Cape May Bus Terminal. All shuttle bus service is scheduled to coincide with the arrival and departure of the ferry. According to the DRBA website, two continuously looping shuttles operate in Delaware, one between Lewes and the ferry terminal and the other among the Delaware Transit Corporation (DART) Park & Ride lot, the Tanger Outlets, Rehoboth Beach, and the ferry terminal. The Cape May shuttle continuously loops between downtown Cape May and the ferry terminal. During the summer tourist season, it operates daily. The shuttle operates with weekend service only for part of the pre-summer season. More information is available from the [DRBA website](#) or from their information and reservation office at 1-800-64-FERRY.



Interstate Bus Service

In addition to operating commuter rail service on the Atlantic City Line, NJ TRANSIT provides a number of interstate commuter bus services in the region, linking the SJTPO region to cities, such as Philadelphia and New York City. [Table 6](#), below, lists interstate bus services operating in the SJTPO region.

Table 6 – NJ TRANSIT Interstate Bus Routes

Route Number	Routes
313	Philadelphia – Wildwood – Cape May via NJ 47
315	Philadelphia – Wildwood – Cape May via Black Horse Pike
316	Philadelphia – Wildwood – Cape May Express (summer only)
319	New York – Atlantic City – Wildwood – Cape May
401	Philadelphia – Salem
402, 410, 412	Philadelphia – Woodbury
408	Philadelphia – Millville
410	Philadelphia – Bridgeton
551	Philadelphia – Atlantic City

Source: NJ TRANSIT.

Table 7, below, depicts the total passenger trips for each of these bus routes for FY 2019.

Table 7 – FY 2019 Bus Transit Ridership, SJTPO Region

Route #	Route Description	Total Riders (FY 2019)
313	Philadelphia - Cape May via Millville	70,432
315	Philadelphia - Cape May via Tuckahoe	39,753
319	Atlantic City - NY	364,818
401	Salem - Phila	195,639
402	Pennsville - Phila	164,815
408	Millville - Phila	329,822
410	Bridgeton - Phila	265,098
412	Glassboro - Phila	244,995
501	Atlantic City - Brigantine	240,880
502	Atlantic City - AC Community College	673,953
504	Bungalow Park	159,952
505	Atlantic City - Longport	1,192,976
507	Atlantic City - Ocean City	628,538
508	Atlantic City - Hamilton Twp	522,898
509	Atlantic City - Somers Point	343,195
551	Atlantic City - Phila	564,155
552	Atlantic City - Cape May	577,811
553	Atlantic City - Upper Deerfield	883,555
554	Atlantic City - Lindenwold	707,410
559	Atlantic City - Lakewood	659,249
Total		8,829,944

Source: NJ TRANSIT.

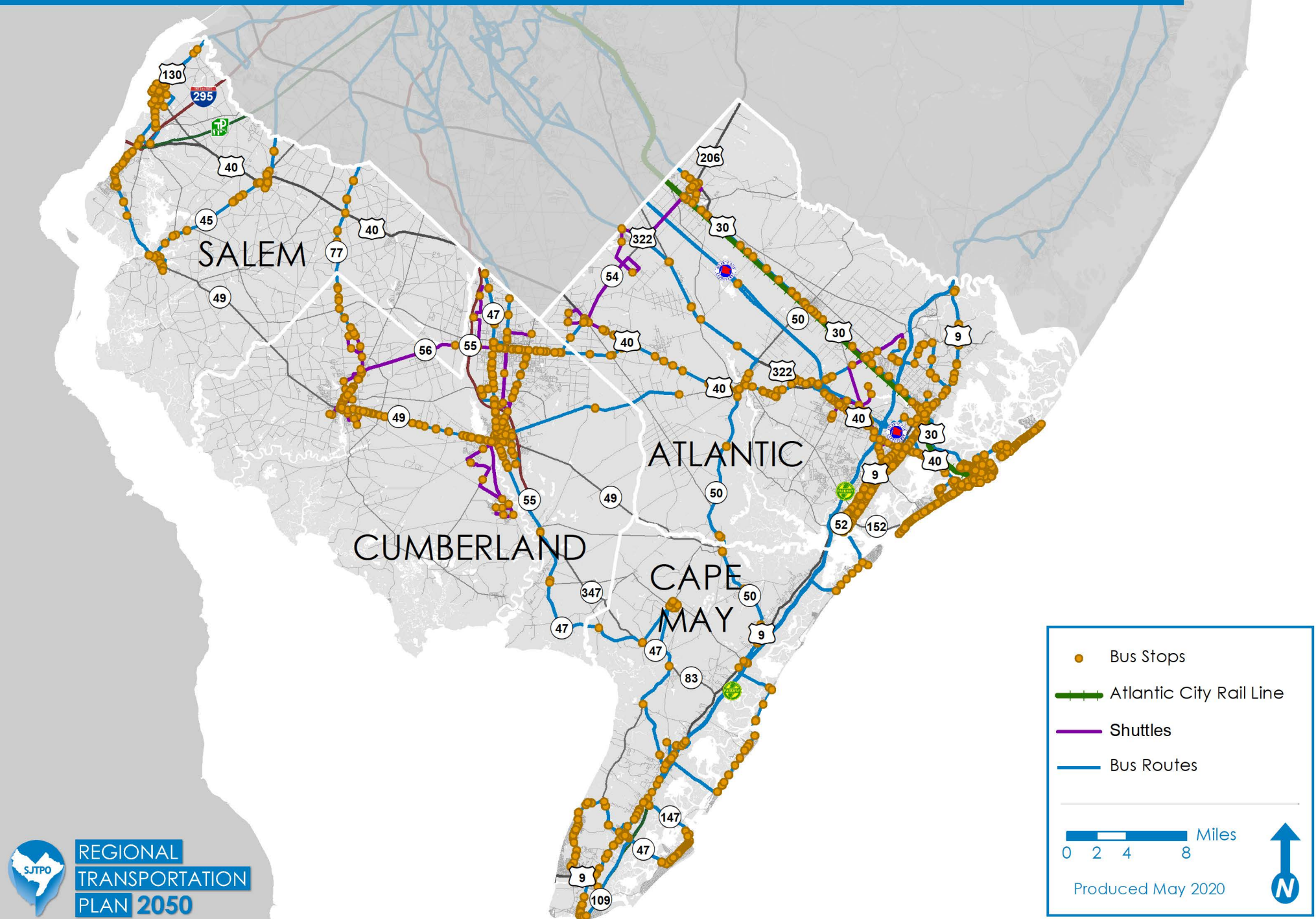
Casino Bus

In 2017, Atlantic City was visited by more than 18 million people.¹¹ SJTA actively supports programs to facilitate the casino bus operations. SJTA oversees a bus management program to regulate all casino related bus activities in Atlantic County, including bus intercept, bus parking, bus maintenance, site capacities, traffic management, computerized and electronic permits or medallion validation, routes of travel, discharge and loading of passengers, bus operations and activities, enforcement, and maintenance of a daily bus manifest. SJTA operates several casino bus parking facilities, providing services to help promote the ongoing use of transit vehicles to bring at least a quarter of all visitors to Atlantic City.

¹¹ https://atlanticcitynj.com/userfiles/pdfs/2017_barometer_november.pdf. Accessed 9 December 2019.

Figure 21

Public Transit Network



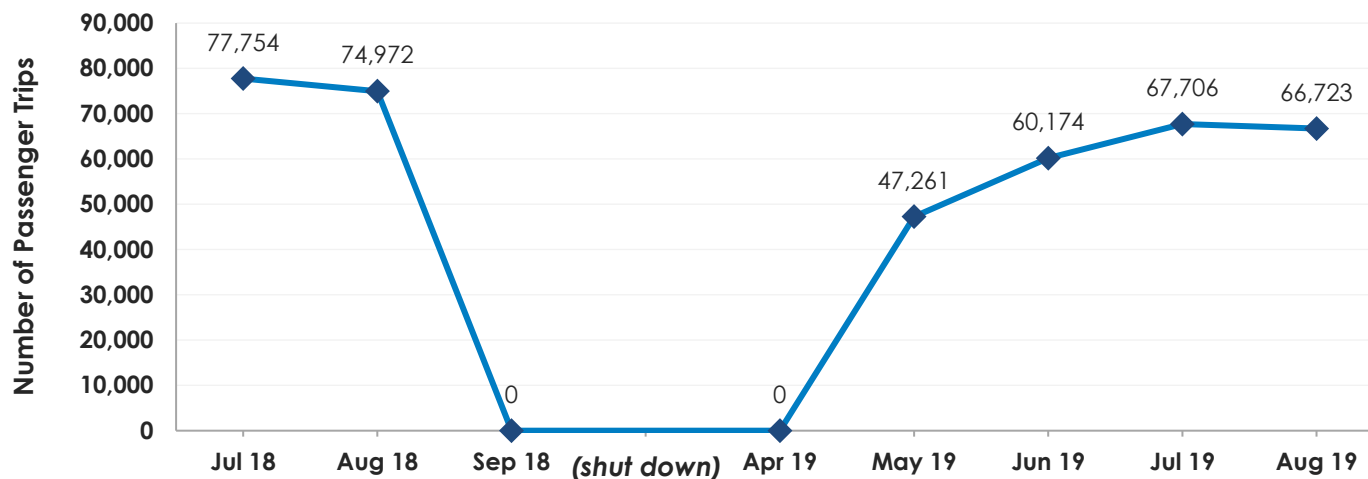
Passenger Rail Service

Atlantic City Rail Line

Currently, the only rail corridor offering commuter rail service in the SJTPO region is the Atlantic City Rail Line, operated by NJ TRANSIT. The rail line offers commuter rail services between 30th Street Station in Philadelphia to the Atlantic City Rail Terminal seven days a week. It includes stops in Philadelphia (30th Street), Cherry Hill, Lindenwold, Atco, Hammonton, Egg Harbor City, Absecon, and Atlantic City.

[Figure 22](#), below, depicts monthly passenger trips on the Atlantic City Rail Line from July 2018 through August 2019. It is important to note that between September 2018 and April 2019, no passengers were reported because the Atlantic City Rail Line was shut down to install federally mandated Positive Train Control safety equipment. The Atlantic City Rail Line hosts not only NJ TRANSIT rail service, but also daily freight services operated by a short line, the Southern Railroad Company of New Jersey.

Figure 22 – Monthly Passenger Trips, Atlantic City Rail Line



The Five-Mile Beach Electric Railway Company

The Five-Mile Beach Electric Railway Company, run by the Great American Trolley Company, operates a trackless boardwalk tram, trackless trolleys, and community-based services in Cape May County. Service is provided via the Cape May Loop, Ocean City Loop, Wildwood and Wildwood Crest Loops, the Wildwood Downtown Loop, and the North Wildwood, Wildwood Crest, and Rio Grande routes. All routes operate only during the summer, with the exception of the

The Atlantic City Rail Line is the only rail corridor in the SJTPO region and is operated by NJ TRANSIT.



North Wildwood, Wildwood Crest, and Rio Grande routes, which operate year-round. The trolley does not service the area campgrounds. A complete listing of the routes and schedules can be found at www.gatrolley.com.

Ferry Services

Cape May has a bi-state ferry service that offers a 17-mile, 80-minute cruise across the Delaware Bay from Lewes, Delaware, to Cape May on a daily basis throughout the year. The Cape May-Lewes Ferry, owned and operated by the DRBA, provides the service via a fleet of three vehicles. This service runs 365 days a year and accommodates pedestrians, bicyclists, and automobiles. Each vehicle can hold up to 100 cars and approximately 800 passengers. More information about the Cape May-Lewes Ferry is available at the [DRBA website](#).

The DRBA additionally operates a “three fort ferry crossing” linking Fort DuPont in Delaware City, Delaware, to Fort Delaware on Pea Patch Island to Fort Mott in Pennsville.

Park-and-Ride Facilities

There are a number of park-and-ride facilities in the SJTPO region, both state-owned and joint-use facilities. [Table 8](#), below, lists the park-and-ride lots available in the SJTPO region.

Table 8 – Official NJDOT Park and Ride Locations in SJTPO Region

County	Location	Town
Atlantic	Exit 4--Atlantic City Expressway, Intercept lot	Pleasantville City
Atlantic	Atlantic City Bus Terminal	Atlantic City
Atlantic	Atlantic City Service Area, Garden State Parkway	Galloway Township
Cape May	Interchange 25, Garden State Parkway	Upper Township
Cape May	Ocean View Service Area	Dennis Township

Source: www.nj.gov/transportation/commuter/rideshare/prlocate.shtm. Accessed December 9, 2019.

Local Community Mobility Services

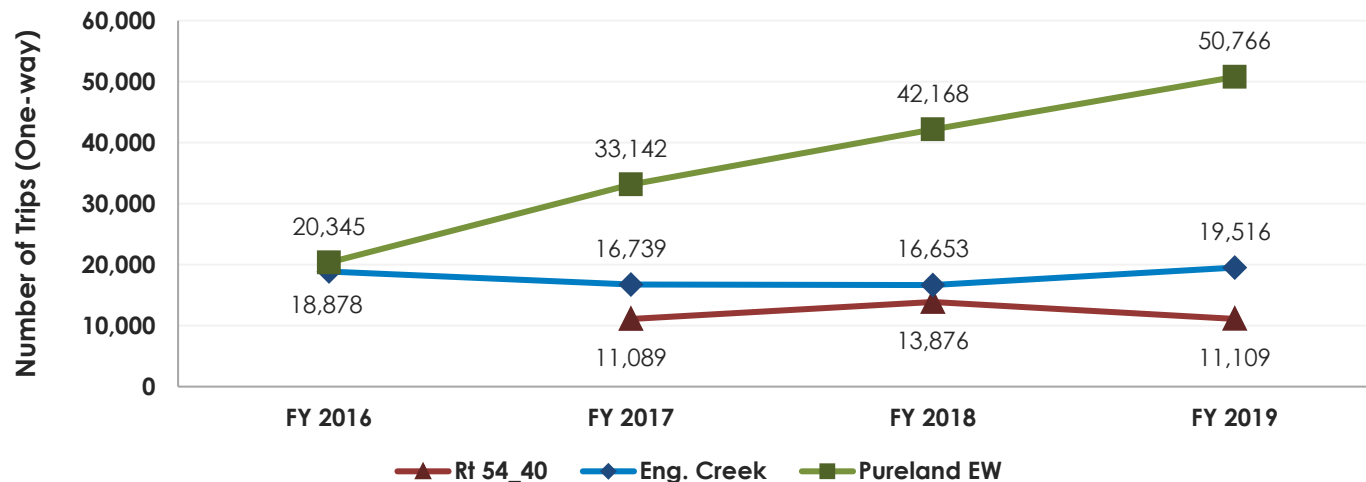
In addition to the fixed route, long-haul service provided by NJ TRANSIT, the SJTPO region has a rather extensive array of local community mobility services, which, while servicing mostly smaller market areas and shorter trips, are also the major means of transportation for the most vulnerable segments of the population, such as senior citizens, persons with disabilities, and the low-income, as well as the general public. While many of these shuttles are administered by the counties and/or non-profit agencies, a few services within the SJTPO region are administered by Cross County Connection, the local Transportation Management Association (TMA) servicing the SJTPO region. Transportation Management Associations (TMAs) are non-profit member corporations that coordinate local commuter transportation services, including, but not limited to, public transportation, vanpools, carpools, bicycling, and pedestrian modes. Funding for New Jersey’s TMAs is

provided, in part, by FHWA, NJDOT, and NJ TRANSIT. In partnership with SJTA, as well as other agencies, Cross County Connection TMA operates shuttles serving residents of the four-county SJTPO region. These shuttles include:

- **The Route 54/40 Shuttle** – This is a free shuttle serving Atlantic County.
- **The English Creek Shuttle** – This is a deviated fixed-route service, serving the general public through Egg Harbor Township and the City of Northfield. There are connections with several NJ TRANSIT bus stops. The fare is \$1.00 (as of May 2020).
- **Pureland East-West Shuttle** – Although this shuttle primarily serves Gloucester County, there are residents from the SJTPO region who take this shuttle. Its connections with multiple NJ TRANSIT bus lines makes this transfer fairly smooth. The fare is \$1.00 (as of May 2020).
- **The Egg Harbor Shuttle** – This is a fixed-route service connecting the Egg Harbor City Rail station with Stockton University, the FAA Tech Center and Atlantic City International Airport. There is no fare.

As is evidenced by [Figure 23](#), below, annual trips have increased due to demand for the Pureland East-West and English Creek shuttles, while trips for the Route 54/40 shuttle have lessened due to a decrease in demand. Nonetheless, these commuter services lead to a reduction in single-occupancy vehicle (SOV) trips, which is beneficial for air quality and helps to mitigate traffic congestion.

Figure 23 – Annual Number of Trips, CCCTMA Community Shuttles



Source: CCCTMA.



Human Services Transportation

As to be mentioned in [Chapter IV](#), one of SJTPO's key goals for promoting accessibility and mobility is to "advance transit for the transit disadvantaged." There is a segment of the population that is in need of transportation, including senior citizens and the disabled, who for various reasons are unable to drive themselves, persons of low income who cannot afford to own or operate their own vehicle, and underage youths, who are not yet eligible to obtain a driver's license. These "transportation disadvantaged" individuals often need this transportation to get to jobs and/or job training, a doctor or some type of medical appointment, for shopping trips, or other desired destinations.

It has long been the policy of the various levels of government and private agencies to provide or assist in providing transportation services to this segment of the population. Federal and state funding programs are available to public and private agencies to subsidize transit services and related activities, such as route scheduling and dissemination of transit service information to the public.

Given the extent of the needs of the transportation disadvantaged, and the limited financial resources available to provide and support needed transportation services, the challenges to those involved in this human service transportation planning process is to:

- Identify the transportation service needs of this disadvantaged population (i.e., what are the gaps in available services?),
- Provide these needed transportation services to the greatest extent possible, and
- Provide all of these transportation services in a cost-effective manner (i.e., to maximize the quality and coverage of these services by minimizing the cost of providing them).

Recognizing the challenges and problems relating to the process of providing adequate human services transportation (HST) to the transportation-disadvantaged population, a federal initiative was created which required counties to prepare, at five-year intervals, a Coordinated Human Services Transportation Plan (CHSTP). SJTPO's CHSTP is referred to as the Access for All Transit Plan. The plan provides an inventory of existing HST services, identifies unmet needs, proposes recommendations to meet these needs, and proposes measures, primarily coordination of HST services, to reduce the cost and improve the efficiency of the HST system. Agencies applying for funding or vehicles under FTA Section 5310 must be included in an approved plan. Other HST funding programs give priority to or look favorably on, applications included in a plan.

The SJTPO 2015 Coordinated Human Services Transportation Plan

In the most recent response to federal and state requirements, SJTPO completed the 2015 Coordinated Human Services Transportation Plan (CHSTP) update for its four counties. The 2015 Plan included all of the required elements, including the identification of proposed new routes and services to meet the transportation needs identified in the plan. Most importantly, the SJTPO proposed various options for achieving HST service coordination at the county and regional level.

The plan recommends that an active county coordinating council be established where agencies and organizations concerned with the goal of coordinating transportation opportunities can meet regularly to share information and identify coordination opportunities and HST funding opportunities.

Current Services in the SJTPO Region

As noted, HST programs and services are currently provided by a range of government agencies as well as private non-profit organizations to serve the needs of the transportation-disadvantaged population. The SJTPO CHSTP identified these levels of services, which includes services provided by the state, including Access Link, a demand-responsive service for the disabled, and Medicaid transportation, service to medical appointments for eligible Medicaid recipients, as well as county and local governments, including demand responsive, a door-to-door service, and deviated fixed route service, targeting users that range from the general population to the disabled and those needing transportation for work-related trips. Non-profit agencies, such as the Puerto Rican Action Committee, Easter Seals, and Pearl Transit in Salem County, also provide transportation services for their clients. HST trips may be able to use NJ TRANSIT's traditional fixed route transit services, including NJ TRANSIT's system of bus services that serve to interconnect the SJTPO region and the state, as well as the Atlantic City Rail Line.

[Table 9-Table 11](#), below, and on the following pages, list the demand responsive and deviated fixed route services provided by the four counties or the counties in partnership with other agencies. While most of these systems are available to the general public, the primary users are the transportation disadvantaged, and many services are provided at a low or at no cost to riders. The Cumberland County Department of Workforce Development provides an extensive deviated fixed route service consisting of five separate bus routes that focuses primarily on work trips and serves to connect workers to major places of employment, such as the Vineland Industrial Park.

Table 9 – Major Demand-Responsive Services in the SJTPO Region

Service	Type of Service	Service Area	Target Clients	Operated or Administered by
Atlantic County Transportation	Demand-Responsive	Atlantic County	Primarily for county residents who are 60 years or older, and the disabled	Atlantic County Transportation Unit - Division of Intergenerational Services
Cumberland Area Transit Service (CATS)	Demand-Responsive	Cumberland County	General Public	Cumberland County - Office on Aging & Disabled
Cape May County Fare-Free Transportation	Demand-Responsive	Cape May County	General Public	Cape May County
Salem County SCOOT	Demand-Responsive	Salem County	General Public (targeting seniors/disabled)	Salem County - Office on Aging and the Disabled


Table 10 – Atlantic County Community Shuttles

Service	Type of Service	Service Area	Target Clients	Operated or Administered by
English Creek – Tilton Rd Community Shuttle	Deviated Fixed Route	Egg Harbor Twp., City of Northfield	General Public	SJTA in cooperation with Atlantic County and Cross County Connection TMA
Rt. 54/40 Community Shuttle	Deviated Fixed Route	Hammonton, Buena Vista, Buena Richland, Minotola, Landisville	General Public	
Egg Harbor Shuttle	Fixed Route	Atlantic City Rail line's Egg Harbor Station, Stockton University, FAA Tech Center & Atlantic City Airport	General Public	

Table 11 – Cumberland County "To Work" Shuttles

Service	Type of Service	Service Area	Target Clients	Operated or Administered by
Greater Bridgeton Area Transit	Deviated Fixed Route	Bridgeton/Upper Deerfield	Low-income persons needing transportation for work-related trips	Cumberland County Department of Workforce Development
Landis Avenue Express	Deviated Fixed Route	Bridgeton & Vineland along Landis Ave.	Low-income persons needing transportation for work-related trips	
Vineland Shuttle	Deviated Fixed Route	Vineland (including the Industrial Park)	Low-income persons needing transportation for work-related trips	
Millville Area Connector	Deviated Fixed Route	Connects Millville with the Vineland Transit Center	Low-income persons needing transportation for work-related trips	
Millville Airport and Laurel Lake Connector	Deviated Fixed Route	Laurel Lake, Millville, the Vineland Airport	Low-income persons needing transportation for work-related trips	

Some municipalities also provide demand-responsive services, including:

- Atlantic City Senior Citizens Programs
- City of Pleasantville Transit Service
- Margate Senior Citizen Shuttle

Ridesharing/Alternative Commuter Services

Cross County Connection TMA is available to assist any resident, business, or local government agency in southern New Jersey with ridesharing or other transportation needs. It also keeps potential carpool participants on file for possible

matching. Cross County Connection TMA also educates and advises businesses, employers, developers, and residents on trip reduction strategies, including compressed work hours, telecommuting, and bicycle and pedestrian options.

In addition to the services mentioned above, Cross County Connection TMA offers an array of other services, including the development of specialized web and smartphone applications that assist users in locating and using public transportation. A full array of Cross County Connection TMA services can be found at www.driveless.com. A full description of the three types of public transportation services offered in each county, including fixed-route, demand-responsive (paratransit), and passenger rail, can be found in each county's 2015 Human Service Transportation Plan Update, located on the website at www.sjtpo.com/AccessforAll.

Bicycle and Pedestrian System

SJTPO is involved in a number of efforts to improve bicycle and pedestrian access across the four-county region. Everyone is a pedestrian at some point in his or her trip, whether it is as a primary method to get from one place to another or simply get to and from the car, bus, train, etc. Transportation planners and engineers must find ways to provide facilities that give the public the option to walk and bike safely in addition to making pedestrians and bikes more visible to drivers. New Jersey has been recognized by the USDOT as a Bicycle and Pedestrian Safety Focus State, due to its high number of bicycle and pedestrian crashes and fatalities. As such, pedestrian and bicyclist safety must be considered in all transportation investment decisions.

In addition to their recreational benefits, provision of sidewalks, bicycle lanes, and multi-use trails can encourage the use of alternate forms of transportation for work, shopping, and other trips. This represents one of several transportation alternatives designed to reduce congestion on our roadways. This is especially true in the Jersey Shore communities, where the greater density makes them highly conducive to walking and biking. These communities have a greater need to remove vehicles from highly congested roadways, particularly during the summer months. In addition to congestion mitigation, bicycle and pedestrian travel is great for personal health and is environmentally friendly, as it creates no mobile source emissions.

The Existing Network

Identifying the number of bicycle and pedestrian facilities is difficult to measure. There is no standardized inventory of sidewalks in the region. SJTPO recently conducted an inventory of sidewalks on county roadways as well as local roadways in the City of Vineland as a part of a recent pavement and asset inventory. It is important to note that municipal roadways are the most likely roadways to include sidewalks, so the current inventory is very incomplete.

Designated bicycle facilities are also difficult to quantify. In the last regional transportation plan, it was identified that there were 214 miles of bicycle facilities, as reported by jurisdictions in the region. However, this is not based on a standard definition of what constitutes a bicycle facility. Some jurisdictions include shoulders that are wide enough to bike on, but

Figure 24 – Example of a Sharrow



Image courtesy of Eric
[Gilliland/Flickr](#)

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are not marked for cyclists nor are they maintained as bicycle facilities; some include roadways with “share the road” signage or sharrows (shown in [Figure 24](#)) marked on the roadway, but include no actual infrastructure for cyclists; also included were roadways noted on state maps as bicycle tour routes, but again have nothing on the ground to designate a facility for users; while others only include off-road facilities and marked bicycle lanes. This is important as it gives conflicting messages to potential users and may dissuade them from bicycling in the region.

Roadways remain the primary means by which cyclists may access the region. This may suffice for expert riders; however, casual riders will require additional facilities that are deliberately planned for bicycling in order to gain meaningful access to the region. An additional step that is needed for the region is an inventory of levels of traffic stress for bicyclists in the region. Essentially what a level of traffic stress does is it provides users with a map of all roadways in the region and gives users a clear set of expectations when they use the roadways on a bicycle. Some users may require a trail or bike lane, others may feel comfortable with a shoulder, while others may be comfortable with any roadway below a particular speed limit, but users should be able to go out on the roads with a clear advance understanding of what to expect when they ride and to be able to plan their route accordingly.

Gaps in the System

Although existing roadways may hold the potential to accommodate bicyclists safely, there are a number of factors, such as traffic volumes, motor vehicle speeds, use and availability of the land and roadway, and surface conditions that all need to be examined in order to determine bicycle compatibility. In addition, different road conditions represent different levels of compatibility to different users. For example, an unmarked shoulder may feel comfortable to a more experienced user; however, a novice or casual user may require a separated bike path to feel comfortable. For pedestrians, a further challenge is the inconsistent availability and condition of sidewalks, crosswalks, signals, overpasses, underpasses, trails, and bikeways. For example, while sidewalks may be more common in more urbanized areas, in suburban and rural areas, they are often not continuous or well maintained, making pedestrian use unattractive or uncomfortable. Further, in lower-income urban communities, facilities may not be maintained for optimal use due to lack of local funding. Sidewalks need to be continuous, accessible, and well maintained in order to be useful. Many sidewalks in the region do not meet these criteria.

Like the rest of New Jersey, the impediments listed above for both bicycle and pedestrian travel are widespread in the region and steps need to be taken to remove these barriers. If bicycling and walking are to become commonplace, a more bicycle and pedestrian friendly environment must be created. This requires better inclusion of these modes in the engineering, design, and operation of streets and highways. Although there is more to be done to identify the gaps within the system, work in this area is being done and should continue to be a focus, working to support RTP 2050’s goal to “Enhance the integration of connectivity of the transportation system.”

Important steps to improve these existing conditions include improvements in the inventory of existing conditions. SJTPO and its member jurisdictions have a relatively good inventory of trails, but do not have a regional inventory of sidewalks, nor is there an inventory of the level of traffic stress of roadways, which communicates for users the conditions on the

ground, such as speeds, shoulder presence, and traffic volumes, so that users can self-select which facilities meet their abilities. An additional benefit of level of traffic stress is that projects can be targeted to address major barriers. Funding for these kinds of inventories is limited. However, SJTPO will continue to seek opportunities to develop robust inventories of sidewalk facilities and level of traffic stress of the roadway network.

Health Benefits

In addition to the economic benefits described above, active transportation networks, such as the Circuit Trails have significant health benefits with a multitude of activities that take place on these activities. In addition to being a bikeway system, the trails that comprise the Circuit Trails system are good for walking, running, dog walking, and numerous other activities.

An Opportunity to Provide Equal Access

In addition to the benefits that bicycle and pedestrian facilities provide for all residents and visitors in the region, the benefits to households without access to a vehicle are much greater. It is easy to assume that everyone has an automobile as a necessity to conduct day-to-day activities; however, despite the necessity of vehicle ownership in our region, many residents do not have reasonable access to one. In fact, 11.2 percent of all households in the four-county SJTPO region do not have access to a car. With 22.8 percent of households in Penns Grove, 24.8 percent in Salem City, and 46.1 percent in Atlantic City without a vehicle and limited access to walking, bicycling, and transit, these communities become cutoff from the region.¹²

Safety

Since 2004, FHWA has been working to reduce pedestrian deaths by focusing extra resources on the cities and states with the highest rates of pedestrian fatalities. Efforts to focus on pedestrian crashes are important because of the greater likelihood of severe injury and death when involved in a crash. When a vehicle is in a crash, drivers are protected by an elaborate system of engineering designed to reduce the likelihood of injury or death; however, when a bicyclist or pedestrian is hit by a car, there is nothing to protect them and the likelihood of serious injury or death is very high.

Nationally, though bicyclists and pedestrians make up only 3.4 percent of work commutes¹³, they make up 17 percent of fatalities.¹⁴ As shocking as these statistics are, they are much worse in New Jersey, where 34 percent of roadway fatalities

¹² South Jersey Transportation Planning Organization 2014 Household Travel Survey. June 2014.

www.sjtpo.org/wp-content/uploads/2014/06/HouseholdTravelSurvey_2010.pdf.

¹³ Modes Less Traveled – Bicycling and Walking to Work in the United States: 2008–2012. Brian McKenzie. American Community Survey. May 2014. <https://www.census.gov/library/publications/2014/acs/acs-25.html?#>.

¹⁴ NJDOT Safety Target dataset. April 2020.



Complete Streets is an effort to bring bicycle and pedestrian travel, and public transportation into the design, maintenance, and updating of roadway facilities.

South Jersey Transportation Planning Organization

are bicyclists and pedestrians.¹⁵ As a result, New Jersey is classified as a Pedestrian Focused State. This brings both resources and restrictions, but it means New Jersey needs to take the safety of pedestrians, and similarly bicyclists, very seriously until we can reduce these numbers.

Complete Streets

In recent years, there has been a significant push to adopt Complete Streets policies in communities and states across the country. Throughout much of the 20th century, the transportation system was designed primarily for automobiles. The result has been problems ranging from disproportionate injury and fatality rates among bicyclists and pedestrians to the health and social impacts that are the result of drastically declining rates of human-powered mobility. Complete Streets is an effort to bring bicycle and pedestrian travel, as well as public transportation into the equation when roadway facilities are designed, maintained, and updated. Complete Streets policies generally require all roadway projects to consider all modes. This is in accordance with SJTPO's strategy under accessibility of "including all users in projects."

New Jersey was among the first states in the country to adopt such a policy in 2009. This policy guides all projects for new or retrofitted facilities that receive state or federal funds. Prior to Complete Streets, standard practice was only to add bike, pedestrian, or transit accommodation when an additional justification was made. With this policy, these accommodations are presumed to be needed unless additional justification is made to exclude them. In other words, the burden of proof is needed to exclude them rather than to include them.

In addition to the state policy, according to the New Jersey Bicycle and Pedestrian Resource Center, as of March 3, 2020, 24 communities in the SJTPO region have adopted some form of a Complete Streets policy, up from 18 in the last RTP, four years ago.

- | | | | |
|---------------------|---------------------------------|-----------------------|------------------|
| • Atlantic City | • Hammonton | • Northfield | • Upper Township |
| • Brigantine | • Linwood | • North Wildwood | • Ventnor |
| • Buena Borough | • Lower Alloways Creek Township | • Ocean City | • Vineland |
| • Cape May | • Margate | • Pennsville Township | • Wildwood |
| • Downe Township | • Middle Township | • Pleasantville | • Woodbine |
| • Egg Harbor City | | • Somers Point | • Woodstown |
| • Galloway Township | | | |

¹⁵ Bicycling in New Jersey [2014 Fact Sheet]. The League of American Bicyclists.
http://bikeleague.org/sites/default/files/Summit2014/2014_Factsheet_New_Jersey.pdf.

South Jersey Trails

Given the importance of tourism to the South Jersey region, SJTPO has and will continue to recommend projects that can help enhance tourism within the region and capitalize on existing eco-tourism efforts. A major opportunity to build on this, while enhancing opportunities inland is South Jersey Trails. The South Jersey Trails project aims to build a regionwide trail network that will connect major attractions within the region and even to neighboring regions. Albeit on a much smaller scale, SJTPO aspires to build something like the Circuit Trails, a 750-mile network of planned bicycle and pedestrian multi-use trails connecting people to jobs, communities, and parks in the Greater Philadelphia area.

In 2019, SJTPO embarked on an initial step towards the development of a regional trails system, with a branding and marketing strategy. The result is the South Jersey Trails brand. The next step in this effort is the creation of a South Jersey Trails Action Committee. Among other tasks, they will work to develop a visionary network for the region and a common definition of what constitutes a trail. There are over 56 miles of designated trails in the region. This does not include designated bike lanes, bikeable shoulders, boardwalks and other facilities that may be appealing for some users. The primary growth in trail mileage in the region in recent years is in Cape May County, where the county actively develops its trails system through its Open Space Program. Below are the current off-road trail facilities in each county in the SJTPO region.

- **Atlantic County**
 - **Atlantic County Bikeway: 7.6-mile** off-road bike facility, from east of Mays Landing to the old Shore Mall.
 - **Buena Borough Bike Path: 1.9-mile** off-road asphalt bike facility, from US 40 in Landisville to Blackwater Pond Park.
 - **Linwood Bike Path (Pleasantville to Somers Point): 7.5-mile** off-road, asphalt bike facility, from Pleasantville to Somers Point.
 - **Bike lanes and boardwalks:** Atlantic County has many miles of bike lanes throughout the county as well as boardwalks in Atlantic City, though with seasonal and time-of-day restrictions.
 - More information on major bikeways in Atlantic County is available at www.aclink.org/PARKS/mainpages/Bikeway.asp.
- **Cape May County**
 - **Middle Township Bike Path: 8.9-mile** off-road, asphalt facility, from the Cold Spring Bike Path at Seashore Road in Cold Spring, Lower Township to the Cape May County Zoo in Middle Township.
 - **North Wildwood Seawall: 0.8-mile** off-road, concrete facility, from John F. Kennedy Boulevard to Allen Drive and 2nd Avenue.
 - **Ocean City Bike Path: 0.9-mile** off-road, asphalt facility, from 25th Street to 35th Street.
 - **Route 52 Bridge Trail: 2.4-mile** off-road, concrete facility, from Somers Point across the Route 52 Bridge into Ocean City. This facility connects to miles of bike lanes and sidewalks in Ocean City and will soon connect in Somers Point to the 7.5-mile Linwood Bike Path to Pleasantville.

Figure 25 – South Jersey Trails Branding

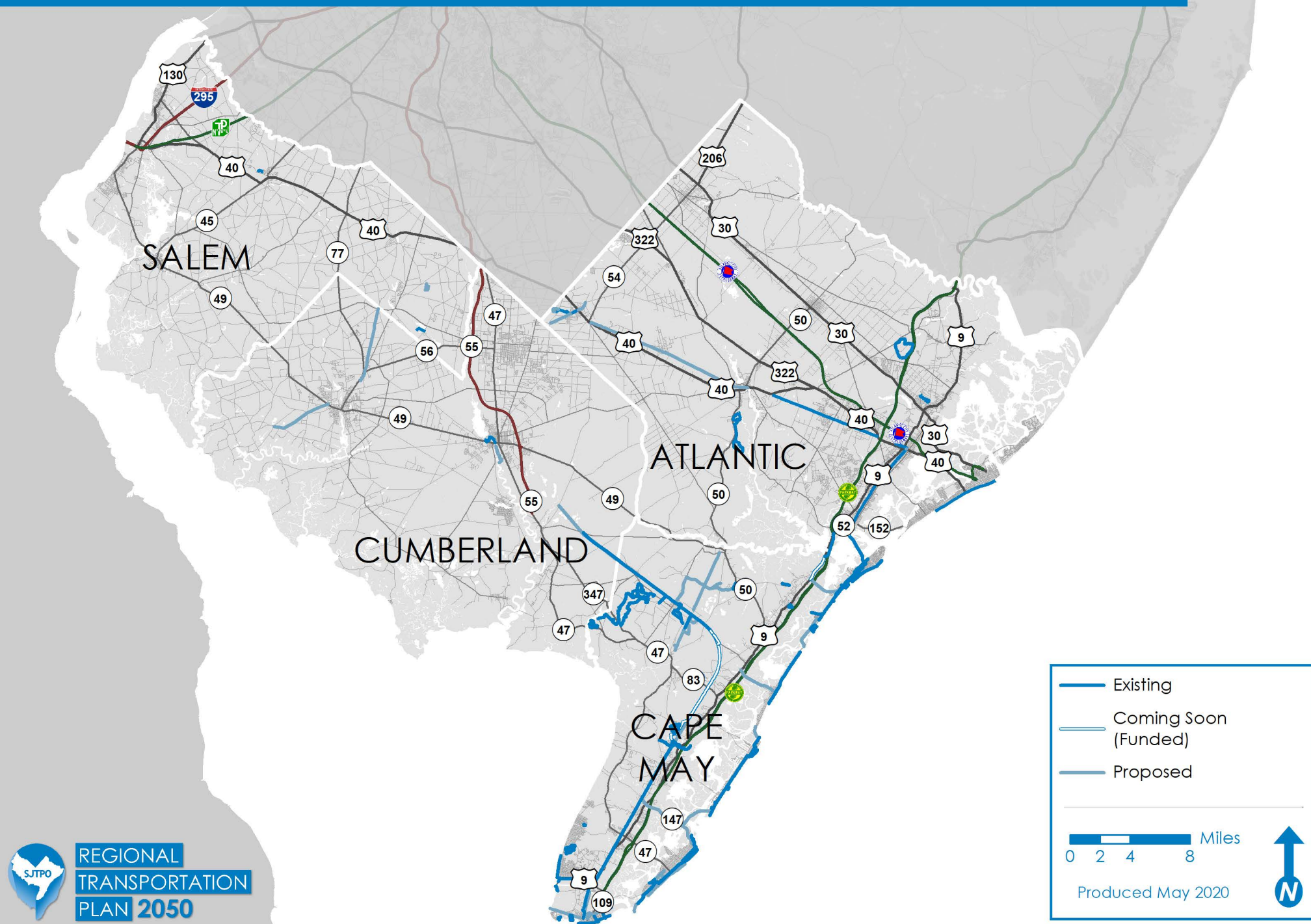




- **Wildwood Crest Bike Path: 1-mile** off-road, concrete and asphalt facility, from East Rambler Road, to East Cresse Avenue.
- **Woodbine Railroad Trail: 3.2-mile** off-road asphalt facility, from southeast of Petersburg Road to Dehirsch Avenue near Grant Avenue.
- **Bike lanes and boardwalks:** Cape May County also has miles of bike lanes in many of the Jersey Shore communities, as well as boardwalks, though many have time-of-day restrictions for bicyclists.
- An interactive map with information on major bikeways in Cape May County is available at https://ims.capemaycountynj.gov/CapeMay_StoryMap_WalkandBike/. The map includes information on bicycle and pedestrian facilities and their proximity to landmarks and attractions.
- **Cumberland County**
 - **Maurice River Bikeway: 1.4-mile** off-road asphalt and crushed stone facility, from Ware Avenue to Sharp Street in Millville.
 - **Port Norris Pathway: 0.8-mile** off-road, crushed stone facility, from Bivalve to Port Norris in Commercial Township.
 - **Bike lanes:** There are also designated bike lanes on Elmer and Wood Streets in Downtown Vineland as well as along Delsea Drive in southern Vineland and northern Millville.
- **Salem County**
 - **Elephant Swamp Trail: 5.1-mile** off-road stone and wood chip facility, from baseball fields at US 40 in Elmer to Elk Township Recreation Park in Gloucester County.
 - **Parvin State Park Trails: 15 miles** of off-road crushed stone, dirt, and asphalt facilities within Parvin State Park in Pittsgrove Township.
 - **Bike lanes:** There is a 5-mile designated bike lane in the Pilesgrove/Woodstown area, from the Woodstown High School to recreation areas and other points of interest.

Figure 26

South Jersey Trails



REGIONAL
TRANSPORTATION
PLAN 2050



The Circuit has planned connections for trails to the SJTPO region, presenting an opportunity for connectivity between Philadelphia and the Jersey Shore.

South Jersey Transportation Planning Organization

Opportunities to Build Upon

The bicycle and pedestrian network in the SJTPO region is slowly growing. SJTPO is working to advance a regional vision for South Jersey Trails. The aim is to develop a vision for the network that will ultimately develop a “shelf” of projects that is ready to advance as funds become available. The region has inherent strengths that it can build upon to develop a strong network that will serve to further benefit the regional economy and serve as a resource for local residents. Some of these strengths or opportunities include the Jersey Shore and the desire of visitors to take advantage of amenities like trails to get better access to natural resources while avoiding uncomfortable traffic congestion. Additionally, the region’s proximity to the Greater Philadelphia Area as well as its region’s Circuit Trails network serves as a huge opportunity for the region, as the Circuit has planned connections for trails to the SJTPO region, which ultimately can present an opportunity for connectivity between Philadelphia and the Jersey Shore. This can serve as a major attraction and a major economic opportunity for communities and businesses along the way. In addition, an expanded network can be valuable in promoting economic development and can help improve access for households with limited or no access to an automobile.

Bike/Ped, Multi-Use Trails, and Tourism – An Economic Driver

There are many reasons to promote the use of alternative modes, such as bicycle and pedestrian travel. A result of their impact on mobility, accessibility, and quality of life is that they improve the local economy. The impact of this is seen on multiple levels. It is intuitive to many that a well-connected bicycle and pedestrian network as well as multi-use trails provide an amenity that tourists enjoy, particularly when they connect to attractions and local businesses. Residential and commercial developers are recognizing the value of trail-oriented development and we are now seeing a new generation of bicycle-friendly buildings and projects. By adding bike-friendly amenities, developers and homebuilders are finding that they can appeal to both ends of the demographic spectrum: young people who want to live closer to work as well as baby boomers who are looking for a more walkable and bikeable lifestyle.¹⁶

Perhaps less known is that studies¹⁷ indicate that potential tourists who take advantage of these kinds of facilities are more affluent than average residents, which presents a real opportunity for local economies. Further, amenities, such as trails are highly demanded by prospective homeowners. According to the National Association of Homebuilders, “Trails consistently remain the number one community amenity sought by prospective homeowners.”

Providing amenities that are in high demand increase demand for local properties, which raises property values and results in generation of additional tax revenue for local communities. Everyone has roads but fewer communities have a good trail

¹⁶ Urban Land Institute. Active Transportation and Real Estate: The Next Frontier. 2016. <http://uli.org/wp-content/uploads/ULI-Documents/Active-Transportation-and-Real-Estate-The-Next-Frontier.pdf>.

¹⁷ Economic Impact of Recreational Trail Use in Different Regions of Minnesota. Ernesto C. Venegas. University of Minnesota Tourism Center. November 2009. <http://atfiles.org/files/pdf/MinnesotaTrailEconomicImpact2009.pdf>.

network, which makes that an amenity people are willing to pay for. In short, people with the resources to choose where they want to live, choose to live in communities with amenities like trails.

Aviation

Described below are airports in the region with scheduled service.

Atlantic City International Airport

In spite of its relatively small size, the SJTPO region has a variety of public use airports, both publicly and privately owned. The Atlantic City International Airport located in Egg Harbor Township offers commercial service flight operations – one of three in New Jersey. The airport serves to facilitate tourism into the region, as well as to link the region to other aviation hubs for business and leisure travel.

SJTA operates the terminal, runways, and related facilities at the airport. The Federal Aviation Administration William J. Hughes Technical Center and New Jersey Air National Guard are located at the airport. The Atlantic City International Airport is located 10 miles from downtown Atlantic City, a gaming and resort community that attracts millions of visitors annually. The airport is situated adjacent to the Atlantic City Expressway, which runs from Atlantic City to the Philadelphia metropolitan region and intersects with the Garden State Parkway.

In 2013, the Port Authority of New York and New Jersey took over the day-to-day operations of the Atlantic City International Airport. Under this arrangement, SJTA agrees to pay the Port Authority to operate the facility in an arrangement that leaves the Port Authority responsible for marketing and air service development, among other things.

General Aviation Airports

In addition to the Atlantic City International Airport, the SJTPO region hosts several smaller public use airports, listed in [Table 12](#), below. There are four “Advanced Service” airports, which support corporate/executive and private-use general aviation activities, including Cape May County Airport, Hammonton Municipal Airport, Millville Municipal Airport, and Ocean City Municipal Airport. Several other airports, known as Basic Service airports, are smaller publicly owned and privately operated airports, and have paved or turf runways that support small general aviation aircraft.¹⁸ Basic Service airports within the SJTPO region include Bucks Airport, Kroelinger Airport, and Spitfire Aerodrome, formerly Oldmans Airport, of which Kroelinger Airport is the smallest. These general aviation airports serve private passenger, agricultural, and/or commercial charter and freight aircrafts.

18 NJDOT State Airport System Plan. “Draft Airport Service Roles and Minimum Airport Performance Objectives.” AECOM. June 25, 2019.


Table 12 – Public Use Airports in the SJTPO Region

Airports	Location	County
Atlantic City International Airport	Egg Harbor Township	Atlantic
Bucks Airport	Bridgeton	Cumberland
Cape May County Airport	Wildwood	Cape May
Hammonton Municipal Airport	Hammonton	Atlantic
Kroelinger Airport	Vineland	Cumberland
Millville Municipal Airport	Millville	Cumberland
Ocean City Municipal Airport	Ocean City	Cape May
Spitfire Aerodrome (formerly Oldmans)	Oldmans Township	Salem
Vineland-Downstown (serves Vineland, but is not located within municipal boundaries)		Gloucester
Woodbine Municipal Airport	Woodbine	Cape May

Freight Network

In addition to serving passengers, the extensive freight activity within the SJTPO region puts great demands on the transportation system as well. A description of the existing freight network and current activity within the SJTPO region is given below.

New Jersey Statewide Freight Plan¹⁹

The Statewide Freight Plan, adopted in December 2017, was structured to meet the requirements of the FAST Act and, as applicable, MAP-21. It is multimodal in nature and includes distribution and warehouse facilities, which are critical elements of the supply chain and have a significant national presence in New Jersey. The Statewide Freight Plan identified eight goals, as follows:

1. Improve Safety and Security
2. Strengthen Economic Competitiveness
3. Improve Reliability and Efficiency
4. Enhance System Resiliency
5. Maintain and Renew Infrastructure
6. Support Environmental Stewardship, Local Communities, and Quality of Life
7. Leverage Innovative Technologies and Practices
8. Facilitate Interagency Coordination and Governance

¹⁹ NJ Department of Transportation: NJ Statewide Freight Plan 2017.

Freight Flows, Growth, Modes

New Jersey's freight transportation system handled more than 511 million tons of freight worth nearly one trillion dollars in 2015. Approximately 29 percent of tonnage and 33 percent of value was inbound; around 27 percent of tonnage and 43 percent of value was outbound; and around 44 percent of tonnage and 23 percent of value was internal.²⁰

Overall, the state is projected to grow at a 1.4 percent Compound Annual Growth Rate (CAGR). The added tonnage will be evenly divided between inbound, outbound, and internal flows. International trade is forecasted to increase much more rapidly than domestic trade. Trucking will add the most tonnage, growing at the regional average CAGR. Multiple modes and air cargo are projected to grow much faster than the regional average CAGR, while rail and water are also expected to grow at above-average rates.

The supply chain analysis confirms that trucks are the predominant mode for moving freight in New Jersey, serving nearly 75 percent of all tonnage. Therefore, relieving bottlenecks, and shifting some of the projected growth in freight volumes from truck to rail or water modes is important.

Highway Freight Network

The highway freight network evaluated in the plan consists of the approved National Highway Freight Network (NHFN), the proposed additions/deletions to that network, the New Jersey Highway Freight Network (NJ Access Network), and the proposed Critical Urban/Critical Rural Freight Corridors (CUFC/CRFC). [Figure 27](#), below, displays the current and proposed Freight Highway Network for the SJTPO region.

The NHFN relates to freight at the national scale, while the NJ Access Network addresses the roadways serving goods movement within New Jersey and the surrounding region. States and MPOs are responsible for designating CUFCs and CRFCs in accordance with the FAST Act.

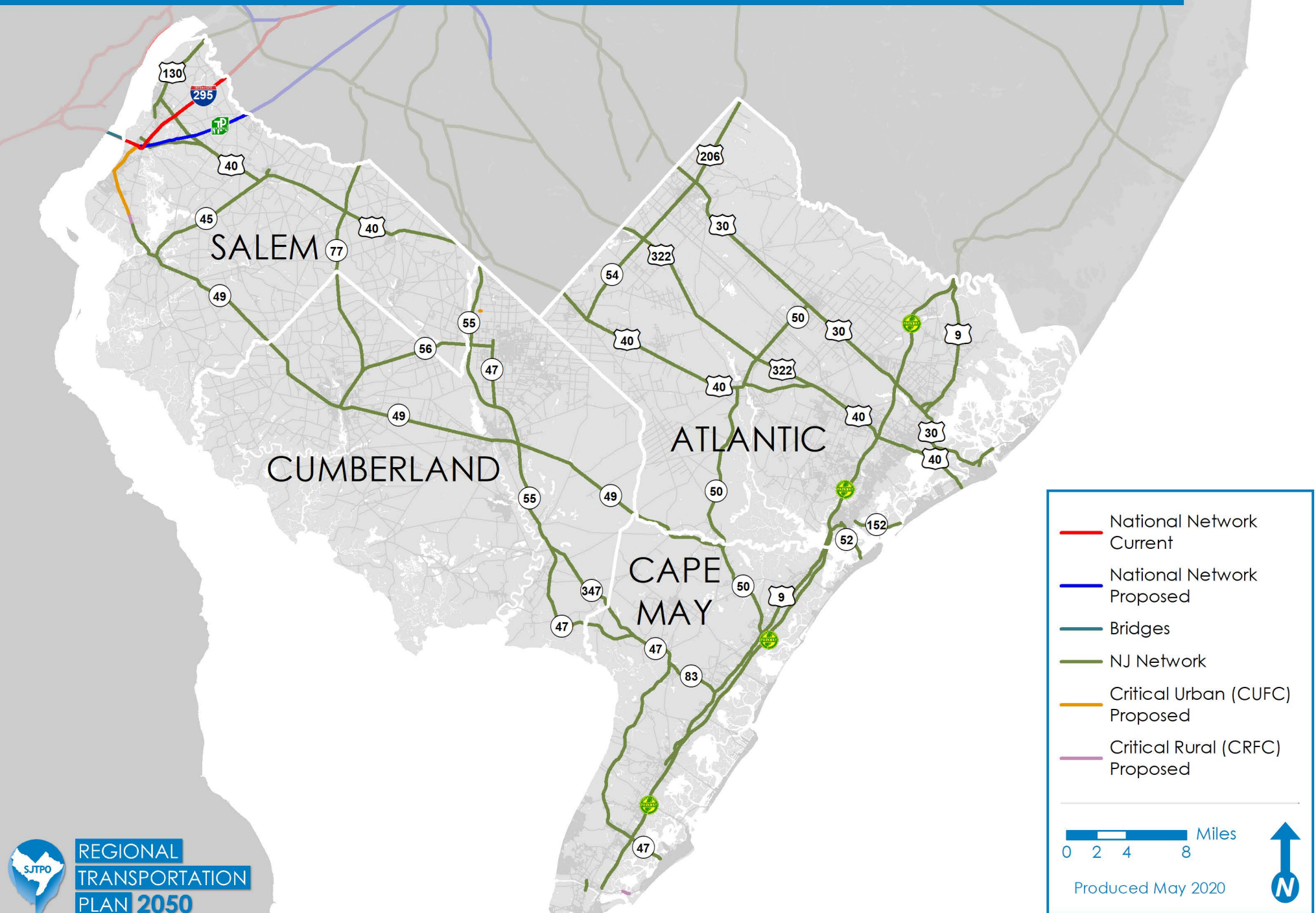
New Jersey may designate up to 150 miles of public roadways as CRFC and up to 75 miles as CUFC for roadways that are not already part of the NHFN. These roadways are identified as important freight corridors, allowing expanded use of NHFP funding and Infrastructure for Rebuilding America (INFRA) Grant Program funding.

In 2015, New Jersey's freight transportation system handled more than 511 million tons of freight worth nearly one trillion dollars.

²⁰ Federal Highway Administration, Freight Analysis Framework, Version 4 (FAF-4).

Figure 27

Freight Highway Network (Current and Proposed)



Highway Freight Performance was reviewed using three key measures: Planning Truck Travel Time Index, Average Truck Travel Speed, and Highway Truck Crash data. The results of the highway performance analysis were used to identify key problem areas where there is heavy delay, as determined by a high truck travel time index, or low truck travel speed and/or high crashes, as determined by an area being designated as a crash hotspot.

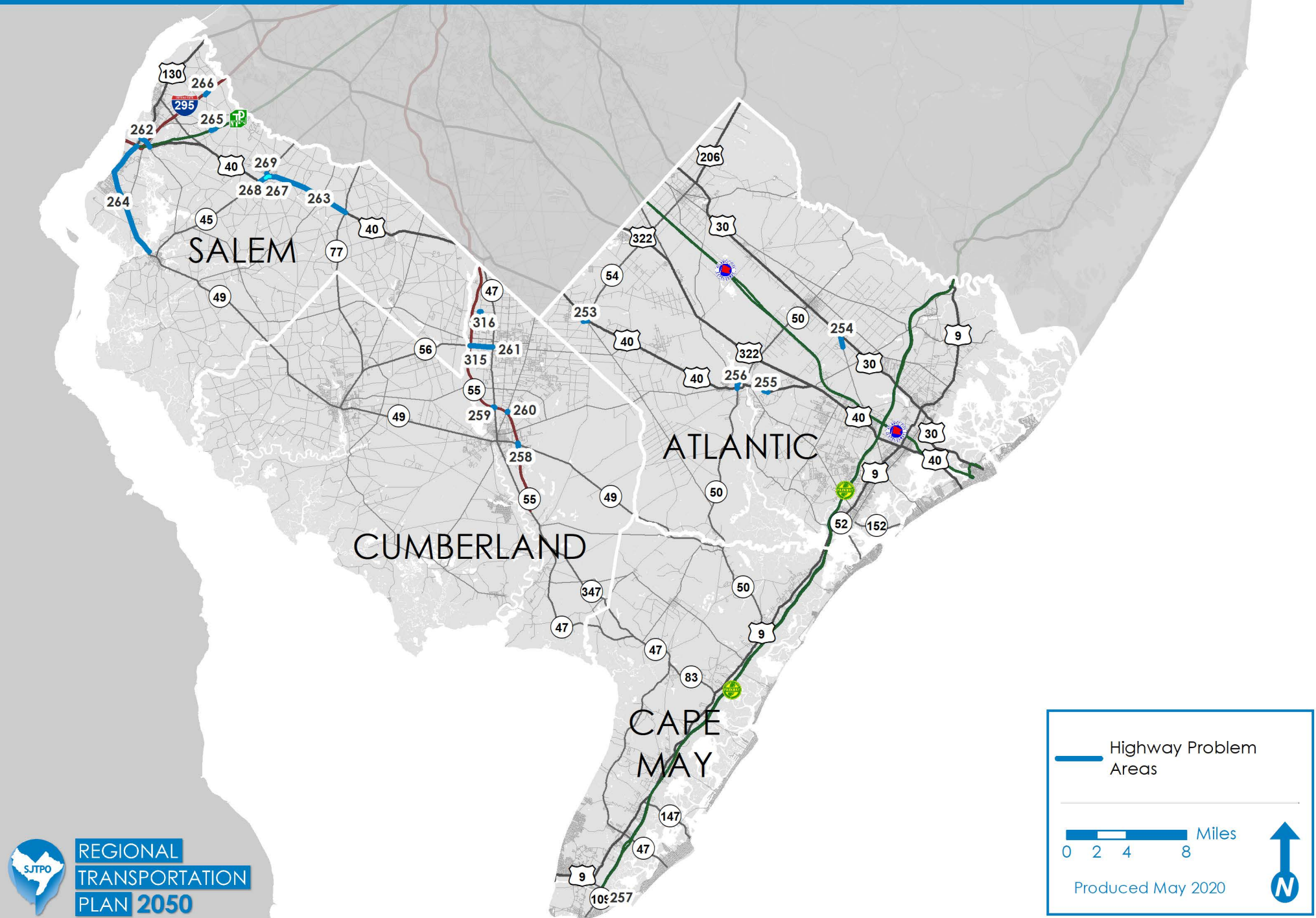
The SJTPO locations are listed and displayed in [Table 13](#), below. [Figure 28](#), below, displays the problem areas related to the CUFCs (urban) and CRFCs (rural).

Table 13 – Freight Highway Problem Areas in the SJTPO Region

Map ID	Route	County	Municipality	Start	End	Length	Critical Urban/Rural	How Identified
253	CR 619	Atlantic	Buena Vista Twp	CR 655	US 40/CR 557	0.23	Urban	Atlantic Co
254	CR 563	Atlantic	Galloway Twp	Country Club Dr	US 30	0.96	Urban	Atlantic Co
256	CR 616	Atlantic	Hamilton Twp	CR 559	US 40/NJ 50	0.36	Urban	Atlantic Co
255	US 40	Atlantic	Hamilton Twp	Cantillon Blvd	19th St	0.31	Urban	Atlantic Co
257	CR 621	Cape May	Lower Twp	Middle Thorofare Bridge		0.50	Rural	SJ Econ. Dev. Study
258	NJ 55	Cumberland	Millville City	NJ 49 (Int 24)		0.20	Urban	SJ Econ. Dev. Study
259	NJ 55	Cumberland	Millville City	NJ 47 (Int 27)		0.20	Rural/Urban	SJ Econ. Dev. Study
260	CR 555	Cumberland	Vineland City	NJ 55	CR 655	0.10	Urban	Cumberland Co
316	CR 674	Cumberland	Vineland City	Mill Rd		0.10	Urban	SJTPO
261	NJ 56	Cumberland	Vineland City	NJ 55	NJ 47	1.53	Urban	Cumberland Co
315	NJ 56	Cumberland	Vineland City	Mill Rd		0.20	Urban	SJTPO
262	NJ 140	Salem	Carneys Point Twp	US 130	US 40	0.99	Urban	Speed/Crash; TTI/Crash
264	NJ 49	Salem	Multiple	I-295	Front St	8.50	Rural/Urban	SJ Econ. Dev. Study
263	US 40	Salem	Multiple	CR 616	NJ 77	6.50	Rural/Urban	NJ FMS
266	I-295	Salem	Oldmans Twp	CR 643 (Int 7)		0.50	-	SJ Econ. Dev. Study
265	NJ Tpk	Salem	Oldmans Twp	Clara Barton/John Fenwick Service Areas		0.40	-	FP 2
267	US 40	Salem	Woodstown Boro	Int. Improvement Project		0.30	Urban	STIP
269	NJ 45	Salem	Woodstown Boro	US 40	CR 636	0.22	Urban	Speed/Crash
268	US 40	Salem	Woodstown Boro	Creek	Wilson Ave	0.48	Urban	Speed/Crash

Figure 28

Freight Highway Problem Areas



Truck Parking

Truck parking is rapidly becoming a critical issue. The FAST Act funding is eligible for the development of truck parking facilities, although states tend to utilize funds for the maintenance and repair of existing infrastructure. New Jersey is one state that has a severe truck parking shortage. Recent studies (NJTPA, DVRPC) and actions have been taken related to this topic. Truck parking solutions face challenges, including fiscal concerns, land availability, and public perception. The electronic log device mandate (2017) will be placing more attention on the issue.

Maritime Freight

South Jersey's geographic boundaries are largely defined by waterways – the Delaware River and Delaware Bay to the West and South, and the Atlantic Ocean to the East. These waterways provide a great opportunity in the region to expand New Jersey's maritime footprint, given the relative lack of congestion and availability of land for facilities.

Maritime Freight Network

The National Marine Freight Network (NMFN) includes two marine highways that serve New Jersey ports – the M-87 and M-95 Marine Highway Corridors. The M-95 Marine Highway essentially parallels the I-95 corridor between Maine and Florida. It is expected to modify shipping patterns, volumes, or schedules to east coast ports. Also, changes in overall waterborne freight and goods movement patterns may impact related motor freight or rail traffic serving various New Jersey ports.

In addition to the NMFN, other marine highways primarily support goods movement within New Jersey and the surrounding region. The Delaware River Main Channel was identified as an additional New Jersey Marine Highway, serving the entire South Region and ports in both New Jersey and Pennsylvania.

Port Facilities and Services

The Port of Salem is located on the Salem River in Salem County. It is one of the oldest ports on the east coast (1682). It is part of Foreign Trade Zone #142 and is owned and operated by the South Jersey Port Corporation. It generally handles smaller barge and container ships. The port handles sand and gravel, various dry bulk, motor vehicles and apparel. The Port covers 28 acres, has one berth, and contains shed and warehouse storage capacity of 60,000 square feet²¹. The Port has highway direct access Rt. 49, Rt. 45 with good access to US 130, I-295, and NJ Turnpike.

21 <https://www.southjerseyport.com/facilities/salem-terminal/>.



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The Port of Salem in South Jersey has an advantageous location among these waterways where, if improvements are made to highway and rail linkages, it can increase its role in New Jersey's maritime network. In 2018, SJTPO completed a planning study that reviewed intermodal and rail opportunities linking to the Port of Salem.

The Middle Thorofare Bridge has been identified previously as an impediment to the fisheries operating in South Jersey. While the structure itself is structurally deficient (load posted for 15 tons) and functionally obsolete, additional concerns for the goods movement industry are associated with waterborne clearances.

Rail

Existing Operating Issues, Strategies

The primary driver of freight demand across all modes, including rail, is economic and population growth. With a more stable, sustainable rail network and operational framework in place, rail freight volumes have continued to grow, driven by advances in freight rail productivity. NJDOT consulted with passenger and freight rail operators, and regional planning organizations related to New Jersey's needs for freight rail efficiency and reliability.

State of Good Repair (SOGR) is a critical issue for the FAST Act, and it applies to tracks, bridges, and grade crossings. SOGR issues may be solved through policy and increased funding to certain programs.

Clearance (horizontal or vertical) and structural capacity refer to the structural conditions of the freight rail system. An example of this is the Delair Movable Branch corridor. This bridge was recently improved to accommodate 286K rail cars and Plate F.²² However, capacity issues remain on the Philadelphia side. Resolving the issue will need cooperation, collaboration, and substantial capital investment.

Operation of 286K freight rail over passenger tracks creates conflict with Amtrak and New Jersey Transit's missions and fiscal resources. Coordination and dialogue amongst the stakeholders are required to identify solutions.

Existing Infrastructure Rail Constraints

The Statewide Freight Plan summarizes the freight rail issues. Three groups of rail constraints are identified for the SJTPO area. Group: 286K refers to the needed improvements to the New Jersey Transit passenger rail lines to better serve freight service. Group: PA-NJ-1 refers to the constraints in Pennsylvania that impact the SJTPO Region's use of the Delair Bridge. Group: SJPC (South Jersey Port Corporation) refers to maximizing South Jersey's access to the Port of Paulsboro and a direct freight rail connection between northern and southern New Jersey.

²² Both 286K and Plate F cars refer to "new larger rail cars" that are now the industry standard in freight rail operations. 286K (286,000 lbs.) refers to the weight of the rail car and its contents, while Plate F refers to the size of the car and contents.

Table 14 – Rail Constraints – SJTPO Priority Project Locations

Tier	Map ID	Name of Constraint	Line Name	Grouping
1	1	286k Request	Atlantic City Line	286K
1	53	Vertical Clearance Restrictions on Delair Bridge	Delair Branch	PA-NJ-1
1	70	286k Restrictions & Needed repairs	Salem Running Track	SJPC
2	54	Vertical Clearance at G Street (19'10")	Delair Branch	PA-NJ-1
2	55	Vertical Clearance at Front Street (20'2")	Delair Branch	PA-NJ-1
2	56	Vertical Clearance at 2nd Street (18'8")	Delair Branch	PA-NJ-1
2	57	Vertical Clearance at 5th Street (19'3")	Delair Branch	PA-NJ-1
2	58	Vertical Clearance at Margie Street (18'10")	Delair Branch	PA-NJ-1
2	59	Vertical Clearance at Ridge Avenue (18'11")	Delair Branch	PA-NJ-1
2	60	Vertical Clearance at Cecil B. Moore Avenue (18'0")	Delair Branch	PA-NJ-1
2	71	Paulsboro Wye to Port Connection	Vineland Secondary	SJPC
2	72	North Jersey & South Jersey Connection		SJPC

Air Freight

Air freight cargo tends to be the highest unit cost to move; it is generally time sensitive, light in weight and high in value²³. Therefore, the airports in the SJTPO region could play an expanded role for this freight mode of transportation.

Atlantic City Airport

The Atlantic City International Airport (ACY) conducts commercial and general aviation operations, offering air travel to support commerce, tourism, and the general public.

ACY is operated by the South Jersey Transportation Authority. It is located in Egg Harbor Township, about 10 miles from Atlantic City. It is accessible by car via Route 30, the Garden State Parkway, and the Atlantic City Expressway. The airport is not directly accessible by train, but two stations on the Atlantic City Line – Egg Harbor and Absecon – are located nearby. Several additions and upgrades have been made to the airport since 2004²⁴.

The 5,143 acres that the Atlantic City International Airport resides on is shared and owned primarily by the William J. Hughes Technical Center (WHTC), an important facility for aviation research and development. The WHTC is also being expanded to include a research lab and additions to the campus. In addition, the William J. Hughes Center contains a branch of the Department of Homeland Security, the Transportation Security Lab, the United States Coast Guard Group Air Station

²³ New Jersey Statewide Freight Plan 2017.

²⁴ Atlantic County Master Plan, May 2018.



South Jersey Transportation Planning Organization

Atlantic City, and the New Jersey Air National Guard 117th Fighter Wing. The Center houses a wing of National Guard aircraft and serves as a major base of operations.

There are currently limited cargo operations at the Atlantic City Airport. However, an export-import distribution center is currently being planned for ACY, with the primary role of serving South Jersey's farm and fisheries markets. This indicates the substantial potential for growth in air cargo at this facility²⁵.

The FAA William J. Hughes Technical Center and Atlantic City International Airport present the opportunity to form a new hub of economic activity in the County. The County should encourage land uses in its vicinity with connections to appropriate infrastructure that can complement or expand the economic potential in emerging industries²⁶.

The New Jersey Wind Port

New Jersey has selected a firm to build its first offshore wind project, a 1,100-megawatt installation, 15 miles off the coast of Atlantic City. Offshore wind installations such as this, need port facilities to meet their unique requirements. The massive size of the wind turbine components calls for ports with wharfs that can accommodate up to 800 tons. This type of port infrastructure is lacking along the East Coast. Therefore, a new port is being constructed to serve the wind project.

The New Jersey Wind Port will be built in Lower Alloways Creek Township, Salem County, on an artificial island on the Delaware River, which flows into the Atlantic Ocean. The land is owned by PSE&G and is next to the utility company's Hope Creek Nuclear Generating Station. The new port will provide staging, assembly, and manufacturing activities related to offshore wind projects in New Jersey and along the East Coast, which includes the offshore wind project mentioned above. The New Jersey Economic Development Authority (NJEDA) is leading development.

Construction is expected to begin in 2021 and last years. The project has two phases of construction. Phase one will be to develop 55 acres, which will include a 25-acre area for manufacturing wind power components. Phase two will develop 150 acres to expand the operation and include facilities that can handle massive turbines.

The project has the potential to create as many as 1,500 jobs, as well as hundreds of construction jobs in the state. The port is expected to also attract developers, and manufacturers that will want to be located nearby. This positions South Jersey to potentially become an epicenter for offshore wind capital investment²⁷.

²⁵ New Jersey Statewide Freight Plan 2017.

²⁶ Atlantic County Master Plan May 2018.

²⁷ Frank Kummer. Posted: June 16, 2020 - 2:49 PM. @FrankKummer. fkummer@inquirer.com.

Millville Airport

The Millville airport covers 916 acres in Cumberland County. It has two runways: 6,002 by 150 feet, asphalt and 5,057 by 150 feet, concrete²⁸.

The Delaware River & Bay Authority (DRBA) is the sponsor for the Millville Executive (MIV) and Cape May (WWD) Airports in New Jersey. The DRBA Airports Division is responsible for operations, maintenance, property management, economic development, and safety/security at each facility²⁹.

None of Millville's runways exceed 6,000 feet in length and this limits its usefulness as a large-scale freight facility since most freight airplanes require a 10,000-foot runway. Access improvements are also necessary to fully exploit the airport facility as a trans-modal facility³⁰.

However, MIV does offer several features relevant for freight and economic development, including:

- Instrument Landing Systems
- 24-hour operations
- Security provided by DRBA Safety and Operations
- 70 acres airside, plus 40 acres landside of developable land
- Over 300 additional acres of developable, shovel-ready industrial park immediately adjacent to the airport property
- Immediate availability of hangar, shop, and office space
- Unmatched federal, state, and local incentives

Other factors that contribute to MIV's freight potential include:

- New businesses can take full advantage of the DRBA's land-lease or build-to-suit and lease-back programs
- Millville Airport is part of United States Free Trade Zone #142, which includes the Port of Salem and licensed to the South Jersey Port Corporation (SJPC).
- There are four industrial parks nearby³¹:
 - Airport Industrial Park (Millville)
 - Gorton Road Industrial Park (Millville)
 - Vineland Industrial Park (Vineland)
 - Bridgeton Industrial Park (Bridgeton)

28 FAA Airport Form 5010 for MIV PDF. Federal Aviation Administration. Effective 30 June 2011.

29 <http://mivairport.com/>.

30 Cumberland County Transportation Plan March 2013.

31 www.sjedd.com/sjedd/industry-parks.asp.



New Jersey is one of the fastest-warming states in the country, increasing in temperature of at least three degrees Fahrenheit over the past century.

Currently, limited cargo operations exist at the Atlantic City International Airport.³² Input from the Freight Advisory Committee indicated that an export-import distribution center is currently being planned for the airport, with the primary role of serving South Jersey's farm and fishery markets. This indicates the substantial potential for growth in air cargo at this facility. In addition to the Atlantic City International Airport, Millville Airport in South Jersey, operated by the Delaware River & Bay Authority, was identified as having potential cargo opportunities, given that it is part of Foreign Trade Zone 142.

Climate Change and Greenhouse Gas Emissions

A major environmental concern within the SJTPO region, which is observed worldwide, is the increase in average temperatures due to emissions of greenhouse gases, such as carbon dioxide (CO₂). There is broad scientific consensus that greenhouse gas (GHG) emissions caused by human activity are affecting the earth's climate, and that increasing atmospheric GHG concentrations will result in significant adverse global, regional, and local environmental impacts. Evidence exists of an increase in the statewide average temperatures, as per the indicators below.

According to the "State of the Climate: 2013" report published by the Rutgers Climate Institute, New Jersey has experienced an increase in temperature of at least 3°F over the past century. The report also notes that the past 25 years have been characterized by more unusually warm months in New Jersey than unusually cold months. The disparity has been even greater since 2000, as unusually warm months have outnumbered unusually cold months by 25 to 2.³³ In addition to the increase in average yearly temperature, New Jersey is one of the fastest-warming states in the country. Since 1980, New Jersey has begun to experience more rapid warming, with five of the warmest years occurring after 1998. As shown below, New Jersey's top 10 warmest years since record keeping began in 1895³⁴ have all come after 1990, including 2012, which was the hottest year on record in New Jersey.³⁵

- | | | |
|-----------------|-----------------|------------------|
| 1. 2012 (55.9°) | 5. 2011 (54.9°) | 8. 1990 (54.5°) |
| 2. 1998 (55.2°) | 6. 2010 (54.7°) | 9. 1991 (54.4°) |
| 3. 2016 (55.0°) | 7. 2017 (54.6°) | 10. 2002 (54.3°) |
| 4. 2006 (55.0°) | | |

Projected effects of climate change include rising sea levels, increased storm surge, and increased frequency and severity of storms, all of which could affect the region's transportation facilities.

32 New Jersey Statewide Freight Plan 2017, Table 31.

33 Rutgers Climate Institute. "State of the Climate: New Jersey." 2013. <https://climatechange.rutgers.edu/docman-list/special-reports/133-state-of-the-climate-new-jersey-2013/file>.

34 Office of the State Climatologist, August 2019.

35 At: <https://www.nj.gov/dep/climatechange/data.html>. Accessed 29 December 2019.

Sea Level Rise

As with increasing average temperatures, there is ample evidence of rising sea levels. While rates of sea level rise vary globally, sea levels along the Jersey Shore have risen faster than the global average, especially in the last 25 years, due to melting glaciers, the expansion of warmer water, and a gradually sinking coastline.³⁶ According to Lenore Tedesco, Executive Director of the Wetlands Institute in Stone Harbor, sea level along the New Jersey coastline is in a rise rate of 1.5 feet per century since 1965.³⁷ In Atlantic City, where records extend back to 1912, sea level has risen by an average rate of 1.5 inches per decade, which equates to a rate of approximately 1.3 feet per 100 years. If no action is taken by 2100, the Jersey Shore could see a 6.3-foot sea level rise, according to Rutgers scientists.³⁸

Storm Surge

Even though precipitation from the storms themselves can inflict severe damage on a community, often times it is the *storm surge* resulting from the storm that can inflict the most damage, as was the case with Superstorm Sandy. *Storm surge* is the abnormal rise in seawater level during a storm, measured as the height of the water above the normal predicted astronomical tide. The surge is caused primarily by a storm's winds pushing water onshore.³⁹ Using a rating system known as the Saffir-Simpson Hurricane Wind Scale, hurricanes are rated from 1 to 5, based on their sustained wind speeds. Superstorm Sandy was a Category 3 hurricane, with wind speeds between 111 and 129 mph.⁴⁰ [Figure 29](#), below, depicts the impacts from the surge of a Category 3 storm, as predicted by the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model.⁴¹

In 2018, New Jersey experienced more precipitation than any other year since records have been kept, despite the absence of any single big storm.⁴² In the past century, New Jersey has experienced an upward trend of 4.1 inches (9 percent increase) in precipitation per 100 years. Further, 2011 was the wettest year on record for New Jersey, with August 2011 setting the record for the all-time wettest month.⁴³ Most scientists and researchers believe that the average intensity of storms is likely to increase, in terms of maximum wind speed and rainfall, as well as the frequency. There is also high confidence that the impacts of future storms are likely to be more severe because of rising sea levels.⁴⁴

Storm surge is the abnormal rise in seawater level during a storm.

36 Scott Fallon and Andrew Ford. "The Future is Now." [The Daily Journal](#). August 29, 2019.

37 Jack Fichter. "Study: New Jersey has fastest-rising temps in U.S." [Ocean City Sentinel](#). July 31, 2019.

38 Rutgers. "New Jersey's Rising Seas and Changing Coastal Storms: A Summary of the 2019 Science and Technical Advisory Panel." November 2019. At: <https://www.nj.gov/dep/climatechange/pdf/nj-rising-seas-changing-coastal-storms-stap-report.pdf>. Accessed 17 March 2020.

39 At: <https://oceanservice.noaa.gov/facts/stormsurge-stormtide.html>. Accessed 29 December 2019.

40 At: <https://www.weather.gov/mfl/saffirsimpson>. Accessed 13 March 2020.

41 Category 3 is the third-highest hurricane classification category on the Saffir-Simpson Hurricane Scale, and storms that are of this intensity maintain maximum sustained winds of 96–112 [knots](#) (111–129 mph, 178–208 km/h).

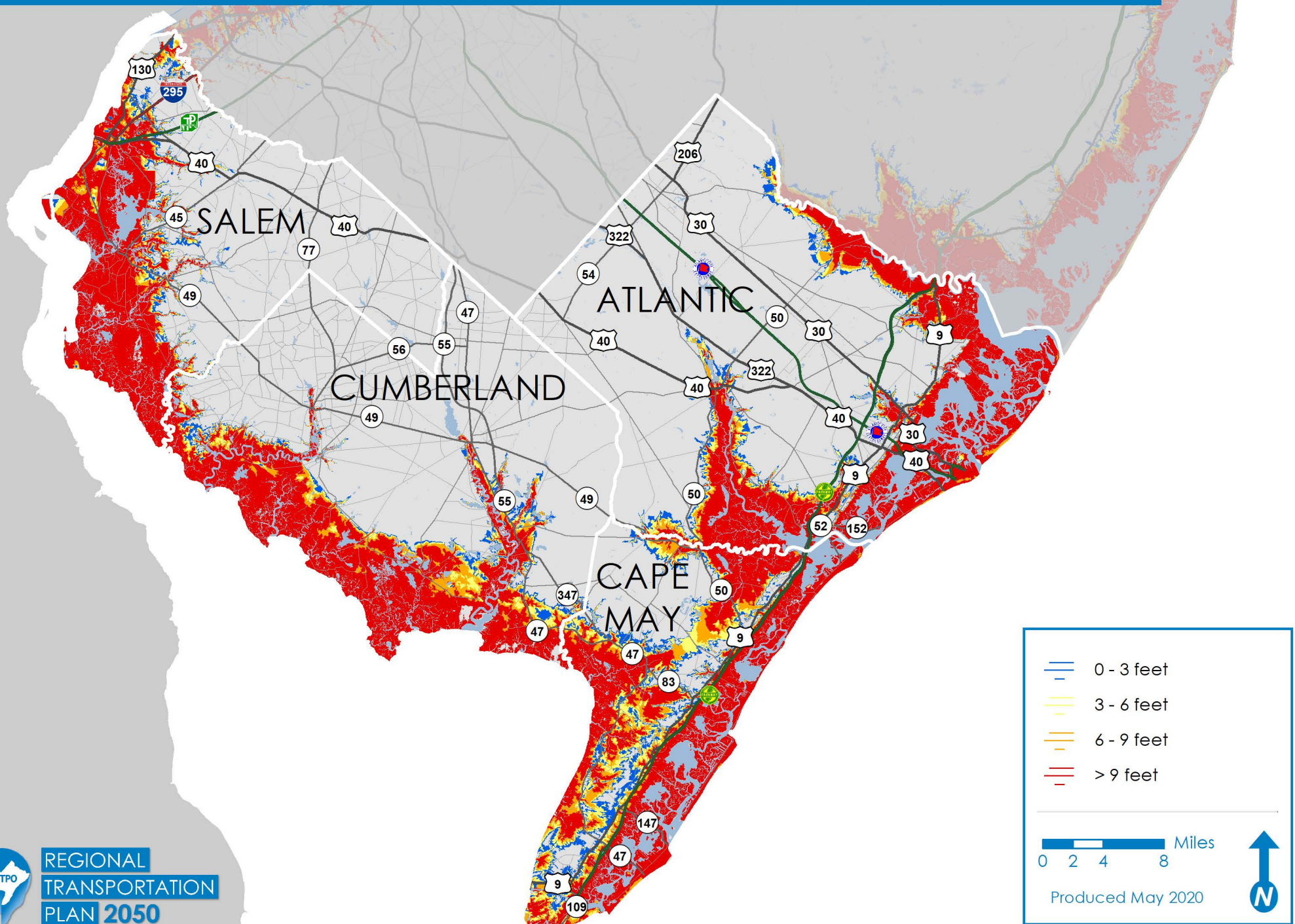
At: https://en.wikipedia.org/wiki/List_of_Category_3_Atlantic_hurricanes. Accessed 22 November 2019.

42 Fallon and Ford. "The Future is Now."

43 At: www.nj.gov/dep/climatechange/data.html. Accessed 29 December 2019.

44 Rutgers Climate Institute.7.

Storm Surge - Category 3



Furthermore, numerous studies have shown that vehicular emissions, primarily from automobiles, trucks, buses, and other on-road vehicles, are a major contributor to GHG levels in the atmosphere. The 2014 SJTPO Regional Greenhouse Gas Emissions Inventory revealed that, in 2010, the largest emissions sector in the SJTPO region was transportation, representing 45.5 percent of gross emissions. The 2018 Statewide Greenhouse Emissions Inventory showed that out of a total net emission of 97.0 million metric tons of CO₂e (MMTCO₂e) emitted in 2018, transportation was the largest single source in New Jersey, emitting 40.6 MMTCO₂e, representing 42 percent of total emissions statewide.⁴⁵

Impacts on Transportation Infrastructure

Not surprisingly, excessive heat, sea level rise, and storm surge have significant adverse impacts to the region's transportation infrastructure. Increased heat can cause railroad tracks to expand and buckle. Frequent flooding caused by an increase in sea level rise and higher storm surge can necessitate the replacement of both roadways and railways. Higher storm surges can also require rail, rail bed, and embankments to be replaced, and can damage electrical equipment and wiring. Furthermore, storm debris from storm surges can lead to temporary road closures and cancellations in transit service. These are just a few of the many impacts of increased heat, sea level rise, and storm surge on the transportation infrastructure. Mitigation and adaptation measures necessitated by these phenomena are described in more detail under [Goal 5](#) in [Chapter IV](#).

Flood Zones

With all four of SJTPO's counties fronting either the Delaware Bay or the Atlantic Ocean, it is not surprising that reoccurring flooding is a significant issue within the SJTPO region. The special flood hazard areas (SFHAs), that comprise the SJTPO region are described and shown in [Figure 30](#), below. SFHAs are defined as the areas that will be inundated by a flood event having a one percent chance of being equaled or exceeded in any given year. The one percent annual chance flood is also referred to as the base flood or 100-year flood, while the 0.2 percent annual chance flood is often referred to as the 500-year flood, and defined as the boundary of the flood that has a 0.2 percent chance of being equaled or exceeded in any given year.^{46, 47} As can be seen from [Figure 30](#), below, much of the coastal portions of the SJTPO region are designated as Zone AE, which is an area that would be inundated by one percent annual chance flooding, and Zone VE, which is an area that would be inundated by one percent annual chance flooding with wave action. Much of the inland portion of the SJTPO region is designated as Zone X, which is defined as areas outside the SFHA and higher than the elevation of the 0.2 percent-annual-chance flood.⁴⁸

⁴⁵ www.nj.gov/dep/aqes/oce-ghgei.html. Accessed 11 November 2019.

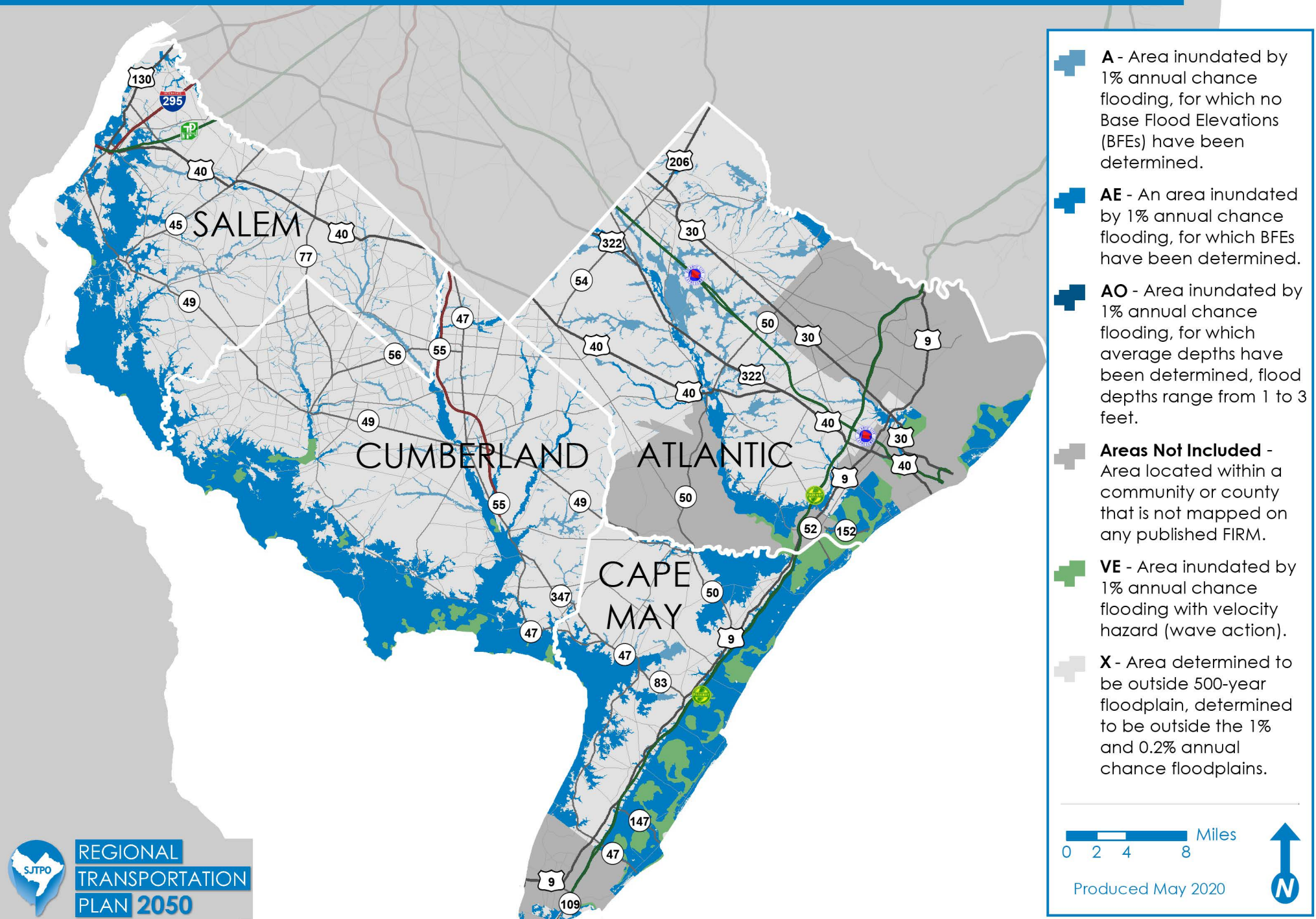
⁴⁶ At: www.fema.gov/flood-zones. Accessed 17 March 2020.

⁴⁷ FEMA. "How to Read a Flood Insurance Rate Map Tutorial." 2003. At: www.fema.gov/media-library-data/20130726-1550-20490-1950/ot_firm.pdf. Accessed 17 March 2020.

⁴⁸ At: www.fema.gov/flood-zones. Accessed 17 March 2020.

Figure 30

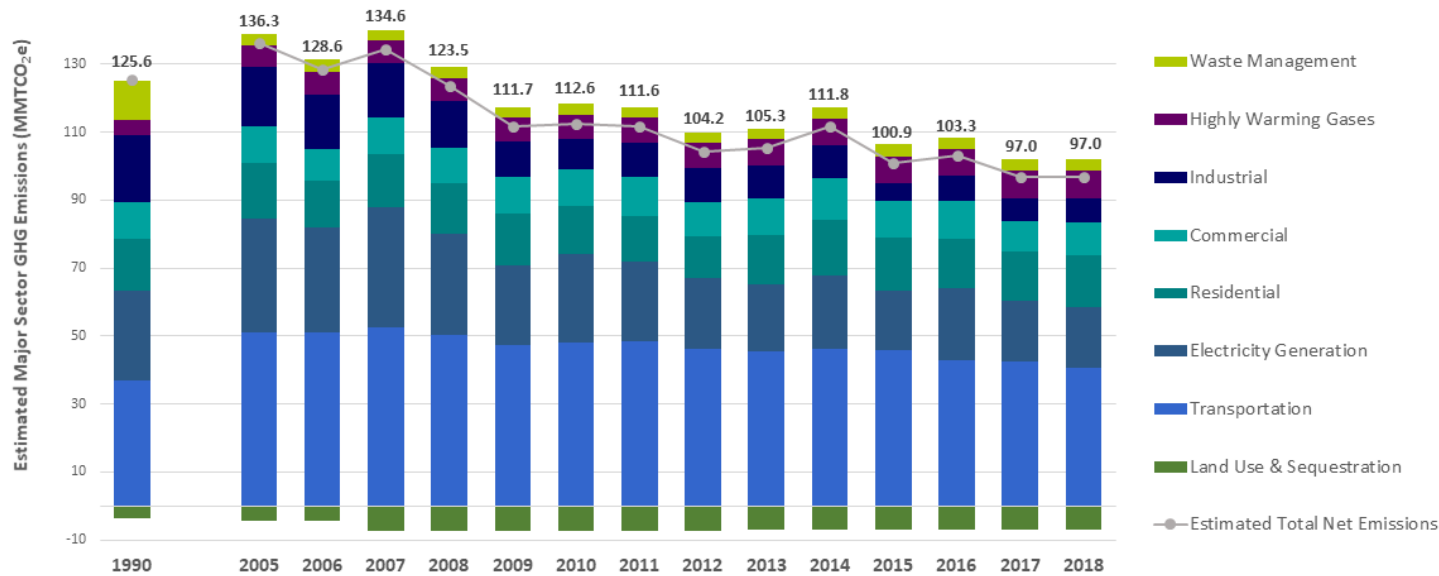
Special Flood Hazard Areas



State-level Legislation

Given the consensus amongst numerous government officials, particularly at the state level, that climate change and its deleterious impacts is a serious problem and needs to be addressed now, the State of New Jersey has developed policies and plans to deal with this problem. In 2007, the Governor of New Jersey signed the Global Warming Response Act (GWRA), which called for the reduction of GHG emissions to 1990 levels by the year 2020, followed by a further reduction of emissions to 80 percent below 2006 levels by 2050. According to the GWRA, the 2020 limit is a quantity equal to the 1990 emissions total (baseline), which has been estimated to be 125.6 MMTCO₂e, and the 2050 limit is 24.6 MMTCO₂e, a quantity 80 percent less than the 2006 emissions. On a statewide level, emissions have been going down, from 103.3 MMTCO₂e in 2016, to 97.0 MMTCO₂e in 2017, and 97.0 MMTCO₂e in 2018, well below the 2020 125.6 MMTCO₂e limit. [Figure 31](#), below, depicts the recent greenhouse gas emissions levels from the 2018 NJ Statewide Greenhouse Gas Emissions Inventory, completed in 2019.

Figure 31 – NJ Greenhouse Gas Emissions, 1990-2018



Source: www.nj.gov/dep/climatechange/data.html.

There are several reasons that have been put forth to explain the decline in statewide Greenhouse Gas Emissions. These include:

- **More reliance on natural gas**, which emits less GHG per unit of energy, as opposed to coal in some electricity generating plants.



***SJTPO is committed to
ensuring projects
have equitable
benefits and burdens.***

- **Increased energy efficiency** encouraged by state policies and following a long-standing national trend, which has led to lower energy use and GHG emissions. In addition, up until recently, there had also been a rise in vehicle fuel efficiency, as reflected by the rise in the Corporate Average Fuel Efficiency Standards (CAFE) standards to 35.5 miles per gallon (mpg) in 2016, an increase of more than 20 percent from 27.5 mpg in 2000.⁴⁹
- **A trend of more electricity production from solar sources**, which has resulted in less generation from fossil fuel sources, lowering GHG emissions.⁵⁰

While it appears that New Jersey is on track to meet the 2020 emissions target of 125.6 MMTCO₂e, to achieve the 2050 GWRA limit of 24.1 MMTCO₂e, New Jersey will need to reduce its estimated GHG emissions by 72.9 MMTCO₂e between 2018 and 2050, approximately 75 percent, a much greater degree of reduction than that required to meet the 2020 limit.⁵¹ [Chapter IV.5](#), below, lists existing and proposed emissions reduction strategies that will help attain that 2050 GWRA limit.

Equity in the SJTPO Region

One of SJTPO's strategies for promoting accessibility and mobility is "ensuring projects have equitable benefits and burdens," which leads to the larger issue of equity. Equity is a difficult issue to discuss and even more difficult to address. The first barrier to addressing equity is the stigma associated with equity that the only way to accomplish it is to take from one person and give to another. This creates animosity among those who perceive that they will be "wronged" along the way. Further, distrust in the ability of government agencies to manage programs and address issues often leads to a feeling of a "lose-lose" situation, where people feel something will be taken from them and the effort will not be effective anyway. This makes the issue difficult to talk about. In transportation, the connections to equity often feel at arm's length – transportation is often one of many issues that impact equity, so connections between the two are not always clear. However, it is important to recognize that transportation is, at its best, capable of putting equitable opportunities within reach. Transportation, when done correctly, should not make it more difficult for one person than another to access a job or healthcare service – this is why it is so important.

It is important to understand that in the context of this analysis, SJTPO is a disadvantaged region. As is laid out in the following sections, incomes are lower than the state as a whole, even relative to cost of living, access is lower, traffic fatalities are higher, poverty is higher, educational attainment is lower, social issues associated with poverty are more pronounced, health outcomes are worse, and ultimately lifespan is lower. With all of that said, planning and programming in New Jersey should be tailored to different needs throughout the state rather than take a one-size-fits-all approach. Further,

49 National Highway Traffic Safety Administration. "December 2014 Summary of Fuel Economy Performance" www.nhtsa.gov/fuel-economy. Despite these increases in fuel efficiency, the Trump administration plans to replace Obama's standards, which required the auto industry to just about double the fuel economy of vehicles to an average of about 54 miles per gallon by 2025, with nothing. Instead, it will simply freeze the standard at the 2021 level.

50 Ibid. 6.

51 Accessed 18 November 2019.

it is particularly concerning that the SJTPO region with these issues continues to fall behind in transportation funding relative to population, vehicle miles travelled, roadway mileage, or rates of poverty.

Legislative Basis of Equity

Not all measures of inequity are created equal. Over decades and even centuries of governance and court precedent, it has been established that certain inequities are particularly egregious, as certain groups have faced more sustained, aggressive, systemic inequity throughout our nation's history and thus require more deliberate protections under the law. Those protections, among other things, place a greater burden of proof on entities accused of discrimination to prove that discrimination did not take place. These pieces of legislation address race, color, national origin, disability, income, and physical ability. Further, antidiscrimination laws apply fully to any organization that receives any federal funding directly or indirectly, not only to the specific activities that directly receive federal funds.

- **Title VI of the Civil Rights Act of 1964** – Established that “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.”
- **Americans with Disabilities Act of 1990** – Prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public.
- **Executive Order 13166 (Limited English Proficiency)** – Provided clarity to the “national origin” component of Title VI. It requires agencies who receive federal funds to develop and implement a system by which Limited English Proficient (LEP) persons can meaningfully access those services consistent with, and without unduly burdening, the fundamental mission of the agency.
- **Executive Order 12898 (Environmental Justice)** – Defines Environmental Justice and directs agencies who receive federal funds to identify and address, disproportionately high adverse impacts of its activities on minority and low-income populations.



Demographics

[Table 15](#), below, offers a snapshot of the demographic makeup of the region. In general, the region tends to be older than the state as a whole, is slightly less diverse, and is much more rural.

Table 15 – Demographics of SJTPO Region

Demographics	New Jersey	SJTPO Region	Atlantic County	Cape May County	Cumberland County	Salem County
Households	3,213,362	214,294	99,874	39,904	50,608	23,908
Population	8,908,520	571,568	265,429	92,560	150,972	62,607
% below 18 years of age	21.9%	21.3%	21.2%	17.5%	23.9%	21.4%
% 65 and older	16.1%	18.7%	17.9%	26.6%	15.3%	18.6%
% Non-Hispanic Black	12.9%	13.8%	14.6%	4.1%	18.6%	13.4%
% American Indian & Alaska Native	0.6%	0.9%	0.7%	0.3%	1.6%	0.6%
% Asian	10.0%	4.5%	8.3%	1.0%	1.5%	1.1%
% Native Hawaiian/Other Pacific Islander	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%
% Hispanic	20.6%	19.5%	19.2%	7.9%	31.4%	9.5%
% Non-Hispanic White	54.9%	60.0%	55.9%	85.2%	45.9%	73.9%
% not proficient in English	6.0%	5.4%	6.0%	1.0%	8.0%	3.0%
% Females	51.1%	50.8%	51.6%	51.1%	49.0%	50.9%
% Rural	5.3%	19.8%	12.7%	17.5%	23.0%	45.3%

Source: The 2020 County Health Rankings. www.countyhealthrankings.org.

Transportation

In terms of traits related to transportation, the rural nature of the region, relative to the state as a whole, clearly translates to a number of differences shown in

[Table 16](#), below. Residents in the SJTPO region are more likely to drive alone, yet are less likely to have excessive commute times. This may be due to the fact that much of the region is simply too far from the Greater Philadelphia or New York areas, so residents are more likely to work locally. Traffic volumes are much lower. That said, due to the lower density, people are more likely drive more miles in a given year. In addition, deaths from motor vehicle crashes are nearly twice as high in the region. This is likely attributable to a number of factors. Second, alcohol is a contributing factor in a higher number of those deaths than in the state as a whole. In addition, the lower density, greater prevalence of rural areas, and less traffic volume or congestion translates to higher vehicle speeds, which causes crashes to be more severe.

Table 16 – Transportation Characteristics, SJTPO Region

Transportation	New Jersey	SJTPO Region	Atlantic County	Cape May County	Cumberland County	Salem County
Driving Alone to Work	71%	79%	77%	80%	81%	84%
Long Commute (30+ minutes) - Driving Alone	43%	29%	27%	24%	31%	37%
Traffic Volume (<i>Average traffic volume per meter of major roadways</i>)	661	175	288	86	60	107
Annual Vehicle Miles Travelled Per Household	24,130	27,353	27,230	27,878	23,873	34,357
Motor Vehicle Crash Deaths (<i>per 100,000 population</i>)	7	13	11	12	17	15
Alcohol-Impaired Driving Deaths (<i>percent of total driving deaths</i>)	22%	27%	26%	39%	24%	24%

Source: The 2020 County Health Rankings. www.countyhealthrankings.org.

Housing and Economics

Incomes in the SJTPO region are much lower than the state as a whole, with households in New Jersey making nearly \$82,000 annually, but just over \$59,000 per year in the SJTPO region. It is often suggested that these numbers do not translate to poverty as lower incomes are attributed to lower costs of living as well. However, the data show otherwise. The unemployment rate is more than 50 percent higher than the state and other metrics of poverty are all much higher. While it is true that housing costs are roughly 20 percent lower than that state as a whole, this does not tell the full picture. Vehicle ownership is a necessity due to the relatively sparse of transit coverage in the region and as such, costs associated with vehicle ownership are much higher. The result of this is that when vehicle ownership and housing are combined, the costs are a much greater share of median income in the SJTPO region (51.5 percent) compared to the state as a whole (39.1 percent).


Table 17 – Housing and Economic Characteristics, SJTPO Region

Housing and Economics	New Jersey	SJTPO Region	Atlantic County	Cape May County	Cumberland County	Salem County
Median Household Income	\$81,800	\$59,055	\$60,800	\$62,200	\$51,800	\$64,500
Homeownership	64%	68%	67%	78%	64%	70%
Annual Vehicle Expenses Per Household	\$13,150	\$14,907	\$14,840	\$15,194	\$13,011	\$18,725
Monthly Median Household Housing Costs	\$1,610	\$1,284	\$1,376	\$1,294	\$1,138	\$1,194
Vehicle & Housing Cost as percent of Median Household Income	39.1%	51.1%	51.6%	49.4%	51.5%	51.2%
Unemployment	4.1%	6.4%	5.9%	8.4%	6.5%	5.4%
Children in Poverty	14%	19%	19%	16%	22%	16%
Children in Single-Parent Households	29%	41%	41%	27%	50%	39%
Children Eligible for Free/Reduced Lunch	38%	54%	58%	40%	59%	42%
Households Using SNAP	9%	14%	15%	7%	19%	13%

 Source: The 2020 County Health Rankings. www.countyhealthrankings.org.

Social Factors

The social tolls of these economic disparities have been significant. Educational attainment is lower in the SJTPO region, similarly social stability metrics, such as single parent households, teen births and disconnected youth are less favorable, and crime statistics are notably higher.

Table 18 – Social Factors, SJTPO Region

Social Factors	New Jersey	SJTPO Region	Atlantic County	Cape May County	Cumberland County	Salem County
High School Graduation	91%	87%	90%	88%	81%	87%
Some College	69%	55%	59%	63%	40%	58%
Children in Single-Parent Households	29%	41%	41%	27%	50%	39%
Teen Births (<i>per 1,000 females ages 15-19</i>)	13	24	18	20	36	22
Disconnected Youth (<i>percent of age 16-19 neither working nor in school</i>)	6%	9%	7%	8%	16%	5%
Violent Crimes (<i>per 100,000 population</i>)	253	377	373	236	516	266
Injury Deaths (<i>per 100,000 population</i>)	56	90	87	92	92	94
Homicides (<i>per 100,000 population</i>)	4	6	7		8	6
Suicides (<i>per 100,000 population</i>)	8	11	13	11	8	12
Firearm Fatalities (<i>per 100,000 population</i>)	5	9	9	7	10	11
Juvenile Arrests (<i>per 100,000 population</i>)	19	39	37	46	38	43

 Source: The 2020 County Health Rankings. www.countyhealthrankings.org.

Health and Environment

Health is a factor that is often left out in transportation planning is health. However, the connections between health, transportation, and social and economic equity factors have become far more apparent in recent years. Land use and transportation determine whether a person has easy access to physical activity, which impacts health. They also determine the access people have to economic opportunity, which as a product of economic prosperity impacts social and physical health. Related to health, outcomes in the SJTPO are dire. Residents in the region on average live shorter lives, are more likely to be obese, and have less access to healthy food and food in general. In addition, the opioid epidemic as well as other drug and alcohol issues, have hit the region especially hard, with drug overdose deaths nearly double the state average. In addition, residents have less access to physical and mental health services. Residents generally have half the access to mental health providers as residents of the state as a whole. Cumberland County has half the access to physical health providers and Salem County has nearly one-third as much access as the state as a whole.

Table 19 – Health Indicators, SJTPO Region

Health & Environment	New Jersey	SJTPO Region	Atlantic County	Cape May County	Cumberland County	Salem County
Life Expectancy	80.4	76.6	77.2	77.2	75.4	76.2
Child Mortality (<i>per 100,000 population</i>)	40	53	50	50	60	50
Infant Mortality (<i>per 1,000 live births</i>)	4	6	7	5	6	5
Adult Smoking	14%	17%	16%	16%	18%	18%
Adult Obesity	26%	32%	30%	29%	36%	37%
Physical Inactivity	26%	30%	30%	27%	31%	30%
Access to Exercise Opportunities	95%	86%	91%	95%	79%	70%
Food Insecurity	10%	13%	13%	12%	13%	13%
Limited Access to Healthy Foods	4%	8%	8%	9%	10%	3%
Drug Overdose Deaths (<i>per 100,000 population</i>)	28	48	47	48	52	44
Alcohol-Impaired Driving Deaths (<i>% of total driving deaths</i>)	22%	27%	26%	39%	24%	24%
Uninsured	9%	10%	10%	8%	12%	8%
Primary Care Physicians	1,190:1	1,766:1	1,190:1	1,700:1	2,310:1	2,990:1
Dentists	1,160:1	1,818:1	1,750:1	1,680:1	1,540:1	2,980:1
Mental Health Providers	450:1	833:1	630:1	980:1	1,060:1	930:1
Preventable Hospital Stays (<i>per 100,000 Medicare enrollees</i>)	4,535	5,967	5,291	4,259	7,535	7,580

Source: The 2020 County Health Rankings. www.countyhealthrankings.org.



Transit as a Means of Equity

Transportation is an excellent opportunity to improve equitable access and thus equitable outcomes. There is perhaps no greater mode of transportation for working toward equity than public transit. Good transit service serves a whole host of societal goals, from emissions reduction and congestion management to promotion of investment in communities. It also provides users access regardless of their physical ability, age, income, or any other factor. With that, it is of particular importance for disadvantaged communities to have strong access to transit service. Unfortunately, the SJTPO region has very limited access to transit service. While discussed further in [Chapter II](#), it is important to note that funding for public transportation in the SJTPO region does not keep pace with one of any number of regional characteristics, as 8.7 percent of persons in poverty in New Jersey live in the SJTPO region and 6.4 percent of the year-round population lives in the region, only 2.7 percent of NJ TRANSIT funding between 2004 and 2019 have been spent in the SJTPO region.

Policy and Process: Barriers to Equity

Policies and procedures are set by all levels of government. They are important ways that funding sources establish the rules that users must follow to ensure that public money is spent responsibly. They are well-intended, and any negative consequences are generally unintentional. However, those policies and procedures are a one-size-fits-all approach and often they are not regularly reviewed to determine their impacts on communities that they intend to benefit. As shown earlier, communities in the SJTPO region are very different than in other parts of the state. Yet, the policies and procedures are the same everywhere. Those procedures likely work well for some communities. However, there are instances where disadvantaged communities face disproportionate negative impacts from these procedures. Some examples of this include federal responsible charge requirements and other burdensome requirements and processes to gain access to federal funds, policies of state and county governments that leave the responsibility of sidewalk maintenance or construction to local municipalities and property owners, and the policy of NJ TRANSIT to leave the responsibility of bus shelter maintenance to local municipalities as a condition of construction.

Responsible charge refers to a requirement for federal transportation funds that necessitates a jurisdiction to identify a full-time public employee who will act as the day-to-day manager of those funds (person in Responsible Charge). On its face, this is a reasonable requirement. In practice, this requirement can eliminate many communities from consideration for federal funding for transportation projects, as many jurisdictions cannot afford to keep a full-time staff member in a position relevant to transportation planning or engineering. Those communities often rely on private consulting firms, whose employees are not eligible to meet this federal requirement. Similarly, the overall regulatory burden on a recipient of federal funds is rigorous, time consuming, and costly. While jurisdictions can generally be reimbursed for their expenses, they must pay for them first, before they are reimbursed. This can essentially mean that communities without funds on hand cannot receive these funds. In some areas, counties can step in and implement the project for a disadvantaged municipality, alleviating both of these barriers. However, if the county does not have the resources to provide that level of assistance or would have too many communities with that level of need, there are currently no other options.

It may be surprising to learn that despite the fact that a sidewalk serves the same public utility as a roadway, many jurisdictions do not construct or maintain sidewalks along their roadways. The result is often that municipalities must step in to construct or maintain sidewalks, even along roadways they do not own, in order to provide access for those who need them. This is a major barrier for communities with limited financial means and can mean that those communities often have fewer sidewalks, in poorer condition, even when the demand for them may be greater in communities with a higher number of no car households. Similarly, while the construction of bus shelters is funded by the state, the municipality must agree to bear full cost of maintenance. Not only does this put low-income communities at a disadvantage, but it puts bus infrastructure in lower standing relative to rail infrastructure, which does not require maintenance by local governments.

The policy and process barriers described above are all outside the direct control of SJTPO. However, SJTPO will work to help with these issues going forward. It is important to note that generally, any policy or process in place, serves a purpose, addresses a previous issue, or responds to resource limitations, etc. It will be important for SJTPO to work with appropriate agencies to identify the underlying needs, discuss the unintended barriers, and assess possible solutions. Solutions may include removing or altering a policy or procedure and may include mitigation, to which SJTPO may be able to play a more direct role.

Environment

The SJTPO region is also bursting with a multitude of precious environmental resources including coastal and freshwater wetlands, wildlife habitat areas, prime farmland, forested areas, Natural Scenic Areas, Wild and Scenic Rivers, and unique natural areas, such as the Pinelands and the coastal environment. Based on the 2015 Land Use/Land Cover, land uses in the SJTPO region are shown in [Table 20](#), below.

Table 20 – Land Uses in the SJTPO Region

Land Use	Percentage
Agriculture	6.46%
Barren Land	1.81%
Forest	31.18%
Urban	24.42%
Water	5.24%
Wetlands	30.89%

Source: NJDEP. Land Use/Land Cover Map. 2015.



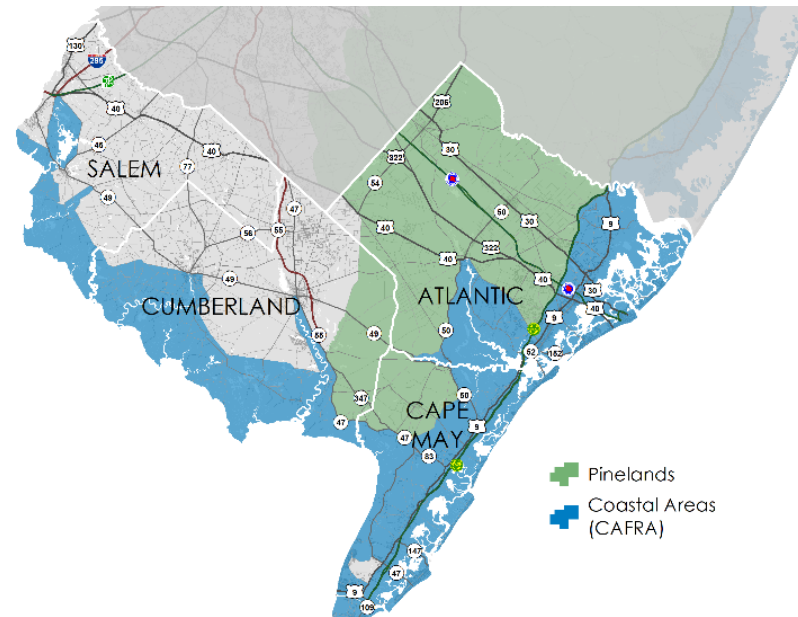
Consideration of the natural resources and environmental features in the region are an essential part of the long-range transportation planning process.

The Pinelands Area is a million-acre mosaic of forests, farms, and towns that lies above trillions of gallons of water.

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Careful consideration of the natural resources and significant environmental features in the SJTPO region are an essential part of the long-range transportation planning process. CAFRA was adopted to control the adverse impact of major industrial sites and public works facilities (e.g., power plants, food-processing facilities, hazardous-materials storage facilities, etc.) on water quality and estuarine habitat. In 1993, amendments to the act expanded the scope of review to include development in regulated coastal areas.⁵² CAFRA also established the CAFRA zone, depicted in the map, at right, as the bounds of CAFRA regulation. All four counties within the SJTPO region contain at least some portion of the CAFRA zone. Certain activities undertaken within the CAFRA zone are regulated by the Division of Land Use Regulation and require permits.⁵³

Figure 32 – Environmentally Protected Areas



Covering approximately 335,000 acres in parts of Atlantic, Cape May, and Cumberland Counties alone, the Pinelands Area is a million-acre mosaic of forests, farms, and towns that lies above trillions of gallons of water. In addition to year-round inhabitants, the region provides refuge for 135 rare plant and animal species. As a critical part of its mission to safeguard the Pinelands, the Pinelands Commission is charged with overseeing land use and development in this special part of southern New Jersey. The Pinelands Commission does this through the Pinelands Comprehensive Management Plan, last updated in 2018.⁵⁴ Commission staff review public and private applications for development, evaluating proposals by using scientifically based standards to ensure that the Pinelands' ecological health is protected. Development proposals must meet a series of environmental standards, such as those that protect water quality, wetlands, and threatened and endangered species, among other standards. In addition to development applications, all federal, state, and local public projects, except for certain national defense and national security projects, are also subject to procedures and standards that assure conformity with the goals and provisions of the Pinelands CMP (NJAC 7:50-4.52 et seq).

⁵² American Planning Association – New Jersey Chapter. *Complete Guide to Planning in New Jersey*. 2018-Fourth Edition. 186.

⁵³ For further information on CAFRA and the required permits, see www.nj.gov/dep/landuse/coastal/cp_main.html.

⁵⁴ The latest Pinelands Comprehensive Management Plan is available at: www.nj.gov/pinelands/cmp/CMP.pdf.

Transportation and Land Use

Even though New Jersey is a home rule state, which means that all land use decisions are under the authority of the municipalities, SJTPO strives to integrate land use into its decisions on transportation investments, working primarily through each of its four subregions (counties). Nearly all four counties' Comprehensive and/or Master Plans call for the preservation of critical natural areas and the protection of farmland. They all encourage growth and development in areas where capital facilities are already available, such as those municipalities located in the Metropolitan Area (Planning Area 1, or PA1), as designated in the State Development and Redevelopment Plan (SDRP)⁵⁵, and discourage growth in the Environmentally Sensitive Areas (PA5), such as the Pinelands and the numerous park and natural areas throughout the region. They also all encourage economic development in appropriate locations, such as the FAA William J. Hughes Technical Center and Atlantic City Airport (ACY) in Atlantic County, as well as “maintenance of the resort economy” of both Atlantic and Cape May counties. Transportation planning that “complements” land use planning is one of the ten goals of RTP 2050, which will be discussed in more detail in the next chapter.

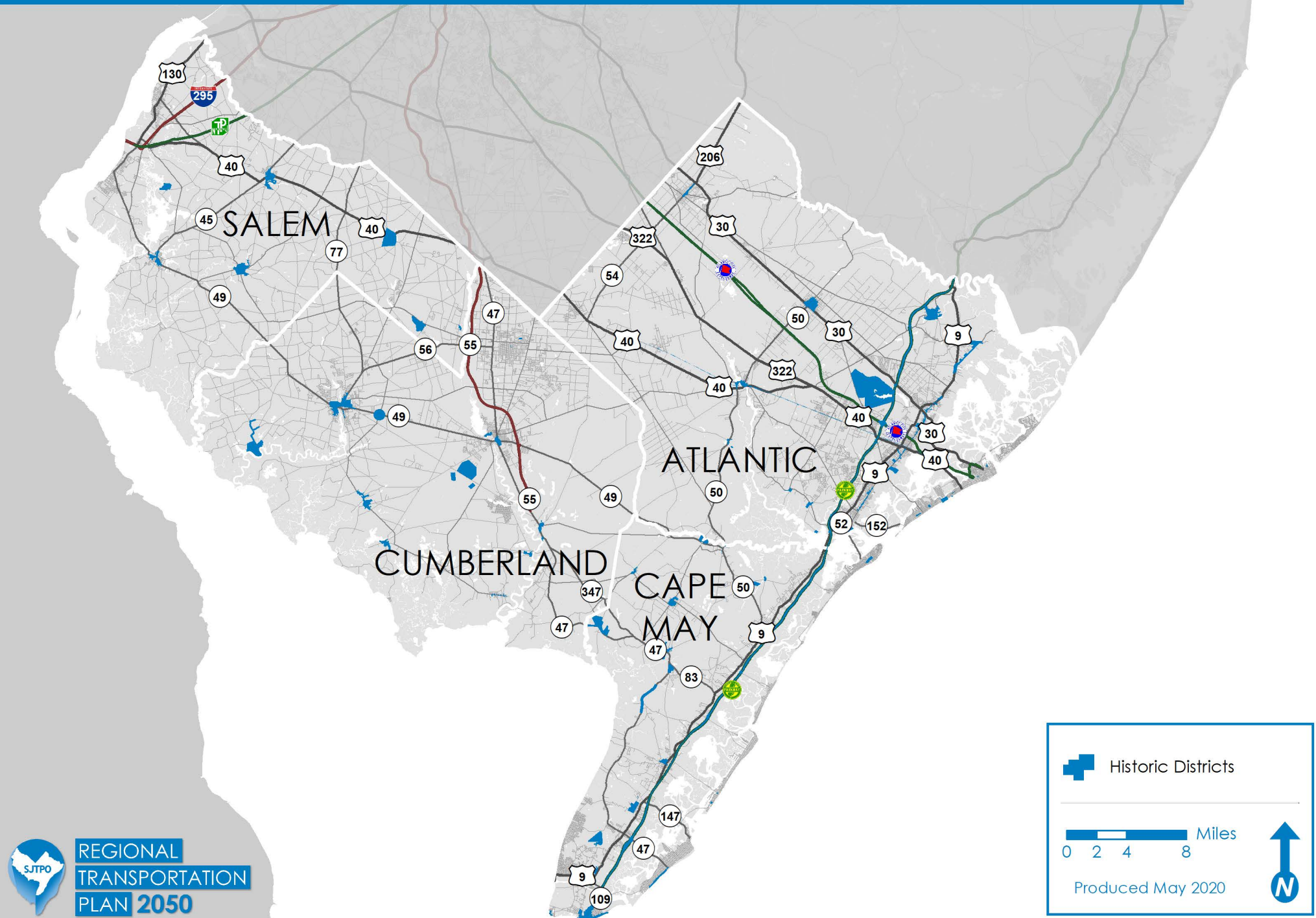
Historic and Cultural Resources

In spite of its predominant rural and agricultural land use, the SJTPO region contains more than 100 existing or eligible historic districts within its boundaries, shown in [Figure 33](#), below. Transportation projects can impair or destroy historic and cultural resources through roadway widenings, realignments, and other modifications. There are several federal and state laws that have been enacted to avoid and minimize impacts to these historic and cultural resources. These include the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act, and the New Jersey Register of Historic Places Act. All federally funded projects must adhere to these laws and mitigate any adverse impacts. For a detailed list of historic resources by county, see: www.nj.gov/dep/hpo/1identify/nrsr_lists.htm.

⁵⁵ Required by New Jersey state law, (N.J.S.A. 52:18A-200(f)), the Statewide Development and Redevelopment Plan (SDRP) is New Jersey's current governing State Plan. It serves to establish Statewide planning activities and coordinates planning activities between state, county, and local governments, in transportation, land use, agriculture and farmland retention, and numerous other areas. The full SDRP can be downloaded at: <https://nj.gov/state/planning/state-plan.shtml>.

Figure 33

Historic Districts



Scenic Byways

Another environmental asset unique to the SJTPO region is the Bayshore Heritage Byway, which is an official New Jersey Scenic Byway. The National Scenic Byways Program is a program administered by the Federal Highway Administration with the intent of preserving and protecting the nation's scenic but often less-traveled roads, while also promoting tourism and economic development. A byway possesses the following outstanding values:

- Scenic
- Natural
- Recreational
- Cultural
- Historic or Archaeological Significance⁵⁶

The Bayshore Heritage Byway begins at Mannington Meadows in Salem County, goes along CR-540 (Hawks Bridge Road), and meanders along the Delaware Bay shoreline through Salem, Cumberland, and Cape May Counties, terminating in Cape May Point State Park for a distance of approximately 122 miles.

In addition to the Bayshore Heritage Byway, the SJTPO region also includes portions of the Pine Barrens Scenic Byway. These are:

- The Pine Barrens Central Byway, which runs from Hammonton near Nesco on Route 524 through Rt. 658 Mullica Township, then Route 623 Hamilton Township and Mays Landing, terminating in Corbin City.
- The Pine Barrens Southern section, which runs from Corbin City to Weatherby Road, to NJ 47, to Woodbine, Belleplain, and back to Corbin City.

In 2014, the South Jersey Bayshore Coalition along with NJDOT completed a Corridor Management Plan, which is a tool that outlines the vision, goals and strategies to “preserve, protect, and enhance the byway.” It also strives to increase the range of “safety and travel choices and opportunities.” However, its implementation is dependent on the communities, as well as various cultural and heritage programs. Perhaps most importantly with the completion of the Management Plan, the South Jersey Bayshore Coalition could apply for designation as a National Scenic Byway, which could make the facility eligible for additional federal grants.⁵⁷

Funding for calendar year 2020 was provided under the Reviving America's Scenic Byways Act of 2019. The law required the U.S. Secretary of Transportation to solicit nominations for certain roads to be designated under the National Scenic

⁵⁶ CU Maurice River. “Bayshore Heritage Scenic Byway.” Presentation by Jane Galetto. 2/27/20.

⁵⁷ Ibid.



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Byways Program as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities.

This section has provided a general description of SJTPO's existing transportation system. [Chapter II](#), above, discusses five critical issues the SJTPO region faces in improving the transportation system. [Chapter IV](#), below, will go into the specific goals and strategies that SJTPO and its partners are currently and planning to undertake to meet these goals.

IV. VISION, GOALS, AND STRATEGIES: WHERE ARE WE NOW, AND WHERE ARE WE HEADED?

The main purpose of a long-range regional transportation plan is to describe a future vision for the region's transportation system. The vision represents the ultimate outcome of what SJTPO, and its residents would like the transportation system to look like and operate in the year 2050. While the vision should attract commitment and reflect the desires and aspirations of the region's constituents, it should also be realistic and attainable. The goals and strategies described below are established to support and achieve the RTP's vision. In addition, all the activities and projects that SJTPO and its subregions engage in within each four-year planning cycle are designed to support the RTP's vision and supporting goals and strategies. Based on the metropolitan planning factors and input from planning partners, SJTPO has established the following vision for RTP 2050.

Our Vision

A transportation system based on regional collaboration that moves people and goods in a safe and efficient manner, inclusive of all modes and users.

Transportation planning and decision-making for the SJTPO region are guided by a series of goals and strategies, which are effectively summarized by SJTPO's vision. The goals of SJTPO and RTP 2050 are directly based upon the planning factors included in the FAST Act, the current federal transportation legislation. The strategies represent types of actions that SJTPO could undertake to achieve the goals.

SJTPO developed the strategies for RTP 2050 through an extensive internal process, complemented by collaboration with the TAC, Citizens Advisory Committee (CAC), and the public. In total, 45 strategies were developed to advance RTP 2050. Many of these strategies support numerous goals to varying degrees. To avoid overcomplicating the Plan document, SJTPO only listed a strategy within a goal if the strategy was considered to have a primary relationship with the goal. To do this, SJTPO engaged in a non-scientific exercise to establish primary and secondary relationships between goals and strategies.

Our Vision:
A transportation
system based on
regional collaboration
that moves people
and goods in a safe
and efficient manner,
inclusive of all modes
and users.

A full list of all strategies and their relationship to each goal is included as [Appendix D](#). This shows the degree to which most strategies work simultaneously to advance a number of goals.

The ten goals, arranged in order of their importance to the public, and their supporting strategies, are listed below. Strategies with primary relationships to more than one goal are included multiple times. All-encompassing in the SJTPO process are tasks related to consultation and coordination with state, regional, and local partners, as well as public outreach and equity (Environmental Justice, Title VI, Limited English Proficiency, etc.), which relate to all of these goals and strategies, as they form the backbone of SJTPO's process. It should be noted that the order of the goals is simply a reflection of the sentiments shared by members of the public on their preference of these goal topics. This does not represent a statistically valid surveying of broad public opinion. Given the priorities to various topics, such as safety, and others that are reflected in federal planning priorities, performance targets, as well as state and local guidance, it should be noted that SJTPO will actively work to advance all of the goals. The order below is not a direct reflection of the degree of importance of the goals in the overall process.

1. Promote accessibility and mobility for the movement of people and goods
2. Mitigate traffic congestion and promote efficient system operation
3. Restore, preserve, and maintain the existing transportation system
4. Support the regional economy
5. Improve the resiliency and reliability of the transportation infrastructure, particularly along the Atlantic and Delaware Bay shorelines
6. Increase and enhance opportunities for travel and tourism
7. Improve transportation safety
8. Enhance the integration and connectivity of the transportation system
9. Protect and enhance the environment and complement land use planning
10. Improve security

Goal 1. Promote Accessibility and Mobility for the Movement of People and Goods

“Promoting the accessibility and mobility for the movement of people and goods” is the top-ranked goal for RTP 2050. This is logical, as perhaps the number one purpose of any transportation system is to ensure that its users can reach some destination, generally to engage in a particular activity, be it work, shopping, doctor's visit, etc. Accessibility is often defined as the ease in which some person(s) can reach or participate in activity opportunities.⁵⁸ Mobility is the movement of people and goods. To put it another way, mobility is *how far you can go* in a given amount of time, while accessibility is *how much*

The public ranked the accessibility and mobility of people and goods as their number one goal for RTP 2050.

⁵⁸ At: www.quora.com/In-transportation-what-is-the-difference-between-mobility-and-accessibility. Accessed 9 December 2019.



you can get to in that time.⁵⁹ With a fairly extensive roadway system and close proximity to heavy attractions, such as Philadelphia and the Jersey Shore, the SJTPO region is very accessible, especially by car, and its transportation system offers good mobility for those who own a car.

Roadway System: Looking to the Future

As it is in all developed areas, the dominant mode of travel in the SJTPO region is the automobile, as is evidenced by its system of highways and roadways. The region has an extensive system of roadways. Planning for the safe and efficient movement of traffic on this system is complicated by the fact that traffic volumes in parts of the region can vary considerably throughout the year due to the seasonal nature of the Jersey Shore and gambling-based resort industry in Atlantic City.

In recent years, many improvements have been completed that have helped SJTPO to achieve its goal of improving accessibility. These include the addition of travel lanes along sections of the Garden State Parkway (north of Atlantic City) and Atlantic City Expressway (west of the Parkway) to ease congestion. In addition, numerous roadways and bridges have been elevated above projected flood levels in Atlantic and Cape May Counties. [Chapter VI.5](#), below, gives examples of specific roadway elevation projects.

An example of these types of major improvements discussed above that are currently being considered and/or recommended include major interchange improvements on NJ 55 at NJ 47 in Cumberland County. As of now, this project is being routed through NJDOT's Problem Statement process. Another project that is part of SJTA's capital program is a new direct road connection between the Atlantic City Expressway and the Atlantic City Airport in Atlantic County. This project first emerged as a recommendation in the 2009 Casino Redevelopment Authority (CRDA) Atlantic City Regional Transportation Plan. It is scheduled for completion by 2030. Unfortunately, many of these projects have been identified as a "critical need," but there is no money to advance them. See [Chapter V](#), below, for the fiscally constrained list of projects, as well as the aspirational projects, which includes critical needs.

Public Transit: Looking to the Future

It is critical to build upon the transit services that currently operate in the region so that the mobility offered by these essential services is maintained and improved. The SJTPO will work with NJ TRANSIT to assess and identify necessary transit service enhancements in the region, including an examination of existing bus routes and service levels.

NJ TRANSIT embarked on the capital planning effort in 2019 to identify, develop, and vet capital projects targeted to achieve the vision and goals of the agency. The Capital Plan strives to address the challenges of the state's transportation system by providing residents, customers, and policymakers with a clear understanding of the agency's long-term capital needs. The Capital Plan is a comprehensive capital investment plan that describes what NJ TRANSIT can achieve with

⁵⁹ At: www.strongtowns.org/journal/2018/10/17/the-difference-between-mobility-and-accessibility. Accessed 9 December 2019.

sustained and dependable funding over an extended period. The plan focuses on projects that can be started or completed in the next five years and describes projects that can be delivered over a 20-year timeframe to address both immediate and long-term needs.

The South Jersey Regional Rail Study, published in 2002, provides the basis for more detailed planning to reactivate one or more abandoned rail lines for passenger service. Another option that should be considered is a bus rapid transit (BRT) system. BRT offers advantages of generally lower costs than fixed rail systems, and depending on the alignment, NJ TRANSIT can utilize exclusive right of way or share right of way with other vehicles. SJTPO will engage with NJ TRANSIT to determine if there are potential bus rapid transit opportunities in the SJTPO region, which would help “Promote accessibility and mobility for the movement of people and goods.”

A bus rapid transit system connecting Philadelphia to Gloucester and Camden Counties is currently under consideration by NJ TRANSIT. The proposed South Jersey Bus Rapid Transit System (SJBRT) will provide a new, high-quality transit service between park/rides in Gloucester and Camden Counties and downtown Camden and Center City Philadelphia. NJ TRANSIT is actively engaged with FTA in finalizing the environmental impact study for the proposed SJBRT, which will improve transit service along the Atlantic City Expressway, Routes 42 and 55, Interstates 76 and 676, and downtown Camden and Philadelphia. The SJBRT is projected to provide about 6,400 passenger trips once implemented. Decreasing commute times from adjacent counties into Philadelphia could encourage more trips originating in the SJTPO region and connecting to Philadelphia via bus rapid transit nodes in neighboring Camden and Gloucester Counties.

In addition, the Delaware River Port Authority (DRPA) is investigating the feasibility of a light rail transit (LRT) line between Camden and Glassboro. At the current time, NJ TRANSIT is providing technical assistance to advance the DRPA-led environmental review for the proposed 18-mile light rail line. This environmental review is necessary for this roughly \$1.6 billion project to become potentially eligible for federal capital funds. Designation of a project sponsor and identification of funding sources remain outstanding issues. SJTPO continues to monitor this project, as a Glassboro-Vineland link may be more feasible if a Camden-Glassboro light rail transit is implemented.

Pomona Train Station

The 2009 Atlantic City Regional Transportation Plan, developed by the CRDA, also highlights the need for a “new Atlantic City Rail Line Airport Station at North Pomona, specifically the corner of South Pomona Road and West White Horse Pike (Route 30) in Galloway Township, with shuttle service to the Atlantic City International Airport, and from the Airport to Atlantic City.” The regional multimodal center would be located at the Atlantic City Airport but would act as the point where auto and air travelers convert to transit travelers. The center is planned to include substantial parking to encourage visitors to park and then take bus services into Atlantic City. At this time, while both the station and the land adjacent to the station, have seen interest from developers, the commercial density needed to support the project still falls short of what is



necessary to support the project. Nonetheless, efforts to develop this station are still moving forward, and both Atlantic County and NJ TRANSIT support this project.

Human Services Transportation: Looking to the Future

As part of the development process for the Access for All Transit Plan, formerly referred to as the Coordinated Human Services Transportation Plan, SJTPO staff looked at current services and providers in the SJTPO region and, based on an analysis of demographics in the region (i.e., geographic location or concentration of the transportation-disadvantaged population) and input from stakeholders and the general public, identified needs and gaps in this system of services. The plan also recommended services and strategies for meeting these needs, including:

- Service from Woodbine to Atlantic City and to the Southern part of Cape May,
- Service from Northern Cape May County to Atlantic City,
- Service between Laurel Lake and Commercial Township (e.g., Port Norris),
- Service between Northeastern Salem County and Bridgeton in Cumberland County,
- Service from Eastern Salem County (Elmer and Olivet) to the Vineland Transit Hub,
- Service from Salem County to Wilmington and Elsmere (Delaware),
- Extension of the Hamilton Mall Route to the Atlantic Cape Community College,
- Extension of the hours of the Salem and Cape May county transit services and the addition of weekend service for these counties, and
- The creation of feeder services from various outlying areas in Salem and Cumberland Counties that would connect these areas with NJ TRANSIT bus routes.

Details on these proposed services and other general recommendations are explained in more detail in the SJTPO 2015 Coordinated Human Services Plan on the SJTPO website (www.sjtpo.org/AccessforAll).

It should be noted that some of these recommendations have been implemented since the completion of the 2015 Coordinated Human Services Plan, particularly the feeder services now provided by SJTA, and some of the needs associated with the proposed fixed route services have been met, to varying degrees, by the demand responsive systems run by the counties. For example, Salem residents can request rides on the Salem SCOOT bus to take them into Bridgeton, and the Cumberland CATS system can provide rides for Port Norris residents to Vineland and Millville for medical and shopping-related trips.

Furthermore, some of the existing services identified in the 2015 Coordinated Human Services Plan may no longer be in operation. A primary example is the fixed route service between Salem City and the Pureland Industrial Park in Gloucester County. This service, which was discontinued, provided an important connection between the western part of Salem County with the Industrial Park for those seeking employment at this location and other employment centers in Salem County. Since it has been discontinued, this service has shifted from an existing to a proposed service.

These examples show that an Access for All Transit Plan or a similar plan cannot, by itself, meet the needs and achieve the goals associated with the human services transportation system implementation process. It needs to be an ongoing and dynamic process, involving transportation providers and those dependent on transportation services at the local, county, and even the regional level, meeting together to explore service options and ways to reduce costs and improve services to the transportation-disadvantaged. This is, or should be, the function of the county coordination committees recommended in the 2015 Coordinated Human Services Plan.

The Future Role of the Access for All Transit Plan Planning Process

SJTPO is currently in the process of updating its 2015 Coordinated Human Services Plan, referred to as the Access for All Transit Plan. As part of this update, SJTPO staff has met with and/or contacted key human services transportation providers in the region, along with the general public through a series of public meetings. The Access for All Transit Plan is expected to be released for public review in January 2021 and adopted by the SJTPO Policy Board in March 2021.

Outside of developing the Access for All Transit Plan, SJTPO will continue to work with the counties in implementing recommendations contained within the plan and assist, when possible. In addition to this, SJTPO will continue to keep up with the issues and opportunities related to the human services transportation planning and implementation process, and channel this information to county coordinating committees and transportation providers.

Bicycle and Pedestrian System: Looking to the Future

There are ongoing efforts across New Jersey to advance bicycle and pedestrian access and safety. These include efforts at the state level, at SJTPO, and at the local county and municipal level.

Statewide Efforts

The New Jersey Statewide Bicycle and Pedestrian Master Plan offers five goals to encourage an approach to bicycling and walking as a routine part of the transportation system.

- Create a bicycle and pedestrian infrastructure by planning, designing, constructing and managing transportation and recreation facilities that will accommodate and encourage use by bicyclists and pedestrians and be responsive to their needs.
- Make community destinations, transit facilities, and recreation facilities accessible and convenient to use by all types and levels of bicyclists and pedestrians.
- Reform land use planning policies, ordinances, and procedures to maximize opportunities for walking and bicycling.
- Develop and implement education and enforcement programs that will result in reduction of crashes and a greater sense of security and confidence for bicyclists and pedestrians.



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- In conjunction with the creation of bicycle and pedestrian infrastructure described above, there may be potential opportunities for rail right-of-way reuse, as was done in New York City's High Line or the upcoming Reading Viaduct in Philadelphia.

These goals are designed to address bicycle and pedestrian advancement from all sides of the issue. SJTPO does not have direct authority over some functions, such as land use policy, but has and will continue to work with local counties and municipalities to advance these goals within the region.

The New Jersey Statewide Strategic Highway Safety Plan (SHSP) updated in 2020, memorialized its commitment to advancing bicycle and pedestrian safety, where addressing Bicycle and Pedestrian crashes is indicated as one of its seven Emphasis Areas. The SHSP indicates a number of strategies for reducing pedestrian and bicyclist crashes, including:

- Strengthen Complete Streets Implementation by state, county, and municipal governments. Hold a peer exchange with other state transportation agencies to gather best practices. Establish a Complete Streets Task Force to improve complete streets integration on state, county, and municipal projects, assess implementation by municipalities, gather lessons learned, and share best practices.
- Convene a group to develop strategies to facilitate ADA implementation by all agencies.
- Work with legislators, advocates and other safety stakeholders on legislation, regulations, policy, and programs to improve safety for bicyclists and pedestrians. Assess current practices nationally and provide recommendations for automated speed enforcement in school and work zones as well as vulnerable road user laws.
- Establish a task team to develop a strategy for updating Residential Site Improvement Standards. Review the state highway access code and identify opportunities to strengthen it to provide greater pedestrian and bicycle safety. Review the Municipal Land Use Law and provide recommendations to strengthen it to enhance pedestrian and bicycle safety.
- Update the 2009 NJ Trails Plan to include midblock trail crossings.
- Improve design practices to support pedestrian and bicycle safety on all roads by establishing a task team to improve design guidance related to increasing visibility at intersections, improving street crossings, considerations within school zones, consistency of signing, conflicts with buses and heavy vehicles, and standards for design speed on arterial roadways.
- Provide comprehensive pedestrian and bicyclist safety education for students (K-12 and higher education) who walk or bike to school or bus stop. Review the Safe Routes to School Non-Infrastructure Program and provide recommendations for improvement. Working with the Trauma Center Council, discuss opportunities to develop a safety culture education program for higher education students who walk or bike to school. Implement a comprehensive traffic safety curriculum in elementary schools. Working with the Trauma Center Council, develop pedestrian and bicyclist educational programs focused on teachers, parents, and volunteers at elementary schools, middle schools, and high schools.

- Work with the NJ Motor Vehicle Commission to improve driver education and testing related to pedestrian, bicyclists, and scooters.
- Provide recommendations to improve local governments awareness of pedestrian and bicyclist infrastructure grant opportunities.
- Provide recommendations to enhance and expand the Street Smart Pedestrian Safety Awareness Program to additional municipalities in the state.
- Provide recommendations for a program to perform quick-response road safety audits immediately following pedestrian and bicyclist crashes.
- Develop a plan to improve integration of pedestrian and bicyclist safety concerns in the NJDHTS Highway Safety Plan.
- Assess current methods for the public to report pedestrian and bicyclist infrastructure issues on state, county, and municipal facilities and provide recommendations to improve reporting methods or increase the awareness of available reporting methods.
- Incorporate best practices to incorporate pedestrian and bicycle infrastructure improvements in developer projects impacting state, county, and municipal roads.
- Increase pedestrian and bicyclist safety enforcement in school zones or high-volume crosswalk locations with recurring crash trends. Review existing enforcement at locations with recurring crash trends and provide recommendations. Review current education campaigns related to stopping at crosswalks and recommend enhancements. Review existing school zone speed enforcement program and recommend enhancements.
- Consider equity issues related to pedestrian and bicycle crashes. Research equity-related crash analyses and program approaches in other states and countries to identify alternate means to performing crash analyses and program development. Develop an approach for identifying and assessing high-risk pedestrian and bicyclist safety locations in underserved communities. Develop a methodology to identify transit stops and station locations in underserved communities which have a high need for pedestrian and bicyclist safety improvements.
- Improve pedestrian and bicyclist safety data and performance measures. Develop performance measures to evaluate the completeness and quality of pedestrian and bicyclist networks, including such factors as levels of traffic stress, infrastructure condition and completeness, ease of use. Research pedestrian and bicyclist crash data deficiencies and provide recommendations for improvement. Assess infrastructure conditions at NJ Transit Bus and Rail stops related to pedestrian and bicyclist safety and provide recommendations on how best to address. Evaluate approaches and best practices for the development of Crash Modification Factors for various pedestrian and bicyclist safety countermeasures. Assess opportunities to include pedestrian and bicyclist infrastructure elements and volumes on the NJDOT Straight Line Diagram.
- Assess performance of counties and municipalities in expending pedestrian and bicyclist infrastructure grants and provide recommendations to improve expenditure performance.



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Working collaboratively with the various safety partners in the state, SJTPO is seeking more opportunities to combine both safety education and infrastructure improvements whenever possible to reduce bicycle and pedestrian crashes and serious injuries. A multifaceted approach will help us achieve a greater reduction much faster. SJTPO is devoting resources to promote bicycle and pedestrian focused projects where the greatest risk for crashes exist.

Local Efforts

Numerous communities have been able to develop local Bicycle and Pedestrian Master Plans sponsored through the New Jersey Department of Transportation Office of Bicycle, Pedestrian, and Safety Programs (NJDOT-OBPSP) Bicycle and Pedestrian Local Technical Assistance Program. Through this program, municipalities have an opportunity to develop a comprehensive plan that will identify pedestrian and bicycle issues and outline recommendations to address deficiencies and integrate facilities. Local communities make the request to NJDOT and, if approved, are provided with consultant services to perform planning studies to evaluate needs and opportunities relating to bicycle and pedestrian circulation and safety. The studies are locally driven in a partnership arrangement with the local city or municipality and have a strong public outreach component.

The primary goal of these studies is to increase the safety and mobility for people biking and walking in local communities, thereby improving personal health, transportation options, and air quality. These plans outline a recommended network of bicycle and pedestrian corridors, a range of improvements, implementation strategies, and identify areas in need of further study. This program has included efforts in the following communities in the SJTPO region.

- Atlantic City, 2013
- Cape May/Cape May Point, 2017
- Deptford, 2009
- Downe Township, 2014
- Galloway, 2010
- Linwood, 2010, 2012
- Northfield, 2015
- Ocean City, 2009, 2011
- Upper Township, 2018
- Ventnor/Margate, 2016
- West Cape May, 2008
- Wildwood Crest, 2003
- Woodbine, 2008

Cross County Connection Transit Management Association (TMA)

In addition to state and local efforts described above, the Cross County Connection TMA is engaged in a number of efforts that advance bicycle and pedestrian accommodation, including the following:

- Educational programs, focusing on pedestrian safety and bike rodeos. This program is directed at 3rd and 4th graders,
- Information dissemination,

- Applications, such as Transit Locator and Bike Route Locator, to assist in the reduction of single-occupancy vehicle congestion and encouragement of alternatives to the single-occupancy vehicle,
- Safe Routes to School (SRTS) activities (currently provide activities in 15 schools in SJTPO region), and
- Bike route inventories.

Since the last RTP, *Transportation Matters*, SJTPO has begun a process to further develop a South Jersey Trails network. That work will continue to develop a visionary network, establish standards of what constitutes a trail, and to better communicate appropriate facilities to the public. This effort is discussed in [Chapter IV. 6](#) related to increasing and enhancing opportunities for travel and tourism.

Aviation: Looking to the Future

NJDOT is currently in the process of updating its State Airport System Plan. The State Airport System Plan identifies current and future air transportation needs of the state and creates an implementation plan to fund the projects that best support the state's airport system. SJTPO is currently a member of the NJDOT State Airport System Plan Study Advisory Group, which provides input on the plan. NJDOT will use this updated State Airport System Plan as guidance to prioritize improvements to state airports for the next ten years and strengthen the case to the Federal Aviation Administration (FAA) and state government for more funding necessary to maintain a safe and efficient system of airports. The final plan and technical report are expected to be released later in 2020.

Strategies

RTP 2050 recommends the following strategies to “promote accessibility and mobility for the movement of people and goods:”

- Evaluate transit service:** Work with public transportation providers to evaluate transit service availability in all communities, but disadvantaged communities in particular, as those areas are likely to have limited vehicular access.
- Include all users in projects:** Evaluate all transportation projects that receive funding through the SJTPO process for their inclusion of complete streets elements, including bicycle, pedestrian, disabled, transit, and freight accommodation.
- Advance transit for the transportation disadvantaged:** Work with regional partners to advance recommendations of the Access for All Transit Plan, formally referred to as Coordinated Human Services Transportation Plan.
- Promote transportation alternates:** Promote public awareness of alternative transportation options and services, such as rideshare, carpooling, electric vehicles, walking, bicycling, transit, etc., and support agencies that provide these alternatives.



- e. **Improve truck routes:** Work with regional partners to identify and evaluate truck routes and other critical freight corridors for accessibility, reliability, safety, and other system performance measures in order to develop and prioritize projects.
- f. **Promote new connections between travel modes:** Identify and promote the development of locations where better intermodal facilities and infrastructure are needed in order to promote intermodal connectivity.
- g. **Ensure projects have equitable benefits and burdens:** Evaluate all transportation projects that receive funding through SJTPO's Project Evaluation Process (described in more detail in [Chapter V](#)), to ensure that the burdens of the transportation network do not fall disproportionately on racial minority, low-income, or other disadvantaged populations and that the system provides equal benefit to these populations.
- h. **Inclusiveness of all users:** Identify groups that represent freight, bicycles, pedestrians, and transit, and evaluate ways to expand their representation into the MPO planning process.
- i. **Reduce barriers to job access:** Evaluate data from the Ladders of Opportunity effort and other sources to identify transportation barriers to employment access and work with regional partners to reduce or eliminate those barriers.

Goal 2. Mitigate Traffic Congestion and Promote Efficient System Operation

“Mitigating Traffic Congestion and Promoting Efficient System Operation” is the second-ranked goal for the RTP 2050. While the SJTPO region is generally not congested relative to areas in the NJTPA or DVRPC regions, the significant seasonal population influx of almost three-fold during the summer, as described in [Chapter I](#), causes major congestion in the summer tourist season. Summer population is generally deemed to be from Memorial Day in May to Labor Day in September. Since tourism is a major industry within the SJTPO region, and many of the businesses depend heavily on the seasonal influx of visitors, it is sensible that reducing traffic congestion during the summer would be among the highest-ranked concerns of the general public.

Congestion Management Process

SJTPO has an operational Congestion Management Process (CMP), as is required because of its status as a Transportation Management Area (TMA). A TMA is an area designated by the Secretary of Transportation, having an urbanized area population of over 200,000. TMAs incur additional requirements, such as developing a CMP, compared to smaller urbanized areas (23 USC 134 (i)). The CMP is a systematic process that provides for the safe and effective integrated management and operation of the multimodal transportation system. The CMP is used to identify congested roadways, establish multimodal performance measures, identify congestion management strategies, including means of implementation and evaluating the effectiveness of implemented strategies. The CMP relies heavily on archived operations data, accessible through a specialized user portal known as the Probe Data Analytics (PDA) Suite, to measure travel time reliability and

other congestion performance measures on all major roadways.⁶⁰ For more details on SJTPO's CMP, visit www.sjtpo.org/CMP.

The identification of congested areas lies at the core of SJTPO's CMP. As much of the travel delay within the SJTPO region occurs at intersections, SJTPO's prime determinant of congested locations is the PDA Suite Bottleneck Tool. Congestion relief projects have and will continue to constitute a significant portion of SJTPO's capital program, funded primarily through the Congestion Mitigation and Air Quality (CMAQ) Program. Other funding sources may include Transportation Assistance Program (TAP) or Highway Safety Improvement (HSIP) funds. From FFY 2017 to FFY 2019, SJTPO authorized over \$8.0 million for projects related to congestion mitigation and/or air quality improvements. These include a range of projects from bicycle/pedestrian improvements to traffic signal improvements to a roundabout study. Moving forward, over \$20.0 million of congestion relief projects are programmed for authorization in FFY 2020 and beyond.

SJTPO also participates in the NJDOT Mobility and Congestion Relief Problem Statement Development Process Subcommittee. Congested locations on state highways are conveyed to NJDOT through this subcommittee for potential problem statements to be developed by NJDOT. SJTPO will continue to work with its subregional partners and this subcommittee when selecting candidate congested locations for NJDOT problem statements. SJTPO's CMP Activity Report, located in [Appendix E](#), utilizes SJTPO's approved CMP methodology to produce an updated list of congested locations for 2018 as well as authorized and future congestion relief projects.

Strategies

Strategies should contribute to congestion relief, but contributions to other regional objectives, such as safety and multimodal mobility must also be considered, especially given tight fiscal constraints. Increasing SOV capacity shall not be considered as a first choice. Alternatives to additional SOV capacity shall be given priority per federal guidance.

RTP 2050 recommends the following strategies to “mitigate traffic congestion and promote efficient system operation:”

- a. **Promote transportation alternatives:** Promote public awareness of alternative transportation options and services, such as rideshare, carpooling, walking, bicycling, transit, etc., and support agencies that provide these alternatives.
- b. **Promote technology in transportation:** Promote the implementation and deployment of Intelligent Transportation System (ITS) technologies, such as smart traffic signals, dynamic message signs, vehicle detection systems, and connected vehicle technology.
 - In evaluating ITS and traffic operations strategies, SJTPO will also draw upon *The Connected Corridor* — New Jersey's Transportation Systems Management and Operation (TSM&O) Strategic Plan and

⁶⁰ For more information on the PDA Suite, see: <https://www.cattlab.umd.edu/?portfolio=vehicle-probe-project-suite>.



Architecture for the State of New Jersey.⁶¹ SJTPO was a member of the team that helped to develop this project. Many ITS and TSM&O projects help to lessen congestion.

- c. **Measure congestion impact of projects:** Utilize the SJTDM and other tools to evaluate impacts of future projects related to congestion and delay.
- d. **Develop congestion/air quality projects:** Work with subregional planning partners to develop projects to be funded through the CMAQ Program.
- e. **Identify congested locations:** Utilize the CMP to identify congested locations and analyze available data to inform project development at the regional level.
- f. **Include all users in projects:** Evaluate all transportation projects that receive funding through the SJTPO process for their inclusion of complete streets elements, including bicycle, pedestrian, disabled, transit, and freight accommodation.
- g. **Reduce summer congestion/delay:** Collect data that demonstrates the added needs of the region due to unique seasonality of travel patterns and work to identify transportation needs and secure additional funding based upon those needs.

Additional information on these strategies can be found in SJTPO's [FY 2017 CMP Methodology Report](#). All the strategies identified should be considered in collaboration with the appropriate implementing agencies and local stakeholders.

Goal 3. Restore, Preserve, and Maintain the Existing Transportation System

Goal 3 of RTP 2050 centers on system preservation and maintenance. Due to limited funds within the SJTPO region, most of the money in the current Transportation Improvement Program (TIP) goes towards system preservation work, including Roadway Preservation, Bridge Preservation, and NJ TRANSIT System Preservation. System preservation includes everything from resurfacing and milling of existing roadways, fixing potholes, and ensuring that the limited transportation dollars are spent in the most cost-efficient means possible. As an MPO, SJTPO does not own any major assets, but its capital program includes many roadway resurfacing projects, as well as purchases of new vehicles for NJ TRANSIT and other transit providers. A more limited subset of funds goes towards bridge projects within the region. Pavement, bridge, and transit assets are the core of the federally required performance measures, and practically all projects impact at least one of these assets.

System preservation includes resurfacing and milling of existing roadways, fixing potholes, and ensuring limited transportation dollars are spent in a cost-

⁶¹ The full report is at: <https://www.njtpa.org/NJTPA/media/Documents/Planning/Regional-Programs/Technology-ITS/The%20Connected%20Corridor/The-Connected-Corridor-Final-Report-Complete.pdf>.

Pavement

In transportation engineering, pavement is defined as the durable surfacing of a road, airstrip, or similar area. The primary function of a pavement is to transmit loads to the sub-base and underlying soil.⁶² Without pavement, much of the transportation system would be inoperable. Most of the pavement within the SJTPO region is made of asphalt or concrete. As initially reported in [Table 4](#), there are 5,233 road-miles in total within the SJTPO region, of which 3,234 (61.8 percent) are owned by the municipalities, 1,467 (28 percent) of which are owned and maintained by the counties, and 491 (9.4 percent) owned/maintained by NJDOT or other authorities. The remaining 41 road-miles are owned by federal agencies or parks.

As stated, much of SJTPO's capital program goes toward pavement resurfacing projects. SJTPO will continue to assist its subregions with pursuing federal funding for pavement preservation projects through the funding programs administered by SJTPO, such as the SJTPO-STBGP program. Pavement condition is also one of the criteria in SJTPO's TIP/RTP Project Selection Process. FHWA has indicated that proven safety countermeasures should be considered in all pavement projects, as appropriate. More details on SJTPO's Project Selection Process are available in [Chapter V](#).

Bridges

After pavements, bridges are probably the most extensive asset of the regional transportation system. The SJTPO region includes more than 280 bridges owned by NJDOT, counties, authorities, and local bridge authorities and commissions. The Final Rule (23 CFR 490) that mandated performance measures and targets for pavements included similar requirements for bridges.

While SJTPO has almost no jurisdiction or control over bridge assets, it will continue to bring awareness to the high number of bridge projects that are deemed "critical needs," as well as assist subregions with pursuing federal funding for bridge improvement projects, be it in the form of identifying grant opportunities, providing technical assistance, or using its unique position in the project development process to ensure collaboration in any project of regional significance.

Project Mix

As will be seen in the Fiscally Constrained Project List in [Chapter V](#), and the Financial Plan in [Chapter VI](#), most of the programmed projects in RTP 2050 are road and bridge preservation projects, with almost no capacity enhancement projects. Of the \$1.3 billion in funding programmed through the FFY 2020-2029 Transportation Improvement Program (TIP), which constitutes the bulk of RTP 2050's funded projects from FFY 2020 through FFY 2029, more than \$1.25 billion, or 97 percent of the total amount of programmed funding, falls into the "Infrastructure Preservation" Asset Management Category, while \$44 million, or three percent of the total programmed funding in the TIP, falls into the "Mobility and Congestion Relief" and "Safety" Asset Management Categories. Despite almost all the TIP funded projects being Infrastructure

The SJTPO region includes more than 280 bridges owned by NJDOT, counties, authorities, and local bridge authorities and commissions.

⁶² www.britannica.com/technology/pavement-civil-engineering. Accessed 17 December 2019.



Preservation projects, there are still many unfunded critical needs. The unfunded critical needs include numerous bridge rehabilitation and replacement projects, adaptation projects such as elevating roadways to fortify the infrastructure and reduce vulnerability against the impacts of climate change, a few roadway expansion and interchange reconfiguration projects, as well as a few roadway resurfacing projects. These unfunded critical needs are listed alongside the fiscally constrained project list in [Chapter V](#).

Strategies

RTP 2050 recommends the following strategies to “restore, preserve, and maintain the existing system.”

- a. **Infrastructure that supports businesses:** Evaluate needs and support the investment in the infrastructure necessary to serve the region’s businesses, including highways, freight rail, transit, ports, airports.
- b. **Prioritize system maintenance:** Consistent with established project selection criteria, prioritize maintenance of the existing system over the expansion of system facilities.
- c. **Improve pavement conditions:** Assist subregions with pursuing federal funding for pavement preservation projects through funding programs administered by SJTPO.
- d. **Prioritize greatest needs:** Develop systems that assist local governments in prioritizing projects based on greatest need and greatest efficiency in use of funding.
- e. **Incorporate Proven Safety Countermeasures:** Consistent with federal guidance, work with local jurisdictions to ensure that proven safety countermeasures are incorporated into all pavement projects, as appropriate.

Goal 4. Support the Regional Economy

In simple terms, freight means “goods in motion,” and more fundamentally, “an economy in motion.” A flexible, efficient, freight network that meets the ever-changing needs of the logistics industry is vital to serving New Jersey businesses and industries and maintaining New Jersey’s role as the premier commercial gateway for international trade on the Eastern Seaboard.⁶³

Freight is an important building block of the regional economy. This section of the RTP focuses on SJTPO’s freight planning efforts. SJTPO’s existing freight network, including the State Freight Plan, was discussed extensively in [Chapter IV](#). This section discusses SJTPO’s other freight planning initiatives. A summary of strategies that resulted from these planning efforts then follows. The chapter will conclude with the actions SJTPO is in the process of taking to meet the RTP 2050’s freight-related Plan goals.

63 NJ Department of Transportation: NJ Statewide Freight Rail Strategic Plan 2014.

Looking to the Future: Funding and Financing Program Trends

NJDOT funding currently comes from three primary sources: motor fuel taxes, motor vehicle registrations, and federal grants and formula funds. Financing occurs through bond proceeds currently, although innovative financing mechanisms such as Public-Private Partnerships (P3s) are being explored. Each of the funding sources have seen revenue increases in the current decade, most notably, fuel taxes and federal funds. New Jersey receives an apportionment under the National Highway Freight Program. Also, the Infrastructure for Rebuilding America (INFRA) program provides funding to the states. Some is set aside for intermodal rail and port projects as well as for small projects.

Emerging Trends

- Connected and Automated/Autonomous Vehicles redefines the production function for shippers and for freight carriers. Autonomous Truck (AT) technology is a top issue facing the industry. Truck platoons will likely be on I-95 and the New Jersey Turnpike. While autonomous trucks can lead to cost savings and less crashes, they are not without controversy, as automated trucks could put a lot of the more than 3.5 million truck drivers in the United States out of work.
- Intelligent Transportation Systems are providing technology for viewing, sensing, tracking, communicating, and signaling. This is making integrated, multifaceted systems possible.
- Intermodal rail developments include new hub technology, such as wide-span cranes. This allows for rapid, automated container transfers between railcars. This allows rail to compete with trucking for shorter trips.
- Technology advances allow warehouses to have a smaller footprint. This will increase demand for modern facilities on smaller plots of urban land.
- Emphasis on time to market is causing growth in consumer home delivery. Truck deliveries will emanate from carrier terminals, stores, and new local staging points. Moreover, retailers report an increase in the frequency of inbound delivery to stores necessitated by customer pick-up of online orders.

Priority Projects

NJDOT has identified a range of projects that are most critical to freight mobility throughout the state. Priority projects include remediation of existing infrastructure, ITS, and capital improvements that expand roadway or rail capacity. These projects were generated from different sources: previously identified projects, the STIP, Freight Advisory Committee input, and highway performance analysis. These priority project locations, which are discussed in further detail in [Chapter III](#), serve as a pool of projects for future investments.

Several problem areas are worthy of advancement as planning projects. These projects will be eligible for funding under FAST Act guidelines but cannot be included within the Investment Plan until they have been included within the TIP.

Motor fuel taxes, motor vehicle registrations, and federal grants and formula funds are the three primary sources of NJDOT funding.



- **NJ 55 at NJ 47 Interchange**

The NJDOT' Safe Corridors program, and SJTPO's 2013 Millville Transportation Improvement Study identified this interchange as having specific safety concerns. This interchange serves a major South Jersey retail area. It also provides links to warehousing facilities of Millville and Vineland. The project will address the issues impacting the heavy vehicles that move through this critical juncture, including ramp, capacity, and operational deficiencies.

- **North-South Rail Connector**

For South Jersey to attract new carload and intermodal rail freight service, a new North-South rail connector is needed. A study would investigate a rail connection between North and South Jersey freight generators. The study would also investigate economic development opportunities along any potential freight rail corridor.

- **Other Regional Initiatives**

Overall, SJTPO will continue its commitment to the regional freight initiatives that impact the SJTPO region including the I-95 Corridor Coalition (now Eastern Transportation Coalition), and the East Coast Marine Highway Initiative, and bring them to the attention of NJDOT, as appropriate. Additionally, several other focused opportunities are the Freight Advisory Committee (FAC), truck parking investments, incorporating freight into the NJDOT Capital Program, and municipal/county outreach.

SJTPO Region Freight Planning Initiatives

Port of Salem Corridor Freight Rail Intermodal Study

This 2018 study focused on reviewing previous studies, assessing existing conditions, conducting outreach with key stakeholders, and preparing a summary table of issues and recommendations, including proposed implementation strategies. This work resulted in the identification of issues and recommendations in four main categories: port facilities, rail facilities, road facilities, and economic activity.

- **Port facilities:** assess and upgrade the Port of Salem facilities, promote plans to deepen and better maintain the shipping channel, and complete the planned rehabilitation of the Salem Branch Rail Line to connect with the port facilities.
- **Rail facilities:** complete the planned upgrade of the entire Salem Branch, upgrade the Salem Running Track, preserve and improve regional connectivity, improve industrial tracks, consider rehabilitating and reactivating the former Salem rail yard, and consider further extending the Salem Branch along the waterfront.
- **Road facilities:** promote Hook Road as the main truck route connecting Salem with the interstate system, provide alternate truck routes around the downtown area to the port, and improve operations of the Broadway & Front Street intersection at the entrance to the port.

- **Economic activity:** advance development and redevelopment of waterfront properties, exploring the potential for shipping aggregates and agricultural products, assessing regional markets for maritime shipping, and identifying other revenue opportunities for the Salem Branch Rail Line.

More information about this study can be found in the [Port of Salem Corridor Freight Rail Intermodal Study Final Report](#).

Regional Freight Planning

SJTPO participated in the development of the 2017 New Jersey Statewide Freight Plan. SJTPO will be complementing this statewide plan with a regional freight planning effort. This will be a data-driven approach, leading to a performance-based analysis.

The project goals include identifying the region's freight generators and regional freight network. Other issues to be identified are any restrictions to network access, restrictions along the network, and restrictions to access the greater state, national, and international freight networks. The following steps have been identified, which are anticipated to be part of this freight planning effort:

1. Inventory and develop a core freight dataset for the region, including: the region's freight generators, the region's multimodal freight network, including highways, rail, pipeline; and the freight nodes, such as ports and airports, as well as intermodal facilities connecting rail, road, ports, airports, and service facilities,
2. Estimate or collect freight traffic volume and perform relevant projections,
3. Perform data-driven screening (see below),
4. Provide network analysis tools for project and future use,
5. Facilitate a Freight Planning Steering Committee, and
6. Facilitate Freight Stakeholder Outreach.

In addition, this effort will include a detailed assessment of county freight plans, or other freight planning work and data, and will incorporate those, as appropriate.

Perform Data-Driven Screening

This effort will include the development of measures to analyze the networks. The purpose is to identify issues or shortcomings in the network that would benefit from capital investment to optimize freight movement. This work will focus heavily on highway measures. However, the study will also address rail, maritime, aviation, pipeline, and intermodal nodes to the extent that they will provide SJTPO with meaningful information that can advance capital investments that improve freight movement in the region.



South Jersey Transportation Planning Organization

The developed performance measures are anticipated to cover topics, such as crashes, bridge restrictions, intersection geometry, and rail segment speed restriction. These measures are to allow for monitoring of current and future performance. This effort will guide the development of future planning activities or studies.

Strategies

Strategies that support the 2020 RTP Goal to Support the Regional Economy are shown below.⁶⁴ These Goals and Strategies are also described in Chapter III of the plan; however, they are given some further context here.

- a. **Improve truck routes:** Work with regional partners to identify and evaluate truck routes and other critical freight corridors for accessibility, reliability, safety, and other system performance measures in order to develop and prioritize projects.
- b. **Expand role of businesses in MPO process:** Identify major employers and non-profit sectors that represent regional economic interests and expand their representation into the MPO planning process.
- c. **Promote new connections between travel modes:** Identify and promote the development of locations where better intermodal facilities and infrastructure are needed in order to promote intermodal connectivity.
- d. **Infrastructure that supports businesses:** Evaluate needs and support the investment in the infrastructure necessary to serve the region's businesses, including highways, freight rail, transit, ports, and airports.
- e. **Reduce barriers to job access:** Evaluate data from the Ladders of Opportunity effort and other sources to identify transportation barriers to employee access to employment and work with regional partners to reduce or eliminate those barriers.
- f. **Projects that support the economy:** Continue to work extensively with subregions as well as local and regional economic development agencies to ensure that transportation investments promote conditions conducive to economic activity.
- g. **Projects that enhance tourism:** Continue to work extensively with subregions and allied agencies to ensure that transportation improvements enhance opportunities for travel and tourism within the SJTPO region.

Goal 5. Improve the Resiliency and Reliability of the Transportation Infrastructure

In October 2012, New Jersey experienced one of its most extreme meteorological events, Superstorm Sandy. The most destructive element of Sandy was the powerful storm surge that was produced by the strong winds and the unusual west-

⁶⁴ DVRPC Long-Range Vision for Freight 2035 (2010), The New Jersey Statewide Freight Plan (2017), The Southern New Jersey Freight Transportation and Economic Development Assessment (2010).

northwestward track of the storm.⁶⁵ While New Jersey counties north of the SJTPO region were hit harder, much of the SJTPO region was also significantly impacted. Even though it is more than seven years later, Sandy's effects are still being felt around the region. A substantial number of homeowners have received rebuilding funds to rehabilitate and refurbish their homes. However, in many cases, the funds have been inadequate, leaving many home rebuilding projects incomplete.⁶⁶

In light of climate change, extreme weather events are becoming more frequent. In New Jersey, extreme weather events are not limited to hurricanes. New Jersey is subject to Nor'easters, a type of storm that produces heavy rain or snow, and can cause severe coastal flooding, coastal erosion, hurricane-force winds, or blizzard conditions. Tornadoes are also becoming more prevalent in New Jersey. During the summer of 2019, five tornadoes touched down in the state.

Considering these extreme weather events, resiliency and reliability of the transportation infrastructure are factors to acknowledge. Resilience is the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions.⁶⁷ Since Hurricane Sandy, the SJTPO region and its subregions have made significant investments to improve the region's resiliency infrastructure. Some investments are highlighted, below. SJTPO recognizes further investments are needed.

Looking to the Future

[Figure 34](#), below, depicts the impacts of a two-foot sea level rise on the SJTPO region. The areas of greatest impact include areas near the coast or directly on the barrier islands. Without effective adaptation measures, the barrier islands and the Bayshore area will be in extreme danger of being submerged. SJTPO will need to work with state and county partners to incorporate various adaptation measures to help protect communities from the impacts of sea level rise.

“More than ever, it is critical that when we build for the future, we do so in a way that makes communities more resilient to emerging challenges such as rising sea levels, extreme heat, and more frequent and intense storms.”

- Shawn Donovan, Chair, Hurricane Sandy Rebuilding Task Force⁵⁷

⁶⁵ *Storm surge* is the abnormal rise in seawater level during a storm, measured as the height of the water above the normal predicted astronomical tide. The surge is caused primarily by a storm's winds pushing water onshore. From: <https://oceanservice.noaa.gov/facts/stormsurge-stormtide.html>. Accessed 29 December 2019.

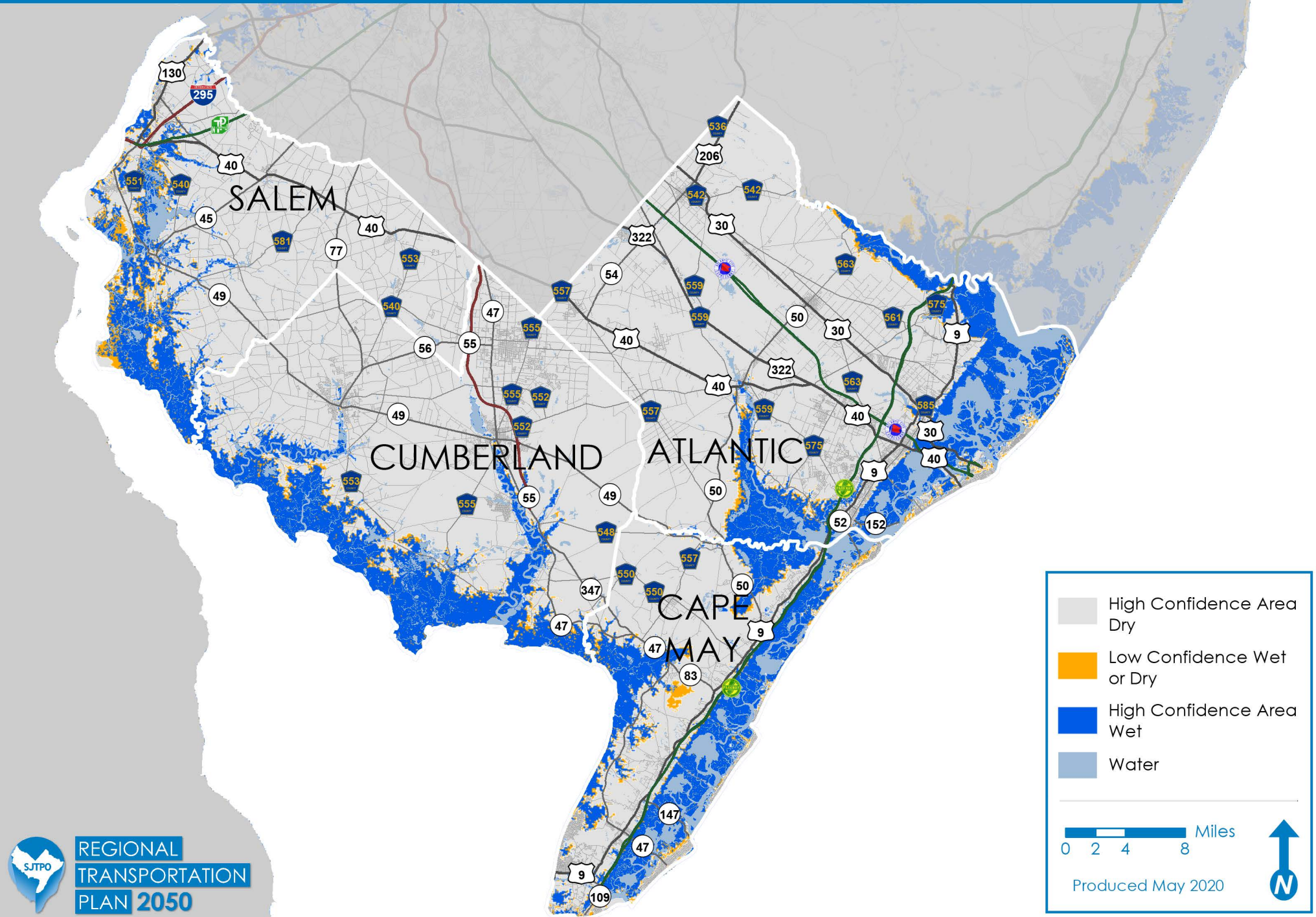
⁶⁶ Patrick Sisson. “Six years after Sandy, Jersey Shore recovery shows shortfalls in the system.” At: www.curbed.com/2019/6/18/18684095/jersey-shore-houses-hurricane-sandy-fema. Accessed 21 November 2019.

⁶⁷ FHWA-HEP-17-028: “Resilience and Transportation Planning.” At: www.fhwa.dot.gov/environment/sustainability/resilience/publications/ratp/fhwahep17028.pdf. January 2017.

⁶⁸ Shawn Donovan, Chair, Hurricane Sandy Rebuilding Task Force, “Hurricane Sandy: Rebuilding Strategy.” August 2013.

Figure 34

Inundation Due to 2 Foot Sea Level Rise



Generally, there are at least two major ways to respond to the problem of emissions, be they ozone, greenhouse gases, or some other pollutant – *mitigation* and *adaptation*. In the former, the objective is to reduce emissions in numerous ways, including the use of new and innovative technology (e.g., electric-powered vehicles), reduction of vehicle miles traveled (VMT), conservation (promoting energy efficiency), and sequestration (e.g., through woodland preservation). In the latter, the objective is to fortify the existing infrastructure to deal with the negative impacts of climate change due to storm surge or flooding.

Mitigation Strategies

New Jersey Statewide Hazard Mitigation Plan (SHMP)

In 2019, the New Jersey Office of Emergency Management (OEM) released its State Hazard Mitigation Plan (SHMP), which goes into more detail on the natural and human-caused hazards facing New Jersey based on current science and research. The SHMP is the cornerstone to reducing New Jersey’s vulnerability to disasters. It is the state’s commitment to reducing risks from hazards and serves as a guide for state decision makers as they commit resources to reducing the effects of hazards. Hazard mitigation distinguishes actions that have a long-term impact from those that are more closely associated with pre-disaster preparedness, response to an event, and recovery from an incident. Due to the SHMP being administratively approved and adopted by the Federal Emergency Management Agency (FEMA), state and local governments are eligible to apply for and participate in various FEMA-funded programs.⁶⁹

Although it covers the entire state, the SHMP includes strategies to be carried out by SJTPO directly. Two of the actions to be executed by SJTPO include the Regional Resilience Study, a critical first step in identifying appropriate sites and operations for mitigation priorities for the regional transportation infrastructure and hosting of a Regional Roundtable specific to resiliency and hazard mitigation planning for the region and enrichment of stakeholder education and training. These are both near-term strategies for the SJTPO.

The SHMP addresses all sorts of hazards that municipalities and counties in New Jersey are likely to face. These include severe winter weather, geologic hazards, and even man-made hazards, such as acts of terrorism. It also addresses flooding, nor’easters and hurricanes, those hazards that are likely due to and exacerbated by climate change. However, the SHMP is not unique to those hazards. The strategies outlined, below, are more specific toward mitigating impacts stemming from the extreme weather events likely due to global warming and climate change.

⁶⁹ The State of New Jersey 2019 Hazard Mitigation Plan. <http://ready.nj.gov/mitigation/2019-mitigation-plan.shtml>.



Regional Greenhouse Gas Initiative (RGGI)

A major program aimed at mitigating GHG emissions is the Regional Greenhouse Gas Initiative (RGGI). Launched in 2005, RGGI is a program that establishes a regional cap on CO₂ emissions and requires power plants with a capacity greater than 25 megawatts to obtain an allowance for each ton of CO₂ emitted annually. These plants may comply by purchasing allowances from RGGI auctions or from other power plants within the RGGI program, or through specific projects that offset CO₂ emissions. The funds generated by RGGI can be used by states to invest in programs and projects to help reduce GHG pollution and develop and promote reliance on clean and renewable energy facilities.

Although New Jersey Governor Chris Christie withdrew the state from RGGI in 2012, New Jersey Governor Phil Murphy directed New Jersey to re-enter RGGI in January 2018. The NJDEP adopted its rules to rejoin the RGGI. These two rules govern New Jersey's re-entry into the RGGI auction and distribution of the RGGI auction proceeds. The first auction is scheduled to take place in 2020.⁷⁰

Transportation and Climate Initiative (TCI)

A program similar to RGGI is the Transportation and Climate Initiative (TCI). TCI is a regional collaboration of twelve Northeast and Mid-Atlantic states, including New Jersey, and the District of Columbia, that seeks to improve transportation, develop the clean energy economy, and reduce carbon emissions from the transportation sector. The main intent of TCI is to "design a regional low-carbon transportation policy that would cap and reduce carbon emissions from the combustion of transportation fuels...and allow each TCI jurisdiction to invest proceeds from the program into low-carbon and more resilient transportation infrastructure."⁷¹

The main operational mechanism that is being proposed for TCI is the "Cap-and-Invest" model. In a "cap-and-invest" model, fuel suppliers are the main regulated entities. They are assigned a cap, or allowance, of CO₂ emissions, which they cannot exceed. The fuel suppliers cannot generate more CO₂ emissions than they have allowances for. If they do not use their entire cap or allowance, they can transfer them to another entity, or sell them via an auction, the proceeds of which are to be invested in low-carbon transportation programs.⁷² The TCI jurisdictions released their draft proposals in the form of a draft Memorandum of Understanding (MOU) in mid-December 2019. In summary, the TCI jurisdictions are considering three different cap proposals which would lead to anywhere from a 20-25 percent reduction in transportation emissions by 2032. The three proposals would have an estimated cost of anywhere between five and 17 cents per gallon. At this time,

⁷⁰ <https://www.state.nj.us/dep/aqes/rggi.html>. Accessed September 5, 2019.

⁷¹ TCI Regional Policy Announcement" presented at COG & MPO Transportation & Climate Initiative Convening. Delaware Valley Regional Planning Commission. June 24, 2019.

⁷² For a more detailed discussion of how the Cap-and-Invest model works, see the video prepared by the Georgetown Climate Center, located at: <https://vimeo.com/331091117/defadf2a7f>.

New Jersey is part of the overall TCI consortium and has committed to working on policy development. States had until the spring of 2020 to make a formal commitment to implement the program.⁷³

Adaptation Strategies

In *adaptation*, the objective is to attempt to minimize the negative effects of global warming on the human environment through such means as elevation of roads and bridges above anticipated flood levels, construction and fortification of dams and levees to make them more resilient and planning and enhancement of storm evacuation routes. Many of SJTPO's subregions have made improvements to their transportation infrastructure to make them more resilient, some of which were funded through the federal aid programs administered directly by SJTPO.

One type of improvement has been the installation of berms, revetments, or similar types of structures on various roadways to make them more resilient to precipitation and storm surge. [Figure 35](#), at right, depicts a stone revetment wall that was built on a section of Ocean Drive (CR-619) in Upper Township, Cape May County, an area that was flooded after Superstorm Sandy.

Another common type of resiliency improvement is the raising of roadways and bridges, as depicted in [Figure 36](#), at right. The raising of Sea Isle Boulevard (CR-625) from the Garden State Parkway to Ludlam Thorofare in Dennis Township in Cape May County, is an example of a project that was funded directly with SJTPO Local Lead Federal Aid funds. The project involves raising the roadway by approximately 4.5 feet to above the 100-year flood elevation. The EH-21 bridge in Egg Harbor Township was one of three bridges in Atlantic County that was raised to reduce flooding. It also better enables CR-559, the roadway carried by EH-21, to be used for evacuation purposes.

Similar improvements are needed on the rail system. Railroad tracks may need to be removed and installed above sea level. Structures need to be built with more robust materials that are able to withstand ocean surge forces and saltwater immersion. Retaining walls may need to be hardened, culverts replaced, and pumps installed.⁷⁴

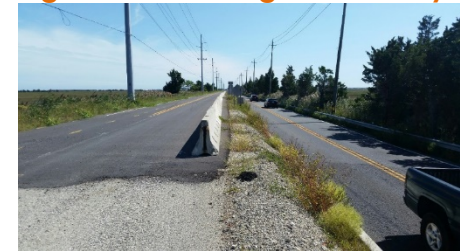
Living Shorelines

Adaptation strategies do not necessarily have to deal with manmade structures. They can also incorporate features of the natural landscape, such as wetlands or dunes. These types of measures fall under a broader group of strategies often referred to as *green infrastructure*, defined as “methods of stormwater management that reduce wet weather/stormwater volume, flow, or changes the characteristics of the flow into combined or separate sanitary or storm sewers, or surface waters, by allowing the stormwater to infiltrate, to be treated by vegetation or by soils; or to be stored for reuse.”⁷⁵ A prominent

Figure 35 – Long-Term Repair



Figure 36 – Raising a Roadway



Images courtesy of Cape May County.

73 For more on the TCI Policy Design process, see: www.transportationandclimate.org/main-menu/tcis-regional-policy-design-process-2019.

74 At: <https://www.adaptationclearinghouse.org/resources/resilience-of-new-jersey-transit-nj-transit-assets-to-climate-impacts.html>. Accessed 25 November 2020.

75 APA-NJ Chapter. *Complete Guide to Planning in New Jersey-Fourth Edition*. 2018. 291.



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example of green infrastructure that has been constructed and implemented in New Jersey is the Living Shorelines Program. Living Shorelines is a shoreline management practice that addresses the loss of vegetated shorelines and habitat in the area closest to the shore, also known as the littoral zone, by providing protection, restoration or enhancement of these habitats. The goal of the program is to “create and maintain sustainable shorelines for Habitat enhancement/creation, Shoreline stabilization, Marsh enhancement/restoration/creation, Tidal flood mitigation, and Stormwater management.”⁷⁶ In the SJTPO region, one example of a Living Shoreline project is the Atlantic City Gardner’s Basin Living Shorelines project. For more information on this and other Living Shoreline projects in New Jersey, see: [NJDEP's Living Shoreline Projects webpage](#).

Strategies

RTP 2050 recommends the following strategies to “improve the resiliency and reliability of the transportation infrastructure.”

- a. **Prioritize evacuation projects:** Evaluate evacuation and other critical routes and prioritize roadway maintenance projects on these routes.
- b. **Emergency Preparedness Plans:** To the maximum extent possible, ensure coordination, as appropriate integration with transportation plans of emergency relief and disaster preparedness plans, strategies, and policies amongst SJTPO subregions and planning partners.
- c. **Emergency Preparedness Education:** Educate the public about emergency preparedness efforts.
- d. **Improve Transportation Vulnerability:** Analyze the vulnerability of the transportation system to determine where adaptation strategies are most appropriate.
- e. **Resiliency Partnerships:** Participate in regional and statewide resiliency planning initiatives.
- f. **Support Resiliency Funding:** Serve as a technical resource to partner agencies in pursuing funding opportunities to improve resiliency and reliability of transportation infrastructure.
- g. **Resiliency Education:** Educate the public on the worsening vulnerabilities of the regional transportation network with the resulting increases in flooding and storm severity.
- h. **Stormwater Management:** Assess strategies appropriate to address stormwater management.

Goal 6. Increase and Enhance Opportunities for Travel and Tourism

“Enhance travel and tourism” is the newest of the 10 Metropolitan Planning Factors (23 CFR § 450.306). Mandated by the USDOT via the FAST Act, metropolitan planning factors must be considered in any metropolitan transportation planning

⁷⁶ At: www.arcgis.com/apps/MapJournal/index.html?appid=049f4937cbdd437bb496a7aca94acd35&folderid=f4686d3c9a7048efb7a1dd8d877eb3f6. Accessed 17 November 2019.

process. “Travel and tourism” is especially relevant to the SJTPO region, considering one of the major trip purposes in the SJTPO region is for leisure/recreation.

Travel and tourism dominate the economic and transportation landscape in the SJTPO region. In 2018, over 111 million individuals visited New Jersey, spending \$44.7 billion, generating \$5 billion in state and local taxes. The state has a goal of drawing 150 million visitors by 2023.⁷⁷ In 2018, the tourism industry accounted for 3.1 percent of the total New Jersey Gross Domestic Product (GDP), generating \$19.4 billion. It is also the 7th largest employer in New Jersey.⁷⁸ As seen in [Table 21](#), tourism-related employment accounts for a large number of jobs, particularly in Atlantic and Cape May counties.

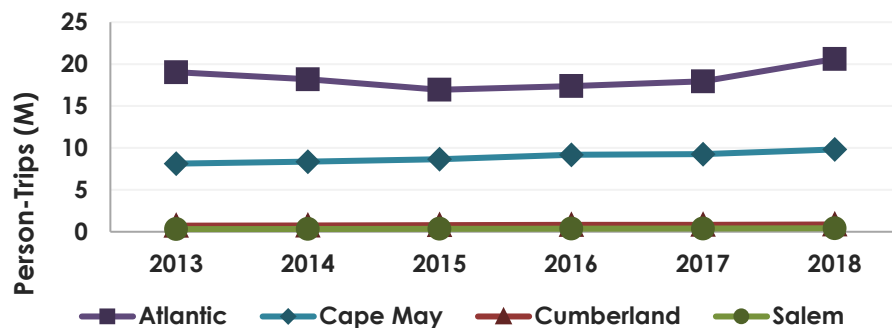
Table 21 – Direct Tourism Employment by SJTPO Counties

County	2014	2015	2016	2017	2018	Percent Change
Atlantic	52,035	47,606	47,632	47,978	51,687	-0.7%
Cape May	25,513	25,858	26,137	26,885	26,572	4.15%
Cumberland	3,109	3,264	3,307	3,308	3,219	3.54%
Salem	1,550	1,562	1,578	1,588	1,624	4.77%
Total	82,207	78,290	78,654	79,759	83,102	11.79%

Source: Tourism Economics. “Economic Impact of Tourism in New Jersey, 2018.” March 2019.

A major attraction and generator of these trips to Atlantic and Cape May County is the New Jersey Shore. In addition, despite increased competition from casinos opening in neighboring states, such as Pennsylvania and Delaware, Atlantic City is still a major gambling and entertainment destination. Two new casinos, Ocean Resort and the Hard Rock Café, opened in Atlantic City in June 2018, providing Atlantic County with a boost to visitor spending. As seen in [Figure 37](#) below, total visitation to counties within the SJTPO region have increased slightly since 2013.

Figure 37 – Visitation by County, in Millions



Source: Tourism Economics. “Economic Impact of Tourism in New Jersey, 2018.” March 2019.

77 At: www.roi-nj.com/2019/05/09/lifestyle/tourism-in-n-j-hits-record-breaking-numbers-murphy-says/. Accessed 7 January 2020.

78 Tourism Economics. “Economic Impact of Tourism in New Jersey, 2018.” At: www.visitnj.org/sites/default/files/2018-nj-economic-impact.pdf.

In 2018, over 111 million individuals visited New Jersey, spending \$44.7 billion, generating \$5 billion in state and local taxes.



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Unfortunately, South Jersey's strong tourism sector brings with it some unintended effects – that of a high level of seasonal traffic congestion. Mitigating seasonal congestion remains a recurring challenge within the SJTPO region. Recognizing seasonal variations and analyzing traffic congestion during tourist season, typically Memorial Day through Labor Day, is an inherent part of SJTPO's Congestion Management Process. Seasonal data collection is improving. In addition to the vehicle probe data, as mentioned in [Chapter IV.2](#), more actual traffic counts are being taken along roadways that get heavily congested during the summer tourist season. In 2017, SJTPO submitted a list of such areas to NJDOT, and since that time, traffic counts have been conducted at these locations by NJDOT officials to get a better handle on the seasonal variation of roads within the SJTPO region. In 2018, updated seasonal adjustment factors which better represent the seasonal patterns were released with the hope of better anticipating and planning for this seasonal influx of traffic.

In addition to the shore and gaming industries, ecological tourism, more commonly known as eco-tourism, has been an area that many counties within the SJTPO region have and are looking to further develop. Eco-tourism can be defined as “responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education.”⁷⁹ Eco-tourism is a \$600 million industry in Cape May County, and the county is considered one of the top bird watching hotspots in North America.⁸⁰ Eco-tourism is not limited to Cape May County, however. With an extensive County Park system, scenic rivers and the Edwin P. Forsythe National Wildlife Refuge, Atlantic County contains a multitude of eco-tourism spots. With its rich maritime history, including being a prime oyster fishing spot, Cumberland County released an Ecotourism Plan in 1996, which establishes goals and strategies upon which ecotourism can be promoted in Cumberland County. Located in Mannington Township in Salem County, Mannington Meadows, a 6,000-acre complex of wetlands and tidal water that is home to various mammals and waterfowl, in addition to being a hotspot for migratory bird watching, is a major draw for ecotourism.

There are many reasons to promote the use of alternative modes, such as bicycle and pedestrian travel. A result of their impact on mobility, accessibility, and quality of life is that they improve the local economy. The impact of this is seen on multiple levels. It is intuitive to many that a well-connected bicycle and pedestrian network as well as multi-use trails provide an amenity that tourists enjoy, particularly when they connect to attractions and local businesses. Residential and commercial developers are recognizing the value of trail-oriented development and we are now seeing a new generation of bicycle-friendly buildings and projects. By adding bike-friendly amenities, developers and homebuilders are finding that they can appeal to both ends of the demographic spectrum – young people who want to live closer to work as well as baby boomers who are looking for a more walkable and bikeable lifestyle.⁸¹

79 At: <https://visit.org/blog/en/what-is-ecotourism/>. Accessed 7 January 2020.

80 Cape May County. Cape May County Spring Tourism Conference 2018: Destination Marketing – It's about telling the whole story.” 24. At: <https://capemaycountynj.gov/DocumentCenter/View/4797/2018-Cape-May-County-Tourism-Conference-Booklet>. Accessed 7 January 2020.

81 Urban Land Institute. Active Transportation and Real Estate: The Next Frontier. 2016. <http://uli.org/wp-content/uploads/ULI-Documents/Active-Transportation-and-Real-Estate-The-Next-Frontier.pdf>.

Strategies

RTP 2050 recommends the following strategies to increase and enhance opportunities for travel and tourism:

- a. **Advance South Jersey Trails:** Continue to advance conversations and build a coalition of regional partners in the public, private, and non-profit sectors to develop and implement a vision for the South Jersey Trails regional trail network to connect major attractions within the region and to neighboring regions.
- b. **Reduce summer congestion/delay:** Collect data that demonstrates the added needs of the region due to unique seasonality of travel patterns and work to identify transportation needs and secure additional funding based upon those needs.
- c. **Projects that support the economy:** Continue to work extensively with subregions as well as local and regional economic development agencies to ensure that transportation investments promote conditions conducive to economic activity.
- d. **Projects that enhance tourism:** Continue to work extensively with subregions and allied agencies, to ensure that transportation improvements enhance opportunities for travel and tourism within the SJTPO region.
- e. **Identify Congested Locations:** Utilize the Congestion Management Process to identify congested locations and analyze available data to inform project development at the regional level.

Goal 7. Improve Transportation Safety

SJTPO has a long-standing record of placing a high priority on safety. If users of the transportation system do not reach their destination safely, nothing else matters. SJTPO has joined advocates of safety advancement across the country in adopting a vision of zero fatalities on our roadways.

As such, SJTPO is taking a multifaceted approach to identify the causes of crashes and fatalities and is working to make improvements that address safety in a variety of different ways. To that end, SJTPO is working rigorously to advance improvements to area infrastructure as well as to educate people on how small changes in behavior can make a huge difference in increasing safety on area roadways. SJTPO is working to integrate safety into the core functions of the transportation planning process.

Safety Outreach and Education

SJTPO's Local Safety Program is unique in its dual focus on infrastructure improvements and behavior. For many years, SJTPO has had a robust behavioral focus, with a strong emphasis on safety education. SJTPO collaborates with a number of organizations on programs that address different facets of safety. Programs are presented in schools to students of all age groups. Additionally, SJTPO's Traffic Safety Specialists work with teen parents and child services organizations to ensure the appropriate use of child restraint systems on school buses and organization-owned vehicles.

Each one of us needs to ask ourselves what role we play in working towards zero fatalities on our roadways. We have to ask ourselves whom among our family and friends are we willing to lose on our roadways, and then realize that can mean only zero fatalities are acceptable.



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These safety programs are designed to bring awareness to the many risks presented to drivers, passengers, bicyclists, and pedestrians on area roadways and teach simple ways to improve safety. This is a part of SJTPO's commitment to work toward zero fatalities and ensure that all roadway users get home safely.

For more information about these programs or to request a program, visit www.sjtpo.org/education.

- **Programs for Drivers of All Ages**
 - Defensive Driving (six-hour or eight-hour course)
- **Programs for High School Students**
 - Share the Keys
 - Car Crashes, It's Basic Physics
 - Teens and Trucks
 - Most Dangerous Place on Earth
- **Programs for Elementary and Middle School Students**
 - Occupant Protection for Middle School Students
 - Bicycle and Pedestrian Safety
 - Belts on Bones
 - Belts, Bones, and Buses
- **Programs for Adults**
 - Car-Fit for Senior Drivers
 - Child Passenger Safety (CPS) – Car Seat Inspection Program
 - CPS – Transporting Children Safely
 - CPS – Child Passenger Safety Technician Training
 - CPS – Restraint Systems on School Buses National Training

Opportunities to Expand Bicycle and Pedestrian Safety Awareness

SJTPO recognizes that continuing education and awareness is important for all users of the transportation system. SJTPO is always exploring opportunities to improve safety in our region. Examples of this include the “[Street Smart](#)” campaign, led by NJTPA, which teaches roadway users to “check their vital signs,” a reference to the roadway signs that are vital to the safety of bicyclists and pedestrians. This program is tailored to New Jersey’s traffic laws and has been implemented successfully in cities and towns across northern and central New Jersey. Another example includes a program from the National Highway Traffic Safety Administration (NHTSA), called “[Everyone is a Pedestrian](#),” which highlights that at some point in our trip, everyone is a pedestrian and links to federal resources on pedestrian safety. These programs represent successes and opportunities that SJTPO can take advantage of to bring the safety message to all users, going beyond the younger users covered in current safety outreach programs.

**Learn more or request
a program [Here>>](#)**

Statewide Strategic Highway Safety Plan (SHSP)

All states are required to develop a Strategic Highway Safety Plan (SHSP). The SHSP provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roadways. It identifies the key safety needs in the state and guides investment decisions towards strategies and countermeasures with the most potential to save lives and prevent injuries. It is a data-driven, multi-year, comprehensive plan that establishes statewide goals, objectives, and key emphasis areas and has established a series of standing Emphasis Areas Teams to ensure the advancement of the Plan's goals going forward. The SHSP allows highway safety programs and partners in the state to work together in an effort to align goals, leverage resources, and collectively address the state's safety challenges.

New Jersey updated its SHSP in 2020. The 2020 SHSP establishes priorities for areas of emphasis in addressing safety on New Jersey's roadways. The SHSP is data driven, sets long-term goals, and is a coordinated statewide plan that identifies the most significant infrastructure and behavioral safety issues on New Jersey's public roads. The SHSP identifies seven key safety emphasis areas, including Equity, Lane Departure, Intersections, Driver Behavior, Pedestrians and Bicyclists, Other Vulnerable Users, and Data, and the supporting strategies that are likely to have the greatest impact on improving safety on South Jersey's roadways. SJTPO's efforts in addressing infrastructure and public behavior are consistent with the state's priorities in the SHSP and are unique in its multi-faceted approach. SJTPO is directly involved in several of the standing Emphasis Areas Teams as well as the SHSP Steering Committee. SJTPO will maintain an ongoing roll in contributing towards the advancement of the SHSP and based on that ongoing involvement, will continue to look for ways to improve upon its own practices in support of the SHSP and safety in general.

More information about New Jersey's SHSP can be found at www.saferoadsforallnj.com.

Roadway Safety Improvements

SJTPO has worked rigorously to strengthen its Local Safety Program in recent years, focused on both infrastructure and behavior. For the infrastructure component, work has been to develop an intuitive, data-driven process to identify and vet projects for advancement. SJTPO is utilizing federal funding from the HSIP to fund infrastructure projects selected through the Local Safety Program. The purpose of the HSIP is to achieve a significant reduction in fatalities and serious injuries on all public roads. This includes all roadways, regardless of ownership, including federal, state, county, and municipal roadways.

SJTPO's Local Safety Program guides HSIP-eligible projects on county and municipally owned roadways in Atlantic, Cape May, Cumberland, and Salem Counties through a data-driven, five-step, strategic approach to improving highway safety. The result is that these limited safety dollars go to locations with the greatest need and to countermeasures that best address the identified problem. SJTPO's Local Safety Program will generate safety infrastructure projects by guiding applicants through a five-step process, including:



1. Location Selection
2. Problem Identification
3. Countermeasure Selection
4. Benefit-Cost Analysis
5. Technical Committee Review

For more information about SJTPO's Local Safety Program, visit www.sjtpo.org/HSIP.

Strategies

In summary, the numerous SJTPO initiatives in safety planning, safety project development, and safety education and programming all relate to the RTP 2050's goal of "Improve Transportation Safety."

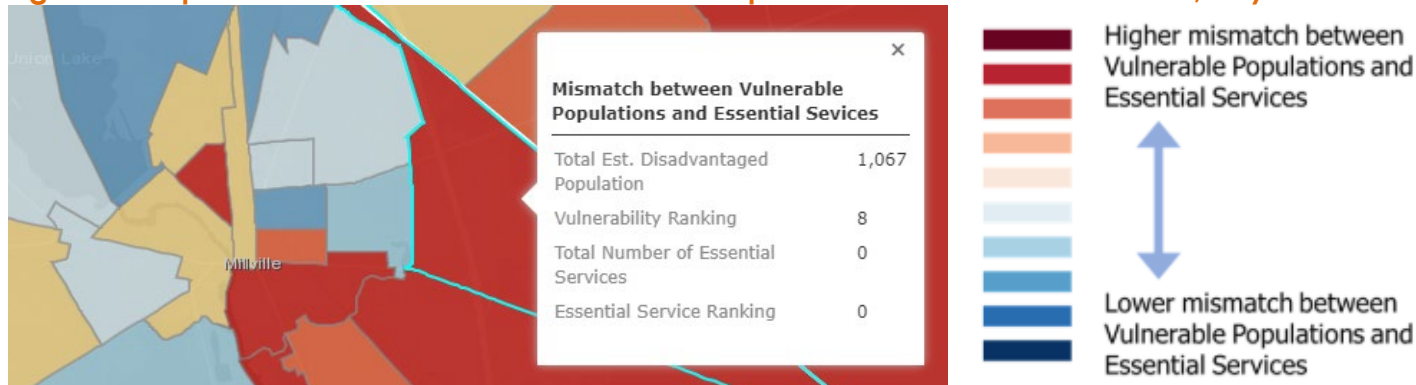
- a. **Promote and Advance Safety Countermeasures:** Educate the public and stakeholders about the benefits of the Federal Highway Administration's Proven Safety Countermeasures, including roundabouts, road diets, and others that offer major safety benefits, but may be subject to misinformation and work to include them in SJTPO projects. Work to ensure these countermeasures are included in projects, as dictated by safety needs.
- b. **Safety in all Projects:** Evaluate all transportation projects that receive funding through the SJTPO process to ensure they identify and address the safety needs of all roadway users. Utilize updated Project Pre-Evaluation Screening process to consider crash history when evaluating all projects and utilize Network Screening Lists to identify locations with the greatest need for safety improvement.
- c. **Bicycle and Pedestrian Safety Projects:** Work with regional partners to develop and prioritize projects that improve safety for bicyclists and pedestrians, both on the existing bicycle and pedestrian network as well as in all projects.
- d. **Reduce Barriers to Safety:** Continue and expand state and regional partnerships to identify and reduce barriers to safety project advancement, including offering design assistance support to better ensure projects reach construction.
- e. **Align Safety with State Priorities:** Ensure that safety investments are aligned with priorities established with the State's Strategic Highway Safety Plan, which was developed in collaboration with New Jersey's MPOs and other statewide partners.
- f. **Safety Outreach and Education:** Improve the safety of roadway user behavior through the continued dissemination and development of safety education programs.
- g. **No Roadway Death is Acceptable:** Guide all transportation decision-making to incorporate the Vision Zero philosophy, which states that any loss of life on our roadways is unacceptable and preventable.

Goal 8. Enhance the Integration and Connectivity of the Transportation System

One of the main strategies SJTPO employs to support integration and connectivity is “Advancing Transit for the Transportation Disadvantaged” via the 2015 Coordinated Human Services Transportation Plan, now referred to as the Access for All Transit Plan. One of the main objectives of the Access for All Transit Plan is to identify gaps in the transportation system and make recommendations for filling those gaps. Human services transportation is discussed in more detail in [Chapter III](#).

SJTPO’s Ladders of Opportunity Toolkit, developed in 2017 in response to USDOT’s Ladders of Opportunity initiative, is another project that seeks to identify gaps in the transportation system. The toolkit is a demographic-based transportation analysis that identifies areas where the disadvantaged populations have poor access to essential services, such as health care facilities, schools, grocery stores, recreation/open space, and social service centers. A series of maps were created to indicate the locations of the vulnerable populations, essential services, and areas where there is a spatial mismatch between the vulnerable populations and the essential services. [Figure 38](#), below, is a screenshot from the Ladders Toolkit depicting the high spatial mismatch in the City of Millville. The Ladders of Opportunity Toolkit and details on the toolkit’s methodology are available at www.sjtpo.org/Ladders.

Figure 38 – Spatial Mismatch Between Vulnerable Populations and Essential Services, City of Millville



Performance

While the Access for All Transit Plan and the Ladders of Opportunity Toolkit do a good job of identifying gaps in the system, they are not solutions in and of themselves. The Access for All Transit Plan provides recommendations for solutions; however, as with many of the desired projects, a major impediment to implementation is lack of funding. Nevertheless, since the completion of the 2015 Plan, there have been efforts to improve the human services transportation system. For example, SJTA has provided some additional feeder services to its shuttle system, and some needs associated with fixed



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route services have been met by the demand responsive systems run by SJTPO's subregions. These efforts are more fully described in [Chapter III](#).

In addition to efforts in human services transportation, improvement of connectivity and integration with other modes is a main driver behind many studies and projects undertaken by SJTPO. Whether a project will advance the goal of "enhancing integration and system connectivity" is one of SJTPO's TIP/RTP Project Selection Criteria. Every project that goes through SJTPO's project development process is evaluated for inclusion of complete streets elements, including bicycle, pedestrian, disabled, transit, and freight accommodation. SJTPO has completed and will continue to promote and support connectivity projects both within its own project development process, as well as via the Subregional Transportation Planning Work Program (UPWP). Part of SJTPO's UPWP is a program whereby SJTPO funnels federal funds directly to its subregions with the intent of enabling them to do planning studies that support the regional transportation planning process and encourage them to continue their involvement in transportation.

In 2018, SJTPO completed its Port of Salem Freight Rail Intermodal Study. In summary, the study entailed analyzing the port of Salem and recommended a program of improvements for the Port of Salem, the Salem Branch Rail Line, and the area's roadway network, with the objective of increasing commercial activity and related economic development. One of the more specific recommendations was a project to restore the rail infrastructure near the port to improve port-rail connectivity. Also, through the UPWP, SJTPO funded a Regional Bike Path/Intermodal Connectivity Study for Cape May County in FY 2018. As part of its South Jersey Trails effort, an initiative designed to build a more extensive trail system within the SJTPO region, it is looking to fill critical gaps in the existing trail network and ultimately connect with DVRPC's Circuit Trails in Philadelphia.

Strategies

RTP 2050 recommends the following strategies to enhance the integration and connectivity of the transportation system:

- a. **Evaluate transit service:** Work with public transportation providers to evaluate transit service availability in all communities, but disadvantaged communities in particular as those areas are likely to have limited vehicular access.
- b. **Advance transit for the transportation disadvantaged:** Work with regional partners to advance recommendations of the Access for All Transit Plan, including on-demand transit services.
- c. **Promote new connections between travel modes:** Identify and promote the development of locations where better intermodal facilities and infrastructure are needed in order to promote intermodal connectivity.
- d. **Evaluate connections between travel modes:** Evaluate the performance of existing intermodal connections within the region to ensure they are still functioning effectively and evaluate the existing gaps within and between modes to identify and plan for projects that make new intermodal connections.
- e. **Transit oriented development:** Investigate and establish an appropriate role for SJTPO in supporting the NJDOT Transit Village Initiative as well as Transit-Oriented Development (TOD) in the region.

- f. **Include all users in projects:** Evaluate all transportation projects that receive funding through the SJTPO process for their inclusion of complete streets elements, including bicycle, pedestrian, disabled, transit, and freight accommodation.
- g. **Support connectivity projects:** Serve as a technical resource to partner agencies in pursuing funding opportunities for improving the connectivity of the transportation system.
- h. **Advance South Jersey Trails:** Continue to advance conversations and build a coalition of regional partners in the public, private, and non-profit sectors to develop and implement a vision for the South Jersey Trails regional trail network to connect major attractions within the region and to neighboring regions.

Goal 9. Protect and Enhance the Environment and Complement Land Use Planning

As described in [Chapter II](#), the SJTPO region is rich in environmental resources. These include the Pinelands, natural scenic areas, wildlife habitat areas, wetlands, and numerous other valuable resources which need to be protected. In contrast to the rest of the state, the SJTPO region is predominantly rural, with a lot of forested area. It is partly because of this vast array of rich environmental resources that the stringent environmental protection measures of the Pinelands and CAFRA were enacted. When further developing the regional transportation system, consideration must be given to the negative effects of vehicular traffic on the natural and human environment, and the impacts the changing natural environment can have on roads, bridges, rail lines, and tunnels. SJTPO is also part of an Eight-Hour Ozone Nonattainment Area, meaning that its ambient air quality does not meet federal air quality standards. As such, SJTPO planners must ensure that their future transportation projects conform with state and federal air quality standards, a process known as conformity, described in more detail below.

When planning any transportation project, there are a multitude of environmental impacts to consider, which often result in mitigation measures that can add significant delay and cost to a project. For example, a project could impact wetlands or other environmentally sensitive areas, which would necessitate mitigation measures under the Clean Water Act. Construction that results in the discharge of waste or sediments into streams or rivers, may require a permit under state stormwater regulations. A project could also impact a wildlife habitat area, which would require mitigation measures under the National Environmental Policy Act (NEPA). As will be described in the Environmental Mitigation section later in this chapter, mitigation of these types of environmental impacts are the responsibility of the project sponsor, who are most likely the subregions (counties) and/or NJDOT. As an MPO, the one environmental impact of most consequence is the future transportation system's impact on air quality, as under the Federal Clean Air Act and the Metropolitan Planning Rule (23 CFR Part 450 and 771, 49 CFR Part 613), it is the MPO that is responsible for ensuring conformity of the future emissions generated from planned transportation projects with national ambient air quality standards (NAAQS), a process known as Transportation Conformity. Possible consequences of having a nonconforming Plan or TIP can be quite serious, including a freeze on building transportation projects and possible loss of federal funds. Given the MPO's major role in the

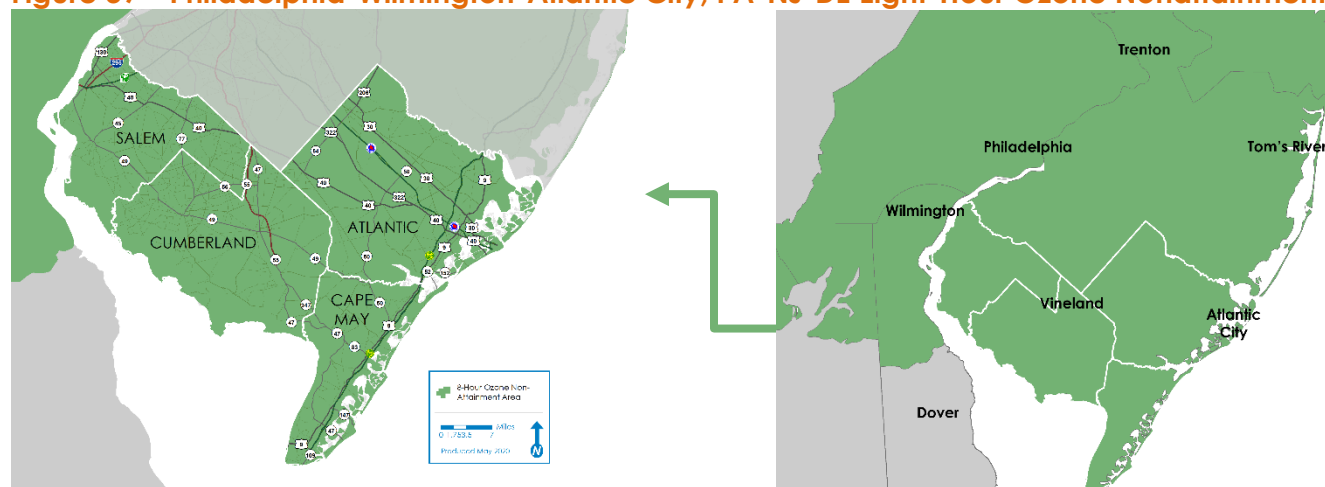
demonstration of transportation conformity, and the serious consequences of not demonstrating transportation conformity, an entire section is allotted to it and is included at the beginning of this chapter.

Transportation Conformity

Ground level ozone is a gaseous compound formed when Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOCs) combine in the presence of sunlight. A significant portion of the ozone concentration in the air comes from mobile sources, such as automobiles and trucks.

The SJTPO region falls within the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE Eight-Hour Ozone Nonattainment Area, making it subject to air quality conformity requirements, as mandated by the Federal Clean Air Act. [Figure 39](#), below, depicts a map of the SJTPO as well and the Eight-Hour Ozone Nonattainment multi-state area. Transportation conformity is demonstrated by comparing future projections of emissions from on-road vehicles with emission budgets that are established in the State Implementation Plan (SIP), NJDEP's plan for meeting federal air quality standards. The SIP contains the emissions targets, known as emissions budgets, that the State of New Jersey must meet to satisfy the current National Ambient Air Quality Standard for Ozone of 70 parts per billion (ppb).⁸² The SIP also contains the control strategies the state must undertake to meet those emissions targets. Conformity means conforming to, or being consistent with, the SIP. The RTP 2050 conforms to the emissions budgets established in the SIP.

Figure 39 – Philadelphia-Wilmington-Atlantic City, PA-NJ-DE Eight-Hour Ozone Nonattainment Area



⁸² The most recent SIP Update is located at: www.nj.gov/dep/baqp/PDF%20for%20posting/Final.pdf.

Environmental Performance Measures and Targets

Ambient air quality within the SJTPO region has been quite good over the past four years. A common metric for measuring air quality is the *Air Quality Index (AQI)*, a national index for rating daily air quality. The higher the AQI value, the greater the level of air pollution and health concern. AQI values from 101 to 150 are unhealthy for sensitive groups.⁸³ In 2019, there were 12 days in the state in which the AQI was 101 or higher due to an ozone concentration higher than the daily maximum eight-hour average concentration of 70 ppb. This is also known as an exceedance day. However, of those 12 days, only three of them were due to high readings at the two monitors within the SJTPO region. The three days where there were exceedances measured at monitors within the SJTPO region are depicted in [Table 22](#), below. The remaining nine days were due to exceedances at monitors outside the SJTPO region but still within the State of New Jersey.

Table 22 – Ozone Exceedances at Air Quality Monitors within the SJTPO Region

Date	Monitor Location	Pollutant	Concentration	Units	AQI Value
6/27/19	Millville	Ozone	0.072	ppm	105
6/28/19	Brigantine	Ozone	0.072	ppm	105
	Millville	Ozone	0.071	ppm	101
7/2/19	Millville	Ozone	0.072	ppm	105

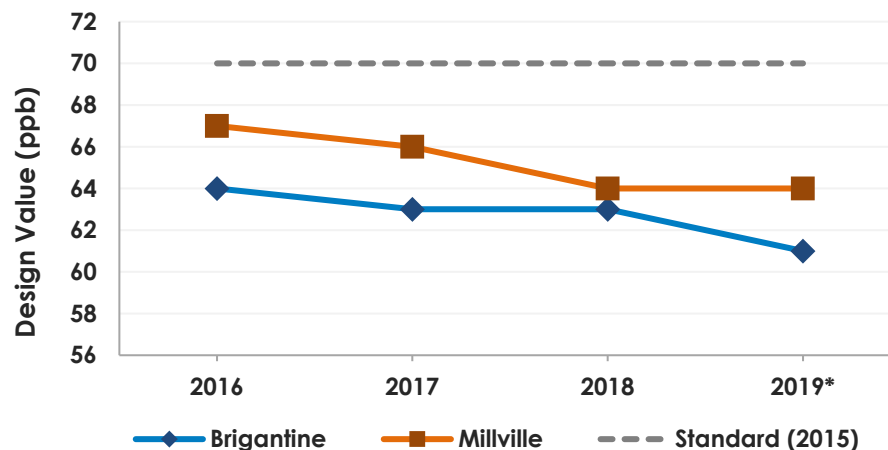
Source: NJDEP.

In spite of the ozone exceedances, there has not been a violation at any of the two monitors within the SJTPO region, as measured by the design value. Exceedance days are those in which a concentration was higher than the NAAQS. However, an exceedance does not mean that there is a violation of the NAAQS. Determining whether an area is in compliance or in violation of a NAAQS depends on whether the “design value” was exceeded. A monitor’s “design value” is the number that is used to determine whether an area is in violation or compliance of the NAAQS. USEPA’s design value for ozone is a three-year average of the 4th-highest daily maximum eight-hour average concentrations.

As depicted in [Figure 40](#), below, the design values for the two monitors located within the SJTPO region show that none of the monitors within the SJTPO region experienced any violation since 2016. Though SJTPO falls within the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE Eight-hour Ozone Nonattainment Area, which is an ozone nonattainment area under the 2015 Eight-Hour Ozone Standard, it appears as if the ambient air quality within the SJTPO region is clean and has improved since the last RTP that was adopted in 2016.

The ambient air quality in the SJTPO region is clean and has improved since the 2016 RTP.

⁸³ For more information on the AQI Index, see: <https://airnow.gov/index.cfm?action=aqibasics.aqi>.


Figure 40 – Eight-Hour Ozone Design Values, Brigantine, Millville Monitors, 2016-2019, SJTPO Region*


Source: NJDEP. *2019 data has not yet been certified.

Congestion Mitigation and Air Quality (CMAQ)

One of the tools within SJTPO's repository to actually improve air quality is the Congestion Mitigation and Air Quality Program (CMAQ). CMAQ is a federal program that funds projects and programs that improve air quality and reduce traffic congestion. Typical CMAQ funded projects include construction of new bicycle and pedestrian facilities, purchase of alternative-fueled (e.g. natural gas, electric, hybrid), vehicles and Travel Demand Management (TDM) activities. TDM activities are actions that reduce single-occupancy vehicle travel, and include such programs as carpools and vanpools, guaranteed ride home, traffic calming measures and telecommuting/teleworking. Applicants must apply directly to SJTPO for CMAQ funding via a competitive application process. Currently, SJTPO's CMAQ Program is oversubscribed due to a backlog of projects that have been programmed but are still pending authorization, but SJTPO next expects to issue a call for projects for FY 2021 in the spring of 2020.⁸⁴

Climate Change and Greenhouse Gas Emissions

Climate change and its ensuing impacts, including an increase in the frequency of extreme weather events and sea level rise is another major environmental concern not just within the SJTPO region, but nationally and internationally. Because it is strongly linked to resiliency and reliability, a more detailed discussion of climate change and its impacts, including New Jersey's and SJTPO's actions in addressing this significant threat is in [Chapter IV.5](#).

⁸⁴ For more details on the SJTPO's CMAQ program and the selection process, see: www.sjtpo.org/cmaq/.

Environmental Mitigation

With respect to mitigation of a project's environmental impacts, SJTPO is involved in projects and plans that reduce emissions from mobile sources by focusing on projects that facilitate the movement or flow of traffic, as opposed to an increase in capacity, thereby reducing overall travel time and vehicle idling. As part of its involvement in the transportation improvement process, SJTPO's project development review process includes measures that modify or discourage proposed roadway capacity improvements that would result in negative air quality impacts. SJTPO also promotes transportation alternatives that reduce traffic volume and VMT, including bus and passenger rail transit, rail freight, which reduces truck traffic, and bicycle and pedestrian facilities.

Federal and state regulations often require an environmental assessment or a comprehensive Environmental Impact Statement (EIS), where a proposed project would involve a significant increase in the carrying capacity of a transportation facility. The findings of these statements may require mitigation strategies to minimize negative impacts or they may suggest significant project modifications. These plans and projects include major road and intersection improvements, the construction of new roads and bypasses, and traffic control improvements that maximize traffic flow. As discussed, SJTPO does not have a direct role in environmental compliance and/or mitigation, which is done during the project implementation phase, following the planning stage. For all Local Aid projects, environmental compliance and mitigation is primarily the responsibility of the subregions, who are generally the project sponsors. However, SJTPO does work with NJDOT's Bureau of Environmental Program Resources (NJDOT BEPR) in helping the subregions meet the environmental requirements for their projects.

As New Jersey is a home-rule state, the authority to regulate land use lies with the municipality. For input on land use matters, SJTPO relies on its subregions, including the two major cities of Vineland and Atlantic City. Nonetheless, SJTPO will continue to work with its subregions to incorporate existing land use and county master plans into the regional planning process. Similarly, SJTPO will continue to support NJDOT's Transit Village Initiative, which creates incentives for municipalities to redevelop or revitalize the areas around transit stations using design standards of Transit-Oriented Development (TOD). TOD helps municipalities create attractive, vibrant, pedestrian-friendly neighborhoods where people can live, shop, work and play, without relying on automobiles. As of now, the City of Pleasantville is the only Transit Village within the SJTPO region.

Strategies

RTP 2050 contains the following strategies to "Protect and Enhance the Environment and Complement Land Use Planning:

- a. **Promote transportation alternatives:** Promote public awareness of alternative transportation options and services, such as rideshare, carpooling, electric vehicles, walking, bicycling, transit, etc., and support agencies that provide these alternatives.

SJTPO is involved in projects and plans that reduce emissions from mobile sources by focusing on the movement or flow of traffic, as opposed to an increase in capacity.



- b. **Educate the public about environmental impacts:** Educate the public about the impacts of transportation on the environment and provide information on how to mitigate those impacts through changes in daily behavior.
- c. **Promote projects that reduce emissions:** Promote projects that reduce emissions on the roadway, such as ITS, signal optimization, bicycle and pedestrian facilities, public transit, or roundabouts.
- d. **Incorporate land use in transportation:** Work to incorporate existing land use and livability plans, policies, and principles throughout the region into the MPO planning process.
- e. **Transit oriented development:** Investigate and establish an appropriate role for SJTPO in supporting the NJDOT Transit Village Initiative as well as TOD in the region.

Goal 10. Improve Security

Security planning involves preparing for impacts on the transportation system due to natural disasters (e.g. flooding, hurricanes or other extreme weather events), major events (e.g. air shows), technical failures/accidents (e.g. incident at nuclear power plant) or even cyber threats. Within the context of transportation, security planning focuses on the protection of critical infrastructure by preventing, preparing against, expediting responses, and facilitating quick recovery in response to a major natural and/or man-made event. While the SJTPO region has many critical infrastructure assets, as described in [Chapter IV.1](#), SJTPO does not own or operate any infrastructure assets. The organization's role in this area is more limited than in other aspects of transportation planning.

New Jersey Statewide Hazard Mitigation Plan

New Jersey has an Office of Emergency Management (NJOEM), which is responsible for hazard mitigation and administering the NJOEM Hazard Mitigation Program. Hazard mitigation can be defined as actions or policies taken to reduce or eliminate the long-term risk and impact to people and property from natural and technological hazards and is intended to result in safer communities that are more resilient in the face of natural or manmade disasters. Mitigation measures also reduce risk for individuals, as well as small and large businesses and critical service locations, such as hospitals, public safety facilities, and utility stations.⁸⁵

New Jersey updated its [Statewide Hazard Mitigation Plan](#) (SHMP) in 2019. As mentioned in [Chapter IV.5](#), the SHMP profiles the different types of hazards experienced by all jurisdictions within New Jersey, and presents strategies to reduce risks from these hazards, as well as serves as a basis for prioritizing future project funding. These hazards consist of both nature-based hazards, such as Nor'easters, hurricanes and tropical storms, severe weather and coastal erosion, as well as human-based hazards, including pandemics, nuclear hazards, and terrorism. It also includes mitigation strategies for local government agencies and individuals to adopt to reduce total loss of life and property by lessening the impact of disasters. Other types of mitigation measures include actions to strengthen infrastructure projects and protect natural systems. Local

⁸⁵ At: <http://ready.nj.gov/mitigation/index.shtml>. Accessed 31 December 2019.

plans and regulations and education and awareness programs are other commonly deployed types of strategies to improve security. SJTPO was one of the many stakeholders included in the planning process for this SHMP, and has included the following mitigation strategies in the plan:

- Develop a Regional Resiliency Planning Study for the transportation infrastructure in Atlantic, Cape May, Cumberland, and Salem Counties in southern New Jersey.
- Host a Roundtable specific to resiliency and hazard mitigation planning for the region to enhance stakeholder education and training.
- Review existing local and regional plans pertaining to hazard mitigation and resiliency and integrate principles with RTP update.

SJTPO has embarked on these strategies and continues to ensure that its planning is in accordance with the goals of the SHMP.

SJTPO Initiatives

Within the SJTPO region, much of the operations' aspects of any security incident is handled at the local level by public safety or law enforcement agencies. Much of SJTPO's role involves the coordination of emergency and disaster preparedness plans and strategies, as well as helping to increase awareness of these plans amongst the public and the organization's partner agencies. SJTPO has already started on this effort by publishing its [Emergency Preparedness webpage](#), which includes links to all the county emergency management plans and national websites to educate both individuals and businesses alike on how to act in the event of a natural disaster or a terrorist incident. As the SJTPO region has two nuclear generation stations, the Salem and Hope Creek Nuclear Generating Stations in Salem County, owned by the Public Service Enterprise Group (PSEG), the webpage includes a link to PSEG's Emergency Plan on what residents should do in the case of a nuclear incident. The website also includes links to county maps depicting the state-designated evacuation routes.

As stated in [Chapter IV.5](#), to strengthen the linkage between emergency preparedness and emergency management, SJTPO has had discussions with NJDOT's Office of Emergency Management, Security, and Response. NJDOT is the lead agency in carrying out Emergency Support Function (ESF #1), which focuses on transportation.⁸⁶ In this role, it supports local,

⁸⁶ Emergency Support Functions (ESFs) are the grouping of governmental and certain private sector capabilities into an organizational structure to provide support, resources, program implementation, and services that are most likely needed to save lives, protect property and the environment, restore essential services and critical infrastructure, and help victims and communities return to normal following domestic incidents. For more background on ESFs, see: www.phe.gov/Preparedness/support/esf8/Pages/default.aspx.



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state, other federal governmental entities, nongovernmental organizations, and the private sector in the management of transportation systems and infrastructure during domestic threats or in response to actual or potential incidents.⁸⁷

In its role as a coordinator and educator of emergency and disaster preparedness planning and plans, SJTPO has also reached out to the tri-County Community Organizations Active in Disasters (COAD), a coalition of groups spearheaded by the American Red Cross of the Southern Shore, with emergency management officials from Atlantic, Cape May, and Cumberland Counties. Comprised of local, regional, and national nonprofits, government, faith-based organizations, and businesses with experience in disaster relief and recovery, the Tri-County COAD is a forum to share knowledge and resources throughout all phases of a disaster – *preparation, response, and recovery* – to help disaster residents and their communities. While Salem County is not part of the Tri-County COAD, they have a group with similar functions – a public-private partnership that is overseen by the Salem County Emergency Manager and a Chairperson.

As a regional planning organization, SJTPO can bring counties and major cities together to share common regional problems and work on solutions that are amenable to all. As mentioned in [Chapter IV.5](#), one of its future mitigation strategies that is included in the 2019 SHMP is to convene a regional roundtable specific to resiliency and hazard mitigation planning to enhance stakeholder education and training. SJTPO also plans to use these forums to further define transportation security and how SJTPO can best advance security planning.

Strategies

The major strategies SJTPO is recommending to “Improve Security” are as follows:

- a. **Prioritize evacuation projects:** Evaluate evacuation and other critical routes and prioritize roadway maintenance projects on these routes.
- b. **Emergency Preparedness Plans:** To the maximum extent possible, ensure coordination, as well as appropriate integration with transportation plans of emergency relief and disaster preparedness plans, strategies, and policies amongst SJTPO subregions and planning partners.
- c. **Emergency preparedness education:** Educate the public about emergency preparedness efforts.
- d. **Advance Security Planning:** Promote conversations among federal, state, and regional partners to define what transportation security means in the SJTPO region and how SJTPO can work to advance security planning.

⁸⁷ At: www.fema.gov/media-library-data/1470148635327-75b99900ae83949a9c5577c1dc99ccdd/ESF_1_Transportation_20160705_508.pdf. Accessed 31 December 2019.

V. FUNDED PROJECTS AND CRITICAL NEEDS

Through the development of this iteration of the RTP, staff worked to review and update the Project Evaluation Process, which is used to aid in the selection of projects for inclusion in the TIP and RTP. The process revolved around two central elements, first more closely tying evaluation criteria to the Performance-Based Planning Process, RTP Goals (Planning Factors), and SJTPO Planning Initiatives. In addition, a Pre-Evaluation Screening Process, which evaluated projects, not simply to passively assess the quality of the project, but actively encourage improvements to projects to better align with regional, state, and federal guidance and priorities, such as safety, Complete Streets, Environmental Justice, as well as other priorities were implemented.

It is important to note that the criteria being adopted as a part of this RTP process will be used for the first time during the 2020 solicitation for the 2022 TIP. As such, projects included in this RTP were selected under the old Project Selection Criteria.

New Project Evaluation Process

Sponsors of proposed projects for consideration in the SJTPO TIP and RTP are asked to submit the information below. The submission items include basic project information that focuses on expanded project description narrative, as appropriate to the project, to assist in the planning-level evaluation of potential projects.

1. Project Name
2. County, Municipality
3. SRI, Route, Roadway Name
4. Structure # (if applicable)
5. Milepost of beginning and end points of every segment or intersection
6. Phases of work requested with Project Cost Estimate for each and fiscal year of request
7. AADTs for the project corridor or intersection and year of AADTs
8. Any relevant truck counts, traffic counts, traffic projections, travel time studies, HCS capacity analyses, SYNCHRO studies, if available
9. Number (and width) of lanes and shoulders – (Existing and Proposed), if applicable
10. Year of completion and/or Open to Traffic
11. NJDOT projects should also include scores from Pavement Management System, Safety Management System, Congestion Management System, and other system scores, as relevant to the project
12. General project narrative: describe existing conditions, issues, and project description with as much detail as possible. Things to consider when writing narrative include:
 - Impact on congestion, if any



- Impact to non-vehicular modes and users without vehicular access
- Was the impact to disadvantaged users considered and addressed? If so, how?
- Impact on tourism, if any. Factors may include, but are not limited to promotion of regional trails, byways, and access to shore areas or other tourism amenities in the region
- Impact on freight movement, if any
- Safety issues present and considerations given to targeted or systemic safety solutions, including rumble strips, Safety Edge, upgrades to ADA ramps or other amenities
- Bridge condition (i.e., Structurally Deficient, Functionally Obsolete, or Scour Critical), if applicable

The Project Pre-Evaluation and Evaluation Processes will be conducted by SJTPO staff and will be coordinated with the project sponsor, TAC, and Policy Board, as described below.

1. SJTPO staff will pre-scan materials received to ensure necessary items have been included, and will follow-up with sponsors, if needed
2. SJTPO staff will conduct a site visit of the project location
3. SJTPO staff will conduct Pre-Evaluation Screening of proposed projects and will reach out to sponsors with any clarifications or to discuss recommendations for improvements
4. SJTPO staff will divide scoring based on areas of expertise and conduct initial Project Evaluation Scoring
5. SJTPO staff will meet to discuss results of initial Project Evaluation Scoring and finalize Draft Scoring
6. SJTPO Executive Director will conduct an overall final internal review of Draft Scoring
7. SJTPO staff will send Draft Scoring of projects to their sponsors for review and comment, offering clarification, and provide additional information, if necessary
8. SJTPO staff will make edits to Scoring, if needed, based on information from sponsors and finalize Draft Scoring Recommendations
9. SJTPO staff will submit Draft Scoring Recommendations to the TAC for review, comment, and final recommendation to the Policy Board. If the final TAC recommendation deviates from the written Evaluation Criteria and Scoring, supporting documentation (explanation) will be included
10. SJTPO staff will submit TAC Final Scoring Recommendations to the Policy Board for approval

New Project Pre-Evaluation Screening

Before a project is advanced for prioritization using the project evaluation process, SJTPO will assess projects for the following items to address opportunities to enhance projects to better meet federal, state, and regional guidance, targets, and priorities. In addition to a desk review, this assessment will include a site visit by SJTPO staff to the project location to better understand the context of the project.

A. Substantive safety considerations are incorporated, as appropriate

All projects will be evaluated for their ability to improve safety for all users. Safety design elements should be incorporated into all projects, as is relevant to their context, including roadway characteristics, crash history, and constraints. SJTPO will aid applicants to ensure appropriate safety countermeasures are considered in all projects.

Projects in locations that appear in the top 100 on a Network Screening List for Intersections, Bicycle and Pedestrian Corridors, or Bicycle and Pedestrian Intersections; appear in the top 200 on the Network Screening List for Corridors; or appear at any ranking on the High Risk Rural Roads (HRRR) List will be evaluated with greater scrutiny to ensure that the safety issues that contribute to their crash performance are addressed in any MPO-funded projects.

B. Context appropriate design is included, as dictated by the project location

All projects will be evaluated to ensure that they adhere to context sensitive Complete Streets design principles. The [New Jersey Complete Streets Design Guide](#) will assist in this effort. However, if a local jurisdiction has its own Complete Streets Policy, that will govern and guide the process. The emphasis in this evaluation will be on context appropriate design, which will likely require more accommodation in urban contexts and less in rural contexts. Accommodations shall align with Environmental Justice considerations and will also need to reflect realistic constraints, such as environmental and permitting issues, right-of-way and property conflicts.

Projects located within a Complete Streets Priority Area will be evaluated with greater scrutiny to ensure that the context of the location, land use, and needs of users are addressed in any MPO-funded projects.

C. Environmental Justice

All projects will be evaluated to ensure that they adhere to federal requirements for Environmental Justice, which dictate that projects may not create burdens on any Environmental Justice population greater than burdens on Non-Environmental Justice populations. It similarly requires that any Environmental Justice populations must receive benefits equal to those of Non-Environmental Justice populations. Benefits and burdens may include, but are not limited to safety, inclusion of non-vehicular modes, environmental impacts, and impacts to quality of life. If any project does not adhere to these Environmental Justice principles, then mitigation or accommodation will need to be included to ensure that benefits are at least shared equally with these populations and that project burdens do not fall disproportionately on these populations. SJTPO will also need to evaluate the pool of projects in their totality to ensure that project improvements are not disproportionately concentrated in areas that do not benefit Environmental Justice populations.

D. Freight Considerations

As part of the SJTPO Regional Freight Plan Data Collection and Analysis technical study, SJTPO will soon perform an evaluation of the regional roadway network based on its use for local and regional freight activity. Once available,



that data will be used in the pre-screening process to determine the degree to which freight activity will benefit from proposed projects and may be used to suggest alterations to improve regional freight flow.

E. Requested projects align with available funding

All project requests will be evaluated against available funds, by year and by Urbanized Area funding pool (200K+, 5-200K, <5K).

F. Air Quality Assessment

If the project is determined to be “Regionally Significant” and thus not exempt from SJTPO air quality conformity, as defined by the SJTPO Interagency Group, SJTPO shall ensure that all necessary data has been collected and assessment of air quality impact has been evaluated.

New Project Evaluation Criteria and Scoring

The following tables provide a description of the planning level evaluation criteria to be used by the professional judgment of SJTPO staff to develop a score that reflects the adherence of projects to federal, state, and SJTPO planning priorities and mandates. Sections 1 and 2 reflect the degree to which projects support performance-based planning targets and SJTPO planning initiatives. In addition, Sections 1 and 2 align with the RTP 2050 planning goals, which are noted under each criterion. Section 3 measures the potential impact of the project, while Section 4 measures the cost-effectiveness of the project. Criteria where no data are provided and are not available to SJTPO will receive zero points.

With the exception of Pavement Condition and Bridge Condition, all criteria will be scored based on a professional qualitative assessment of the degree to which the proposed projects, as described, will advance the criteria below.

1. Contributions to Performance-Based Planning Targets (Categories adapted from performance measures established under MAP-21 and FAST Act.)			45 Points
<i>Evaluation Criteria</i>	<i>Points</i>	<i>Scoring Instructions</i>	
Traffic Congestion <i>(RTP Goal 2: Mitigate Traffic Congestion and promote efficient system operation)</i>	0-15	To what degree will the project improve traffic congestion?	
Pavement Condition <i>(RTP Goal 3: Restore, Preserve, and Maintain the existing transportation system)</i>	0-15	<p>If the project includes repaving in the scope, what is the Surface Distress Index (SDI) from the SJTPO Pavement Management System or International Roughness Index (IRI) based on the NJDOT IRI Guidelines?</p> <ul style="list-style-type: none"> • SJTPO SDI 0–1 (Very Poor) or NJ IRI Deficient = 15 points • SJTPO SDI > 1–2 (Poor) or NJ IRI Fair = 12 points • SJTPO SDI > 2–3 (Fair) = 5 points • SJTPO SDI > 3–4 (Good) or NJ IRI Good = 2 points • SJTPO SDI > 4–5 (Very Good) or NJ IRI Excellent or no data = 0 points <p>The NJ IRI Guidelines are scored as Excellent, Good, Fair, and Deficient based on both IRI score as well as three categories of roadways, including: 1.) Interstate Freeways NHS Highways, 2.) Non-NHS Highways, and 3.) Other County Highways. For roadways that have an SJTPO SDI score, those numbers will serve as the primary indicator of condition.</p>	
Bridge Condition <i>(RTP Goal 3: Restore, Preserve, and Maintain the existing transportation system)</i>	0,5,10,15	<p>Bridge projects will be scored as follows:</p> <ul style="list-style-type: none"> • Bridges deemed “Structurally Deficient” will receive 15 points • Bridges deemed “Functionally Obsolete” or “Scour Critical” will receive 10 points • Projects that preserve or restore all other bridges will receive 5 points • All other projects will receive 0 points 	
Freight Movement <i>(RTP Goal 4: Support the Regional Economy)</i>	0-15	To what degree will the project improve the movement of freight on the regional network?	
Fatalities and Serious Injuries <i>(RTP Goal 7: Improve Transportation Safety)</i>	0-15	<p>To what degree will the project improve safety for drivers, bicyclists, and pedestrians through the advancement of substantive safety improvements?</p> <p>Projects that only improve driver safety can receive no more than 10 points.</p>	
On-Road Mobile Source Emissions <i>(RTP Goal 9: Protect and enhance the Environment and complement land use planning)</i>	0-15	To what degree will the project reduce or mitigate on-road mobile source emissions?	
SECTION 1 TOTAL	0-45	Sum of scores for the highest three Evaluation Criteria in this category.	



2. Advances Emphasis Areas from SJTPO Planning Initiatives			25 Points
Evaluation Criteria	Points	Scoring Instructions	
Environmental Justice (RTP Goal 1: Promote Accessibility and Mobility for the movement of People and Goods) <i>Note: “Moderate” and “Significant” population thresholds, based on regional average and 1.5 standard deviations from the regional average, respectively, are as follows:</i> <ul style="list-style-type: none"> Households in Poverty: 14.2%; 33.2% Minority Population (Racial minority and Hispanic): 39.2%; 84.8% Zero Vehicle Households: 11.2%; 32.6% 	0-5	<p>As described in Section C of the Project Pre-Evaluation Screening, all projects must mitigate or eliminate any disproportionate burdens imposed by a project and must provide equal benefits to Environmental Justice populations in order to advance.</p> <p>What percentage of population within one mile of project are minority or live in poverty (as reported by USEPA EJSCREEN tool ejscreen.epa.gov/mapper), and are in zero vehicle households (as calculated by the average of relevant US Census Bureau block group data) AND to what degree does the project benefit these populations?</p> <ul style="list-style-type: none"> 0-5 points: Populations above the “Significant” threshold for Poverty OR Minority OR Zero Vehicle Households, while remaining above the “Moderate” threshold for all three. 0-4 points: Populations above the “Moderate” threshold for Poverty AND Minority AND Zero Vehicle Households. 0-3 points: Populations above the “Moderate” threshold for any two of the following: Poverty OR Minority OR Zero Vehicle Households. 0-2 points: Populations above the “Moderate” threshold for Poverty OR Minority OR Zero Vehicle Households. 0-1 point: Populations above zero (0) for Poverty OR Minority AND Zero Vehicle Households. 0 points: No populations for Poverty, Minority, OR Zero Vehicle Households. 	
Flood Zones (RTP Goal 5: Improve the Resiliency and Reliability of the transportation infrastructure, particularly along the Atlantic and Delaware Bay shorelines)	0-5	<p>Projects within the most recent FEMA One Percent (100-year) floodplain will be evaluated for their ability to improve the performance of that facility in flood conditions and receive a score of 0-5 points.</p> <p>Projects within the most recent FEMA 0.2 Percent (500-year) floodplain will be similarly evaluated and receive a score of 0-2 points.</p> <p>More information about these floodplains is available at www.fema.gov/flood-zones.</p>	
Tourism (RTP Goal 6: Increase and enhance opportunities for Travel and Tourism)	0-5	<p>Projects will be evaluated for their ability to enhance tourism in the region and will receive a score of 0-5 points. Factors may include, but are not limited to promotion of regional trails, byways, and access to shore areas or other tourism amenities in the region.</p>	

Complete Streets / Context Appropriate Design <i>(RTP Goal 8: Enhance the Integration and Connectivity of the transportation system)</i>	0-5	Projects located within a Complete Streets Priority Area will be evaluated for their meaningful incorporation of Complete Streets elements and will receive a score of 0-5 points. Projects not in these areas will be similarly evaluated and receive a score of 0-3 points.
Evacuation Routes <i>(RTP Goal 10: Improve Security)</i>	0-5	Projects on roadways designated as Evacuation Routes will be evaluated for their ability to improve evacuation and receive a score of 0-5 points. Projects on roadways designated as Secondary Evacuation Routes will be evaluated for their ability to improve evacuation and receive a score of 0-3 points.
SECTION 2 TOTAL	0-25	Sum of scores for all five Evaluation Criteria in this category.

3. Impact of Project			10 Points
<i>Evaluation Criteria</i>	<i>Points</i>	<i>Scoring Instructions</i>	
Weighted Length of Project	1-5	<p>The weighted length of project will be calculated using the following formula:</p> $\left(\frac{\text{Number of lanes}}{2} + \frac{\text{number of shoulders}}{4} \right) \times \frac{\text{centerline}}{\text{miles}} = \frac{\text{weighted length}}{\text{of project}}$ <p>Shoulder for the purposes of assessing project length will only include shoulder of 5 feet in width or greater as such a facility has the potential to serve as a bicycle facility.</p> <p>The weighted length of project will be scored as follows:</p> <ul style="list-style-type: none"> • Weighted project length of greater than 4 miles will receive 5 points • Weighted project length of between 0.5 and 4 miles will receive 3 points • Weighted project length of less than 0.5 miles will receive 1 point • Intersection projects will receive 2 points for one intersection and receive 1 additional point for each intersection, up to 5 points 	
Volume of Corridor	1-5	<p>Bi-directional Average Annual Daily Traffic (AADT) volumes of the project corridor will be scored as follows:</p> <ul style="list-style-type: none"> • Corridor AADT of greater than 8,000 vehicles per day will receive 5 points • Corridor AADT between 5,000 and 7,999 vehicles per day will receive 4 points • Corridor AADT between 2,000 and 4,999 vehicles per day will receive 3 points • Corridor AADT between 500 and 1,999 vehicles per day will receive 2 points • Corridor AADT of less than 500 vehicles per day will receive 1 point 	



If a project corridor has multiple traffic volumes associated with different segment, SJTPO will work to create an average volume for the corridor.

SECTION 3 TOTAL

0-10

Sum of scores for both Evaluation Criteria in this category.

SUBTOTAL SCORE (SECTIONS 1-3)
80 Points
Evaluation Criteria
Points
Scoring Instructions
SUBTOTAL SCORE

0-80

Sum of Scores from Sections 1-3

4. Cost effectiveness
20 Points
Evaluation Criteria
Points
Scoring Instructions
SECTION 4 TOTAL

0-20

A benefit/cost ratio will be calculated, as follows:

$$\frac{\text{Subtotal Score (Sections 1-3)}}{\text{Cost of Project (in \$100Ks)}}$$

Benefit/cost ratio will be translated to a score by assigning 20 points to the highest ratio, 0 points to the lowest, and proportionately assigning all other scores on that scale, to the nearest whole number.

TOTAL SCORE
100 Points
Evaluation Criteria
Points
Scoring Instructions
TOTAL SCORE

0-100

Sum of Scores from Sections 1-4.

Previous Project Selection Criteria

The projects currently listed in the 2020 TIP and this RTP were identified using the previous iteration of the SJTPO Project Ranking & Selection Process. This was to comply with the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. The process consists of four distinct phases. The first involves screening the candidate projects, for eligibility. Next, projects are scored by the sponsor. Thirdly, a Project Selection Subcommittee of the Technical Advisory Committee reviews the scores and accepts or adjusts, in consultation with the sponsor. Finally, the accepted rankings are fit into a financial plan and adjusted if necessary, to reflect funding availability, prior commitments, and geographic equity. The goals to be addressed by projects on the TIP and the detailed criteria used for ranking candidate projects are outlined below.

1. Support the Regional Economy	15 points
The project will support access to tourism destinations or recreational facilities	1.5 points
The project will support transportation and circulation important to the agricultural economy	1.5 points
The project will serve an existing or planned employment center or industrial park	1.5 points
The project will have a significant impact on economic growth and development, will help broaden the economy, or is important in maintaining current economic activity	1.5 points
The project will be important to the movement of freight or commodities or will improve access to ports, airports, ferries, freight distribution facilities, or major industrial districts	1.5 points
Base Subtotal	7.5 points
Multiplier for scope of economic activity supported: (Regional = 2, County = 1.5, Local =1)	x 1, 1.5, 2
Category 1 Total (rounded to nearest whole number)	15 points
2. Improve Safety (Consider severity of problem and whether existing or potential.)	20 points
The project will correct or improve a verified or potential safety or accident problem	2 points
The project is located on an official emergency evacuation route or will otherwise support emergency evacuation operations	2 points
The project will provide for or enhance a safe alternate route or mode for travel	2 points
The project will enhance signage, directions, turning movements, and the overall safe movement of pedestrian, bicycle, or vehicular traffic	2 points
The project will relieve a known flooding, drainage, or water hazard	2 points
The project will provide an intermodal safety improvement (e.g. signals at rail crossings)	2 points
The project will provide needed new or replacement guide rail	2 points
The project will address a narrow bridge roadway	2 points
The project will remedy or prevent a hazardous condition	2 points
The project will address a security problem	2 points
Category 2 Total	20 points



3. Reduce Congestion/Promote Mobility	15 Points
Improves movement through an intersection or along a roadway or other transportation corridor, mass transit options and operations, and mobility of an undeserved population group	3 points
The project will provide and alternate movement around a congestion problem or preserve a future route option	1 point
The project will reduce congestion by reducing the number of vehicles	1.5 points
The project is in a corridor or a location that is congested according to the latest version of the New Jersey Congestion Management Process	1.5 points
The project will not increase Single Occupancy Vehicles (SOV) by adding general purpose lanes to an existing highway (except for elimination of safety and bottleneck problems) or constructing a new general-purpose highway on a new location	1 point
Base Subtotal	7.5 points
Multiplier for scope of problem: (Regional = 2, Corridor = 1.5, Local = 1)	x 1, 1.5, 2
Category 3 Total (rounded to nearest whole number)	15 points
4. Protect and Improve the Environment	10 points
Project is an air quality Transportation Control Measure recognized in the State Implementation Plan (SIP)	2.5 points
Reduces the number of vehicles (e.g. by facilitating traffic movement, reducing number of vehicles, number of single occupant vehicles, reducing vehicle-miles traveled, or other measures)	2.5 points
Provides and alternates movement around a congestion problem or preserves a future route option	2.5 points
Reduces congestion by reducing the number of vehicles	2.5 points
Category 4 Total	10 points
5. Preserve and Maintain the Existing Transportation System (Consider severity of condition and extent of improvement – favor preservation over enhancements)	20 points
The project will address a problem in existing physical condition	6 points
The project will extend the usable life of a facility or equipment	6 points
The project will modernize or qualitatively enhance the functioning of the existing transportation system (not intended to include changes in highway capacity)	8 points
Category 5 Total	20 points

6. Favor Projects for More Important Facilities/ Services/ Programs	15 points
<u>For All Projects:</u>	
The project is a link or phase in a larger transportation project and will serve to help complete the project	1.5 points
There is a relationship to other projects in the regional transportation system	1.5 points
Important support for other types of plans or projects of public agencies (e.g. land use plans, Intermodal Management System)	1.5 points
Employs new technology, which can provide knowledge useful to other members of SJTPO	1.5 points
Significant in some way not recognized elsewhere in this ranking system	1 point
<u>All Project Subtotal</u>	7 points
<u>For Highway Projects:</u>	
The project is on a road functionally classified as the following:	5 points
<ul style="list-style-type: none"> • 5 points: Interstate or Other Freeway/Expressway • 4 points: Other Principal Arterial • 3 points: Minor Arterial • 2 points: Urban Collector or Rural Major Collector • 1 point: Rural Minor Collector • 0 point: Local 	
Addition for relatively high volume for the classification (up to 3 points)	3 points
Highway Project Subtotal	8 points
<u>For Non-Highway Projects:</u> (Consider scope of project – regional, county, and local):	
The route or service provides an important transportation connection	2 points
The route or service has high ridership or use	2 points
The project is responsive to current and future users	2 points
The project will improve information, comfort, or convenience to users	2 points
Non-Highway Project Subtotal	8 points
Category 6 Total	15 points
7. Favor Cost-Effective Projects	5 points
The project will have a relatively large benefit compared to its cost (include consideration of any reduction in operating expenses)	5 points
Category 7 score	5 points
TOTAL SCORE	100 points



Fiscally Constrained TIP Projects

[Table 23-Table 25](#), below, constitute the fiscally constrained project lists from the FFY 2020-2029 TIP for RTP 2050. The projects shown below, generally only include FFY 2020 to 2023, as those are projects that are fiscally constrained. Projects included in the TIP in the final six years of the document, are generally included for informational purposes and are not constrained.

Table 23 – FFY 2020-2029 TIP Locally-Led Projects

DBNUM	Project Name	Description	Phase	Fund	Municipality	County	FFY 20-23 (\$M) (YOE)
S1913	Atlantic Avenue, Albany to California Avenues	Mill and repave, upgrade ADA ramps, drainage upgrades and improvements, thermoplastic stripping, manhole reconstruction, gutters, sidewalks and curb repairs. Atlantic Avenue is a major four lane east-west roadway in Atlantic City, and it is heavily used by both residents and tourists. The road is in deteriorating condition and needs repaving. In addition, ADA accessible ramps will be included in this project.	CON	STBGP-AC	Atlantic City	Atlantic	\$1.000
S1916	Atlantic Avenue, Tennessee to Maine Avenues	Mill and repave, upgrade ADA ramps, drainage upgrades and improvements, thermoplastic stripping, manhole reconstruction, gutters, sidewalks and curb repairs. Atlantic Avenue is a major four lane east-west roadway in Atlantic City, and it is heavily used by both residents and tourists. The road is in deteriorating condition and needs repaving. In addition, ADA accessible ramps will be included in this project.	CON	STBGP-AC	Atlantic City	Atlantic	\$0.964
S1702	Baltic Avenue, Maine to Missouri Avenues	This project will mill and repave the roadway, upgrade ADA ramps, and improve drainage, thermoplastic stripping, manholes, gutters, sidewalks and curbs.	DES	STBGP-AC	Atlantic City	Atlantic	\$0.100
S1703	Chelsea Section, Albany Avenue	This project will mill and repave the roadway, upgrade ADA ramps, and improve drainage, thermoplastic stripping, manholes, gutters, sidewalks and curbs.	CON	STBGP-AC	Atlantic City	Atlantic	\$1.100
S1917	Kentucky/New York Avenues, Absecon Boulevard to Baltic Avenue	Mill and repave, upgrade ADA ramps, drainage upgrades and improvements, thermoplastic stripping, manhole reconstruction, gutters, sidewalks and curb repairs. Kentucky and New York Avenues, from Absecon Boulevard to Baltic Avenue, are in poor condition. These streets serve as connectors from Downtown to Absecon Boulevard and serve the Northside neighborhood.	DES/ CON	STBGP-AC	Atlantic City	Atlantic	\$0.100/ \$1.000
S1912	Brigantine Avenue (CR 638), 2 nd Street South to Terminus	Reconstruction of HMA Surface Course, and HMA Base Course as needed. Other improvements will include but not limited to: pedestrian ADA access, concrete gutter, concrete gutter, driveways, signage, striping, and drainage. County officials have determined through roadway inspections that the existing pavement and adjacent concrete features have deteriorated due to age and traffic volumes and needs pavement replacement at a nearing point in time. With this capital improvement project design will attempt to meet all applicable current standards (or a design exception will be prepared).	CON	STBGP-AC	Brigantine City	Atlantic	\$1.600
S1911	Brigantine Avenue (CR 638), 29 th Street South to 2 nd Street South	Reconstruction of HMA Surface Course, and HMA Base Course as needed. Other improvements will include but not limited to pedestrian ADA access, concrete gutter, concrete gutter, driveways, signage, striping, and drainage. County officials have determined through roadway inspections that the existing pavement and adjacent concrete features have deteriorated due to age and traffic volumes and needs pavement replacement at a nearing point in time. With this capital improvement project design will attempt to meet all applicable current standards (or a design exception will be prepared).	CON	STBGP-AC	Brigantine City	Atlantic	\$2.900

DBNUM	Project Name	Description	Phase	Fund	Municipality	County	FFY 20-23 (\$M) (YOE)
S1706	CR 559 Alternate (Ocean Heights Avenue), Harbor Ave to Salma Terrace	Resurfacing of the HMA Surface Course and HMA Base Course Repairs as needed. This roadway has: a highway classification of Urban Minor Arterial, approximately ADT range of 8,311 (2013yr.) to 11,880 (2012yr.) 50mph posted speed limit, a signalized intersection at or near beginning of project limit, driveways, striping, signage, pavement marking, curbing, sidewalk, drainage, guiderail, etc. Improvements will include pavement resurfacing, pavement structure upgrades as needed, and any other incidental work to improve safety and longevity of the roadway.	CON	STBGP-AC	Egg Harbor Twp	Atlantic	\$1.571
S1708	CR 563 (Tilton Road), Coolidge Avenue to Delilah Road	Resurfacing of the HMA Surface Course and HMA Base Course Repairs as needed. This roadway has: a highway classification of Urban Principal Arterial, approximately ADT of 11,090 (yr. 2014), 50 mph posted speed limit, signalized intersections at or near both limits, bridge with concrete surface over Atlantic City expressway, driveways, striping, signage, pavement marking, curbing, sidewalk, drainage, guiderail. etc. Improvements will include pavement resurfacing, pavement structure upgrades as needed, and any other incidental work to improve safety and longevity of the roadway.	CON	STBGP-AC	Egg Harbor Twp	Atlantic	\$2.300
S9911	Beach Avenue (CR 604)	The project will involve milling and paving, minor drainage improvements, replacing non-conforming handicap curb ramps, and replacing deteriorated curbs, sidewalks, and gutters. Enhanced safety improvements will be added, including new traffic striping and markings and possible push bottom cross walk flashing signs. The project is needed in order to restore the roadway to current engineering standards.	CON	STBGP-B5K200K	Cape May City	Cape May	\$1.785
S1710	Ocean Drive (CR 619), 62 nd Street to 80 th Street	The project consists of milling and resurfacing 0.96-mile section of County Road No. 619. Cross slopes of the asphalt pavement will be made compliant with AAHSTO standards. The curb ramps at each intersection with sidewalks will be brought into compliance with ADA requirements. Long life pavement stripes and markings will be installed upon completion of the paving. Additional stormwater drainage facilities will be provided to reduce the spread of ponding water in the gutter. Stormwater management and bicycle compliant grates and frames will be installed on existing catch basins.	CON	STBGP-AC	Avalon Boro	Cape May	\$1.676
S1711	Pacific Avenue (CR 621), Fish Dock Road to Rambler Road	The project consists of milling and resurfacing 1.70-mile section of County Road No. 621. Cross slopes of the asphalt pavement will be made compliant with AAHSTO standards. The curb ramps at each intersection with sidewalks will be brought into compliance with ADA requirements. The traffic signals within the limits of the project will also brought into compliance with ADA and MUTCD requirements. Long life pavement stripes and markings will be installed upon completion of the paving. Additional stormwater drainage facilities will be provided to reduce the spread of ponding water in the gutter. Stormwater management and bicycle compliant grates and frames will be installed on existing catch basins.	CON	STBGP-B5K200K	Lower Twp	Cape May	\$2.148



DBNUM	Project Name	Description	Phase	Fund	Municipality	County	FFY 20-23 (\$M) (YOE)
S1910	Third Avenue (CR 619), 96 th Street (CR 657) to 80 th Street	The project will involve the replacement of the existing curbs, gutters, and sidewalks along with handicap access upgrades. The existing paving will be replaced with a new 7 1/2" thick bituminous surface. The existing roadway grade and cross slopes will be upgraded to conform to current standards, and drainage will be upgraded to accommodate the 10-year storm event. High visibility traffic stripes and markings will be installed, as will pedestrian crosswalks and cross walk safety features. The project is needed in order to restore the roadway to current engineering standards. County Road 619 is an evacuation route leading to the only non-load posted causeway off this barrier island in the event of an emergency. Numerous storm events, in addition to constant wear, have created the need to restore and upgrade this section of critical road infrastructure. In addition, the roadway serves as a primary pedestrian connector to the municipal streets and serves as a vital commercial corridor for the influx tourists at this resort island. This has increased the need for upgraded pedestrian crossings and traffic safety measures.	CON	STBGP-AC	Stone Harbor Boro	Cape May	\$1.710
S1403	Cumberland County Federal Road Program – FFY 2020	Mill & Overlay of various roadways throughout the county within the existing right-of-way. Roadways include: Dividing Creek Road (CR 555), Brandriff Avenue (CR 555), Vine Street (CR 697), Fayette Street (CR 650), and Pamphylia Avenue (CR 668).	ERC	STBGP-B5K200K	Various	Cumberland	\$2.100
S1403	Cumberland County Federal Road Program – FFY 2021	Mill & Overlay of various roadways throughout the county within the existing right-of-way. Roadways include Sherman Avenue (CR 552) and Morton Avenue (CR 634).	ERC	STBGP-B5K200K	Various	Cumberland	\$2.100
S1403	Cumberland County Federal Road Program – FFY 2022	Mill & Overlay of various roadways throughout the county within the existing right-of-way. Roadways include Lincoln Avenue (CR 655) and Buckshutem Road (CR 670).	ERC	STBGP-B5K200K	Various	Cumberland	\$2.200
S1403	Cumberland County Federal Road Program- FFY 2023	Mill & Overlay of various roadways throughout the county within the existing right-of-way. Roadways include Broadway Road (CR 548), Port Elizabeth – Cumberland Road (CR 646), and Buckshutem Road (CR 670).	ERC	STBGP-L5K	Various	Cumberland	\$2.200
S1407	Landis Avenue, Phase V, Mill Road to Orchard Road (CR 628)	This project provides mill & overlay on the roadway within existing Right-of-Way.	CON	STBGP-B5K200K	City of Vineland	Cumberland	\$1.869
S1713	Landis Avenue, Phase VI, Mill Road to Rt 55	This project provides for milling and resurfacing of the roadway within the existing right of way in addition to removal and replacement of concrete items and rehabilitations of the existing storm sewer infrastructure as needed.	CON	STBGP-B5K200K	City of Vineland	Cumberland	\$1.295
S1901	Landis Avenue, Phase 0, Main Road to Myrtle Street	This project includes the milling and paving of Landis Avenue as well as upgrading of drainage facilities, removal and replacement of concrete curb, gutter and sidewalk as needed. Landis Avenue pavement is in poor condition as evidenced by extensive cracking. Portions of the drainage facilities were constructed using outdated and currently failing materials and need upgrades.	CON	STBGP-B5K200K	City of Vineland	Cumberland	\$1.500
S1714	Mill Road, Landis Avenue to CR 540 (Almond Road)	This project provides for milling and resurfacing of the roadway within the existing right of way in addition to removal and replacement of concrete items and rehabilitations of the existing storm sewer infrastructure as needed.	DES/CON	STBGP-B5K200K	City of Vineland	Cumberland	\$0.100/ \$1.640

DBNUM	Project Name	Description	Phase	Fund	Municipality	County	FFY 20-23 (\$M) (YOE)
S1903	Griffith Street/Grant Street (CR 657)	Mill and pave, sub-base repair, replace broken curb, striping, RPMs, guide rail upgrades, signage upgrades, drainage upgrades. County Road #657 is a major east-west road in Salem City and is heavily used by both residents and travelers. The road is in a deteriorated condition and needs resurfacing. In addition, ADA accessible ramps and/or upgrades will be included in this project.	DES/ CON	STBGP-B5K200K	Salem City	Salem	\$0.100/ \$0.750
S1906	Hood Road (CR 551), Phase 3	Mill and pave, sub-base repair, replace broken curb, striping, RPMs, guide rail upgrades, signage upgrades, drainage upgrades. County Road #551 is a major North-South connector road through Salem County. The road is in a deteriorated condition and needs resurfacing.	CON	STBGP-FLEX	Pennsville Twp	Salem	\$1.500
S1904	Perkintown Road (CR 644)	Mill and pave, sub-base repair, replace broken curb, striping, RPMs, guide rail upgrades, signage upgrades, drainage upgrades. County Road #644 is an east-west connector road from U.S. Route #130 to Interstate #295. The road is in a deteriorated condition and needs resurfacing.	DES	STBGP-L5K	Oldmans Twp	Salem	\$0.100
S1909	South Greenwich Street/Telegraph Road (CR 540), Phase 1	Mill and pave, sub-base repair, replace broken curb, striping, RPMs, guide rail upgrades, signage upgrades, drainage upgrades. County Road #540 is a major East-West connector road through Salem County. The road is in a deteriorated condition and needs resurfacing. In addition, ADA accessible ramps and/or upgrades will be included in this project.	DES/ CON	STBGP-L5K	Alloway Twp	Salem	\$0.150/ \$1.500
S1908	Telegraph Road (CR 540), Phase 2	Mill and pave, sub-base repair, replace broken curb, striping, RPMs, guide rail upgrades, signage upgrades, drainage upgrades. County Road #540 is a major East-West connector road through Salem County. The road is in a deteriorated condition and needs resurfacing.	DES/ CON	STBGP-L5K	Quinton Twp	Salem	\$0.150/ \$1.500
S9912	Welchville Road (CR 540)	Mill and pave, sub-base repair, replace broken curb, striping, RPMs guide rail upgrades, signage upgrades, drainage upgrades. County Road #540 is a major East-West connector road through Salem County. The road is in a deteriorated condition and is in need for resurfacing.	DES/ CON	STBGP-L5K	Alloway Twp	Salem	\$0.100/ \$0.750
S1406	CR 551 (Hook Road), E. Pittsfield Street to Route 295 (Phase II)	Resurfacing of Hook Road (CR 551) from East Pittsfield Street to I-295 NB Including Raising of a 1000-Foot Long Section at MP 2.85 to Alleviate Flooding.	CON	2016 TTF	Pennsville	Salem	\$0.469
S1602	Atlantic Avenue, Morris Avenue to Rhode Island Avenue	Road Diet with Median Island & Buffered Bike. The road diet shall include intersection specific countermeasures consisting of Leading Pedestrian Intervals; Targeted Left-Turn Restrictions; Installation of Traffic Signal Heads with Backplates; and, Curb Extensions at select intersections.	CON	2017 TTF	Atlantic City	Atlantic	\$1.110
S1915	Atlantic Avenue, Rhode Island to Maine Avenues	Mill and repave, upgrade ADA ramps, drainage upgrades and improvements, thermoplastic stripping, manhole reconstruction, gutters, sidewalks and curb repairs. Atlantic Avenue is a major four lane east-west roadway in Atlantic City, and it is heavily used by both residents and tourists. The road is in deteriorating condition and is in need of repaving. In addition, ADA accessible ramps will be included in this project.	DES	TTF	Atlantic City	Atlantic	\$0.450
S2003	English Creek Avenue – CR 603	Milling, Resurfacing, and other needed improvement within Right of Way.	CON	TTF	Egg Harbor Twp	Atlantic	\$0.330
S1707	Third Street (aka Wiltseys Mill Rd CR 724), Old Forks Road to Wood Street	Milling, Resurfacing, and other needed improvement within Right of Way.	CON	TTF	Hammonton	Atlantic	\$1.120


Table 24 – FFY 2020-2029 TIP State-Led Projects

DBNUM	Project Name	Description	Phase	Fund	Municipality	County	FFY 20-23 (\$M) (YOE)
15397	Route 9, Atkinson Avenue to Bayview Drive	Initiated from the Pavement Management System, this project will resurface within the project limits.	CON	NHPP	Somers Points City	Atlantic	\$7.900
14427	Route 30, Bridge over Beach Thorofare	Initiated from the Bridge Management System, this project will rehabilitate the deficient bridge components (the bridge was built in 1942-1946 and modified in 1989) to bring them up to current standards, and improve the functionality, reliability, and service life of the structure.	CON	NHPP	Atlantic City	Atlantic	\$18.250
14428	Route 30, Bridge over Duck Thorofare	Initiated from the Bridge Management System, the project will replace the movable bridge, built in 1946 and modified in 1989.	PE/DES/ROW	NHPP/STATE	Atlantic City	Atlantic	\$1.000/ \$1.850/ \$0.500
15382	Route 30, CR 542 (Sea Grove Ave/Central Ave) to Weymouth Rd (CR 640)	Initiated from the Pavement Management System, this project will resurface within the project limits.	CON	NHPP	Hammonton Twp	Atlantic	\$2.600
17503	Route 30, Mill Road (CR 651)	This project will provide safety improvements to the intersection of Route 30 and Mill Road (CR 651).	CON	HSIP	Absecon City	Atlantic	\$1.400
08371	Route 40, Atlantic County, Drainage	This project will raise approximately one mile of Rt 40/322 to reduce flooding. Construction will include new pavement, new curbs and sidewalks, relocation of aerial and underground utilities, and new drainage.	CON	STBGP-FLEX	Egg Harbor Twp	Atlantic	\$20.000
15370	Route 40, Hamilton Common Drive to West End Avenue (CR 629)	Initiated from the Pavement Management System, this project will resurface within the project limits.	CON	NHPP	Hamilton Twp	Atlantic	\$13.340
196A5	Route 40/322, Median Closures, Oakcrest Avenue to Spencer Avenue	This project will improve safety and traffic operations along the Route 40/322 corridor through the closure and/or modification of median openings. The project also includes installation of sidewalk and median fencing to improve pedestrian connectivity and safety.	DES/ROW	STATE/NHPP	Hamilton Twp	Atlantic	\$1.200/ \$1.000
15448	Route 322, Bridge over Great Egg Harbor River	Initiated by the Bridge Management System, this project will replace the structurally deficient bridge, built in 1931 and widened in 1959.	DES/ROW	STATE/STBGP-OS-BRDG	Hamilton Twp	Atlantic	\$1.500/ \$0.250
12433	Route 322, Route 50 to Leipzig Avenue	Initiated from the Pavement Management System, this project will resurface within the project limits.	CON	STBGP-FLEX	Hamilton Twp	Atlantic	\$15.188
15420A	ADA South, Contract 1 with ROW	This contract will bring projects into compliance with current ADA design requirements that could not be completed within original design or construction time frame for the following sites: 1) Route 30 and Pomona Road (CR 575) Intersection 2) Route 52 Causeway Replacement and Somers Pt. Circle.	ROW/CON	STBGP-FLEX	Galloway Twp	Atlantic, Burlington	\$0.500/ \$4.000

15420	ADA South, Contract 1 w/o ROW	This contract will bring projects into compliance with current ADA design requirements that could not be completed within original design or construction time frame for the following sites: 1) Route 206, Rizzotte Drive to Burlington County Line 2) Route 322, Eight Street to Watering Race Brook.	CON	STBGP-FLEX	Somers Point City	Atlantic, Cape May	\$3.850
16322	ADA South, Contract 5	Mill and repave, upgrade ADA ramps, drainage upgrades and improvements, thermoplastic stripping, manhole reconstruction, gutters, sidewalks and curb repairs. Atlantic Avenue is a major four lane east-west roadway in Atlantic City, and it is heavily used by both residents and tourists. The road is in deteriorating condition and needs repaving. In addition, ADA accessible ramps will be included in this project.	CON	STBGP-FLEX	Galloway Twp	Atlantic, Gloucester	\$1.313
11416	Route 30, Atco Avenue to Route 206	Initiated from the Pavement Management System, this project will resurface within the project limits. The project will include guiderail replacement, installation of handicapped ramps and crosswalks and upgrading of traffic signals.	CON	NHPP	Waterford Twp	Atlantic, Camden	\$1.705
15400	Route 9, Wrights Lane to Harbor Road	Initiated from the Pavement Management System, this project will resurface within the project limits.	CON	NHPP	Upper Twp	Cape May	\$8.200
17303	Route 47, Bridge over Dennis Creek	Initiated by the Bridge Management System, this project will replace the bridge deck and superstructure of the structurally deficient bridge, built in 1928.	ROW/CON	NHPP	Dennis Twp	Cape May	\$0.300/ \$4.350
15340	Route 47, Henderson Avenue to High Street	This project will provide safety improvements and address pedestrian deficiencies within the project limits.	PE/DES	HSIP	Millville City	Cumberland	\$0.350/ \$0.575
15314	Route 49, Bridge over Maurice River	Initiated by the Bridge Management System, this project will replace the bridge.	CON	NHPP	Millville City	Cumberland	\$7.400
12413	Route 40, Elmer Lake to Elmwood Avenue	Initiated from the Pavement Management System, this project will resurface within the project limits.	CON	NHPP	Upper Pittsgrove Twp	Gloucester, Salem	\$4.862
11414	Route 130, Plant Street to High Hill Road (CR 662)	Initiated by the Pavement Management System, this project consists of milling, resurfacing, reconstructing and rehabilitating certain sections within the project limits, replacing substandard guiderail, installing ADA-compliant curb ramps and correcting substandard geometric deficiencies. The pavement will be resurfaced within the entire project limits, with milling and paving on the mainline and shoulders. A small portion of the roadway is identified for reconstruction and the US 130 over Salem Canal concrete culvert will also be repaired.	CON	NHPP	Logan Twp	Gloucester, Salem	\$10.000

Table 25 – FFY 2020-2029 TIP Breakout of Line Item Projects

DBNUM	Map ID	Project Name	PHASE	FUND	MUNICIPALITY	COUNTY	FFY 20-23 (\$M) (YOE)
04314	H-01	Cape May County Centerline Rumble Strip Project (Emphasis Area: Lane Departure Crashes)	CON	HSIP	Various	Cape May	\$0.954
04314	H-02	Cape May County Pilot Roundabout 1 (West Perry) (Emphasis Area: Intersection Crashes)	ROW CON	HSIP HSIP	West Cape May Boro	Cape May	\$0.225 \$0.675
04314	H-03	Cape May County Pilot Roundabout 2 (Woodbine) (Emphasis Area: Intersection Crashes)	CON	HSIP	Woodbine Boro	Cape May	\$0.165



04314	H-04	Cumberland County Pilot Roundabout (West Park Drive) (Emphasis Area: Intersection Crashes)	ROW*	HSIP	Bridgeton City	Cumberland	\$0.001
			CON	HSIP			\$1.035
04314	H-05	Garden Road & Mill Road Traffic Signalization (Emphasis Area: Intersection Crashes)	ROW	HSIP	Vineland	Cumberland	\$0.247
			CON	HSIP			\$1.978
04314	H-06	Salem County Roundabout (Six Points) (Emphasis Area: Intersection Crashes)	FD	HSIP	Pittsgrove Twp	Salem	\$0.124
			ROW	HSIP			\$0.100
			CON	HSIP			\$1.100
04314	H-07	Salem County Pilot Roundabout (Five Points) (Emphasis Area: Intersection Crashes)	FD	HSIP	Pittsgrove Twp	Salem	\$0.124
			ROW**	HSIP			\$0.100
			CON	HSIP			\$1.052
04314	H-08	City of Salem Roadway Corridor and Intersection Safety Improvements (Emphasis Area: Pedestrian and Bicyclist Crashes)	PE	HSIP	Salem	Salem	\$0.189
			FD	HSIP			\$0.189
			ROW	HSIP			\$0.100
04314	N/A	FFY 2021 Local Safety Design Assistance - Cumberland County Ped & Bike Action Plan* (Emphasis Area: Pedestrian and Bicyclist Crashes)	PE	HSIP	Various	Cumberland	\$0.250
			FD	HSIP			\$0.250
X065	C-01	Margate-Ventnor Bicycle Infrastructure Project	CON	CMAQ	Margate, Ventnor	Atlantic	\$0.241
X065	C-02	Improving Air Quality and Reducing Traffic Congestion through Biking in Ocean City	CON	CMAQ	Ocean City	Cape May	\$0.222
X065	C-03	Roosevelt Blvd./34th Street Advanced Traffic Signal Project	DES	CMAQ	Ocean City, Upper Twp	Cape May	\$0.099
			CON	CMAQ			\$0.657
X065	C-04	Cape May County Route 621 (New Jersey Ave) Improvements	CON	CMAQ	Various	Cape May	\$1.245
X065	C-05	Landis & Mill, Landis & Orchard Traffic Signal Upgrades	CON	CMAQ	Vineland	Cumberland	\$0.548
X065	C-06	Millville Broad Street Traffic Signal Upgrades	CON	CMAQ	Millville	Cumberland	\$0.825
X065	N/A	It Pay\$ to Plug in: New Jersey's Electric Vehicle Charging Grants Program	CON	CMAQ	Various	Various	\$0.399
X065	N/A	Purchase of eight (8) Replacement Paratransit Passenger Buses	CON	CMAQ	Various	Atlantic	\$0.798
X065	N/A	Procurement of 7 low emission, unleaded fuel, body on chassis minibuses	CON	CMAQ	Various	Cape May	\$0.500
99358	S-01	Sooy Elementary School Area Sidewalk and ADA Ramp Improvements	CON	SRTS	Hammonton	Atlantic	\$0.502
99358	S-02	Ventnor School Safety Improvement Program	CON	SRTS	Ventnor	Atlantic	\$0.207
99358	S-03	Cape May Bikeway Network Expansion	CON	SRTS	Cape May	Cape May	\$0.350
99358	S-04	West Cape May Borough Elementary School Pedestrian Safety Improvements	CON	SRTS	West Cape May	Cape May	\$0.252
99358	S-05	Sidewalk, crosswalk and signalization improvements at various locations	CON	SRTS	Woodstown	Salem	\$0.237
X107	T-01	Caspian Pointe Pedestrian and Bicycle Connection	CON	TAP-AC	Atlantic City	Atlantic	\$0.558
X107	T-02	Lighthouse District Streetscape Improvement Program	CON	TAP-AC	Brigantine	Atlantic	\$1.000
X107	T-03	Cedar Creek/Egg Harbor Lake Pedestrian Connection	CON	TAP-AC	Egg Harbor City	Atlantic	\$0.723
X107	T-04	Linwood/Seaview Bike Path Extension	CON	TAP-AC	Linwood	Atlantic	\$0.127
X107	T-05	Maurice River Bikeway Trail - Phase V	CON	TAP- B5K200K	Millville	Cumberland	\$0.517

X107	T-06	Borough of Folsom 13th Street Pedestrian Path	CON	TAP-FLEX	Folsom	Atlantic	\$0.414
X107	T-07	Newport Streetscape Improvement Project	CON	TAP-L5K	Downe Twp	Cumberland	\$0.990
X107	T-08	Seashore Road Missing Link (Courthouse to Cape May)	CON	TAP-Regional	Lower Twp	Cape May	\$0.314

Other Funded Projects of Regional Importance

Although the projects listed below are not specifically programmed in SJTPO's TIP, they are large-scale, often high-cost projects on major facilities (i.e., on roadways whose primary function is to deliver traffic between roadways or to major traffic generators), and serve regional transportation needs, such as access to and from a major employment center or activity center, or a major shopping mall. The projects are not funded through SJTPO, but instead funded utilizing federal, county, state, I-Bank, or some other unique source of funding. While these projects represent major regional investments, as most of them are system preservation/rehabilitation projects, they are not considered "regionally significant" for air quality conformity purposes. Regionally significant projects are discussed following the county-led project tables.

Table 26 – Other Major Projects – Atlantic County

Map ID	Project Type	Description	Municipality	Fund	Estimated Cost		
					Design	Construction	Inspection
RI-01	Bridge Replacement	Nacote Creek Bridge (PR-07)-Replacement	Port Republic			\$17.2 M	
RI-02	Bridge Rehabilitation	JFK Bridge (EH-48)-Substructure Rehabilitation	EHT & Longport	2020 County Bond		\$1.95 M	
RI-03	Signal and Pedestrian Upgrades	County Route 629 Signals (28 Signals)	Longport; Margate; Ventnor; Atlantic	I-Bank	\$1 M (Expended)	\$10.0 M	\$1.5 M

Table 27 – Other Major Projects - Cape May County

Map ID	Project Type	Description	Municipality	Fund	Estimated Cost		
					Design	Construction	Inspection
RI-04	System Preservation, Bridge Replacement	Ocean Drive (CR621) Upgrade and Bridge Replacement is estimated to cost in excess of \$250 million. The current bridge, Middle Thorofare Bridge, over the Intracoastal Waterway has a narrow navigation channel that restricts the size of marine vessels. There are major fishing docks, upstream of the bridge, which are unable to expand due to the limitations of the waterway. These docks are part of the Cape May port, which is one of the largest fishing fleets in the United States based upon the value of their cargo. This project is in Concept Development and it is anticipated that the County will advance preliminary engineering RFPs in the summer of 2020.	Lower Twp	County/ Federal, State, I-Bank	\$247.0 M-\$253.1 M. Construction anticipated 2024-2027.		-



Map ID	Project Type	Description	Municipality	Fund	Estimated Cost		
					Design	Construction	Inspection
RI-05	System Preservation	Cape May County Airport Infrastructure Improvements involves improving the various roadways and infrastructure systems within the confines of the County property. As of February 2020, the roadway improvements, including Hornet Road have been completed, and utility infrastructure supporting the roadway has been completed. A new incubator building has been constructed for startup businesses. In addition, the existing Everlon building has been removed, making way for the planned Tech village multiphase offices for technical related businesses. The total monies spent to date are in excess of \$10 M.	Lower Twp	Federal, County	-	> \$10 M	-
RI-06	Adaptation	Rio Grande Avenue Gateway Project - Rio Grande Avenue (CR 661) Improvements from the George Redding Bridge to Park Avenue is an improvement program intended to raise the roadway to reduce the number of times that it is closed due to tidal flooding, mitigate a high crash rate, and alleviate congestion. The project is also intended to provide better accommodations for various modes of transportation, including pedestrian and bicycle mobility along this route. Construction on this project began in February 2018 and is anticipated to be completed by May 21, 2020.	Wildwood	State, Federal (FEMA), County	-	\$13.8 M	\$0.82 M
RI-07	Bridge Rehabilitation	The Roosevelt Boulevard (CR623) Bridge Deck Rehabilitation is a program to address the deteriorating condition of the reinforced concrete deck. The program involves the replacement of the deck in 13 of the 31 spans and to scarify and replace the riding surface of the remaining spans. Once design started on the project, various groups and elected officials have been pushing to make the bridge spanning between Ocean City and Upper Township accommodating for bicyclists and pedestrians. A complete program to address the bicyclists and pedestrians needs along with the deck improvements is estimated to cost \$14 million. The project received substantial completion in May 2018. The project is still in need of wetlands remediation, scheduled for the spring of 2020.	Ocean City, Upper Twp	State, County	-	\$6.7 M	\$0.65 M
RI-08	Bridge Replacement	Replacement of the structurally deficient and functionally obsolete Ocean Drive (CR 619) Bridge over Townsends Inlet. The bridge spans between Avalon and Sea Isle City and negotiating the navigational channel through the bridge is very challenging. The replacement of the Townsends Inlet bridge remains a high priority. In July 2019 the County completed the replacement of spans 1-7 due to severe and critical deterioration of the supporting substructure. A new replacement bridge will either be built offline as the permanent replacement or the bridge will continue to be rebuilt within the existing footprint. Construction is expected to begin in 10 years.	Avalon, Sea Isle City	State, County, Federal, I-Bank	-	\$71.4 M-\$174.7 M	-
RI-09	Bridge Rehabilitation	Bridge deck rehabilitation program for Avalon Boulevard (CR 601) Bridge over Ingrams Thorofare in Middle Township is approximately \$4,500,000. Ingrams Thorofare bridge deck replacement project begun in November 2019 and is expected to be complete by June 21, 2021.	Middle Twp	County, I-Bank	-	\$7.9 M	\$1.1 M (Design & Inspection)

Map ID	Project Type	Description	Municipality	Fund	Estimated Cost		
					Design	Construction	Inspection
RI-10	Bridge Replacement	Replacement of the bascule span in its entirety of the 96 th Street (CR 657) bridge over Great Channel in Stone Harbor. The bascule is part of the original construction and is in excess of 70 years old and is continuing to experience malfunctions and deterioration. A design contract to replace the bascule portion of the bridge in its entirety will be advertised in the spring of 2020. Actual construction is anticipated for 2026 with a 1-year construction period.	Stone Harbor	State, County, I-Bank	\$4.75M-\$4.9M	\$71.9M-\$161.9M	

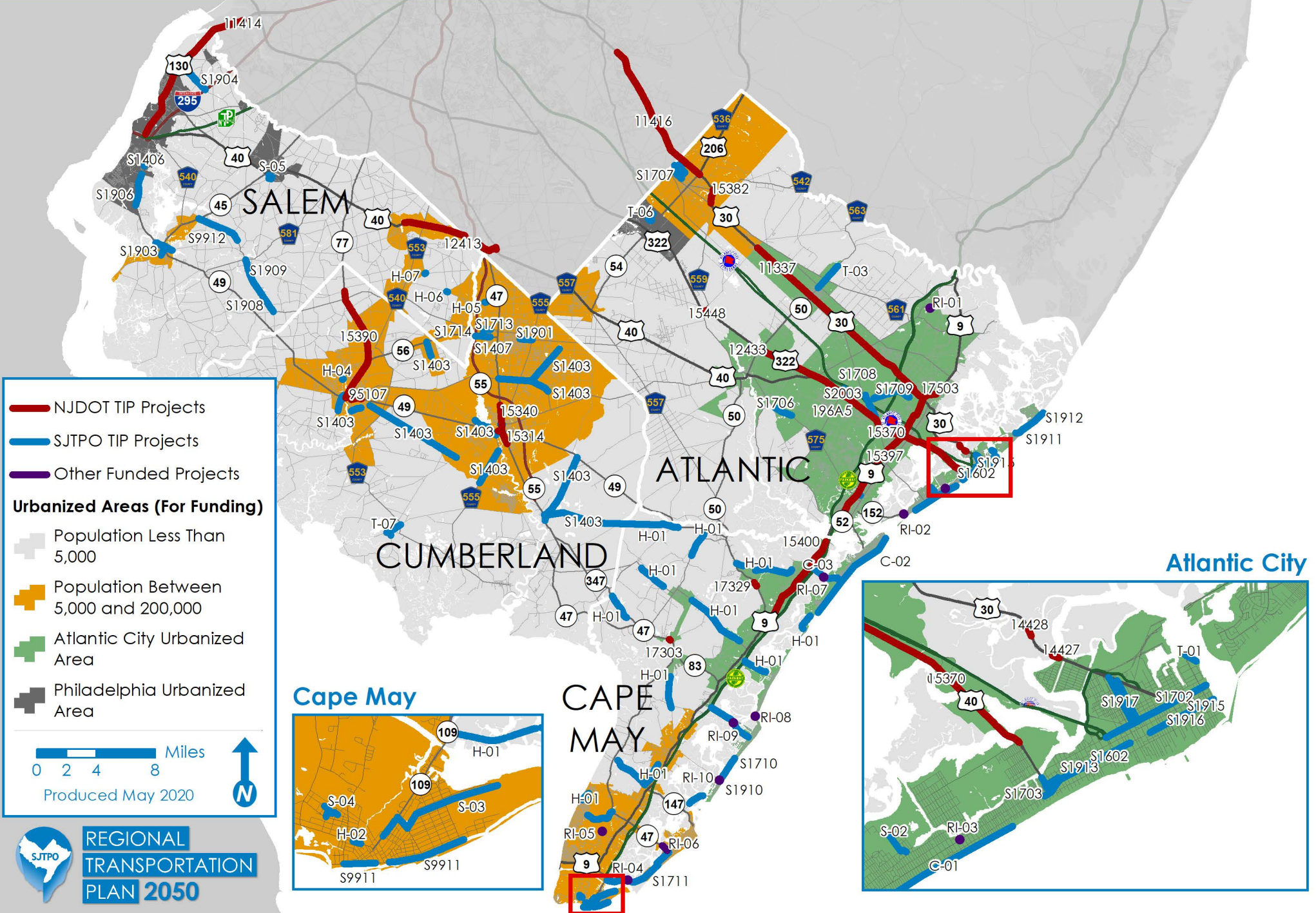
While a considerable amount of non-TIP money goes toward transportation improvements, most projects for the SJTPO counties are System Preservation projects, with minor upgrading as needed. While each of these projects are important to the operation of the county transportation infrastructure, as there is no one improvement that stands out as being of regional importance, no specific projects are listed here for Cumberland or Salem Counties. Each county has an annual transportation capital construction program, with numerous programs funded outside of federal funds through SJTPO. These include the mill and overlay projects and other programs that may include drainage, guiderails, striping, and traffic signals. The counties also receive funds from the state for the Local Bridge Future Needs Program, (LBFN), which are used to rehabilitate and replace major and minor bridges (less than 20-foot span), with an emphasis on Structurally Deficient, Functionally Obsolete, and Scour Critical structures. These formula-based funds are awarded every year. In addition, there are competitive grant programs, such as the State Local Freight Infrastructure Fund, and Discretionary Aid programs, which are used by the counties to address a specific project need.

Federal transportation conformity regulations stipulate that each MPO within a nonattainment or maintenance area, such as the SJTPO, identify *regionally significant* projects with respect to air quality conformity. As defined by the SJTPO Interagency Consultation Group, *regionally significant* projects are projects that alter the capacity of the transportation network, which may include the construction of a new roadway, the widening of an existing roadway to include additional travel lanes, or the permission or allowance of a traffic movement that did not previously exist, as in a new turning lane, or conversion of a roadway from one-way flow to two-way flow. Furthermore, these projects must be on major roadways, including highways or expressways, or they can be new fixed guideway transit facilities, which offer an alternative to regional highway travel.”⁸⁸ In the SJTPO region, the only entities that are planning any “regionally significant” projects are the authorities, namely, the NJ Turnpike Authority, which includes the Garden State Parkway as well as the New Jersey Turnpike; the South Jersey Transportation Authority, which owns and operates the Atlantic City Expressway; and the Delaware River and Bay Authority, which owns and maintains the Delaware Memorial Bridge in addition to operating the Cape May-Lewes Ferry Service. A full list of these “regionally significant” projects is included as [Appendix F](#).

⁸⁸ The full definition of “Regional Significance” for air quality purposes can be found in Appendix F. Transportation Conformity, p. 37.

Figure 41

Fiscally Constrained TIP Projects and Other Funded Projects



Unfunded Critical Needs

Each of SJTPD's subregions (Atlantic, Cape May, Cumberland, and Salem Counties, as well as the Cities of Atlantic City and Vineland) submitted a list of projects that they identified as "critical needs." "Critical needs" can be defined as projects for which there is no currently identified source of funding, but each subregion has identified as "critical" for safety or other compelling reasons. The list of "critical needs" projects, arrayed by jurisdiction are below.

Note that the Map Reference Number (Map No.) for Appendix 1.4 Map of Critical Needs.

Table 28 – Atlantic City Unfunded Critical Needs

#	Map ID*	Project Type	Project Description	Municipality	Estimated Costs		
					Design	Construction	Inspection
1	1	Bridge Rehabilitation	Venice Park Bridges, Ohio Avenue over Penrose Canal, and over Venice Lagoon	Atlantic City		\$6.5 M	
2	2	System Maintenance/Expansion	Albany Avenue Corridor Improvements: Intersection of Wellington Avenue/West End Avenue and US 40/322: Drainage Improvements	Atlantic City			
3	3	System Maintenance/Expansion	Albany Avenue Corridor Improvements: Storm Mitigation and Drainage Improvements; widening from four to six lanes. Other possible improvements include raising the roadway	Atlantic City			
4	4	Adaptation	Albany/West End Avenues Elevation – elevation of these roads to provide emergency access to Exit 2 on the Atlantic City Expressway	Atlantic City			
6	n/a	TSM&O	Synchronization and modernization of traffic signals throughout the City	Atlantic City			
7	6	System Maintenance	Scoping and Engineering for Route 40, from Exit 2 to Bader Field: <ul style="list-style-type: none"> Access to Bader Field, Stockton University Emergency Access for AC and Downbeach 	Atlantic City			


Table 29 – Other Atlantic County Municipal Unfunded Critical Needs

#	Map ID*	Project Type	Project Description	Municipality	Estimated Cost		
					Design	Construction	Inspection
1	7	Adaptation	Elevation of Wellington Avenue from Ventnor Heights: <ul style="list-style-type: none"> Emergency Access 	Ventnor			
2	8	Transit	Increased service of the Atlantic City Rail Line: <ul style="list-style-type: none"> 15 percent increase in ridership since the system has been restarted Direct service from A.C. to 30th Street Station Access to Philadelphia employment opportunities & Philadelphia International Airport Transit village designation for Atlantic City and Absecon 	Atlantic City, various			
4	9	Bike/Ped	Save bicycle and pedestrian access to Garden State Parkway bridge over Great Egg Harbor River to connect the Pleasantville/Somers Point Bike Path to Cape May County.	Various			
5	10	Transit	Bus/transit service to CMC Airport	Various			
6	12	System Preservation	Signalization of the Route 40/322 – W. Jersey Avenue intersection to provide bicycle access across Black Horse Pike and to connect the Pleasantville-Somers Point Bike Path with the Egg Harbor Township Bike Path. This improvement will also provide improved access to the Cardiff Shopping Center.	Egg Harbor Township, NJ			
7	13	Bike/Ped	Pedestrian access over ACE at Pleasantville High School	Pleasantville			
8	n/a	CMAQ	Promote alternative fuel vehicles – Electric Vehicle Charging Station, Compressed Natural Gas Stations	Various			

Table 30 – Atlantic County Unfunded Critical Needs

#	Map ID	Project Type	Project Description	Municipality	Estimated Cost		
					Design	Construction	Inspection
1	n/a	Human Services Transportation	Funding to replace approximately 45 mini & mid-sized buses in about a 30-month timeframe in 2017, 2018, and 2019. This will be an extremely difficult task without an additional funding source being identified	Countywide	n/a	n/a	n/a
2	n/a	Human Services Transportation	Addressing the severe loss of Casino Revenue (SCDRTAP) funding, that has been the mainstay of our senior and disabled transportation program. Atlantic County has gone from an annual funding allocation in 2008 of \$967,700.00 to a 2015 funding allocation of only \$500,237.00. Without replacement funding being identified soon, there is no doubt that existing transportation service programs will need to be curtailed in the future	Countywide	n/a	n/a	n/a
3	n/a	Transit	Doubletrack Atlantic City Rail line to increase service schedule	Countywide	n/a	\$43-\$195 M **	n/a
4	n/a	Transit	Add Pomona Rail Stop in Galloway with Airport Shuttle	Countywide	n/a	\$28.0 M ** (Station)	n/a
5	29	Bridge Rehabilitation	EH-48 JFK Bridge (Substructure Rehabilitation) Longport-Somers Point Boulevard (CR 629) over Risley Channel	Egg Harbor Twp. and Longport	\$0.1 M	\$1.1 M	\$0.11 M
6	31	Bridge Rehabilitation	V-1 Dorset Avenue Bridge (Mechanical/Electrical Rehabilitation) Dorset Avenue (CR 629) over Inside Thorofare	Ventnor	\$0.3 M	\$3 M	\$0.4 M

**Approximate figures based on LTK Engineering Services. “Atlantic City Line Rail Operations Study.” November 15, 2013.


Table 31 – Cape May County Unfunded Critical Needs

#	Map ID	Project Type	Project Description	Municipality	Estimated Cost		
					Design	Construction	Inspection
1	49	Roadway Expansion	Completion of NJ Route 55 from its current terminus in Cumberland County to the Garden State Parkway. Each year needless lives are lost due to motorists using a two-lane country road to travel to and from the popular shore areas in Cape May County. In addition, Cape May County needs a viable evacuation route that can move a large volume of vehicles in a short time frame due to limited notice available in an emergency	Multiple--Maurice River Twp (Cumberland), Dennis, Middle, Lower Twps, Cape May		> \$1 B	
2	56	Adaptation	Raising the roadway and armoring the embankment of Ocean Drive (CR619) from the Corsons Inlet Bridge in Upper Township to 55th Street in Ocean City is approximately \$9 million The armoring of CR 619 from the Corsons Inlet bridge to 55 th Street has been completed as part of a FEMA grant. The roadway currently has not been raised; however, this remains a long-term goal as money becomes available	Upper Twp, Ocean City	\$78.8 M- \$115.6 M		
3	57	Adaptation	Installing a revetment wall to protect the Cape May County owned portion of Ocean Drive (CR656) in Egg Harbor Township from the Ocean City Longport Bridge to NJ Route 152 is approximately \$3 million	Egg Harbor Twp		\$3 M	
4	59	Deck Rehabilitation	Replacing the concrete deck and widening the Avalon Boulevard (CR601) Bridge over Leonards Thorofare in Middle Township is approximately \$10 million	Middle Twp		\$4.15 M-\$4.35 M	
5	60	Bridge Rehabilitation	Replacing the concrete deck and widening the Avalon Boulevard (CR601) Bridge over Gravens Thorofare between Avalon and Middle Township is approximately \$6 million	Avalon, Middle Twp		\$6 M	
6	61	Adaptation	Raising and otherwise improving Roosevelt Boulevard/34th Street (CR623) from Tuckahoe Road Extension in Upper Township to Central Avenue in Ocean City is approximately \$15 million	Upper Twp, Ocean City		\$15 M	

			This remains a priority project and the county is working with the city to assess the level to which the roadway east of the Roosevelt Boulevard bridge can be raised				
7	62	Bridge Rehabilitation	Basculer span bridge constructed in 1939 and connects Borough of Stone Harbor to Middle Twp and North Wildwood along Ocean Drive (CR 619). This bridge requires substantial structural upgrades and major rehabilitation of the basculer span to remain operational. Rehabilitating the Ocean Drive (CR619) Bridge over Grassy Sound in Middle Township is between \$53.5 M and \$93.5 M.	Middle Twp		\$65.8 M-\$105.9 M	
8	63	Bridge Replacement	Replacement of the structurally deficient and functionally obsolete Ocean Drive (CR619) Bridge over Corsons Inlet in Upper Township is approximately \$60 million. The county is currently advising the USCG that their desire is to change the status of the bridge from movable to fixed, to permit a fixed bridge replacement	Upper Twp		\$78.8 M-\$115.6 M	
9	64	Interchange Reconfiguration	Completing the missing movements at Garden State Parkway Interchange 20 is approximately \$15 million Northbound entry approach length has been increased as part of the Sea Isle Boulevard project	Upper Twp		\$15 M	
10	65	Interchange Reconfiguration	Completing the missing movements at Garden State Parkway Interchange 17 is approximately \$12 million	Dennis Twp		\$12 M	
11	66	Interchange Reconfiguration	Completing the missing movements at Garden State Parkway Interchange 6 is approximately \$12 million	Lower Twp		\$12 M	
12	67	Bridge Replacement	Replacing the Lafayette Street (CR633) Bridge over Cape Island Creek between Lower Township and Cape May City is approximately \$8 million	Lower Twp/Cape May City		\$8 M	
13	68	Deck Rehabilitation	Modifying the Sea Isle Boulevard (CR625) Bridge over Ludlam Thorofare between Dennis Township and Sea Isle City is approximately \$16 million. A deck replacement is anticipated within the next 5 years	Dennis Twp/Sea Isle City		\$12.35M-\$13.4M	



14	11	Transit	Cape May Ferry Port – Off-shore wind	North Cape May, NJ			
15	82	Bridge Replacement	96 th Street (CR 657) Bridge 0500-006. Bascule span bridge constructed in 1930 and connects Middle Twp to Borough of Stone Harbor. Bridge is registered on the NJ State Historic Register and the National Register of Historic Places. NJ's only known example of a Rall-type bascule bridge.	Middle Twp and Stone Harbor, NJ			
16	83	Phase 2 Scour and Spall Repair Phase 3 Pedestrian	Mill Creek 0500-030 and Upper Thorofare 0500-020. These concrete fixed span bridges are situated along Ocean Drive (CR 621) in Lower Twp, west of the Bridge Commission's Middle Thorofare Bridge. Both bridges classified as structurally deficient and functionally obsolete due to width and geometry, scour present along abutments, and bridge rails need to be replaced. These bridges serve as a critical link to the fishing industry and are the only current means by which goods can be transported from the ports.	Lower Twp		\$1.35M-\$1.55M \$1.65M-\$1.85M	
17	85	Bridge Replacement	Hand Avenue 0050-031 and Springers Mill. Box culvert bridge that allows Skeeter Island Creek to flow beneath Hand Avenue (CR 658) in Middle Twp. Bridge must be replaced due to undermining of the culverts, erosion of embankments, sinkholes that have developed on approaches, and spalling cracking and deterioration of the concrete.	Middle Twp		\$4.35M-\$4.7M	
18	86	Bridge Replacement	104 th Street 0500-02 over Carnival Bay 0500-023. Interconnects sections of Stone Harbor along Carnival Bay at 104 th Street. Substructure made of wood and portions of bridge are deteriorated from effects of marine borer activity.	Stone Harbor		\$1.57M-\$1.77M	
19	87	Abutment Replacement	25 th Street 0500-024. Fixed span concrete on timber piles interconnects the 25 th St. portion of Avalon over Avalon Canal. Severe deterioration of timber bulkheads resulted in undermining of abutments.	Avalon		\$1.89M-\$2.09M	
20	89	Abutment Replacement	21 st Street Bridge over Avalon Canal 0500-010. Fixed span concrete bridge on timber piles constructed in 1990 and interconnects the 21 st Street portion of	Avalon		\$1.89M-\$2.09M	

21	84	Bridge Replacement	Avalon over Avalon Canal. Increase in loss of fill from behind both east and west bulkheads of substructure. Cedar Swamp (CR 631) 0500-018. Concrete fixed span bridge constructed in 1968 and allows Cedar Swamp to flow beneath Tuckahoe Road (CR 631). Longitudinal cracks and several concrete patches on bridge deck.	Upper Twp		\$7.05M-\$7.55M	
22	88	<ul style="list-style-type: none"> Fender Reconstruction Deck Sealer Rehabilitation (Latex or Other Overlay) Superstructure Repairs (spalls, bearings, deck) 	Ocean City-Longport 3100-001. Fixed span bridge opened to traffic in July 2002 and connects Ocean City to Egg Harbor Township in Atlantic County. Bridge is in satisfactory condition, however, to preserve this bridge capital improvements are recommended, such as fender replacements, deck patching, and new deck joints, substructure, and superstructure concrete repairs, and deck membrane sealing overlay.	Ocean City and Egg Harbor Twp		\$1.975M-\$2.375M \$1.7M-\$4.7M \$925K-\$1,125M	

Table 32 – Cumberland County Unfunded Critical Needs

#	Map ID	Project Type	Project Description	Municipality	Estimated Cost		
					Design	Construction	Inspection
1	69, 70	Interchange reconfiguration	Construction of a southbound and northbound Rt. 55 slip ramp onto west bound Rt. 552 to eliminate a left turn across Rt. 552. The interchange is currently missing ramp movements from 55 NB & SB to 552 WB	Vineland		n/a	
2	71	Safety	NJ 47 (Delsea Drive) & NJ 55 Interchange Improvements. Improvements to improve safety within the interchange and vicinity	Millville		\$8 M	
3.(a).	72	Various Projects--City of Millville Transportation Improvement Study ¹	Divert Route 55 connector to bypass NJ 47 and tie into Sharp Street	Millville		\$1.9 M	
3.(b).	73		Major improvements to Broad Street, Dock Street & Brandriff Avenue as alternate east-west improvement to Main Street	Millville		Varies: Minimal to \$0.280 M	
3.(c).	74		Extend Wade Boulevard & SW Boulevard to enhance road network in northern Millville	Millville		\$3.0 M	



#	Map ID	Project Type	Project Description	Municipality	Estimated Cost		
					Design	Construction	Inspection
4	75	Interchange reconfiguration	CR 552 (Sherman Avenue) corridor-- Operational Improvements to area between NJ 55 and NJ 47 (Delsea Drive)				
5	n/a	Transit	Express bus service from Bridgeton to Atlantic City	Bridgeton			

The projects listed here are a representative sample of the projects from this study. See the actual study at: www.sjtpo.org/wp-content/uploads/2016/06/Millville_TransportationImprovementStudy_May2013.pdf for the complete list.

Table 33 – City of Vineland Unfunded Critical Needs

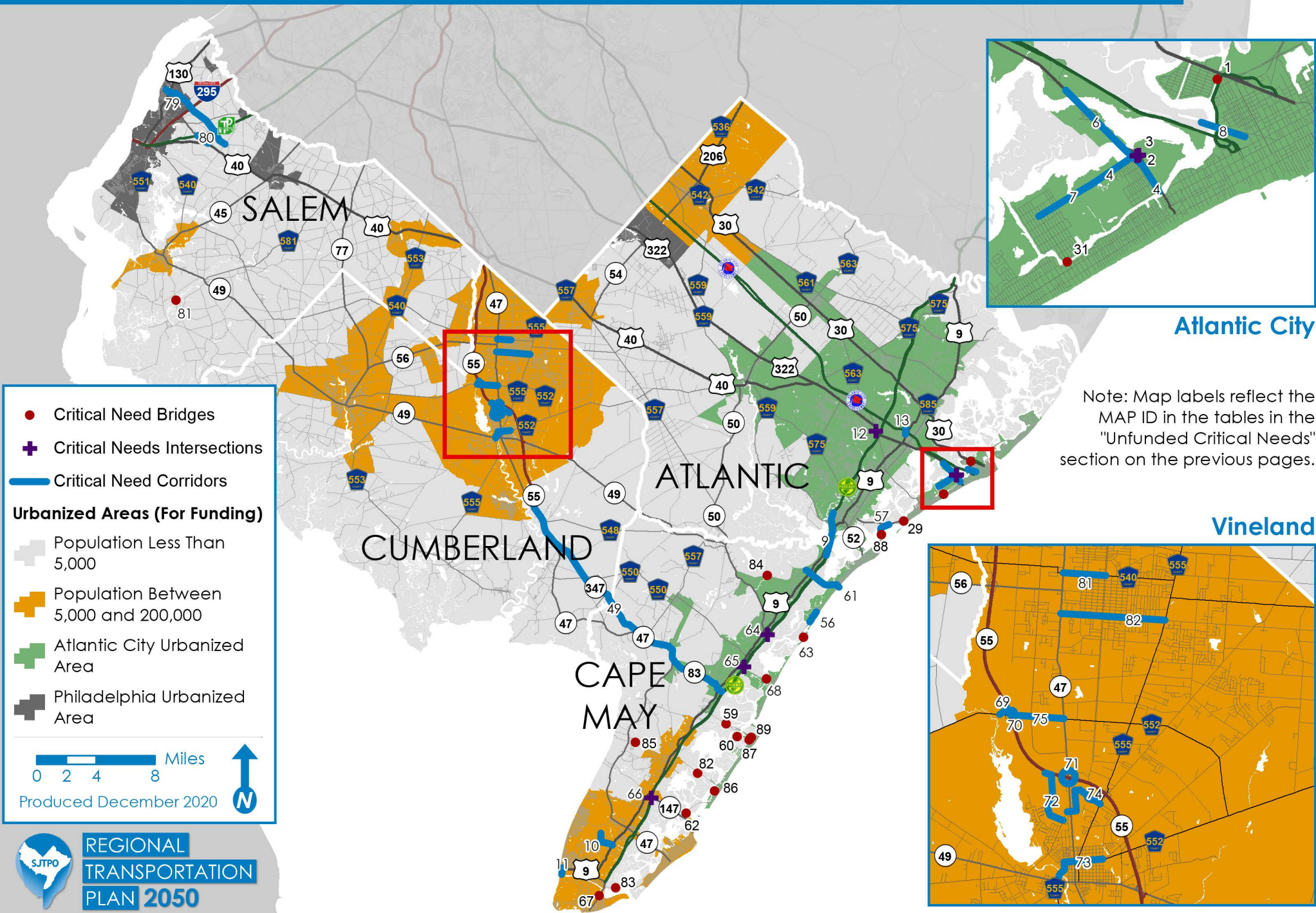
#	Map ID	Project Type	Project Description	Municipality	Estimated Design Cost	Estimated Construction Cost	Estimated Inspection Cost
1	81	Resurfacing	Park Avenue – Delsea Drive to the Boulevards	Vineland	In-house	\$1.6 M	
2	82	Resurfacing	Chestnut Avenue--Delsea Drive to Main Road	Vineland	\$0.15 M	\$3.5 M	
3		Roadway Widening and Resurfacing	Burns Avenue – S. East Boulevard to Main Road	Vineland	\$0.1 M	\$1.6 M plus ROW (\pm \$0.071 M)	
4		Signalized Intersection Upgrades	23 signal upgrades: (1) Park Avenue & West Avenue, (2) Landis Avenue & Mill Road, (3) Landis Avenue & Orchard Road, (4) Chestnut Avenue & Spring Road, (5) Chestnut Avenue & East Avenue, (6) Chestnut Avenue & West Avenue, (7) Landis Avenue & Valley Avenue	Vineland		\$0.250 M per intersection	
5		Sidewalks	Sidewalks around schools & parks.	Vineland			
6		Transportation Alternatives (Enhancements)	Landis Avenue streetscape between Orchard Road & 8th Street				

Table 34 – Salem County Unfunded Critical Needs

#	Map ID	Project Type	Project Description	Municipality	Estimated Design Cost	Estimated Construction Cost	Estimated Inspection Cost
1		Bridge Rehabilitation	Other County Bridges			\$2 M	
2		Rail Rehabilitation	Rehabilitation of County-owned rail (+/- 5 miles)			\$3 M	
3	79	Road Rehabilitation; Transportation Alternatives	Penns Grove-Auburn Road, County Road #641 in Carneys Point: Requires storm drainage; filling in of deep roadside ditches; and sidewalk and/or bike path	Carney's Point Twp		\$5 M	
4	80	Safety Improvements	US-40, in between NJ Turnpike and merge with NJ-48. While US-40 resurfacing project was completed recently, safety issues still remain, i.e., dangerous merges, especially eastbound, resulting in crashes. Signage, clearer striping could help mitigate situation	Carney's Point			
5	81	Bridge Demolition	New Bridge Road, County Bridge #1701-399; demolition and removal of obsolete bridge	Lower Alloway Twp		\$2 M	

Figure 42

SJTPO Critical Need Projects



VI. FINANCIAL PLAN

Federal transportation planning requirements assert that fiscally constrained financial plans are a required element of regional transportation plans for MPOs. Fiscal constraint denotes a demonstration of sufficient funds (federal, state, local, and private) to implement proposed transportation system improvements, as well as to operate and maintain the entire system, through the comparison of revenues and costs. However, MPO plans may include, for illustrative purposes, additional projects, beyond identified revenues of the financial plan if additional resources were to become available. Due to the funding limitations, these additional projects only address the most pressing needs. The transportation needs of the region go far beyond the projects listed in this RTP.

Due to severe funding constraints and projected revenue that is expected to grow at a rate slower than inflation for the foreseeable future, the vast majority of SJTPO funds are used for maintenance and improvements to preserve the region's present infrastructure. Even with the present focus on system preservation, there are still several unmet critical needs, which total \$1.267 billion.

Revenues and expenditures presented are based on reasonable assumptions regarding the availability of funding, based upon the best information available at this time.

Transportation Improvement Program (TIP)

Funding for transportation improvements in the region is dedicated through FFY 2029. The actual budgeting of federal and state funds for projects within the MPO is a product of the development of a regional TIP, the State Transportation Improvement Program (STIP), and the Annual Capital Program. From year to year, there may be significant variations in the amount of funds actually programmed within an MPO as needs and specific project implementation schedules dictate. This fluctuation primarily results from projects along the state system within the MPO region as opposed to locally sponsored projects.

SJTPO's TIP includes lists of state and federally funded projects on the state and local system, public transit projects, and statewide transportation programs scheduled for implementation within the next ten federal fiscal years (FFY 2020 – FFY 2029). The TIP provides for approximately \$1.3 billion in Year of Expenditure dollars for transportation investments in southern New Jersey for this period and includes a detailed description and funding schedule for each project and program. This figure excludes the statewide programs for which SJTPO receives a portion of funding that is allocated to the entire state. The FFY 2020–2029 TIP is constrained to currently available funding. The FFY 2020–2029 TIP was developed over several months by NJDOT, NJ TRANSIT, and SJTPO. To develop the TIP, projects are screened for feasibility of advancement to implementation, including a verification of scope and cost. Projects that pass this initial screening are placed in the project pool for further evaluation and review by SJTPO.

The FFY 2020-2029 TIP provides for approximately \$1.3 billion in Year of Expenditure dollars for transportation investments in South Jersey.



The current authorizing legislation is the FAST Act, which authorizes surface transportation programs, sets program-specific requirements, and authorizes funds (upper line of credit). Each federal fiscal year, an obligation limitation is set, which is the spending authority (budget) the federal government (Congress) gives to each state. It is determined by the federal budget, where Congress sets the spending limit each year. Program authority gives the state the ability to expend funds. Obligation limitation is the ceiling placed on obligations in a federal fiscal year and is set by Congress. Even though states receive apportionments for the different Federal Transportation programs under the FAST Act, the obligation limitation gives the states authority to obligate those funds. Obligation limitation is distributed to states as continuing resolutions are passed and/or when a full-year appropriations act is passed each federal fiscal year. A state cannot obligate funding on a project or program unless it receives obligation limitation distributed by FHWA. States may only be able to spend a small portion of their limitation at any one time (i.e., for staff resources, supplemental authorizations, etc.). On the other hand, the FAST Act determines the apportionments, which are specific program funds that were authorized in the FAST Act (NHPP, NHFP, STBG, etc.) They are apportioned to the states by way of a formula. Each year, NJDOT receives a spreadsheet with the apportionment codes for each funding program. NJDOT uses these apportionments for programming purposes (i.e., NJDOT programs projects up to the apportionment amounts).

It should be noted that there is a difference between the obligation limitation (budget) and the apportionments. The difference is NJDOT does not know the obligation limitation when programming projects but knows the apportionment amount. NJDOT must program up to the apportionment amount because it receives the apportionments from the government before the obligation limitation is set by Congress. NJDOT can only estimate what projects will be submitted for authorization each year, so it cannot program over the apportionment amounts.

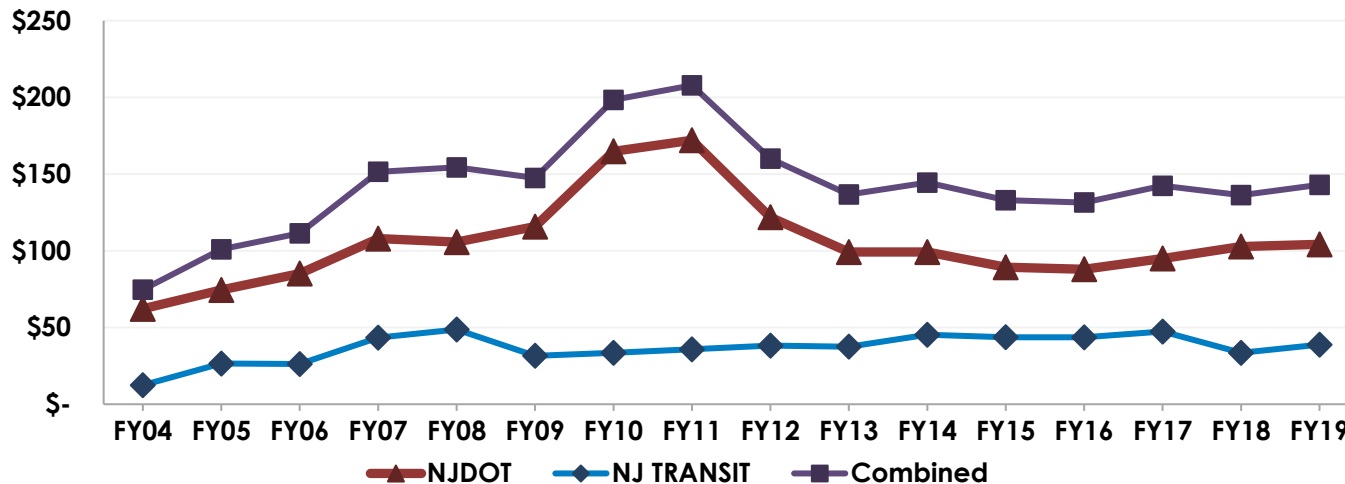
Since the TIP is fiscally constrained, many proposed and necessary projects cannot be included in the TIP. Transportation experts in the four-county SJTPO region have identified Critical Unfunded Needs, as presented in [Chapter V](#), this list includes numerous critical needs with a total cost of more than \$1.267 billion that goes beyond the funding anticipated between now and the year 2050. These reflect today's critical needs, which lead to future challenges as the region continues to develop and transportation needs increase. Insufficient funding means these unmet critical needs will continue to grow, especially as the region's existing transportation system ages.

Continued federal and state funding is required to support the SJTPO's short-term investment program. Although adequate funding levels are in place to support this plan's short-term investments, ongoing planning studies will identify additional short- and long-term investments needed in the region. Allocation of funds will be a product of a planning process that includes needs analysis, prioritization, project selection, and the TIP negotiation process. Fiscally constrained RTP updates and TIPs ensure that investments are economically feasible for the region. Each MPO in New Jersey receives a designated portion of funds of the total apportionment of each of the eleven funding programs from NJDOT (i.e., CMAQ, STBGP, HSIP, etc.). The distributed funds to each MPO will be utilized for projects solely in that MPO region by either NJDOT led projects or local lead projects by the MPO's subregions. Also, NJDOT designates a portion of the total apportionment of each funding program for statewide projects. These distributed funds are used by NJDOT for NJDOT led projects, but the

projects in each funding program may have projects located in any of the three MPOs. SJTPO continually tracks the amount of funds distributed to the MPO each fiscal year. Funds received by SJTPO through NJDOT and NJ TRANSIT historically from FFY 2004 through FFY 2019 are displayed in [Figure 43](#), below. It should be noted that the funds summarized in [Figure 43](#) do not include Statewide Programs.

The need to maintain the existing highway system in a state of good repair is an enormous task and of paramount importance to the SJTPO region. The scale of existing maintenance needs has necessitated focusing the vast majority of resources and efforts on making necessary repairs to the system. In particular, many bridges throughout the region are either structurally deficient or functionally obsolete.⁸⁹ This backlog of bridge projects must be systematically addressed to bring all bridges into a state of good repair. Deferring maintenance leads to increased long-term maintenance cost and shortened useful lifecycles. The SJTPO region will require additional levels of funding to preserve the existing transportation infrastructure to reach a state of good repair, and significantly more to begin addressing the critical needs.

Figure 43 – Historical Funds Received by SJTPO for FFY 2004-2019, in Millions (NJDOT and NJ TRANSIT)



Source: FFY 2004-2020 SJTPO TIPs, Financial Tables 7, 8, 9, and 10.

⁸⁹ A *structurally deficient* bridge, when left open to traffic, typically requires significant maintenance and repair to remain in service and eventual rehabilitation or replacement to address deficiencies. The fact that a bridge is classified under the federal definition as “structurally deficient” does not imply that it is unsafe. To remain in service, structurally deficient bridges are often posted with weight limits to restrict the gross weight of vehicles using the bridges to less than the maximum weight typically allowed by statute.

A *functionally obsolete* bridge is one that was built to standards that are not used today. These bridges are not automatically rated as structurally deficient, nor are they inherently unsafe. Functionally obsolete bridges are those that do not have adequate lane widths, shoulder widths, or vertical clearances to serve current traffic demand, or those that may be occasionally flooded.

The need to maintain the existing highway system in a state of good repair is an enormous task and of paramount importance to the SJTPO region.



Federal Funding Sources for the SJTPO Region

The major federal funding sources for transportation projects in the SJTPO region are described in [Table 35-Table 37](#), as authorized through MAP-21 and the FAST Act. There are additional sources of funding as well, including discretionary and demonstration funds, which are awarded on a competitive basis to projects that meet FHWA or FTA criteria.

Table 35 – Federal and State Funding Sources – Transportation Programs

Formula Funds	Eligible Uses
Congestion Mitigation and Air Quality (CMAQ) Program	<ul style="list-style-type: none"> • Non-recreational bicycle and pedestrian improvements • Transit investments, including transit vehicle acquisitions • Traffic flow improvement projects, including HOV lanes • Diesel engine retrofits and alternative fuel projects • Projects that shift travel demand to non-peak hours
High Priority Projects (HPPs) Program	<ul style="list-style-type: none"> • Specified high priority projects in SAFETEA-LU. (note: MAP -21 contained no new HPP earmarks and HPP has been repealed)
Metropolitan Planning Funds (FHWA-PL, FTA-PL, and STBGP)	<ul style="list-style-type: none"> • Funding provided to Metropolitan Planning Organizations (MPOs) to conduct the planning activities required by Title 23 of the U.S. Code 134 • Funds staff and planning studies for the region
National Highway Freight Program (NHFP)	<ul style="list-style-type: none"> • Provides support for the construction of new facilities on the NHS, the condition and performance of the NHS, and achieving performance targets, as set by the state’s asset management plan • Projects contribute to the efficient movement of freight on the National Highway Freight Network (NHFN) • Projects may be identified in a freight investment plan included in a State Freight Plan (SFP)
National Highway Performance Program (NHPP)	<ul style="list-style-type: none"> • Construction, reconstruction, restoration rehabilitation, preservation, and operational improvements on NHS • Construction, replacement, rehabilitation, and protection of bridges on NHS
Off System Bridge	<ul style="list-style-type: none"> • For use on bridges not on Federal-aid highways (“off-system bridges”)
Rail-Highway Crossing (RHC)	<ul style="list-style-type: none"> • Elimination of hazards at public and private railway/highway crossing

Formula Funds	Eligible Uses
Surface Transportation Block Grant Program (STBGP)	<ul style="list-style-type: none"> • Construction of highways, bridges, and tunnels • Transportation system operational improvements • Transit capital projects • Recreational trails and pedestrian and bicycle projects • Highway and transit safety infrastructure improvements • This funding source is broken out into separate funding pots based on the different urbanized areas. STBGP funds that are utilized in the SJTPO region are as follows: STBGP-AC, STBGP-B5K500K, STBGP-L5K, and STBGP-FLEX
Highway Safety Improvement Program (HSIP)	<ul style="list-style-type: none"> • Roadway crash incidence and severity reduction projects • Bikeway/pedestrian pathway or trail safety projects
Transportation Alternatives Program (TAP)	<ul style="list-style-type: none"> • Construction, planning, and design of on and off-road pedestrian and bicycle trail facilities and infrastructure that provide safe routes for non-drivers • Conversion of abandoned rail lines for walking and bike trails • This funding source is broken out into separate funding pots based on the different urbanized areas. TAP funds that are utilized in the SJTPO region are as follows: TA-AC, TA-B5K500K, TA-L5K, and TA-FLEX • Safe Routes to School Program (SRTS) is sub-allocated under this program
Ferry Boat and Terminal Facilities Construction Program (FPB)	<ul style="list-style-type: none"> • Construction of ferry boats, terminals, and maintenance facilities



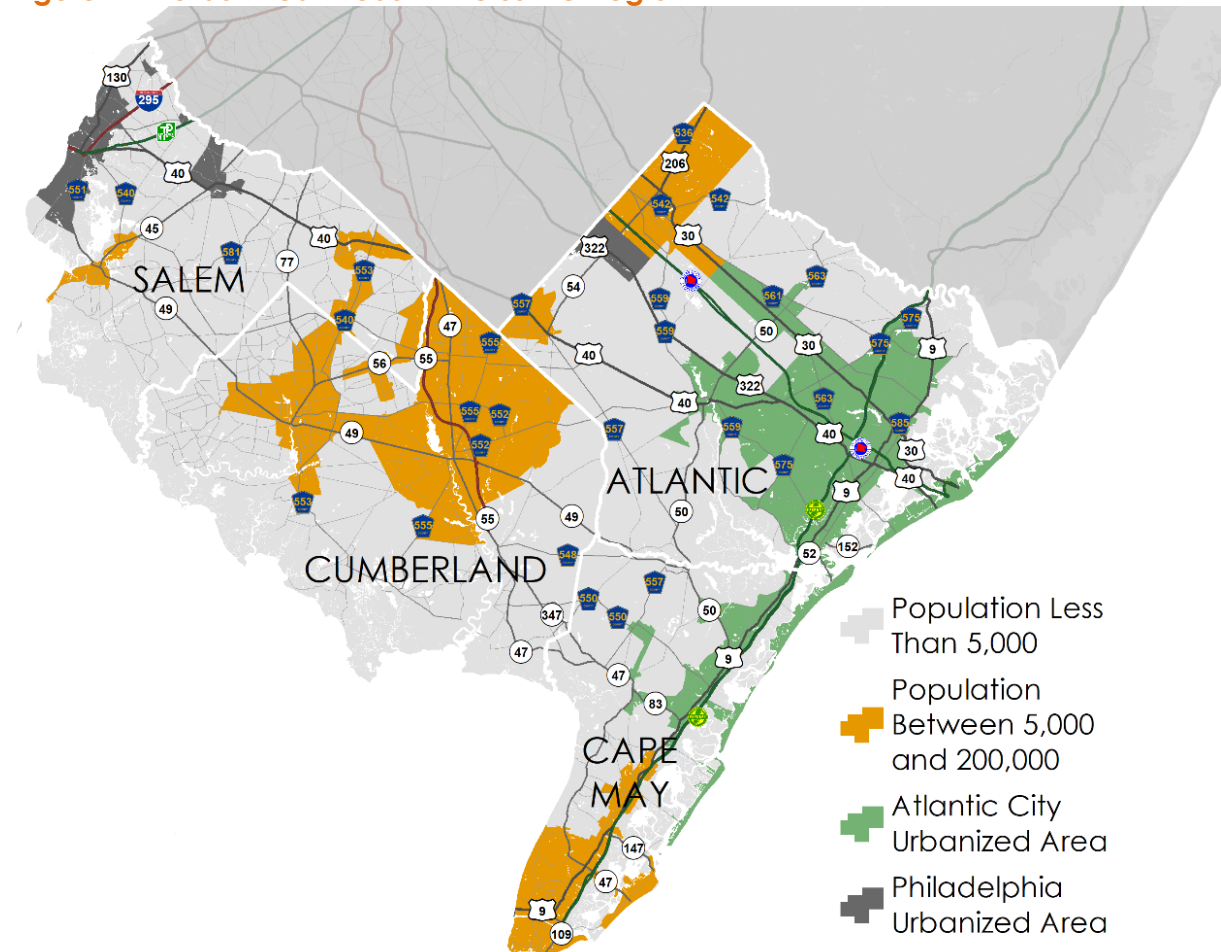
Formula Funds	Eligible Uses
State Planning & Research (SPR)	<ul style="list-style-type: none"> • Engineering and economic surveys and investigations • The planning of future highway programs and local public transportation systems and the planning of the financing of such programs and systems, including metropolitan and statewide planning • Development and implementation of management systems, plans and processes under the NHPP, HSIP, CMAQ, and the National Freight Policy • Studies of the economy, safety, and convenience of surface transportation systems and their regulation and taxation • Research, development, and technology transfer activities necessary in connection with the planning, design, construction and maintenance of highway, public transportation, and intermodal transportation systems • Study, research, and training on engineering standards and construction materials for transportation systems, including evaluation and accreditation of inspection and testing and the regulation and taxation of their use
Transportation Trust Fund (TTF)	<ul style="list-style-type: none"> • Funding provided by the State of New Jersey to finance the cost of "planning, acquisition, engineering, construction, reconstruction, repair, and rehabilitation of the state's transportation system"

Source: [FHWA Guide to Federal-Aid Programs and Projects](#).

Of the various Federal programs, SJTPO only has discretion over a handful. These include CMAQ, HSIP, and STBGP. Of these Federal programs SJTPO's main funding source is the STBGP funding, which may be used on highway projects, bridge projects, transit capital projects, planning and research programs, and a variety of other eligible project types. STBGP funding is suballocated to areas of New Jersey based on their relative share of the state's population.

The SJTPO region is suballocated federal STBGP funds for the Atlantic City Urbanized Area, which is comprised of the City of Atlantic City and the surrounding urbanized area, including portions of Cape May County. [Figure 44](#), below, shows the boundaries of the Atlantic City Urbanized area as well as the two other STBGP areas. The areas are categorized in accordance with the surrounding population area. In addition to the suballocated funds (STBGP-AC), funds from two additional population areas, between 5,000 and 200,000 (STBGP-B5K200K), and less than 5,000 (STBGP-L5K) are also made available in the SJTPO region.

Figure 44 – Urbanized Areas in the SJTPO Region





STBGP-AC (Surface Transportation Block Grant Program – Atlantic City Urbanized Area)

Each urbanized area of the state with a population equal to or greater than 200,000 receives funds based on the urbanized area's share of the population. The Atlantic City Urbanized Area falls entirely within the SJTPO region and has a population of approximately 248,000, according to the U.S. Census Bureau. The Atlantic City Urbanized Area covers much of Atlantic County, including Atlantic City, Absecon, Pleasantville, Ventnor City, Margate City, Longport, Brigantine, portions of Egg Harbor Township, and portions of Galloway Township. The Atlantic City Urbanized Area also covers portions of Cape May County, including Ocean City, Sea Isle City, Avalon, Stone Harbor, and portions of Upper Township. This area is shaded green in the map above.

STBGP-B5K200K (Surface Transportation Block Grant Program – Population Between 5,000 and 200,000)

This category of STBGP funding is available for areas of the state with a population of 5,000 to 199,999. In the SJTPO region, this includes Vineland, Bridgeton, Salem, Wildwood, Cape May, Villas, Hammonton, and other areas. Funding is not individually designated for the area within the SJTPO region. Rather, the state receives one suballocation to use in all areas that fall within the population range. This area is shaded orange in the map above.

STBGP-L5K (Surface Transportation Block Grant Program – Population Less Than 5,000)

This category of STBGP funding is available for rural areas of the state with a population less than 5,000. In the SJTPO region, this includes the rural areas of all four counties. This area is shown in light grey on the map.

While preparing the FFY 2020-2029 TIP, SJTPO worked closely with project sponsors to ensure that projects were matched to the proper STBGP funding categories and that the appropriate amount of funding was being spent in each category in each year. [Table 36](#), below, displays which STBGP funding pots is available for each of SJTPO's subregions.

Table 36 – NJDOT Urbanized Area Fund Types Available to SJTPO's Subregions

STBGP Fund Type	Atlantic City	Atlantic County	Cape May County	City of Vineland	Cumberland County	Salem County
STBGP-AC	✓	✓	✓			
STBGP-B5K200K		✓	✓	✓	✓	✓
STBGP-L5K		✓	✓		✓	✓

Table 37 – Federal and State Funding Sources – Transit Programs

Formula Funds	Eligible Uses
Urbanized Area Formula Program (5307)	<ul style="list-style-type: none"> Capital investments in bus and bus-related activities and in new and existing fixed guideway systems Also includes funding to NJ TRANSIT for Transportation Enhancements (SEC 5307-TE), Transportation Alternatives Program (SECT 5307-TAP), and Associated Transit Improvements (SECT 5307-ATI)
Seniors and Disabled (5310)	<ul style="list-style-type: none"> Also known as "Enhanced Mobility of Seniors and Individuals with Disabilities"

	<ul style="list-style-type: none"> Capital (including vehicles) and operating assistance for transportation services that improve mobility for seniors and the disabled
Non-urbanized Area Formula Program (5311)	<ul style="list-style-type: none"> Purchase of buses and related equipment and operating assistance for bus services in non-urbanized areas Promoting coordinated transit services and connection to rural NJ TRANSIT bus and rail services
Public Transportation Emergency Relief Program (5324)	<ul style="list-style-type: none"> Eligible operating costs relating to evacuation services, rescue operations, temporary public transportation services, and reestablishing or expanding public transportation route services in response to an emergency (i.e., a natural disaster, such as a hurricane or flood, affecting a wide area)
State of Good Repair Grants (5337)	<ul style="list-style-type: none"> Grants to assist state and local governmental authorities in maintaining rail transit systems in state of good repair. Projects limited to replacement and rehabilitation, or capital projects required to maintain public transportation system in state of good repair
Bus and Bus Facilities Formula Grant Program (5339)	<ul style="list-style-type: none"> This capital program provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities Assist in financing evaluation of all modal and multimodal alternatives for identified transportation needs in a broadly defined travel corridor
Casino Revenue Fund	<ul style="list-style-type: none"> Also known as Senior Citizen & Disabled Resident Transportation Assistance Program (SCDRTAP) Annual allocation of 8.5 percent of the Casino Revenue Fund appropriated to NJ TRANSIT for transportation services for senior citizens and disabled residents
Match	<ul style="list-style-type: none"> These are local funds to NJ TRANSIT that are needed to match federal funding (JARC and SECT 5311)
Metro North	<ul style="list-style-type: none"> Funding to NJ TRANSIT received from the Metro-North Commuter Railroad of the New York Metropolitan Transportation Authority
NJ-Job Access/Reverse Commute (JARC)	<ul style="list-style-type: none"> Administered by NJ TRANSIT, funding provides operating assistance to localities for development of transportation shuttle services to connect low-income persons to jobs and other employment related services. Eligible services include shuttles and connector services to public transit or warehouse locations
Other	<ul style="list-style-type: none"> Third-party funds to NJDOT and NJ TRANSIT represent funding provided from other sources, including but not limited to, bi-state and autonomous authorities, private entities, and local governments
Operating	<ul style="list-style-type: none"> These are fare box revenue funds to NJ TRANSIT

Source: [FTA Grant Programs Guide](#).



[Table 38](#), below, includes a detailed breakdown by funding category for FFY 2020 for both NJDOT and NJ TRANSIT resources. The table displays the total resources by agency as compared to the funds distributed to the SJTPO region, shown for the current federal fiscal year (FFY 2020). The revenue estimates are a result of extensive collaboration among NJDOT, NJ TRANSIT, and New Jersey's MPOs.

Table 38 – Funding Resources in Millions Allocated to SJTPO Region for FFY 2020 (NJDOT & NJ TRANSIT)

Funding Category	NJDOT	SJTPO	Funding Category	NJ TRANSIT	SJTPO
FHWA: CMAQ	\$34.7	\$1.9	FHWA: CMAQ	\$75.0	-
FHWA: Ferry	\$4.0	-	FHWA: High Priority	\$0.0	-
FHWA: High Priority	\$2.7	-	FHWA: STBGP-DVRPC	-	-
FHWA: NHFP	\$35.2	-	FHWA: STBGP-NJTPA	-	-
FHWA: NHPP	\$571.4	\$40.8	FHWA: STBGP-SJTPO	-	-
FHWA: Off System Bridge	\$32.5	-	FHWA: STP-Enhancement	\$1.0	\$0.1
FHWA: Other Funds	\$1.4	-	FTA: Section 5307	\$308.3	\$11.7
FHWA: Rail-Hwy Crossing	\$34.1	\$0.3	FTA: Section 5310	\$7.3	\$0.5
FHWA: Safety	\$59.2	\$3.8	FTA: Section 5311	\$4.3	\$0.3
FHWA: SPR/PL	\$35.1	\$1.1	FTA: Section 5324	\$0.0	-
FHWA: STBGP-DVRPC	\$24.0	-	FTA: Section 5337	\$191.9	\$2.4
FHWA: STBGP-NJTPA	\$102.7	-	FTA: Section 5339	\$15.7	\$0.2
FHWA: STBGP-SJTPO	\$4.1	\$4.1	FTA: Section 5339/5307	\$0.0	\$0.0
FHWA: STBGP-Statewide	\$105.4	\$27.6	Subtotal Federal	\$603.5	\$15.2
FHWA: TA	\$17.3	\$0.2	Other		
FTA: SPR/PL	\$3.9	\$0.5	Casino Revenue	\$18.5	\$1.3
Subtotal Federal	\$1,067.7	\$80.3	Match Funds	\$1.9	\$0.1
			Metro North	\$0.7	-
			Other Funds	\$37.9	\$0.0
			Operating	\$0.0	\$0.0
Other Funds	\$0.0	\$0.0	Subtotal Other	\$59.0	\$1.4
State: TTF	\$1,240.0	\$39.1	State: TTF	\$760.0	\$16.9
NJDOT Total	\$2,307.7	\$119.4 (5.17%)	NJ TRANSIT Total	\$1,422.5	\$33.5 (2.36%)

Source: FFY 2020-2029 SJTPO TIP, Financial Tables 2, 4, and 9.

Looking at Statewide TIPs, over the last 15 years (FFY 2004-2019), the SJTPO region has received 5.1 percent of available funds from NJDOT and NJ TRANSIT (excluding statewide programs), as depicted in the figure below. When looking only

at the NJDOT funds distributed, SJTPO received 7.3 percent of the funds over the same time period. SJTPO received 2.7 percent of the total NJ TRANSIT funds distributed during the same five-year period.

State Highway and Transit Funding

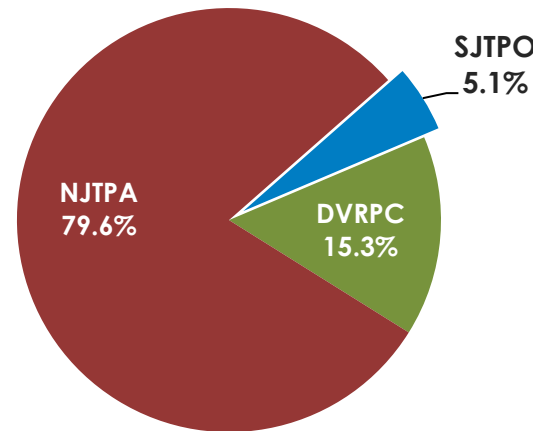
In addition to the federal funding described above, the State of New Jersey provides funding through the New Jersey Transportation Trust Fund (TTF), which was created in 1984 to provide a stable source of funding for transportation improvement projects. Due to the approval of a constitutional amendment approved by New Jersey voters in November 2016, in which the gas tax was increased by 23 cents per gallon, the TTF was able to be renewed in 2016, providing \$16.0 billion over eight years. Because of the shortfall in tax collections, the gas tax was increased by another 4.3 cents in 2018, resulting in the current 41.4 cents per gallon tax. Revenues for the TTF come from motor fuel taxes, appropriations from the General Fund, bonding, heavy truck and diesel fees, and contributions from toll road authorities. As depicted in [Table 38](#), above, in FFY 2020, the state is expected to receive approximately \$2.0 billion (\$1,240.0 million via NJDOT, \$760.0 million via NJ TRANSIT), of which SJTPO is expected to receive \$56.0 million (\$39.1 million via NJDOT, \$16.9 million via NJ TRANSIT).

The TTF revenue estimates assume no growth until FFY 2024, when the existing TTF will require reauthorization. Consistent with the state's current FFY 2020-2029 TIP, RTP 2050 does not assume a stream of TTF funding of more than \$280 million, \$56.0 million annually from FFY 2020 through FFY 2024.

Capital program appropriations to the state have increased from \$249 million at the start of the TTF to \$2.0 billion in FFY 2020, an increase of more than 700 percent. However, the state has been spending much more than it currently collects in revenue. In addition, the state has not yet identified long-term funding sources required to meet the projected future needs of the Trust Fund. Therefore, SJTPO conservatively assumes that TTF revenues will increase at a rate slower than inflation, until FFY 2050. Of course, this assumes that the Trust Fund will be reauthorized in FFY 2024, when the current authorization expires.

As noted, most of the funding will be targeted toward investments that preserve and maintain the region's existing transportation facilities. The bulk of the region's future transportation system is already in place and must be maintained and preserved so it can continue to serve both current and future needs.

Figure 45 – Historical Distribution of NJDOT and NJ TRANSIT Funds to MPOS, FFY 2004-2019



Source: FFY 2004-2029 Statewide TIPs, Financial Tables 7, 8, 9, and 10.



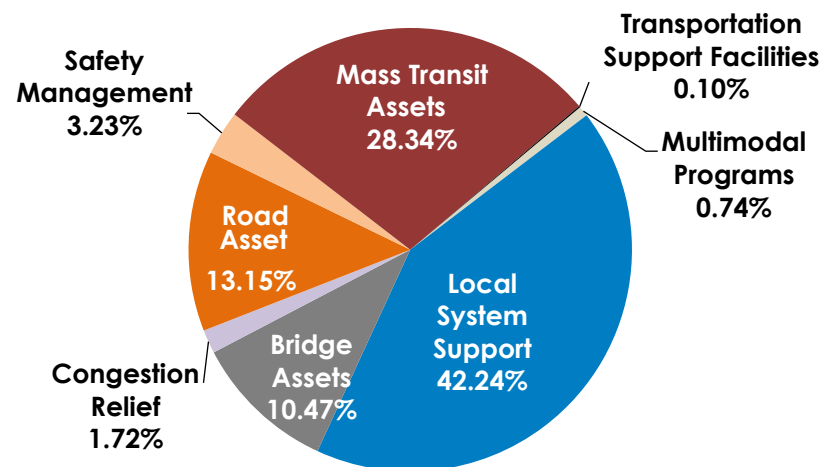
Investment Package

The future year investment package for RTP 2050 consists of all existing federal and state projects funded through the FFY 2020-2029 TIP, as well as future TIP projects through the RTP horizon year of 2050. As seen in the [Fiscally Constrained Project List](#), most of the projects listed are road and bridge preservation projects, with almost no capacity-enhancement projects. A complete list of these projects, as well as a map can also be found there.

The SJTPO TIP consists of two types of projects: State Lead and Local Lead. Highway projects on the state system, normally start as need statements that clearly identify specific problems, needs, or opportunities. Need statements come from various sources, including elected officials, county and local planning agencies, NJDOT staff, users of the state's transportation system, SJTPO-funded studies, NJDOT's Capital Investment Strategy, corridor strategies developed through the planning process, and RTP 2050. Since only a few of the many need statements received can be advanced to project development, they are evaluated by SJTPO and NJDOT.⁹⁰

Most of the projects and programs are categorized into eight Capital Investment Strategy (CIS) Program categories. The figure below, depicts the proportion of funding that falls into each funding category in the FFY 2020-2029 TIP. Of the approximately \$1.3 billion in funding programmed in the SJTPO region, \$548.38 million is programed towards Local System Support, \$170.79 million for Road Assets, \$135.87 million for Bridge Assets, \$367.99 million for Mass Transit Assets, \$22.38 million for Congestion Relief, \$41.93 for Safety Management, \$9.66 million for Multimodal Programs, and \$1.29 million for Transportation Support Facilities. It is important to note that no money is allocated for roadway system expansion.

Figure 46 – SJTPO Project Mix, FFY 2020-2029



Source: FFY 2020-2029 TIP, Section II and IV.

Projected Cost Assumptions

Cost estimates for state projects utilize the AASHTOWare Project Software, previously called Trns•port, to manage project cost estimation, proposals preparation, bid-letting, and construction-phase management. When a designer uses the AASHTOWare Estimation module to develop construction cost estimates, the software will provide/suggest unit prices of

⁹⁰ SJTPO FFY 2020-2029 TIP, p. 24.

the selected pay items based on a regression analysis of historic bid data. Therefore, recent real bid prices and their associated item quantities stored in the database will have a stronger influence than inflation on the unit prices by program.⁹¹

In addition to the state's estimation method, transportation experts at the county or municipal level prepare cost estimates based upon bid pricing of recent projects on the local systems. The result is the costs of projects in the TIP are displayed as Year of Expenditure values. For purposes for projecting future projects expenses in the region, in addition to the projects with the TIP, SJTPO is assuming that project cost will increase at an annual inflation rate of 3.5 percent for projects in the TIP as well as other future project expenses. For long-term construction costs when the letting date is more than a year away, SJTPO is assuming an annual inflation rate of 3.75 percent.⁹² This assumption is consistent with the inflation estimates utilized by NJDOT.

Projected Funding Assumptions

[Figure 47](#), below, displays the historical trend of funds distributed to the state's three MPOs from FFY 2004-2019. The figure represents the dollars, expressed in millions, distributed to the three MPOs for both NJDOT and NJ TRANSIT resources. Statewide program funding is excluded from these values.

The FAST Act ends in FFY 2020 on September 30, 2020. Work is still being done on the next federal transportation bill. No further details have been provided before this report was adopted. Thus, a projected growth rate was calculated based on the historical trend of funds distributed to the MPOs from FFY 2004-2019, excluding statewide programs and funding that has been programed in the STIP's financial tables through the current FFY 2020-2029 TIP. A growth rate was calculated separately for NJDOT and NJ TRANSIT, as funds distributed to the MPOs from each agency are vastly different. The projected growth rate for NJDOT-administered funds is 2.63 percent per year over the 25-year time period (FFY 2004-2029), whereas the historical growth rate for NJ TRANSIT-administered funds is 1.21 percent per year over the same time period. These growth rates were used to project SJTPO's funding from FFY 2030 through FFY 2050. The projected growth rate was calculated as the average percentage per year from FFY 2004-2029. For each fiscal year, the difference between the current total funding for all three MPOs and the previous fiscal year's total funding for all three MPOs was divided by the previous fiscal year's total funding and then converted to a percentage. [Figure 48](#), projects the funding for the SJTPO region given the assumptions described above.

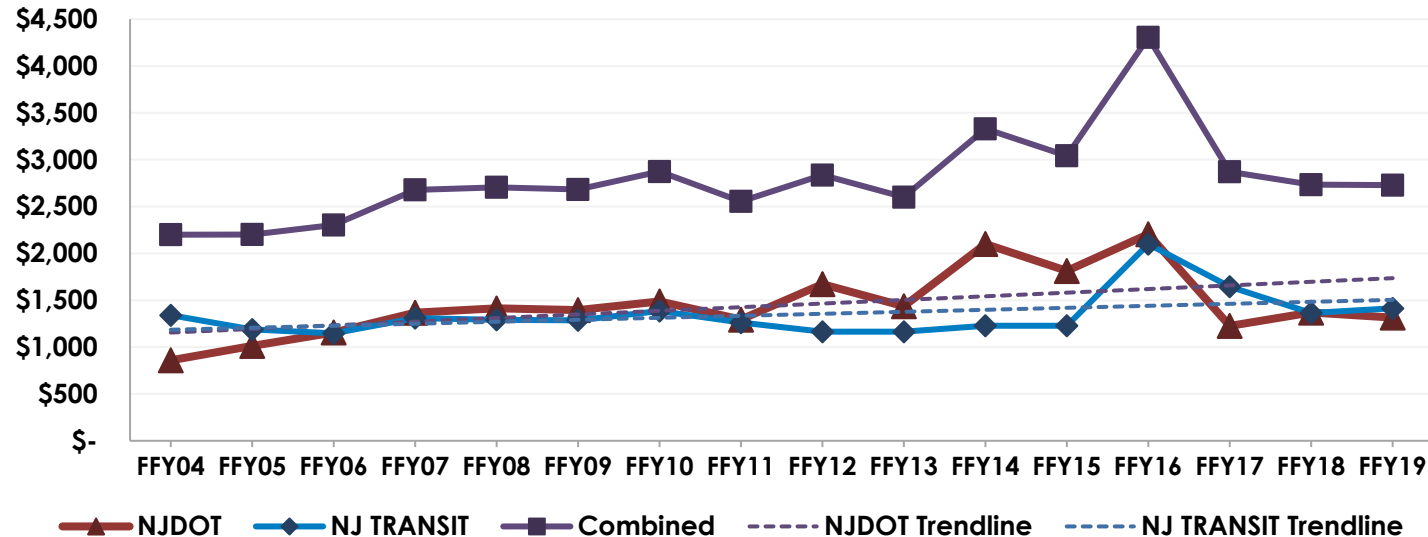
The analysis conducted in this section does not account for any increases in funding to meet the Critical Needs identified by SJTPO-region local stakeholders. The Critical Needs projects are discussed in more detail in [Chapter II](#).

⁹¹ Email with, NJDOT Program Management Office. 2/21/20.

⁹² This is consistent with the Federal Guidance: *Financial Planning and Fiscal Constraint for Transportation Plans and Programs Questions & Answers*. www.fhwa.dot.gov/planning/guidfinconstr_qa.cfm.

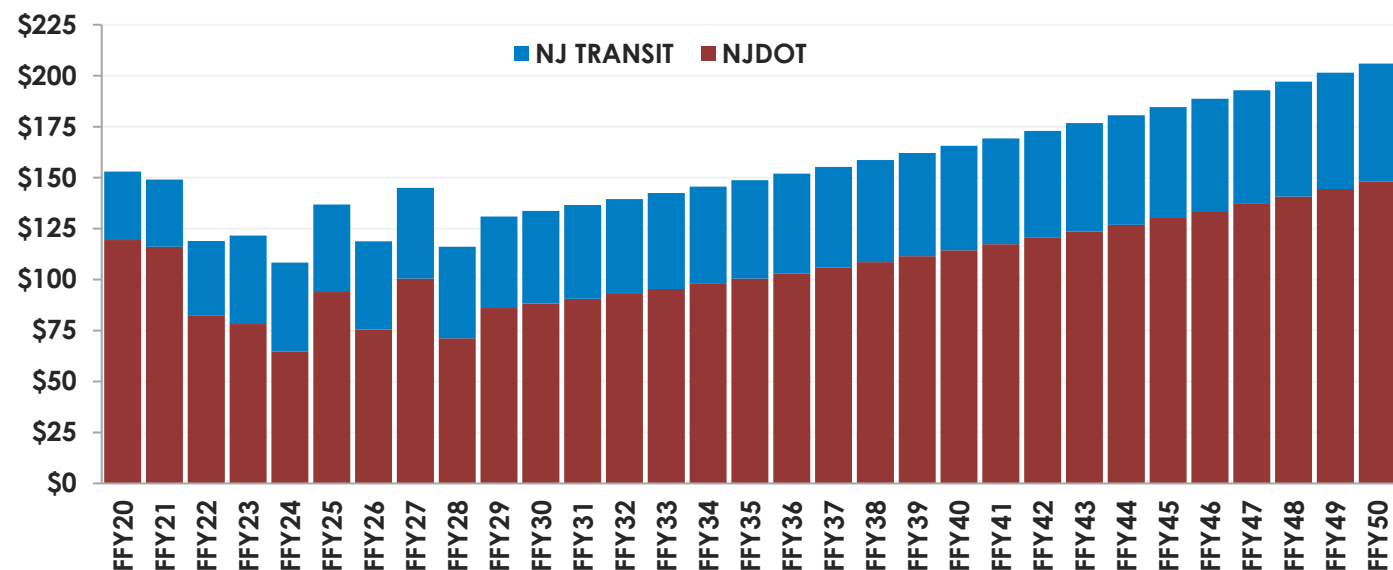


Figure 47 – Historical Distribution of Funds to MPOs (NJDOT and NJ TRANSIT) in Millions, FFY 2004-2019



Source: FFY 2004-2020 Statewide TIPs, Financial Tables 7, 8, 9, and 10.

Figure 48 – Projected SJTPO Funding Available in Millions, FFY 2020-2050



Source: FFY 2004-2020 Statewide TIPs, Financial Tables 7, 8, 9, and 10.

VII. RTP 2050 PERFORMANCE REPORT

Pursuant to the MAP-21 Act enacted in 2012 and the FAST Act enacted in 2015, DOTs and MPOs must apply a transportation performance management approach in carrying out their federally required transportation planning and programming activities. The process requires the establishment and use of a coordinated, performance-based approach to transportation decision-making to support national goals for the federal-aid highway and public transportation programs.

On May 27, 2016, FHWA and FTA issued the Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Final Rule (The Planning Rule).⁹³ This rule details how state DOTs and MPOs must implement new MAP-21 and FAST Act transportation planning requirements, including the transportation performance management provisions. In accordance with the Planning Rule, SJTPO must include a description of the performance measures and targets that apply to the MPO planning area and a System Performance Report as an element of its RTP. This System Performance Report evaluates the condition and performance of the transportation system with respect to required performance targets and reports on progress achieved in meeting the targets in comparison with baseline data and previous reports.

There are several milestones related to the required content of the System Performance Report:

- In any RTP adopted on or after May 27, 2018, the System Performance Report must reflect Highway Safety (PM1) measures,
- In any RTP adopted on or after October 1, 2018, the System Performance Report must reflect Transit Asset Management measures,
- In any RTP adopted on or after May 20, 2019, the System Performance Report must reflect Pavement and Bridge Condition (PM2) and System Performance (PM3) measures, and
- In any RTP adopted on or after July 20, 2021, the System Performance Report must reflect Transit Safety measures. RTP 2050 will be adopted by January 25, 2021. Per the Planning Rule, SJTPO's System Performance Report is included for the required Highway Safety (PM1), Bridge and Pavement (PM2), System Performance (PM3), Transit Asset Management, and Transit Safety targets. This report is meant to be more of a summary of the federally required performance measures and targets.

93 Final Rule at 23 CFR Part 450 and 49 CFR Part 613.



Highway Safety Measures (PM1)

Effective April 14, 2016, the FHWA established five highway safety performance measures to carry out the Highway Safety Improvement Program (HSIP). These performance measures are:

1. Number of fatalities,
2. Rate of fatalities per 100 million vehicle miles traveled (VMT),
3. Number of serious injuries,
4. Rate of serious injuries per 100 million vehicle miles traveled (VMT), and
5. Number of non-motorized fatalities and non-motorized serious injuries.

Per the Federal rule, each of these targets are submitted as five-year rolling averages. The five-year rolling average allows for the smoothing of any unusual spikes in any given year that might overly distort the overall trend. However, although the measures and targets are calculated using five-year rolling averages, state DOT's and MPOs must update their targets annually. For these measures, the SJTPO did not create any of its own measures and/or targets. It supported the state targets, as was its option per the Federal rule. However, NJDOT's process for establishing these targets was very collaborative, including extensive collaboration with SJTPO, as well as DVRPC, NJTPA, the FHWA New Jersey Division Office, and the New Jersey Division of Highway Traffic Safety (NJDHHS) to ensure a consistent approach for target setting. The identified targets reflect coordination and collaboration with the New Jersey Governor's Highway Safety Representative. The selected targets for number of fatalities, fatality rates, and number of serious injuries are consistent with the targets reported in New Jersey's Highway Safety Plan by the Division of Highway Traffic Safety.

In compliance with 23 CFR 924.15(a)(1)(iii)(B) requirements, the following are the targets set by NJDOT for 2020 Safety Performance Measures, based on five-year rolling averages:

Table 39 – 2020 Statewide Safety Targets Supported by SJTPO

Performance Measure	Target 2016-2020 Rolling Average	Baseline 2014-2018 Rolling Average
Number of Fatalities	582.8	581.6
Rate of Fatalities per 100 Million VMT	0.744	0.759
Number of Serious Injuries	1,167.9	1,110.8
Rate of Serious Injuries per 100 Million VMT	1.489	1.449
Number of Non-Motorized Fatalities & Serious Injuries	407.9	392.7

Although some of the five-year rolling average targets above indicate an increase, this is due to annual levels for 2014 that were relatively low. Five-year rolling averages after that date lose the benefit of 2014, resulting in higher five-year rolling average values. However, projected annual values are trending down, as indicated in [Table 40](#), below.

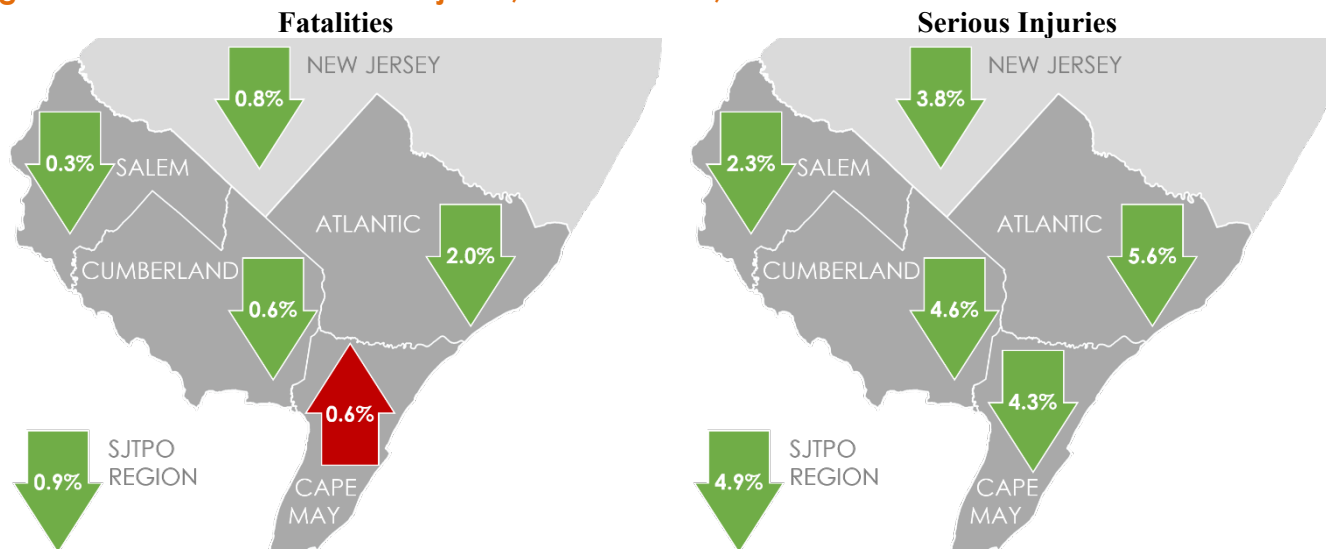
Table 40 – Projected Annual Rolling Average Values

Performance Measure	Target 2020 Annual	Baseline 2018 Annual
Number of Fatalities	560	565
Rate of Fatalities per 100 Million VMT	0.700	0.722
Number of Serious Injuries	1,189	1,270
Rate of Serious Injuries per 100 Million VMT	1.485	1.623
Number of Non-Motorized Fatalities & Serious Injuries	410	424

The SJTPO Policy Board voted to support the statewide safety targets at their July 22, 2019 meeting.

Assessing Safety on our System

SJTPO regularly monitors crash data to evaluate the system and our performance. This comes both during annual evaluations of the aforementioned safety targets as well as other analyses, as needed, throughout the year. SJTPO evaluates individual crashes and high crash locations as well as data related to the performance measures. When looking at trends, between 2007 and 2018, most crash statistics are improving. While the numbers of fatalities and particularly nonmotorized fatalities are low enough that annual numbers fluctuate wildly, over time, the trends are mostly positive and shown in [Figure 49](#), below.

Figure 49 – Fatalities vs Serious Injuries, Annual Trend, 2017-2018

Source: NJDOT.

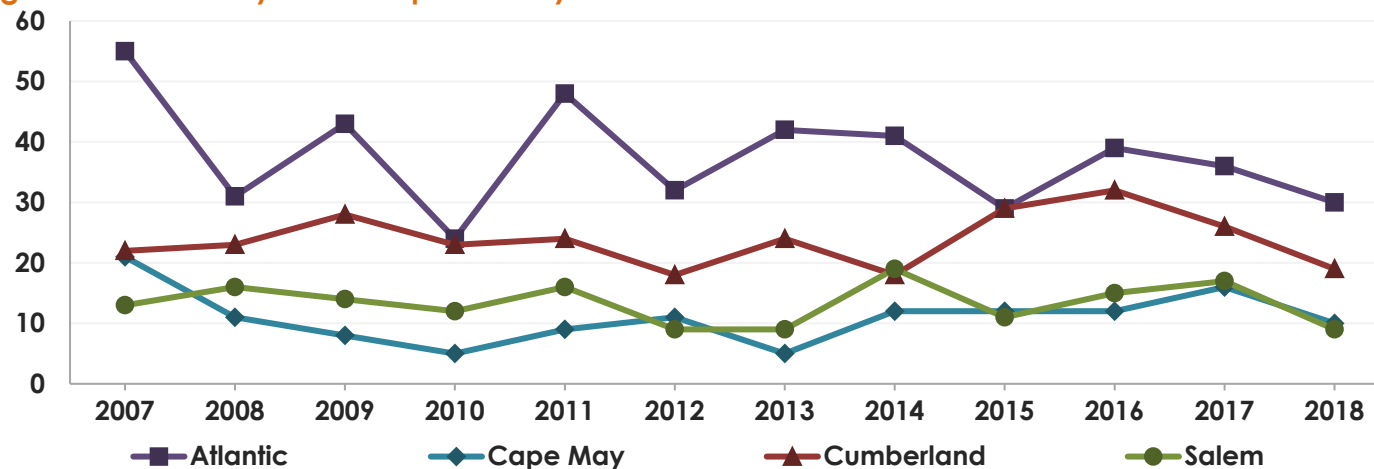
When looking at the annual numbers, by county, the fluctuations become more apparent; however, some trends clearly emerge. Statistics related to fatalities, shown in [Figure 50](#) and [Figure 51](#), have been mostly steady, with only modest declines. However, serious injuries, shown in [Figure 52](#) and [Figure 53](#), have seen a notable decline in recent years. These



South Jersey Transportation Planning Organization

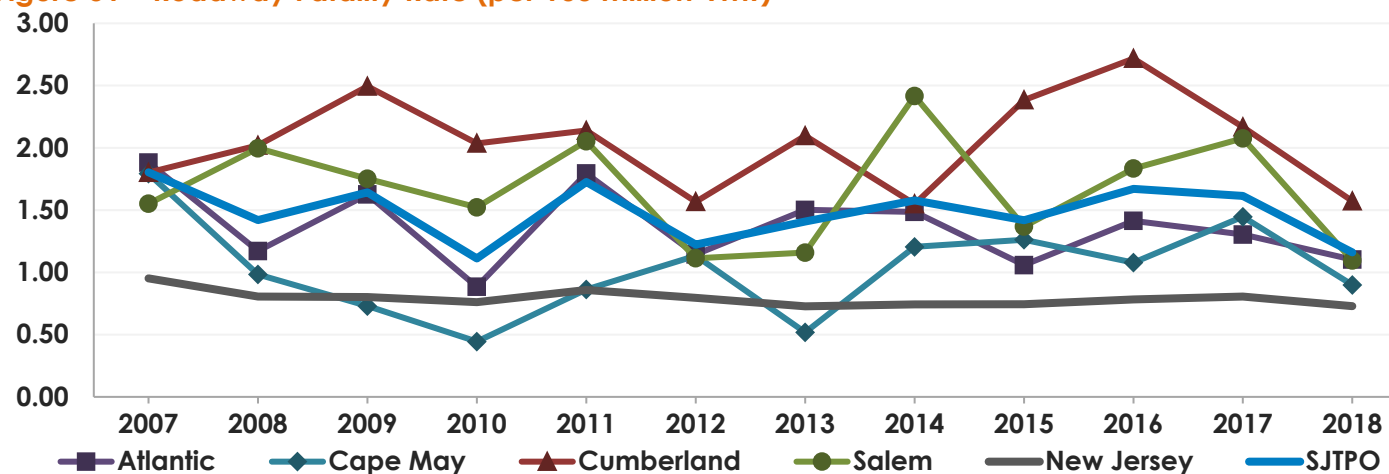
are similar to the respective rates, as fatality rates, per 100 million vehicle miles travelled (VMT) fluctuate wildly, but are mostly flat, whereas the serious injury rate has seen a more notable decline.

Figure 50 – Roadway Fatalities per County

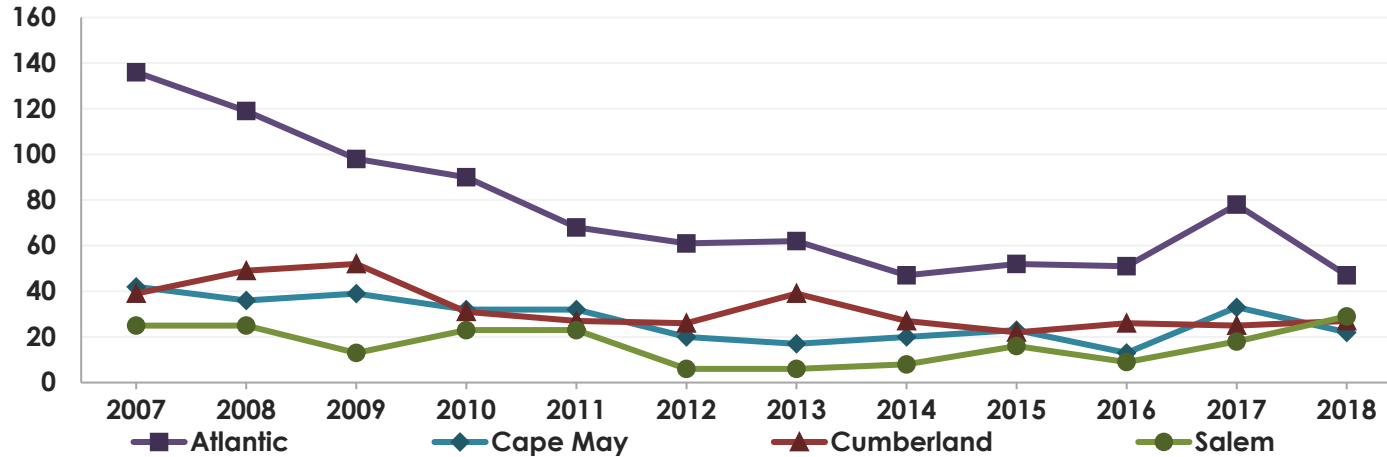


Source: NJDOT.

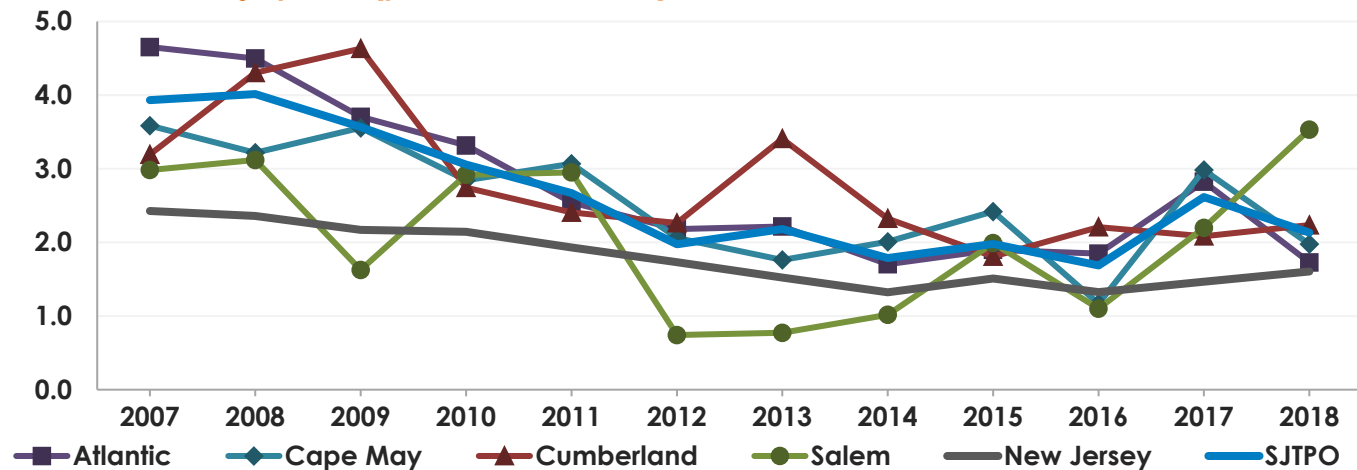
Figure 51 – Roadway Fatality Rate (per 100 million VMT)



Source: NJDOT.

Figure 52 – Serious Injuries per County

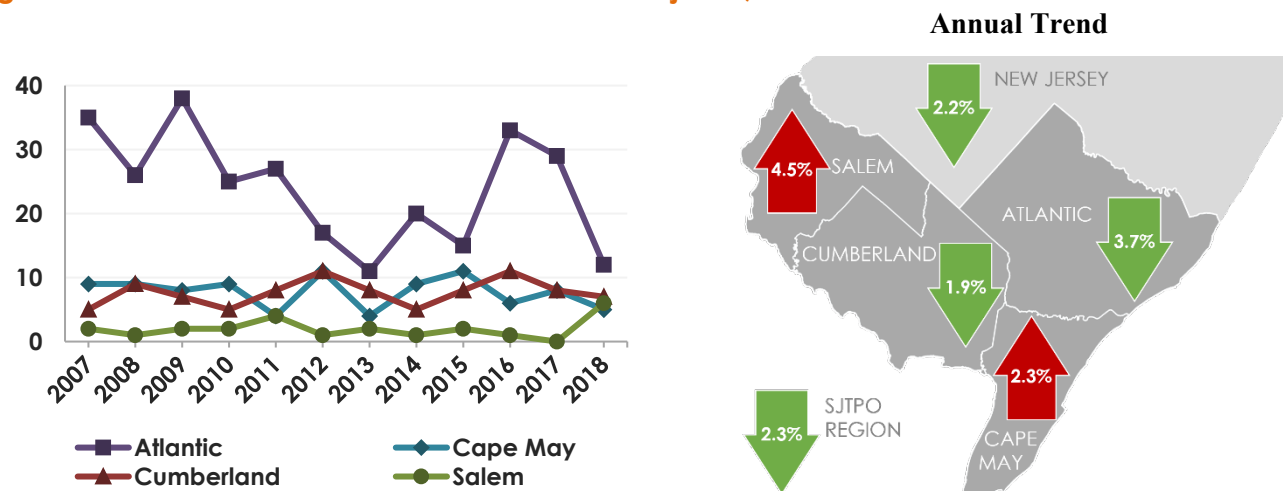
Source: NJDOT.

Figure 53 – Serious Injury Rate (per 100 million VMT)

Source: NJDOT.

Nonmotorized crashes, which include bicyclists and pedestrians, have been more problematic in recent years. When looking at fatalities and serious injuries together, shown in [Figure 54](#), nonmotorized user data has a mixed picture, with increases in Salem and Cape May Counties and decreases in Atlantic and Cumberland County.

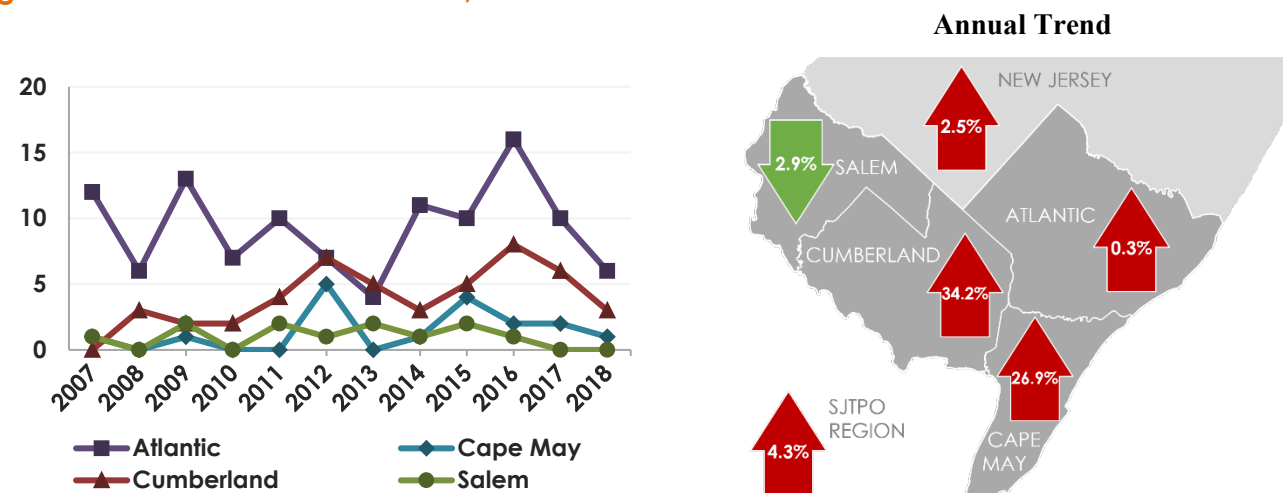
Figure 54 – Nonmotorized Fatalities and Serious Injuries, 2007-2018



Source: NJDOT.

However, when only fatalities among nonmotorized, shown in [Figure 55](#), users are considered, the numbers paint a very concerning picture. While bicycle and pedestrian fatality numbers are low and are thus subject to wild swings as seen below on the left, the overall trends are very clear that bicycle and pedestrian fatalities are on the rise in the SJTPO region and across the state.

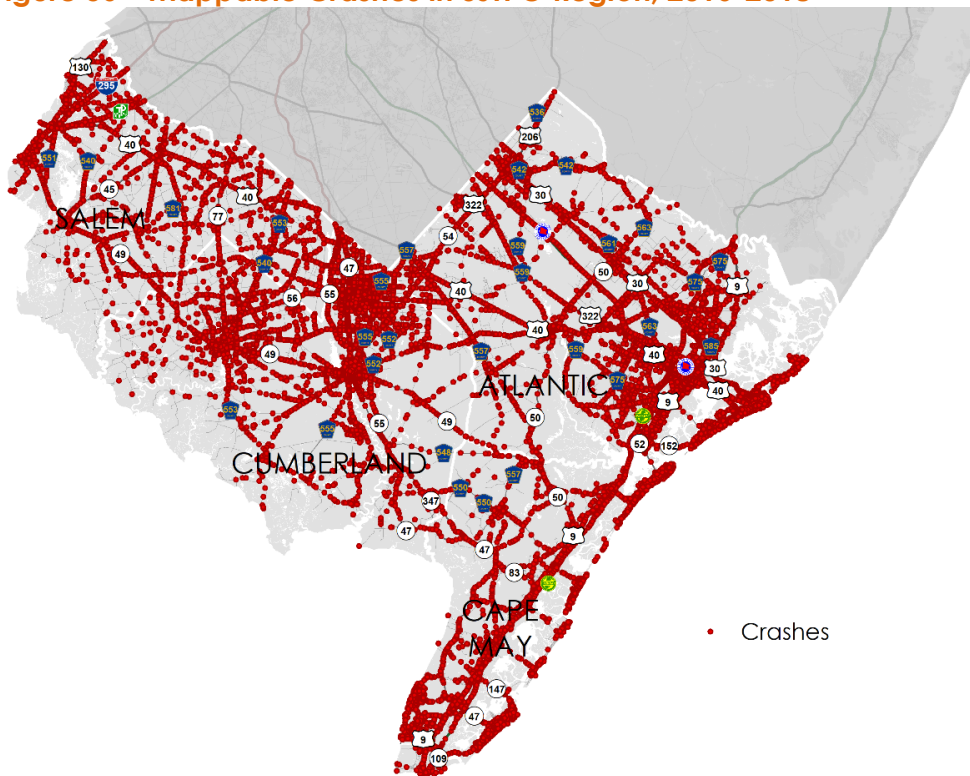
Figure 55 – Nonmotorized Fatalities, 2007-2018



Source: NJDOT.

Finally, SJTPO regularly analyzes data related to specific crashes. This is useful in identifying locations in which to focus for roadway safety improvements and is essential in the detailed analysis work that must be done when evaluating the safety problems at a specific project site. These crash-specific analyses are also what are used by NJDOT to create the network screening, or high crash location lists, which are used to identify eligible locations for HSIP-funded safety improvements. The map in [Figure 56](#), below, shows all mappable crashes in the SJTPO region. It is of note that not all crashes have geolocation data associated with them that makes them mappable. In the three-year period from 2016 to 2018, there were 50,073 crashes recorded in the SJTPO region, of which 44,908 were mappable and shown below. 5,165 or 11.5 percent of crashes do not have adequate data to allow them to be mapped. While this 11.5 percent lapse in data is concerning and must be addressed, it represents a significant improvement in recent years due to efforts NJDOT has undertaken to improve crash records. These crash records are created at the scene of a crash by law enforcement and are often done by hand, which leads to many accuracy issues. However, efforts are underway to move to an all-digital crash record system in New Jersey, which will offer significant opportunities to improve accuracy of this data.

Figure 56 – Mappable Crashes in SJTPO Region, 2016-2018



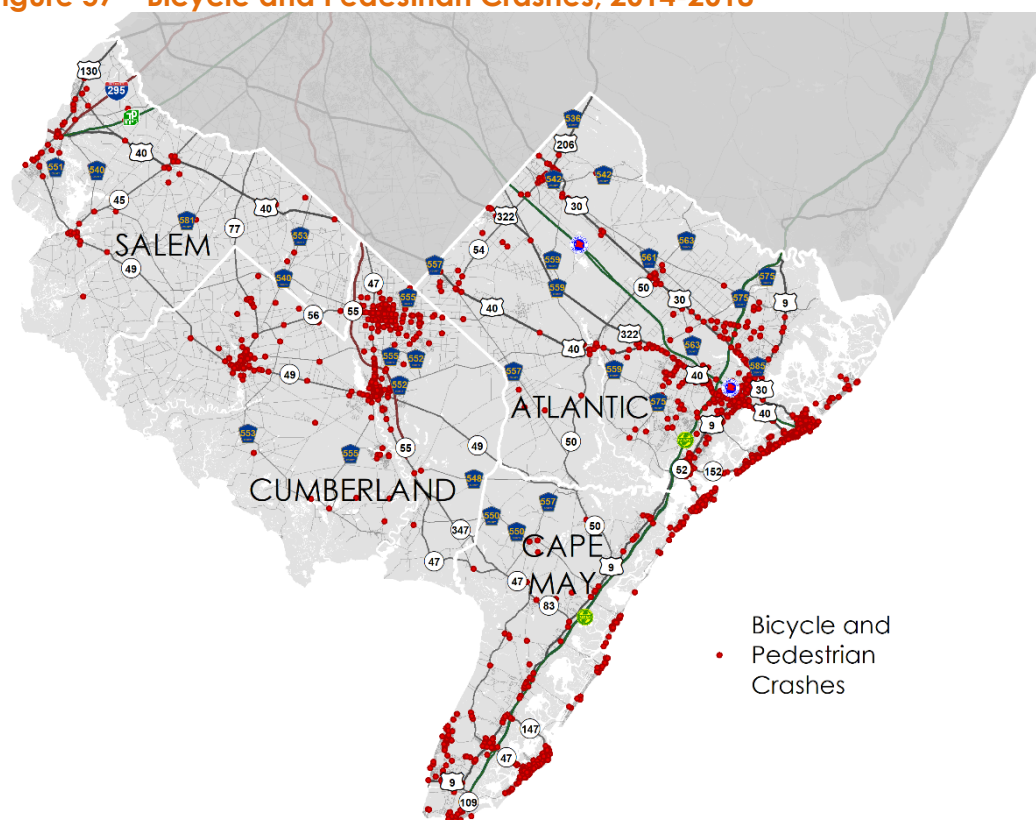
***From 2016 to 2018,
there were 50,073
crashes recorded in
the SJTPO region, of
which 44,908 were
mappable.***

Source: NJDOT.

This crash-specific analysis is a critical piece of the process as it reveals important information. For example, when looking at bicycle and pedestrian crashes, shown in [Figure 57](#), below, most crashes are in urban areas, largely concentrated in low-income communities with limited automobile access. In SJTPO's recent Cumberland County Bicycle and Pedestrian Safety Action Plan effort, it was learned that while 2.9 percent of crashes involve bicyclists and pedestrians, 21.6 percent of fatal or serious injury crashes involve bicyclists and pedestrians, and that these crashes are highly concentrated in low-income areas. It is when all these pieces of data are compiled, that it becomes clear where efforts and resources need to be focused.

In conclusion, based on [Figure 48-Figure 54](#), above, and the accompanying analysis, it appears the SJTPO region is on track to meet the 2020 target values for four out of the five safety performance measures for 2020. The only safety performance measure that could see an increase in the number of non-motorized fatalities and serious injuries. For a more extensive discussion of SJTPO safety initiatives as well as strategies for safety improvement, see [Chapter IV. 7](#).

Figure 57 – Bicycle and Pedestrian Crashes, 2014-2018



Source: NJDOT.

As is evidenced by “Improve Transportation Safety” being one of RTP 2050’s goals and safety considerations being one of the Pre-Screening Criterion of SJTPO’s recently adopted Project Selection Process, safety is a high priority in SJTPO’s planning and project development. Almost \$42 million, approximately 3.23 percent, for safety management projects is programmed through FFY 2029 in RTP 2050. Beyond the “Safety Management” investment category, projects in other investment categories also have safety benefits. For example, over \$548 million in RTP 2050 is programmed for “Local System Support,” which includes “Local Safety Improvements” as a subcategory. In addition, SJTPO anticipates continuing to receive approximately \$2 million per year after FY 2029 for Highway Safety Improvement Program (HSIP) projects, a federal program with the sole purpose of significantly reducing traffic fatalities and serious injuries on all public roads, in accordance with the State’s Strategic Highway Safety Plan. This equates to another \$40 million over 20 years.

Pavement and Bridge Condition Measures (PM2)

In January 2017, USDOT published the Pavement and Bridge Condition Performance Measures Final Rule, which is also referred to as the PM2 rule. This rule establishes the following six performance measures:

1. Percent of Interstate pavements in *good* condition. Good condition suggests no major investment is needed.
2. Percent of Interstate pavements in *poor* condition. Poor condition suggests major reconstruction investment is needed.
3. Percent of non-Interstate National Highway System (NHS)⁹⁴ pavements in *good* condition.
4. Percent of non-Interstate NHS pavements in *poor* condition.
5. Percent of NHS bridges (by deck area) classified as in *good* condition.
6. Percent of NHS bridges (by deck area) classified as in *poor* condition.

Pavement Measures and Targets

As an MPO, SJTPO does not own any roads or infrastructure. As such, NJDOT took the lead in assessing pavement conditions and determining targets, while keeping SJTPO updated. Although SJTPO was not directly involved, many of the counties and municipalities within the SJTPO region were involved in the development and review of the pavement measures and targets.

To assess whether a pavement is in *good* or *poor* condition, NJDOT used three specific metrics:

- **Surface Distress Index (SDI)** - SDI is a measure that was developed by NJDOT to support pavement treatment selection and long-term analysis. It uses an observation of surface distresses to rate pavement condition. SDI is a

SJTPO does not own any roads or infrastructure, so NJDOT took the lead in assessing pavement conditions and targets, while keeping SJTPO updated.

⁹⁴ The National Highway System is a system comprised of all interstates and other roads important to the nation’s economy, defense, and mobility. For a more thorough definition of the National Highway System, as well as a copy of a map depicting NHS roads within the State of New Jersey, see: www.fhwa.dot.gov/planning/national_highway_system/.



composite index that considers structural and nonstructural distresses that can be observed at the pavement surface, including cracking, patching, shoulder deterioration, shoulder drop, faulting, joint deterioration, and running.⁹⁵

- **International Roughness Index (IRI)** - IRI is required as part of the Pavement Conditions Final Rule. IRI is a measure of ride quality, which represents the roughness felt by vehicle occupants driving over the pavement in a measure of inches of vertical movement per mile traveled.
- **Condition Status (CS)** - CS is used by NJDOT to report current and historic pavement condition and forecast future pavement condition. It is a composite measure of SDI and IRI and is determined according to the criteria shown in [Table 41](#), below.

Table 41 – NJDOT Condition Status Criteria*

Condition Status	Condition Index Criteria	Engineering Significance
<i>Deficient (Poor)</i>	IRI > 170 OR SDI ≤ 2.4	These roads are overdue for treatment. Drivers on these roads are likely to notice that they are driving on a rough surface, which may become barely tolerable at higher speeds, putting additional stress on vehicles. These pavements may have deteriorated to such an extent that they affect the speed of free flow traffic. Flexible pavements may have large potholes and deep cracks. These roads often show significant signs of wear and deterioration and may have significant distress in the underlying foundation. Roads in this condition will generally be most costly to rehabilitate.
<i>Fair / Mediocre</i>	(95 ≤ IRI ≤ 170 And SDI > 2.4) OR (IRI < 95 And 2.4 < SDI < 3.5)	These roads exhibit minimally acceptable ride quality that is noticeably inferior to those of new pavements. These pavements may show some signs of deterioration, such as rutting, map cracking, and extensive patching. Most importantly, roads in this category are in jeopardy and should immediately be programmed for some cost-effective treatment that will restore them to a <i>good</i> condition and avoid costly rehabilitation in the near future.
<i>Good</i>	IRI < 95 AND SDI ≥ 3.5	These roads exhibit good ride quality with little or no signs of deterioration. A proactive preventive maintenance strategy is necessary to keep roads in this category as long as possible.

95 NJDOT. "NJDOT Target Setting Approach on the NHS Using National Performance Measures and Metrics As Required by 23 CFR 490." April 2018.

* Table is taken from NJDOT Pavement Management System Pavement Condition Indices and Analysis.

For each pavement metric, a threshold is used to establish *good*, *fair*, or *poor* condition. Pavement condition is assessed for each 0.1-mile section of the through travel lanes of mainline highways on the Interstate or the non-Interstate NHS using these metrics and thresholds. A pavement section is rated as *good* if all three metric ratings are *good*, and *poor* if two or more metric ratings are *poor*. Sections that are not *good* or *poor* are considered *fair*.

The *good/poor* measures are expressed as a percentage and are determined by summing the total lane-miles of *good* or *poor* highway segments and dividing by the total lane-miles of all highway segments on the applicable system, which are the Interstate and Non-Interstate NHS systems in this case. Pavement in *good* condition suggests that no major investment is needed and should be considered for preservation treatment. Pavement in *poor* condition suggests major reconstruction investment is needed due to either ride quality or a structural deficiency.

Federal rules require state DOTs and MPOs to coordinate when setting pavement condition performance targets and monitoring progress towards achieving the targets. States must establish the following targets for pavement measures:

- Percent of Interstate pavements in *good* and *poor* condition (four-years only required) and
- Percent of non-Interstate NHS pavements in *good* and *poor* condition (two and four-year targets required).

The state established the following pavement performance targets for the first four-year performance cycle (CY 2018-2021):

Table 42 – New Jersey’s Statewide Pavement Performance Targets

Measure	Reported Baseline (2018)	Two-year Target (2020)	Four-year Target (2020)
Percent Interstate pavement in <i>good</i> condition	55.02%	**	50%
Percent Interstate pavement in <i>poor</i> condition	1.36%	**	2.5%
Percent non-Interstate NHS pavement in <i>good</i> condition	30.37%	25%	25%
Percent non-Interstate NHS pavement in <i>poor</i> condition	1.18%	2.5%	2.5%

** For the first performance period, (CY 2018-CY2021), two-year targets are not required for the Interstate Pavements Condition.

As with the Safety Targets above, SJTPO had the option to support the state’s targets, or develop its own. SJTPO supports the state targets. The SJTPO Policy Board formally adopted its resolution supporting the state’s pavement condition targets on September 24, 2018.

Progress Towards Meeting Targets

In September 2020, the PM2 Stakeholders Group convened to discuss progress towards meeting the two-year pavement performance targets. For the parts of the Interstate that are on the NHS, there were no two-year targets established, so no assessment was made, although the system seems on track to meet the four-year Interstate targets. For the parts of the NHS



that are non-Interstate, the system seems on track to meet the two-year target of 25 percent pavements in good condition, as approximately 33 percent of the pavements are in good condition, as of 2020. However, based on the 2020 estimate of 10.7 percent, non-Interstate pavements in poor condition, the system missed the two-year target of 2.5 percent by a significant margin. Missing this percent target should not be seen as a reflection of poor pavement management practices or under-investment, but primarily due to the unreliability of the baseline data and a lack of performance history supporting this baseline. Further, as with many of these performance measures, NJDOT (and other asset owners) have limited experience with the Federal pavement measures and metrics.

The pavement performance summary for the New Jersey NHS system is summarized in [Table 43](#), below.

Table 43 – New Jersey National Highway System (NHS), Two- and Four-Year Pavement Target Review

	Baseline (Reported in 2018)	Two-Year Target	2020 Two-Year Performance	Four-Year Target
Interstate Good	55.02	N/A	62.1	50
Interstate Poor	1.36	N/A	1.8	2.5
Non-interstate Good	30.37	25	33	25
Non-Interstate Poor	1.18	2.5	10.7	2.5

Source: NJDOT. PM2 Stakeholders Workshop. September 18, 2020.

At the September 18, 2020, meeting of the PM2 stakeholders, it was recommended that NJDOT raise its original four-year target of non-Interstates in poor condition from 2.5 percent to 15 percent. The original four-year targets for Interstates in good condition, poor condition and non-Interstates in good condition will continue to remain the same. Just as it did with all the pavement performance targets, SJTPO is likely to support this change in the four-year targets and plans to bring it to the Policy Board for approval on January 25, 2021.

Pavement performance is probably one of the larger capital investment categories of programmed projects in RTP 2050. More than \$170 million, slightly more than 13 percent of the total programmed investments in projects from FFY 2020 through FFY 2029, is allocated towards Road Assets, which are projects designed to keep the highway system functioning and in a state of good repair, including work which upgrades segments of the system to current design standards. It should be noted that most of the programmed money for the Local Lead projects, over which SJTPO has the most discretion, goes toward roadway resurfacing projects. From FFY 2020-2023, \$47 million is made available to SJTPO through the Surface Transportation Block Grant Program (STBGP), the main funding source behind Local Lead projects, although only \$8.2 million is for roads on the NHS system.

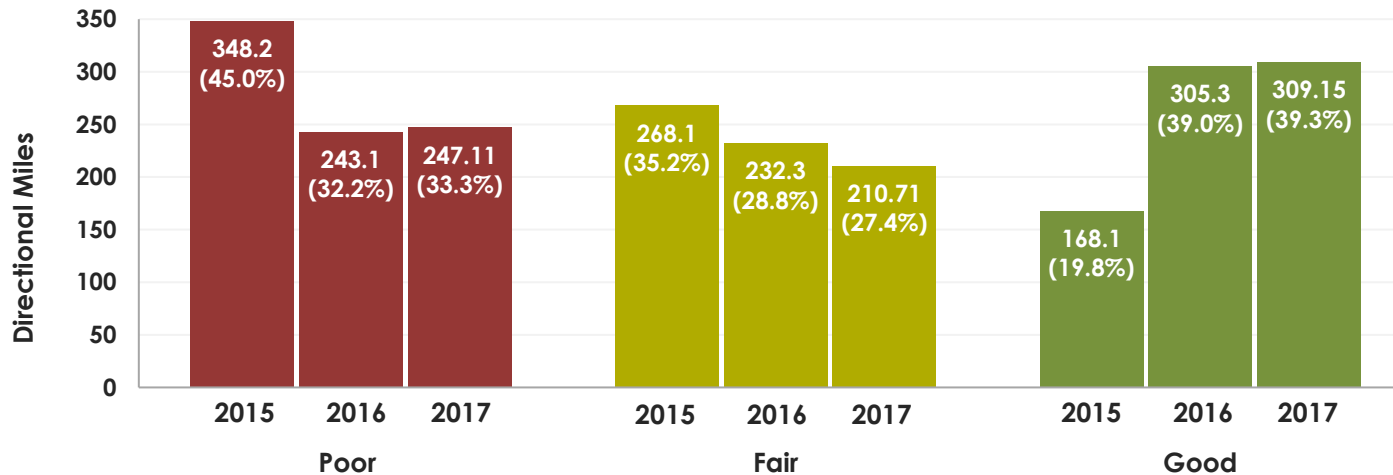
Performance within SJTPO region

While the above metrics and targets were for the state as a whole, SJTPO also compiled and computed performance metrics of the Statewide system that fell within its region.

Using the criteria described above, [Figure 58](#), below, depicts pavement performance on state-owned and maintained roads within the SJTPO region from 2015 through 2017. All the roads owned and maintained by the state are commonly known as the State Highway System (SHS). From 2015 to 2017, there has been a decrease of more than 29 percent in the number of directional road miles rated poor, from 348 road miles (directional) to 247 road miles. There has also been an increase of almost 84 percent the number of directional miles rated good, from just over 168 miles in 2015 to more than 309 miles in 2017.

In addition, the figure shows the percentage breakdown of NJDOT-owned and maintained pavements within the SJTPO region from 2015-2017. As a percentage of the entire SHS, the number of lane-miles rated poor has been trending slightly upward, the amount rated fair has been declining, while the number of lane-miles in good condition has seemed to level off in the last two years.

Figure 58 – SHS Pavement Conditions, SJTPO Region, 2015-2017



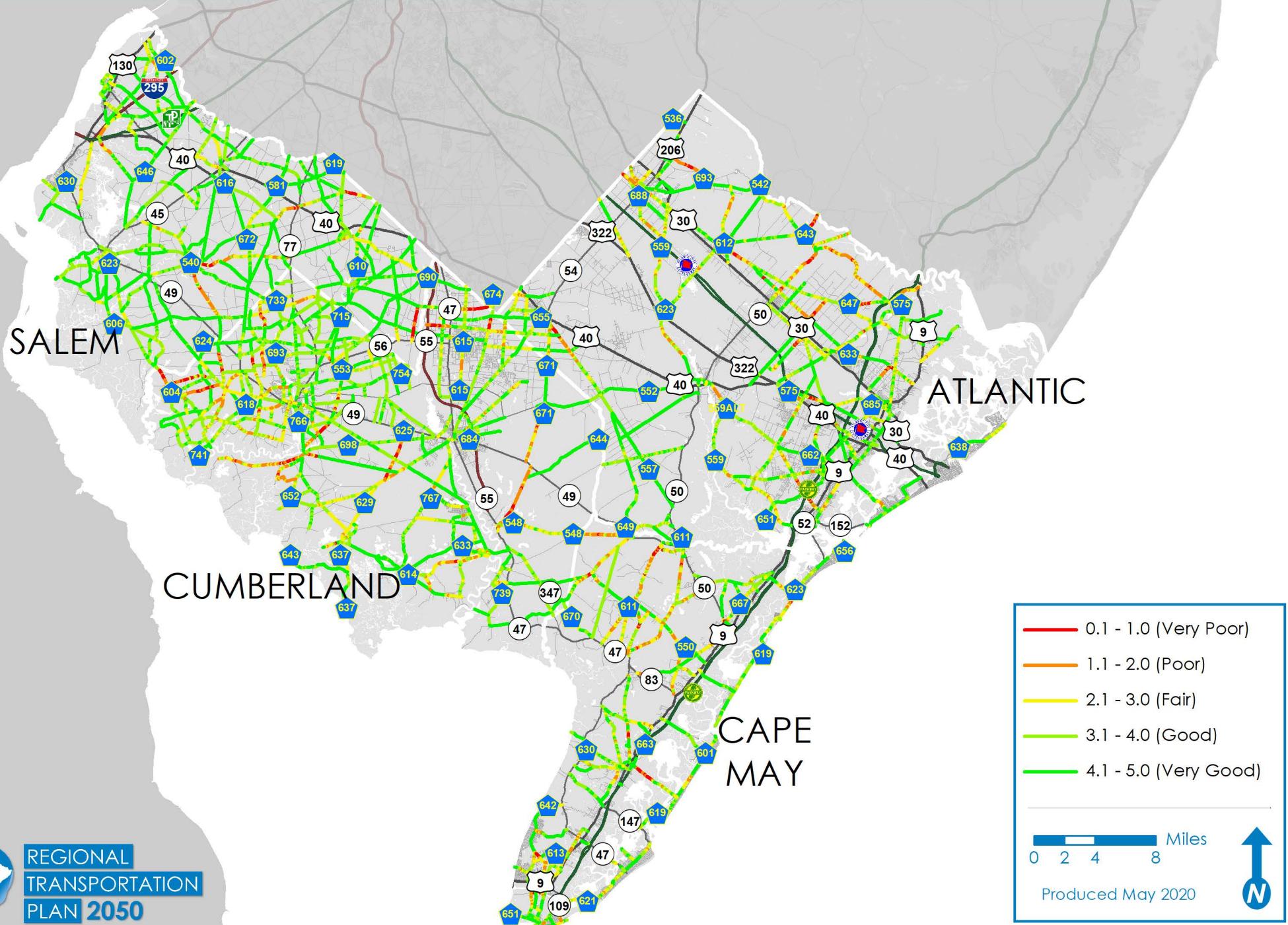
Source: NJDOT.

In addition to the state-owned and maintained roadways, SJTPO has done extensive data collection on pavement conditions for county-owned and maintained roadways within the region. In 2019, as part of SJTPO's Regional Pavement Condition Data Collection project, an instrumented van drove down every county highway in the region, scanning the roadways and collecting images. This data was processed into pavement condition data, depicted in [Figure 59](#), below. While most of the county roadways are in at least good condition, there are segments within each of the four counties that are in poor condition.

All roads owned and maintained by the state are commonly known as the State Highway System.

Figure 59

Pavement Condition



As stated above, much of SJTPO's capital program goes toward pavement resurfacing projects. SJTPO will continue to assist its subregions with pursuing federal funding for pavement preservation projects through the funding programs administered by SJTPO, such as the SJTPO-STBGP program. It is SJTPO's hope that much of the extensive pavement data collected as part of the above project will allow the subregions to prioritize which of their roadways need resurfacing. While SJTPO authorizes the funding under its Local Lead program for pavement resurfacing projects, the actual treatment is usually determined by the project sponsor, meaning the county or the municipality. Pavement condition is one of the criteria in SJTPO's TIP/RTP Project Selection Process. For more details on SJTPO's project selection process, see the Project Selection Process in [Chapter V](#).

Bridge Measures and Targets

After pavements, bridges are probably the most extensive asset of the regional transportation system. The SJTPO region includes more than 280 bridges owned by NJDOT, counties, authorities, and local bridge authorities and commissions. The Final Rule (23 CFR 490) that mandated performance measures and targets for pavements included similar requirements for bridges.

The bridge performance measures are based on bridge deck area. The classification of the bridge in *good* or *poor* condition is based on the lowest National Bridge Inventory (NBI) condition ratings for the bridge deck, superstructure, substructure, and culvert. If the lowest rating is greater than or equal to seven, the bridge is classified as *good*; if it is less than or equal to four, the classification is *poor*. Bridges rated below seven but above four are classified as *fair*, but there is no related performance measure.⁹⁶

The two required bridge condition measures are:

- Percent NHS bridges by deck area in *good* condition
- Percent NHS bridges by deck area in *poor* condition

A bridge in *good* condition suggests that no major investment is needed. A bridge in *poor* condition is safe to drive on; however, it is nearing a point where substantial reconstruction or replacement is needed.

As with the pavement measures, in addition to reporting performance measures, both the state DOTs and MPOs established two- and four-year targets for bridge conditions, although MPOs were able to support their state DOT targets if they chose.

The state established the following bridge performance targets for the first four-year performance cycle:

⁹⁶ Bridge Performance Measures Fact Sheet at: www.fhwa.dot.gov/tpm/pubs/PM2BridgeFactSheet.pdf.

**Table 44 – New Jersey’s Statewide Bridge Targets – 1st Performance Period (CY2018-2021)**

Measure	Reported Baseline (2017)	Two-Year Target (2019)	Four-Year Target (2021)
Percent NHS bridge deck area in <i>good</i> condition	21.7%	19.4%	18.6%
Percent NHS bridge deck area in <i>poor</i> condition	6.5%	6.5%	6.5%

MPOs can either agree to program projects that will support the statewide targets or establish their own quantifiable targets for the MPO’s planning area. As with the pavement performance measures above, SJTPO supports the state’s targets. The SJTPO Policy Board formally adopted its resolution supporting the state’s bridge conditions targets on September 24, 2018.

Progress Towards Meeting Targets

At its September meeting, NJDOT reported the two-year performance of bridge as follows:

Table 45 – New Jersey’s Statewide NHS NBIS Bridge Inventory, Two-Year, Four-Year Target Review

Measure	Reported Baseline (2017)	Two-Year Target (2020)	Two-Year Performance (2020)	Four-Year Target
Percent NHS bridge deck area in <i>good</i> condition	21.7%	19.4%	22.1%	18.6%
Percent NHS bridge deck area in <i>poor</i> condition	6.5%	6.5%	6.8%	6.5%

Source: NJDOT. PM2 Stakeholders Workshop. September 18, 2020.

As seen in [Table 45](#), above, with 22.1 percent of bridge deck in good condition, the percent of good condition NHS bridge performance exceeded the initial two-year target of 19.4 percent by 2.7 percent. Amongst the reasons cited by NJDOT for this better-than-expected performance, more major projects were completed in the two-year period than were expected, and the data also showed that the deterioration of other bridges was not as rapid as expected. At 6.8 percent, the percent of poor condition NHS NBIS bridge performance was short of the target by 0.3 percent. According to NJDOT, the main reason behind this slight shortfall was a large New Jersey Turnpike Bridge over the Passaic River (in northern New Jersey) unexpectedly deteriorated to “POOR” condition, which outweighed the net reduction in the rest of the NHS bridges. Due to the higher-than-expected percentage of bridge deck conditions in good condition, NJDOT is proposing raising the original four-year target from **18.6 to 21.3 percent**, and the percent of bridge deck area in poor condition from **6.5 to 6.8 percent**. As with the pavement performance targets described above, SJTPO is likely to support this change in the four-year targets and plans to bring it to its Policy Board for approval on January 25, 2021.

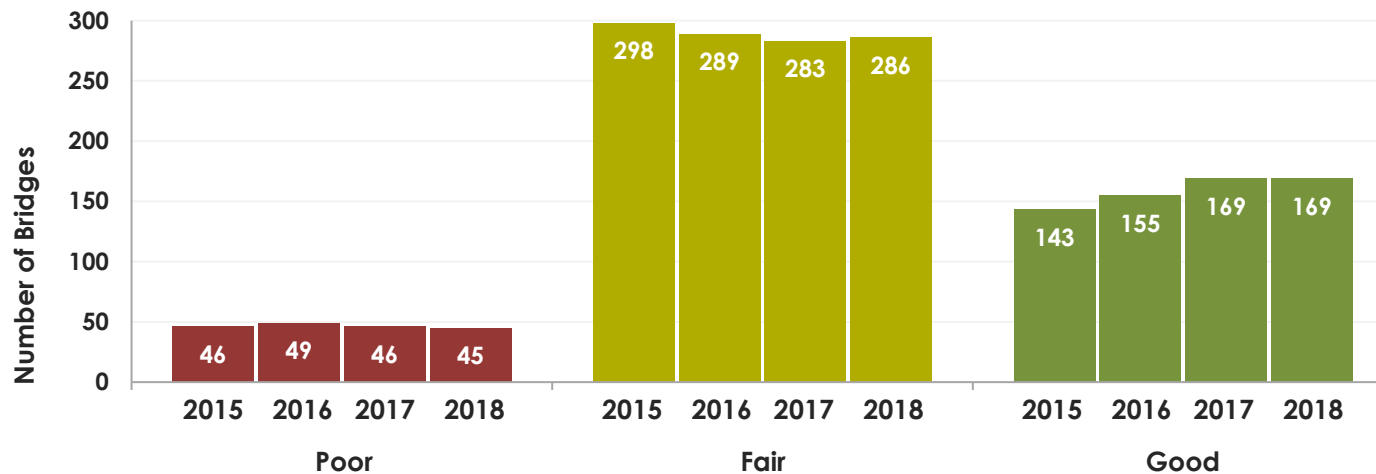
A little more than 10 percent of the total FFY 2020-2029 programmed funds, or almost \$136 million, goes towards bridge assets. These are projects designed to keep existing bridges functioning and in a state of good repair, including work which rehabilitates or replaces existing bridges to current design standards.

Approximately 42 percent, or approximately \$548 million of RTP 2050's total FFY 2020-2029 programmed investments goes towards Local System Support. While this broad category covers a wide span of projects that are funded via County or Local Aid, some of these projects are for the rehabilitation of local bridges. It should be noted, however, that SJTPO has very limited jurisdiction or control over bridge funds.

Performance within the SJTPO Region

As is evidenced by [Figure 60](#), below, most bridges within the SJTPO region are in fair condition. As a percentage of the total number of bridges, bridges in poor condition constitute the lowest proportion.

Figure 60 – SJTPO Bridge Conditions, CY 2015-2018



Source: NJDOT.

While SJTPO has almost no jurisdiction or control over Bridge Assets, it will continue to bring awareness to the high number of bridge projects that are deemed “critical needs,” as well as assist subregions with pursuing federal funding for bridge improvement projects, be it in the form of identifying grant opportunities, providing technical assistance, or using its unique position in the project development process to ensure collaboration in any project of regional significance.

In addition to RTP 2050, in 2019, NJDOT completed a Transportation Asset Management Plan, which goes into much more detail on the conditions of pavements and bridges, and the policies and procedures for operating, maintaining, and improving these assets.

A full copy of NJDOT's TAMP can be found at:

www.state.nj.us/transportation/about/asset/pdf/NJ_2019_TAMP_FHWA.pdf.



System Performance/Freight/CMAQ Performance Measures and Targets Overview (PM3)

In January 2017, USDOT published the System Performance/Freight/CMAQ Performance Measures Final Rule to establish measures to assess passenger and freight performance on the Interstate and non-Interstate National Highway System (NHS), and traffic congestion and on-road mobile source emissions in areas that do not meet federal National Ambient Air Quality Standards (NAAQS). The rule, which is referred to as the PM3 rule, requires MPOs to set targets for six performance measures, collectively referred to as PM3 measures.

National Highway Performance Program (NHPP)

The first two measures described below are designed to measure performance on the highway system and are oriented towards the National Highway Performance Program (NHPP). While there are many ways to measure the performance of a highway system, the federal government felt that travel time reliability (TTR) was a more realistic measure of system performance than some other commonly used measures, such as congestion. Reliability is the consistency or dependability in travel times, as measured from day-to-day and/or across different times of the day.⁹⁷

They are as follows:

1. *Percent of person-miles on the Interstate system that are reliable, also referred to as Level of Travel Time Reliability (LOTTR) and*
2. *Percent of person-miles on the non-Interstate NHS that are reliable (LOTTR).*

LOTTR is defined as the ratio of longer travel times (80th percentile) to a normal travel time (50th percentile) over all applicable roads during four time periods (AM peak, Mid-day, PM peak, and weekends) that cover the hours of 6:00 AM to 8:00 PM each day. The LOTTR ratio is calculated for each roadway segment, essentially comparing the segment with itself. Segments with $\text{LOTTR} \geq 1.50$ during any of the above time periods are considered unreliable. The two LOTTR measures are expressed as the percent of person-miles traveled on the Interstate or non-Interstate NHS system that are reliable. Person-miles take into account the number of people traveling in buses, cars, and trucks over these roadway segments. To obtain person miles traveled, the vehicle miles traveled (VMT) for each segment are multiplied by the average vehicle occupancy for each type of vehicle on the roadway. To calculate the percent of person miles traveled that are reliable, the sum of the number of reliable person miles traveled is divided by the sum of total person miles traveled.

The data used to calculate the above measures as well as the additional PM3 measures, below, are provided by FHWA via the National Performance Management Research Data Set (NPMRDS). This dataset contains travel times, segment lengths, and Annual Average Daily Travel (AADT) for Interstate and non-Interstate NHS roads. The NPMRDS data is packaged in

⁹⁷ At: https://ops.fhwa.dot.gov/publications/tt_reliability/TTR_Report.htm. Accessed 3 January 2020.

the Probe Data Analytics (PDA) Suite, a user-friendly transportation information portal produced by the University of Maryland's Center for Advanced Transportation Technology (UMD CATT Lab) that allows users, such as SJTPO, the ability to easily compute many of these PM3 performance measures.

As with all the previous federally required performance measures cited above, SJTPO could adopt its own or support the targets set by the state. SJTPO chose to support the statewide targets. However, as a member of NJDOT's Complete Team, a group consisting of all the NJ MPOs, as well as multiple units of NJDOT and NJ TRANSIT, as well as a few others, development of these targets was very much a collaborative effort. The statewide LOTTR targets are depicted in [Table 46](#), below.

Table 46 – New Jersey's Statewide Level of Travel Time Reliability (LOTTR) Baseline and Targets

Measure	Estimated Current Conditions (2017)	Reported Baseline (2017)	Two-Year Target (2019)	Four-Year Target (2021)
Percent PMT on Interstate NHS with reliable travel times		82.1%	82.0%	82.0%
Percent PMT on non-Interstate NHS with reliable travel times	84.1%		*	84.1%

*Two-year target for non-Interstate NHS is not required for the first performance period.

The SJTPO Policy Board formally adopted its resolution supporting the state's LOTTR targets on September 24, 2018. The two-year and four-year targets represent system performance at the end of calendar years 2019, and 2021, respectively. Long-term policies for NJDOT and its partner agencies support improvements to reliability. Given traffic growth and near-term projects and programs, the consensus for the overall Level of Travel Time Reliability was to have the required targets represent a maintenance of current values for each travel time reliability measure, as shown in [Table 46](#), above.

Progress Towards Meeting LOTTR Targets

At the September 10, 2020, meeting, the NJDOT Complete Team discussed progress towards meeting the LOTTR two- and four-year targets. In 2019, more than 80.6 percent of the total Interstate System met the Federal reliability threshold of less than 1.50, which was below the two-year target of 82.0 percent. On the other hand, 86.2 percent of the non-Interstate NHS system was reliable, exceeding the four-year target of 84.1 percent. Per [Table 46](#), above, two-year targets for the non-Interstate NHS system were not required.

However, as seen in [Table 47](#), below, in 2019, 80.6 percent of the total Interstate System met the Federal reliability threshold of 1.50, which was below the two-year target of 82.0 percent. On the other hand, 86.2 percent of the non-interstate NHS system was reliable, exceeding the four-year target of 84.1 percent. (Per [Table 46](#), above, two-year targets for the non-Interstate NHS system were not required.) Despite not meeting the reliability target for the Interstate system, members of NJDOT's Complete Team decided to keep the two- and four-year LOTTR targets the same. The Travel Time Reliability



targets were set using National Performance Research Dataset (NPMRDS), a FHWA funded dataset of average travel times that have been made available to State DOTs and MPOs to help in the setting and monitoring of system performance targets. While NJDOT and its partners used the latest available data as well as professional judgment to set the most realistic targets possible, it was noted that the two-year target was based on the NPMRDS' short history of data availability, and improvements continue to be made. Until a reliable NPMRDS dataset is available for the next four to six years, it may not be possible to predict and achieve reliable future targets beyond 2022.

Table 47 – LOTTR Two-Year Performance Review

Measure	Reported Baseline (2017)	Two-year condition/performance (2019)	Two-Year Targets (2019)	Four-year target (2021)
Percent PMT on Interstate NHS with reliable travel times	82.1%	80.6%	82.0%	82.0%
Percent PMT on non-Interstate NHS with reliable travel times		86.2%		84.1%

About 1.7 percent, or approximately \$22 million, is programmed for congestion relief projects in RTP 2050 for FFY 2020-FFY 2029. By improving the flow of people and goods along transportation corridors, these projects help to improve system reliability. In addition, SJTPO has direct discretion over the allocation of local CMAQ funds, which are approximately \$1.9 million per year. This equates to \$38 million between FFY 2030 and FFY 2050.

National Highway Freight Program (NHFP)

The system performance measures described above encompasses all vehicular traffic. The following measure, the Truck Travel Time Reliability (TTTR), is focused on truck traffic. Of each of the federally required performance measures, it is the only one that is focused on freight and is the performance measure for the National Highway Freight Program (NHFP), although freight consists of much more than truck traffic. TTTR is defined as the ratio of longer truck travel times (95th percentile) to a normal travel time (50th percentile) over the Interstate during five time periods (AM peak, Mid-day, PM peak, weekend, and overnight). TTTR is quantified by taking a weighted average of the maximum TTTR from the five time periods for each Interstate segment. The maximum TTTR is weighted by segment length, then the sum of the weighted values is divided by the total Interstate length to calculate the Travel Time Reliability Index.

Unlike the travel time reliability measures, there is no threshold that determines whether a segment is reliable or unreliable for trucks, although a TTTR index of 1.00 is more reliable than a TTTR index of 1.50. As with all the previous federally required performance measures, SJTPO could adopt its own targets or support the targets set by the state. SJTPO chose to support the statewide targets. These are depicted in [Table 48](#), below.

Table 48 – New Jersey’s Statewide Truck Travel Time Reliability (TTTR) Baseline and Targets

Measure	Baseline (2017)	Two-Year Target (2019)	Four-Year Target (2021)
Truck Travel Time Reliability (TTTR) Index	1.82	1.90	1.95

The SJTPO Policy Board formally adopted its resolution supporting the state’s TTTR targets on September 24, 2018. As with the LOTTR targets, the TTTR targets represent system performance at the end of calendar years 2019 and 2021, respectfully. For TTTR measure, the identified targets represent a slight worsening value in both the two-year and four-year targets, considering the anticipated increase in traffic, both overall and trucks specifically, and near-term projects and programs. See [Chapter IV.4](#) for a more detailed discussion of SJTPO’s strategies, programs and projects related to goods movement and freight. Further, [New Jersey’s Statewide Freight Plan](#) presents a comprehensive overview of the conditions of the freight system, as well as project needs, and potential funding sources.

Progress Towards Meeting Truck Travel Time Reliability (TTTR) Targets

Similar to the LOTTR metric described above, NJDOT reviewed the progress in the Truck Travel Time Reliability (TTTR) Index over the past several years. Using the University of Maryland’s PDA Suite, the same tool used by NJDOT and stakeholders to compute many of the federally required performance measures, There is a very slight increase in the TTTR Index from the initial baseline of 1.82 in 2017 to approximately 1.89 in 2019. As the TTTR Index is still below both the two-year target of 1.90, and the four-year target of 1.95, it was the consensus of the NJDOT Complete Team that even though the trend is showing a slight increase in the TTTR, it is almost too short a period to establish a true trend. As such, the NJDOT Complete Team agreed to keep the existing two- and four-year TTTR Index targets the same.

As stated above, SJTPO has direct discretion over the allocation of local CMAQ funds, which are approximately \$1.9 million per year, and equate to \$57 million between FFY 2020 and FFY 2050. While the specific projects that are actually funded through CMAQ are based on the results of a competitive application process, freight and intermodal is an eligible category for CMAQ funds. Approximately 42 percent, or approximately \$548 million of RTP 2050’s programmed investments from FFY 2020-2029 goes towards Local System Support. While this broad category covers a wide span of projects that are funded via County or Local Aid, some of these projects are aimed to spur economic development, which indirectly, can help to improve truck travel time reliability. In addition, approximately \$9.7 million of RTP 2050’s programmed investments from FFY 2020-2029 goes toward multimodal programs, which can also help to improve goods movement.

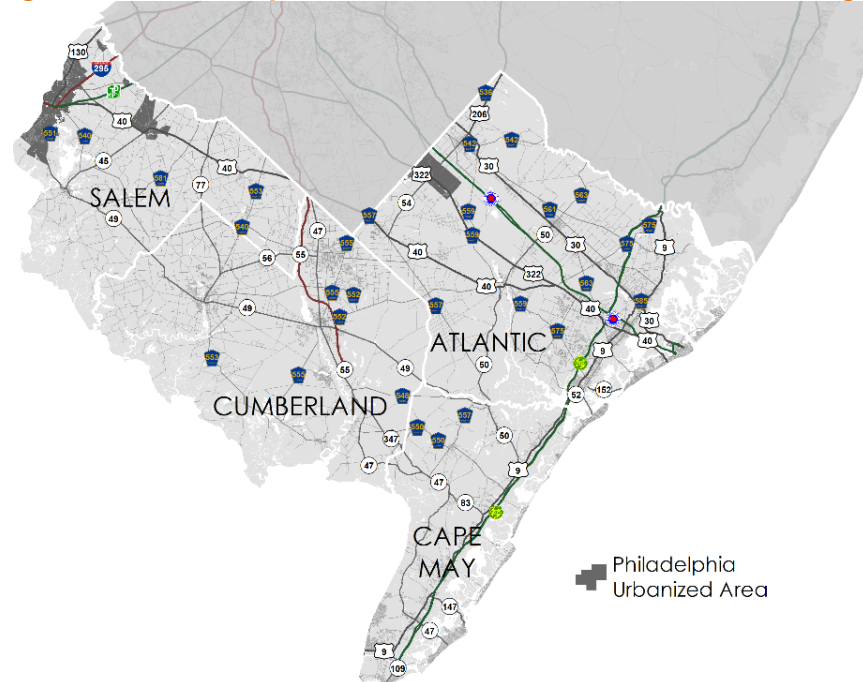
CMAQ Congestion Measures

The third set of performance measures and targets under PM3 are specifically designed to measure the performance of the CMAQ Program. The first set of measures address congestion. Both measures apply to Urbanized Areas with a population

SJTPO has discretion over the allocation of local CMAQ funds, which are approximately \$1.9 million per year, and equate to \$57 million between FFY 2020 and FFY 2050.

over 1 million. As depicted by [Figure 61](#), below, as a small portion of the SJTPO region, specifically western Salem County, including parts of Salem City, Pennsville, and Carney's Point, and western Atlantic County, in and around Collings Lakes, falls within the Philadelphia, PA-NJ-DE-MD Urbanized Area with a population of approximately 5.4 million, SJTPO is subject to these requirements.

Figure 61 – Philadelphia Urbanized Area within the SJTPO Region



The required CMAQ congestion performance measures include:

- **Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita**

The Peak Hour Excessive Delay (PHED) measure indicates the extra time spent traveling due to extreme congestion, expressed as the number of hours per year on a per capita basis. This measure was computed only for NHS lane-miles. The threshold for excessive delay was based on the travel time at 20 miles per hour or 60 percent of the posted speed limit travel time, whichever was greater. The peak travel hours are defined as 6:00 A.M. to 10:00 AM on weekday mornings, 3:00 PM to 7:00 PM on weekday afternoons. The total excessive delay metric was also weighted by vehicle volumes and occupancy. As with many of the other system performance measures, SJTPO was able to utilize the University of Maryland CATT Lab's PDA Suite (as cited above), which developed a specialized

widget to compute and report these measures. For this measure, only a four-year target was required, and it is depicted below.

- **Percent of Non-Single Occupancy Vehicle (non-SOV) travel**

Given the role that single-occupant vehicles play in contributing to traffic congestion and pollutant emissions, the federal government and numerous partner agencies are continuously striving to increase non-single-occupant modes, including public transit, ridesharing, walking, and biking. The baseline data and targets were based on the US Census' American Community Survey (ACS) (2012-2016) five-year estimates for journey to work, as well as professional judgments of planners within the urbanized area. While all trips, not just journey-to-work, would be ideal to track, this regularly updated, and approved dataset was recognized as the best available.

SJTPO was involved in the establishment of these targets. In establishing these targets, SJTPO worked closely with DVRPC, NJDOT, the Pennsylvania Department of Transportation (PennDOT), Wilmington Area Planning Council (WILMAPCO), the Lehigh Valley Planning Commission, the Berks County MPO, the Lancaster County MPO, and the Maryland State Highway Administration. Unlike the previous performance measures described the states and MPOs that make up these urbanized areas must agree upon a single, unified target. There was no option for an MPO to choose a different target than the state. The specific metrics and targets that the members of the Philadelphia Urbanized Area agreed upon were as follows:

- Peak Hour Excessive Delay (PHED) Per Capita
 - Baseline Measure (2017): 16.8 hours/capita
 - Four-year target (2021): 17.2 hours/capita (Assuming a growth of rate of +0.6 percent/year)
- Non-SOV Travel
 - Baseline (Based on 2012-2016 American Community Survey (ACS)): 27.9 percent
 - Two-year target (2016-2018): 28.0 percent
 - Four-year target (2016-2020): 28.1 percent

For the non-SOV travel measure, to compute the baseline, values from the five-year ACS 2012-2016 were used. The two-year target covers the 2016 to 2018 time period, and the four-year target covers the 2016 to 2020 time period. A linear trend was used to establish the two- and four-year targets.

The SJTPO Policy Board approved these targets at their May 21, 2018, meeting.

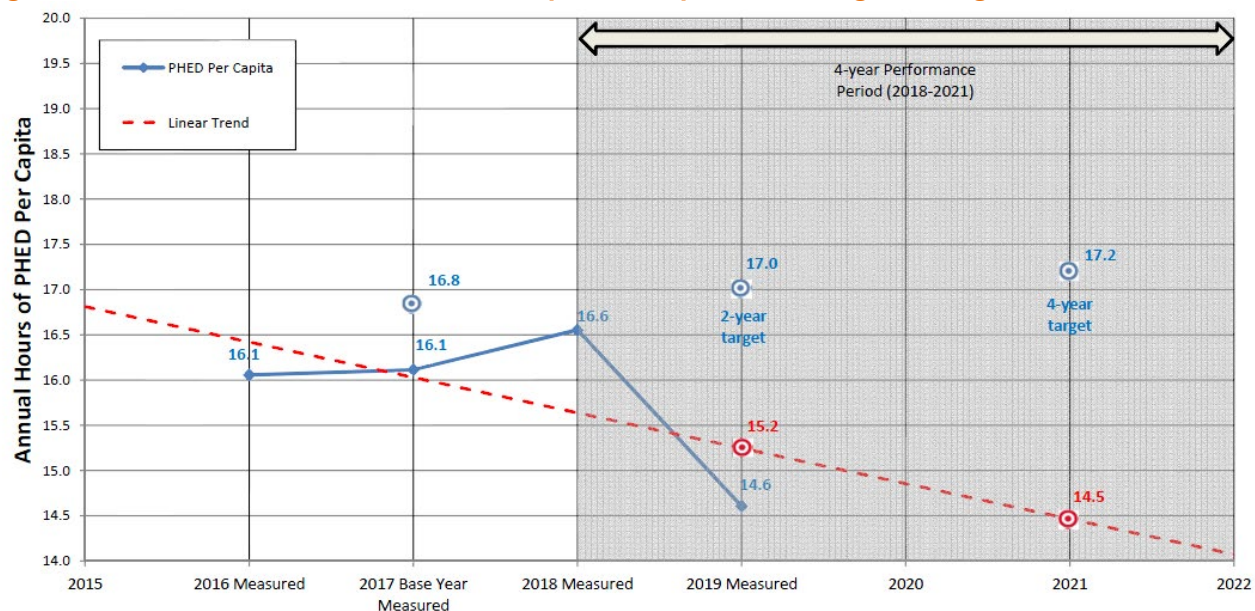
Progress Towards Meeting Targets

On June 11, 2020, the Philadelphia, PA-NJ-MD-DE Urbanized Area Committee convened to discuss progress towards meeting the current two- and four-year targets for each of the CMAQ Congestion Measures. The PHED Per Capita measure was updated using the latest existing measured PHED data calculated from the RITIS PDA Software. Comparing the measured data against the two-and four-year established targets, another trend line was created. As seen in [Figure 62](#), below,



extending this trend line out to 2021 resulted in lower PHED per capita target of 14.5, lower than the currently adopted four-year target of 17.2. While this is certainly a positive, the Committee discussed other confounding factors, such as the fact that there have been updates to the measured data, calculations, and NPMRDS road coverage that may have contributed to the decrease in Annual PHED Per Capita. The Committee discussed the impacts of the pandemic as a likely cause of reduced traffic volumes, and lower PHED. It was concluded that given these differences in data measurements as well as COVID-19 uncertainties, the existing two- and four-year targets for PHED per capita would remain the same.

Figure 62 – Annual Hours of PHED Per Capita Compared to Original Targets



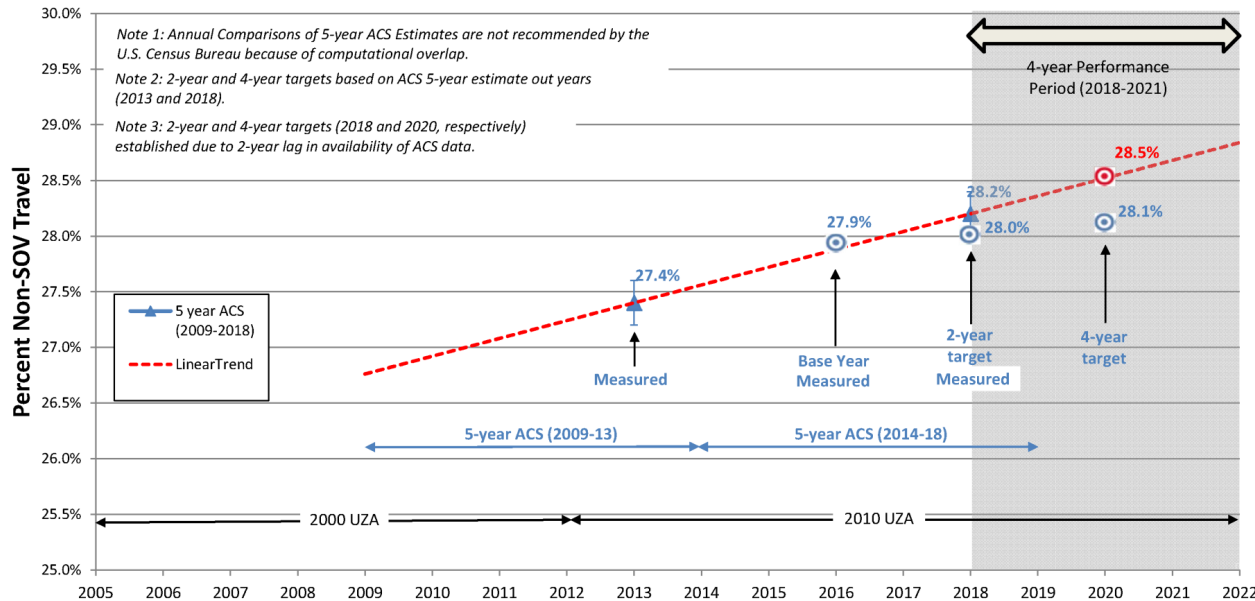
Source: RITIS, NPMRDS v2; U.S Census ACS 5-year estimates

Source: DVRPC. PM3 Measures Coordination Committee Meeting. June 11, 2020. Slide 22.

As seen in [Figure 63](#), below, to assess the progress towards attaining the Percent Non-SOV Travel targets, existing measured data from the 2009-2013 five-year ACS, and the 2014-2018 five-year ACS was trended out and compared to the existing two- and four-year targets. Establishing a linear trend using these updated ACS datasets resulted in a 2020 target of 28.5 percent, slightly higher than the adopted four-year target of 28.1 percent. As with the PHED Per Capita Measure, the Philadelphia, PA-NJ-MD-DE Urbanized Area Committee members discussed the impacts of the COVID-19 pandemic on travel trends. Most members concluded that there may be a shift from transit to automobiles due to commuters trying to reduce their chance of being exposed to the virus. This would, obviously, decrease the percent of non-SOV travel. Alternatively, some commuters may elect to work from home, which would increase the percent non-SOV. Given the

uncertainties of the pandemic on travel behavior, and the fact that the slightly revised target is not significantly different from the new linear trend target of 28.5 percent, it was decided that no adjustments be made to the Non-SOV four-year target.

Figure 63 – Percent Non-SOV Travel Trend Compared to Original Targets



Source: U.S. Census ACS

Source: DVRPC. PM3 Measures Coordination Committee Meeting. June 11, 2020. Slide 15.

As stated above, SJTPO has direct discretion over the allocation of local CMAQ funds, which equates to approximately \$1.9 million per year for projects that mitigate congestion or improve air quality. This equates to \$57 million between FFY 2020 and FFY 2050. On top of that, a little more than \$22 million is programmed for FFY 2020 through FFY 2029 in RTP 2050 for congestion relief projects. Moving forward, congestion mitigation is also a major criterion in SJTPO's new Project Evaluation Process, described in [Chapter V](#). As with traffic congestion described above, on-road mobile source emissions reductions is a new criterion in SJTPO's recently adopted Project Evaluation and Scoring process.

Non-Federally Mandated Performance Measures

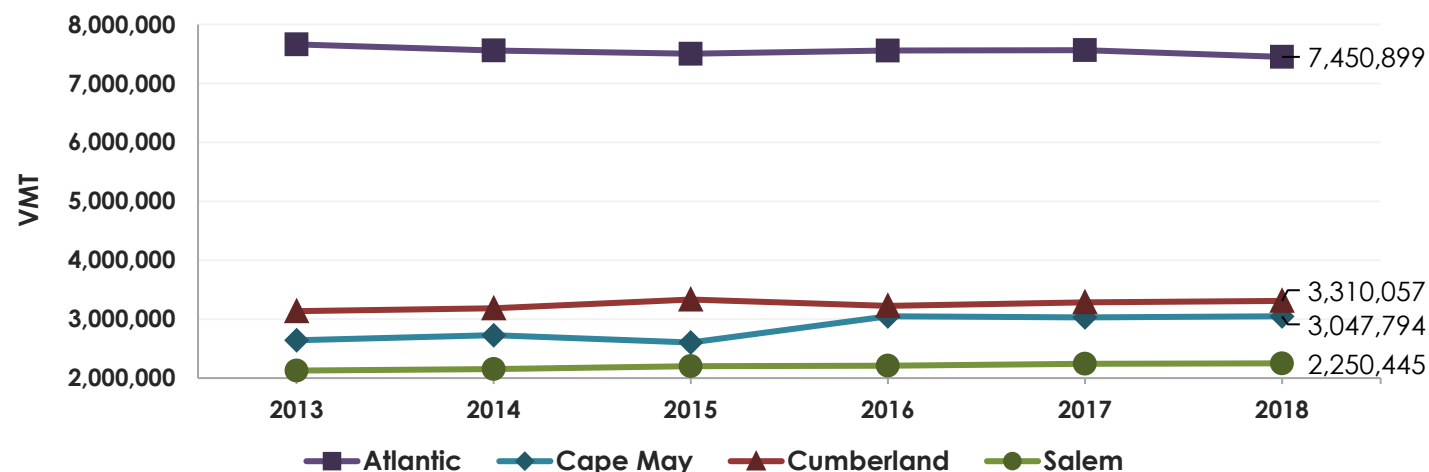
In addition to the federally mandated strategies, SJTPO has developed some of its own performance measures pertaining to traffic congestion. Annual VMT by county is a straightforward performance measure. Based on

Congestion mitigation is a major criterion in SJTPO's new Project Evaluation Process.



[Figure 64](#), below, it appears that overall VMT within the region has increased very slightly since 2013, by approximately 0.50 percent a year. This is sensible, as the economy within the SJTPO region, while recovering somewhat from the downturn it experienced in 2014 when four casinos closed, is still heavily oriented towards the casino industry. While the casino industry is coming back, with the opening of two new casinos in 2018, it still suffers from competition in surrounding areas.

Figure 64 – Annual VMT by County, FY 2013 to FY 2018



Source: NJDOT. Highway Performance Monitoring System.

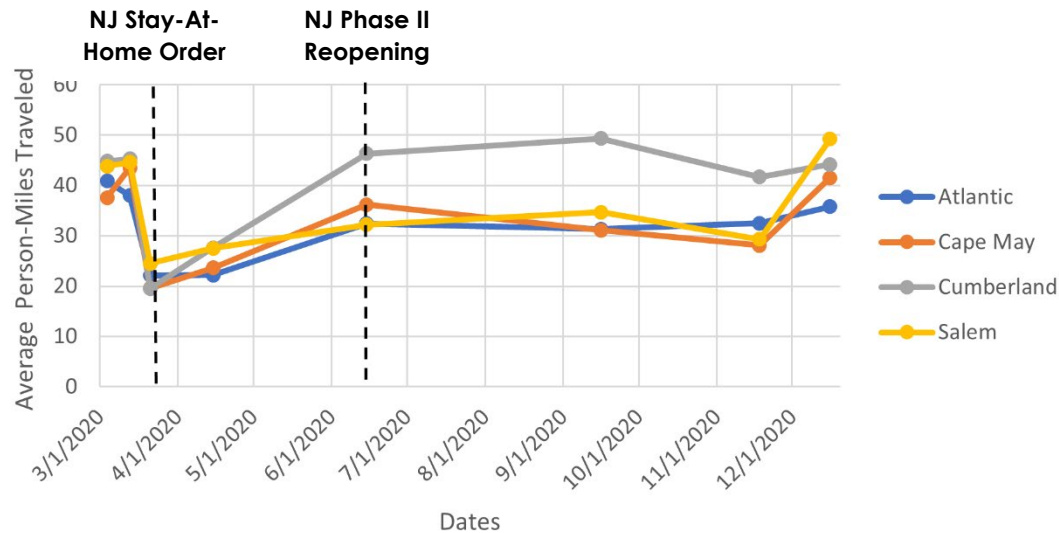
“Mitigate Traffic Congestion” is one of RTP 2050’s goals, and in the phase one of 2050 RTP outreach, this goal was ranked as the second-most important goal to address, behind only the improvement of accessibility and mobility. For a full range of all the policies, programs, and strategies to mitigate traffic congestion, see [Chapter IV.2](#).

COVID-19 Impacts

The COVID-19 pandemic has had a significant impact on travel behavior throughout the SJTPO region as well as the country. As seen in [Figure 65](#), below, immediately after New Jersey Governor Phil Murphy issued the Statewide Stay-at-Home Order on March 21, 2020, there was a significant drop in person-miles traveled across all modes within the SJTPO region. Since that time, as people have learned more about COVID-19 and adopted protective measures, such as social distancing and wearing masks, travel has started to pick up. On June 15, 2020, the Governor issued Phase II of the Reopening Plan for the State of New Jersey. This has allowed moderate-risk activities to resume, such as libraries to reopen for curbside

pickup, outdoor dining, and some nonessential retail businesses to open.⁹⁸ Since Phase II of the Reopening Plan was issued, people have gradually resumed travel activities, practically at pre-COVID-19 levels. It should be noted, however, that Phase II is not the final phase of the Re-opening Plan, and at the time of this writing, the region, the state, and the rest of the country are still in the midst of this epic scourge, with approximately 63.8 cases per every 100,000 people, and thousands of people dying every day⁹⁹. If and when the pandemic will be officially declared “over” is still unknown at this point.

Figure 65 – Average Person-Miles Traveled (All Mode), SJTPO Region



Source: Maryland Transportation Institute (2020). University of Maryland COVID-19 Impact Analysis Platform, <https://data.covid.umd.edu>, accessed on December 24, 2020, University of Maryland, College Park, USA.

CMAQ Emissions Reduction Measures

In addition to the CMAQ congestion measures and targets, there is another required CMAQ performance measure and target focused on the emissions aspects of the program. FHWA regulations state that MPOs that contain nonattainment or maintenance areas that overlap an urbanized area with a population above 1 million people, must establish quantitative two-year and four-year targets for emissions reductions. As described in [Chapter IV.9](#), the entire SJTPO region has been designated by the U.S. EPA as a nonattainment area for ozone, and since a small portion of the SJTPO region overlaps the

⁹⁸ See: <https://covid19.nj.gov/faqs/nj-information/reopening-guidance-and-restrictions/when-and-how-is-new-jersey-lifting-restrictions-what-does-a-responsible-and-strategic-restart-of-new-jerseys-economy-look-like#direct-link> for a full listing of allowable activities under Phase II of the Governor’s Reopening Plan.

⁹⁹ At: https://covid.cdc.gov/covid-data-tracker/#cases_deathsper100klast7days. Accessed December 24, 2020.



Philadelphia, PA-NJ-DE-MD Urbanized Area, SJTPO is required to set targets for pollutant emissions reductions, specifically the ozone precursors of NO_x and VOCs from CMAQ projects. Since ozone is the only criteria pollutant for which the SJTPO region is in nonattainment, SJTPO is not required to submit emissions reductions for any of the other criteria pollutants.

The New Jersey Air Quality Working Group, consisting of subject matter experts from NJDOT, NJDEP, SJTPO, and the other two NJ MPOs, worked to identify and agree upon MPO-level baselines and targets for the emissions reductions from CMAQ projects. The required emissions reduction targets identify the amount of pollutant emissions (in kilograms per day, or kg/day) estimated to be reduced by CMAQ-funded projects within the corresponding nonattainment or maintenance area(s), summed over the applicable fiscal years. The two-year target represents the emissions reductions from CMAQ projects that were to be first authorized within FY 2018 and FY 2019, while the four-year target represents the emissions reductions from CMAQ projects that were to be first authorized within FYs 2018, 2019, 2020, and 2021. SJTPO's two- and four-year CMAQ Emissions Reduction targets are listed in [Table 49](#), below. Note that these emissions targets include not just the emissions benefits expected to accrue from projects funded through SJTPO's local CMAQ program, but they also assume receipt of a portion of the benefits expected from Statewide CMAQ projects. For a complete list of each of the specific CMAQ projects that constitute SJTPO's two- and four-year targets, see [Appendix G](#).

Table 49 – CMAQ Emissions Performance Measures – SJTPO Forecasts and Targets*

Fiscal Year (FY)	Total Emissions Benefits Projections (kg/day)	
	VOC	NO _x
Baseline (FY 2014-17)	9.466	22.446
2018	2.207	5.226
2019**		
2020	2.007	4.642
2021	1.929	4.377
Sum '18-'19 (Two-Year Target)	2.207	5.226
Sum '18-'21 (Four-Year Target)	6.142	14.245

* No CO or PM_{2.5} as SJTPO meets the NAAQS for these pollutants.

** Although SJTPO did not program any CMAQ funds for 2019, emissions benefits from Statewide CMAQ projects were still assumed.

The three MPO-level baselines and targets covering the state were added together to create the statewide baseline and targets. These were eventually submitted to FHWA as part of NJDOT's Baseline Performance Period Report in 2018. By October 1, 2020, NJDOT must submit to FHWA a Mid-Period Performance Report, at which time, the state and SJTPO have the option of changing their targets, if they so choose.

CMAQ Performance Plan

In addition to establishing Performance Measures and Targets, SJTPO had to prepare a CMAQ Performance Plan. The CMAQ Performance Plan describes in more detail both the CMAQ Congestion and Mobile Source Emissions Reduction Measures, the baseline conditions and how the future targets were computed. The CMAQ Performance Plan also includes past and future CMAQ-funded projects that will help SJTPO meet its CMAQ Performance targets. A copy of SJTPO's CMAQ Performance Plan was included in NJDOT's Baseline Performance Period Report that was submitted in 2018. It is included as [Appendix G](#).

Progress towards meeting CMAQ Performance Targets

SJTPO submitted an updated CMAQ Performance Plan as part of the NJDOT Mid-Performance Period Progress Report. As stated in the report, the SJTPO region exceeded the two- and four-year targets listed in [Table 49](#), above, for On-Road Mobile Source Emissions, even though there were no SJTPO programmed CMAQ projects that were reported in the CMAQ Public Access System between fiscal years 2018 and 2019. SJTPO was able to exceed its goals because of the benefits accrued from statewide projects sponsored by NJDOT and NJ TRANSIT, which were distributed to the MPOs throughout the state. The emissions benefits from the statewide projects can be seen in [Table 50](#), below. In two years, the VOC emissions benefits of 8.38 kg/day have exceeded the two-year goal of 2.21 kg/day by 6.17 kg/day and the four-year goal of 6.14 kg/day by 2.24 kg/day. The NOx emissions benefits of 79.51 kg/day have exceeded the two-year goal of 5.23 kg/day by 74.28 kg/day, and the four-year goal of 14.245 kg/day by 65.26 kg/day.

Table 50 – Comparison of CMAQ Emissions Reductions Targets to Reported Values

FFY Year	Total Emissions Benefits Projections (kg/day)							
	VOC		CO*		NOx		PM2.5*	
	Target	Reported	Target	Reported	Target	Reported	Target	Reported
2018	2.21	8.14	-	-	5.23	79.03	-	-
2019	0.00	0.24	-	-	0.00	0.48	-	-
Sum '18-'19	2.21	8.38	-	-	5.23	79.51	-	-
Sum '18-'21	6.14		-		14.25		-	

*No CO or PM2.5 as SJTPO meets the NAAQS for these pollutants

Source: SJTPO CMAQ Mid-Performance Period Plan. September 2020.

In coordination with the Philadelphia PA-NJ-DE-MD Urbanized Area Transportation PM3 Measures Coordination Committee, NJDOT, and the Complete Team, it was decided not to adjust the four-year targets for Mobile Source Emissions. This was partially due to the fact that the goals had been met and the uncertainties associated with how COVID-19 will impact the region in terms of commuter behaviors over the remaining reporting period.



SJTPO has programmed a number of CMAQ projects between FY 2018 and FY 2021 (the first performance period), which will help to further improve performance under the CMAQ Emissions Measure. These projects are listed in SJTPO’s CMAQ Mid-Period Performance Report, included as part of [Appendix G](#). As stated above, SJTPO has direct discretion of the CMAQ Program and allocates approximately \$1.9 million per year for projects that mitigate congestion or improve air quality. This translates to \$57 million from FFY 2020 through FFY 2050. On top of that, a little more than \$22 million is programmed for FFY 2020 through FFY 2029 in RTP 2050 for congestion relief projects, which often have significant emissions benefits.

Transit Asset Management Measures

On July 26, 2016, FTA published the final Transit Asset Management rule. This rule applies to all recipients and subrecipients of federal transit funding that own, operate, or manage public transportation capital assets. The rule defines the term “state of good repair,” requires that public transportation providers develop and implement transit asset management (TAM) plans and establishes state of good repair standards and performance measures for four asset categories: transit equipment, rolling stock, transit infrastructure, and facilities. The rule became effective on October 1, 2018.

[Table 51](#), below, identifies performance measures outlined in the final rule for transit asset management.

Table 51 – FTA TAM Performance Measures

Asset Category	Performance Measure and Asset Class
1. Rolling Stock	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark
2. Equipment	Percentage of non-revenue, support-service and maintenance and vehicles that have met or exceeded their useful life benchmark
3. Facilities	Percentage of facilities within an asset class rated below condition 3 on the TERM* Scale
4. Infrastructure	Percentage of track segments with performance restrictions

*TERM = Transit Economic Requirements Model. TERM is a tool developed by FTA to assess the current physical condition and future investment needs of the nation’s transit assets/operators.

See www.transit.dot.gov/sites/fta.dot.gov/files/TERM_Lite_Overview.pdf for more information about TERM.

For equipment and rolling stock classes, useful life benchmark (ULB) is defined as the expected lifecycle of a capital asset, or the acceptable period of use in service for a transit provider’s operating environment. ULB considers a provider’s unique operating environment, such as geography and service frequency and is not the same as an asset’s useful life.

Public transportation agencies are required to establish and report transit asset management targets annually for the following fiscal year. The fiscal years for these targets are the state fiscal year, which starts July 1 and goes through June 30. The fiscal year at the time of this report was FY 2020, which began June 1, 2019, and extends through June 30, 2020. Each public transit provider or its sponsors must share its targets, TAM, and asset condition information with each MPO in

which the transit provider's projects and services are programmed in the MPO's TIP. The TAM rule defines two tiers of public transportation providers based on size parameters. Tier I providers are those that operate rail service or more than 100 vehicles in all fixed route modes, or more than 100 vehicles or more in one non-fixed route mode. Tier II providers are those that have 100 or less vehicles across all fixed route modes or have 100 vehicles or less in one non-fixed route mode, (i.e., deviated fixed route, demand-responsive). NJ TRANSIT is the only Tier I provider in the SJTPO region. Tier II providers must establish their own targets or participate in a group plan with other Tier II providers and establish their own targets. This Tier II plan is also prepared by NJ TRANSIT, but is not included in this report.

[Table 52-Table 56](#), depict the TAM targets established by NJ TRANSIT. For purposes of comparison, both last year's targets (FY 2019), and this year's targets (FY 2020), are listed.

Table 52 – NJ TRANSIT Rolling Stock – Percent of Revenue Vehicles that Met or Exceeded their ULB

Performance Measure	FY 2019 Target (%)	FY 2020 Target (%)	Change: FY 2019-FY 2020 (%)
Articulated Bus	100.00	20.00	-80.00
Automobile	28.89	0.00	-100.00
Over-the-road Bus	26.80	46.40	73.13
Bus	44.83	0.00	-100.0
Cutaway	13.19	1.50	-88.63
Light Rail Vehicle	0.00	0.0	0
Minivan	4.35	4.35	0
Commuter Rail Locomotive	11.70	6.37	-45.56
Commuter Rail Passenger Coach	16.97	17.94	5.72
Commuter Rail Self-Propelled Passenger Car	100.00	100.00	0
Van	1.53	1.53	0

Table 53 – NJ TRANSIT Equipment – Percent of Service Vehicles that Met or Exceeded their ULB

Performance Measure	FY 2019 Target (%)	FY 2020 Target (%)	Change: FY 2019-FY 2020 (%)
Automobile	39.00	52.76	35.28
Trucks and Other Rubber Tire Vehicles	47.00	50.63	7.72
Steel Wheel Vehicles	25.00	24.10	-3.60


Table 54 – NJ TRANSIT Facility – Percent of Facilities Rated Below 3 on the Condition Scale¹⁰⁰

Performance Measure	FY 2019 Target (%)	FY 2020 Target (%)	Change: FY 2019-FY 2020 (%)
Passenger/Parking Facilities	0.00	0.00	0.00
Administrative/Maintenance Facilities	0.00	0.00	0.00

Table 55 – NJ TRANSIT Infrastructure – Percent of Track Segments with Performance Restrictions¹⁰¹

Performance Measure	FY 2019 Target (%)	FY 2020 Target (%)	Change: FY 2019-FY 2020 (%)
Commuter Rail	0.75	1.00	33.33

When establishing transit asset management targets, the MPO can either agree to program projects that will support the transit provider targets or establish its own separate regional transit asset management targets for the MPO planning area. As has been the case with all the previous federally required performance measures and targets described above, SJTPO is supporting the transit provider's target. The SJTPO Policy Board voted to support the 2020 targets at its January 17, 2020 meeting.

Progress towards meeting Transit Asset Management Performance Targets

With respect to rolling stock, the purchase of new buses has allowed NJ TRANSIT to lower its ULB targets for some of its vehicle types, suggesting that less of its rolling stock will be exceeding its service life. With regards to equipment, the targets for the percent of vehicles that have exceeded their service lives is slightly higher in 2020 than in 2019. NJ TRANSIT is expecting newer vehicles to arrive, and although some have, many of them will not be arriving until later in FY 2020. With regards to the facilities, NJ TRANSIT has not changed its target of 0 percent of facilities in a marginal or poor condition (TERM rating below a 3.0), although the inspection of all of its facilities, including those in the Southern Division will not be complete until later in FY 2020. Lastly, with regards to the infrastructure, the target has pretty much remained the same.

¹⁰⁰ NJ TRANSIT takes a geographic approach (north, central, and south regions) to condition all facilities over a three-year period: North in FY 2018, Central in FY 2019, and South in FY 2020. The facilities' assessment for NJ Transit's Southern Division, (which covers the SJTPO region), are expected to be reported by October 31, 2020.

¹⁰¹ While this performance measure covers other types of rail services including Light Rail and Hybrid Rail, as the SJTPO region contains only one rail service, the Atlantic City Rail line, which is classified as a Commuter Rail service, only the Commuter Rail target is listed herein.

In summary, although many of the targets have remained the same between 2019 and 2020, NJ TRANSIT is making progress with regards to its rolling stock, which has resulted in lower targets for some of its vehicle types, and has set realistic, attainable targets for the agency.

Comprising more than 28 percent of the total project mix, RTP 2050 has almost \$368 million programmed in mass transit assets from FFY 2020-2029. These include light rail, rail and bus physical assets required to bring the transit system to a state of good repair.

Transit Safety Performance

FTA published a final Public Transportation Agency Safety Plan (PTASP) rule and related performance measures as authorized by Section 20021 of MAP-21. The PTASP rule requires operators of public transportation systems that receive federal financial assistance under 49 U.S.C. Chapter 53 to develop and implement a PTASP based on a safety management systems approach. Development and implementation of PTASPs is anticipated to help ensure that public transportation systems are safe nationwide.

As a rail operator as well as an operator of large bus systems – more than 100 vehicles in peak revenue service – NJ TRANSIT must draft and implement its own PTASP. For small operators, defined as those operating 100 or fewer vehicles in peak revenue service, subject to the rule, states must draft and certify PTASPs on their behalf, unless a small provider opts to draft and certify its own safety plan and notifies the state that it will do so.

The required transit safety performance measures are listed below:

Table 56 – Transit Safety Performance Measures

Category	Measure
Fatalities	Total number of reportable fatalities by mode Rate of reportable fatalities per total vehicle revenue miles (TVRM) by mode
Injuries	Total number of reportable injuries by mode Rate of reportable injuries per TVRM by mode
Safety Events ¹⁰²	Total number of reportable safety events by mode Rate of reportable safety events per TVRM by mode
System Reliability ¹⁰³	Mean distance between major mechanical failures by mode

¹⁰² **Safety Events** are defined as the total number of National Transit Database (NTD) reported events and rate that occur during transit operations and the performance of regular supervisory or maintenance activities. Safety events include all NTD reportable collisions, and major smoke conditions and/or fires during revenue service requiring evacuation for life safety reasons per 1 M revenue-mile.

¹⁰³ **System Reliability** (Mean distance between major mechanical failures) - Average distance between major mechanical failures that inhibit vehicle movement or prevents the start or completion of a scheduled revenue trip due to safety concerns. Examples of factors and/or components impacting



Performance Measure Targets

On October 5, 2020, NJ TRANSIT released its initial targets for each of these required measures. These measures and targets were also included in NJ TRANSIT's Public Transportation Agency Safety Plan, released in December 2020. The safety performance targets for the bus network are listed in [Table 57](#), below.

Table 57 – Safety Performance Targets, Bus, 2019 Reporting Year

Fatalities/Rate		Customer Injuries/Rate		Collisions/Rate		Safety Events Employee Injuries/Rate		Major Bus Fire Events/Rate		System Reliability
4	0.055/M. Miles	244	3.35/M. Miles	264	3.63/M. Miles	423	7.99/200K Hrs.	12	0.16/M. Miles	135.45/M. Miles

While each of the targets depicted in [Table 57](#) are meant to depict annual averages, the targets were developed using a three-year average across calendar years 2017, 2018, and 2019. In reviewing progress towards attainment of these targets, three-year rolling averages will be used. In May 2021 (or thereabouts), NJ TRANSIT officials will review the data for CY 2020 and assess progress towards attainment of these targets. As with many of the other measures, MPOs such as SJTPO have 180 days from the receipt of these targets to prepare its own initial safety performance targets or support NJ TRANSIT's targets. Based on the release data of October 14, 2020, SJTPO will have to act on these targets or develop their own on or before April 5, 2021. NJ TRANSIT also released safety performance targets for its light rail network. Because none of these lines are within the SJTPO region, they are not listed here.

Progress Towards Meeting Transit Safety Targets

As these targets were just released a few months prior to the release of RTP 2050, it is still a little too early to assess NJ TRANSIT's progress towards meeting these targets. SJTPO will continue to work closely with NJ TRANSIT on assessing the agency's progress towards meeting these transit safety targets and programming projects that help NJ TRANSIT meet these safety targets. Safety across all transportation modes, including transit, is a top priority for the SJTPO as evidenced by "Improve Transportation Safety," being one of RTP 2050's goals, as well as the Safety Pre-Screening Criterion of SJTPO's recently adopted Project Selection process. Also, as stated above, RTP 2050 has almost \$368 million programmed in Mass Transit Assets from FFY 2020-2029, which undoubtedly includes safety improvements.

System Reliability include: tires, brakes, doors, engine/transmission, cooling systems, steering, axles, and suspension. The data is represented as total number of events and the rate is per 1 M revenue-miles.

VIII. CONSULTATION, COORDINATION, AND PUBLIC INVOLVEMENT

As stated in Title 23 Part 450.315 (e) “MPOs shall, to the extent practicable, develop a documented process(es) that outlines roles, responsibilities, and key decision points for consulting with other governments and agencies, as defined in paragraphs (b), (c), and (d) of this section, which may be included in the agreement(s) developed under §450.314.”

SJTPO consults and coordinates with agencies and officials when completing transportation planning activities as appropriate to the transportation planning activity. With regards to the development of the RTP, SJTPO collaborates with the entities listed below. For each entity, the roles and responsibilities during the RTP development process are outlined:

- **SJTPO Technical Advisory Committee (TAC)** – The TAC is comprised of planners and engineers representing SJTPO’s constituent subregions. The TAC is involved in RTP discussions related to goal prioritization, strategies, critical needs and projects, and more. Furthermore, the TAC reviews the final Draft RTP and recommends its adoption to the Policy Board.
- **SJTPO Policy Board** – The Policy Board is the governing body of SJTPO and is comprised of eight elected officials from counties and municipalities in the SJTPO region, as well as three additional members appointed by NJDOT, NJ TRANSIT, and SJTA. The primary role of the Policy Board in the RTP development is to approve the adoption of the RTP. The Policy Board also weighs in and approves critical elements of the RTP, including the demographic projections and the transportation conformity determination.
- **Federal Highway Administration (FHWA) and Federal Transit Administration (FTA)** – FHWA and FTA have an opportunity to review and submit comments on the final Draft RTP. Transportation conformity determinations must be approved by FHWA and FTA, in addition to the US EPA.
- **Interagency Consultation Group (ICG)** – To demonstrate that the RTP will meet air quality standards mandated by the US EPA, SJTPO coordinates with the US EPA, NJDEP, US DOT, NJDOT, and other agencies during the Transportation Conformity process. SJTPO leads the conformity analysis process, which involves several decisions, commonly referred to as the latest planning assumptions. Using the latest planning assumptions means that the conformity determination is based on the most current information that is available to state and local planners. The latest planning assumptions generally cover the population, employment, travel, and congestion estimates that have been most recently developed by the MPO or another agency authorized to make such estimates. Other significant decisions in the conformity process include the computer models that will be used in the analysis, the analysis years, and whether projects are non-exempt or exempt from air quality analysis. SJTPO seeks concurrence on these

SJTPO consults and coordinates with agencies and officials when completing transportation planning activities.



decisions from the ICG, in accordance with the Conformity Final Rule, (40 CFR §93.105(a), §93.105(b), and §93.105(c). The Conformity Final Rule refers to the specific regulations and requirements as enacted by the US EPA that guide the conformity process. The ICG is comprised of representatives from NJDEP, US EPA, NJDOT, FHWA and the other New Jersey MPOs. The ICG is responsible for aiding in the development of the transportation conformity document for the RTP and for approving the final conformity determination.

When the Draft RTP and Transportation Conformity are prepared, SJTPO begins a public involvement process to ensure that members of the public, affected agencies, employees, private providers of transportation, and other interested parties have an opportunity to comment on the proposed RTP. SJTPO places public notice in area newspapers, disseminates information via the SJTPO General Information e-list, and shares via social media. In addition, copies of the Draft RTP and Transportation Conformity are sent to [State Depository Libraries](#) in each county in the SJTPO region and to key participating agencies in the region, and the documents are also on SJTPO's website. A minimum 30-day public comment period is provided, during which at least one public meeting is held. Due to the COVID-19 pandemic, SJTPO purchased one license of GoToMeeting and GoToWebinar. These online conferencing platforms allowed SJTPO staff to host four virtual public meetings, with one held in Spanish, to present materials from the Plan, as well as to provide members of the public the opportunity to provide feedback and ask questions. All comments received during this process are responded to and incorporated into the final RTP, usually in the form of an appendix. Following RTP adoption, SJTPO works with stakeholders and subregions to implement the goals, strategies, and projects included in the RTP.

Environmental Resource Agencies

From the Pinelands to the wildlife management areas and multitude of parks and forests, the SJTPO region is rich in environmental resources. The SJTPO region's numerous resources are carefully documented in the RTP in [Chapter II](#). The planning behind any project includes a full assessment of its potential environmental impacts.

SJTPO does not have a direct role in environmental compliance and/or mitigation, which is done during the project implementation phase, which follows the planning stage. For all Local Aid projects, environmental compliance and mitigation is primarily the responsibility of the subregions, who are generally the project sponsors. However, SJTPO does work with NJDOT's Bureau of Environmental Program Resources (NJDOT BEPR) in helping the subregions meet the environmental requirements for their projects. BEPR's role in collaboration with Local Aid is to provide guidance and advice to subregions in selecting candidate projects to enter the various programs administered by Local Aid. Additionally, BEPR offers assistance in educating subregions on the multitude of federal and state environmental regulations projects must comply with and provides assistance in preparing documentation needed to demonstrate compliance.

For projects initiated by NJDOT, all environmental work, ranging from identifying environmental constraints in the early planning stages, to obtaining the required state or federal environmental approvals, including permits, is performed by the BEPR using internal resources. BEPR's efforts also include developing appropriate mitigation plans, as needed.

SJTPO does engage with the four counties on land use matters. As stated previously, even though New Jersey is a home-rule state, SJTPO relies primarily on its constituent counties for guidance and direction on land use matters. Due to there being 68 municipalities in the SJTPO region, SJTPO generally does not work directly with individual municipalities, other than Atlantic City and Vineland, the two largest municipalities. It is assumed that the counties consider the concerns of their respective municipalities on any transportation investment decision brought before them. Transportation investments complement land use as much as possible.

With frequent review by the subregions, generally via the SJTPO TAC, and frequent interaction with the NJDOT BEPR, land use and resource agencies are continuously involved with the development and implementation of the RTP. For RTP 2050, any comments from resource agencies and local land use agencies are documented within [Appendix H](#).

Federally and Non-Federally Recognized Tribes

In accordance with Section 106 of the National Historic Preservation Act of 1966 as amended (16 U.S.C. 470) (NHPA), and its implementing regulations found at 36 CFR Part 800, federal agencies must consult with any Indian tribe or Native Hawaiian organization regarding undertakings occurring on or affecting historic properties on its tribal lands. Federal agencies must also:

Consult with an Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties that may be affected by an undertaking [800.2(c)(2)(ii)]. This requirement applies regardless of the location of the historic property. The regulations further require that the agency official shall insure that consultation in the section 106 process provides the Indian tribe...a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties and participate in the resolution of adverse effects [§800.2(c)(2)(ii)(A)].

Currently there are no federally recognized tribal nations that reside in the State of New Jersey, nor are there tribal territories (lands) belonging to federally recognized tribal nations within the confines of the state. There may be individuals belonging to federally recognized tribal nations, but there are no known enclaves or identified communities of such individuals within the state. There are five federally recognized tribes that claim an ancestral relationship with land in the state, who are included as consulting parties for federally funded or permitted transportation projects in accordance with the requirements of Section 106 and 36 CFR Part 800. The Federally Recognized Tribes include:

- Absentee Shawnee Tribe of Oklahoma, with areas of interest in Camden, Gloucester, Salem and Warren Counties
- Delaware Nation, with areas of interest Statewide
- Delaware Tribe of Indians, with areas of interest Statewide
- Shawnee, with areas of interest Statewide

There are five federally recognized tribal nations that claim an ancestral relationship with land in the state, who are included as consulting parties for federally funded or permitted transportation projects.



- Stockbridge-Munsee Community Band of Mohican Indians, with areas of interest in Sussex, Warren, and Burlington Counties

FHWA cannot delegate its government-to-government responsibility and overall consultation and coordination duties with federally recognized tribal nations.

It is the responsibility of the Lead Federal Agency to identify and involve consulting parties in the findings and determinations made during the Section 106 consultation process. However, in advance of developing a coordination process with the MPOs in the State of New Jersey, SJTPO reached out directly to each of the federally recognized tribal nations on behalf of FHWA to introduce the MPO and advise each tribal nation of opportunities for early coordination, including related to SJTPO's RTP. The letter to all five the federally recognized tribal nations was transmitted in mid-April 2020.

Based upon correspondence from the Tribal Historic Preservation Officer for the Stockbridge-Munsee Community Band of Mohican Indians, the tribal nation has deferred consultation in the SJTPO region indicating that projects in the four-county SJTPO region are outside of their areas of interest. No further consultation will be completed with this tribal nation.

To supplement the introduction letter, a second letter was addressed to each federally recognized tribal nation, excluding the Stockbridge-Munsee Community Band of Mohican Indians, to advise that Draft RTP was available for review and comment on the SJTPO website.

In addition to the five federally recognized tribal nations identified above, as of March 4, 2020 an additional four non-federal tribes that have been acknowledged by the current administration in the State of New Jersey to have an interest in historic properties. While these non-federally recognized tribes do not share the same status as the "federally recognized" tribal nations, they are still recognized as important stakeholders in the transportation planning process and will be contacted during project development and in the Section 106 review process. The four non-federally recognized tribes include:

- Nanticoke Lenni-Lenape Indians of NJ
- Powhatan Renape Nation
- Ramapough Lunaape (Lenape) Nation
- Sand Hill Indian Historical Association

A letter to the four non-federally recognized tribes was transmitted in late June 2020, introducing SJTPO and advising that the Draft RTP was available for review and comment on the SJPTO website.

Public Involvement

Meaningful public engagement was essential to the development of the RTP 2050. In an effort to hear from various members of the public, including those most often underrepresented, such as low-income and/or minority populations and those

In addition to the five federally recognized tribes, an additional four non-federally recognized tribes have been acknowledged by the current administration in the State of New Jersey as having an interest in historic properties.

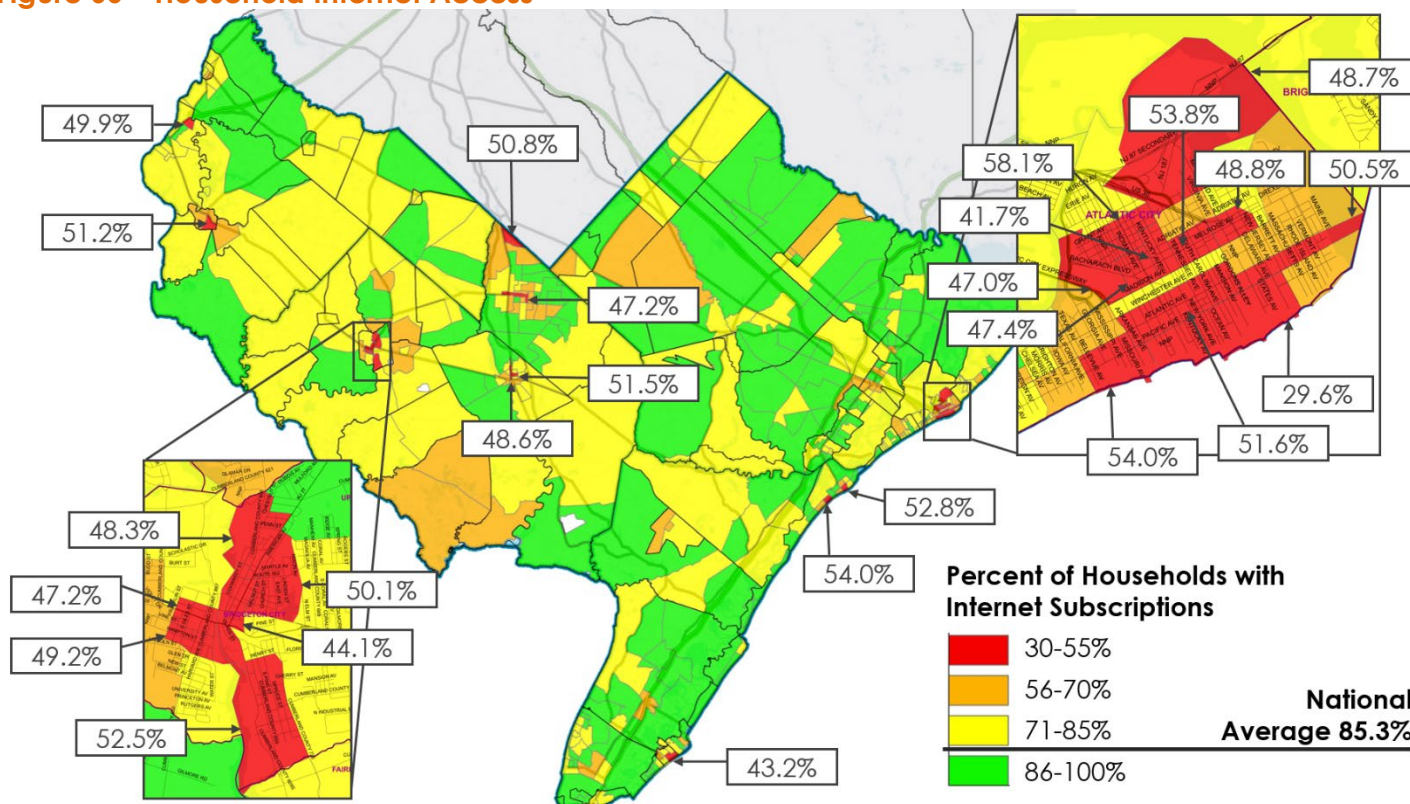
underserved by the transportation system, SJTPO staff offered an array of public engagement activities. During the two phases of outreach for the RTP 2050, members of the public participated in in-person and virtual public meetings, online surveys and comment forms, and through social media to contribute their ideas on the future of the region's transportation system. As a result, SJTPO staff produced a comprehensive plan that reflected the values and priorities of the people who live, work, and conduct business in the four-county region.

Outreach Events

As mentioned, there were two phases of outreach for the RTP 2050. Phase 1 took place in the summer of 2019, which included a public meeting in each of the four counties and provided SJTPO with feedback that helped guide the writing of the Plan. Furthermore, the meetings were held in Environmental Justice (EJ) areas to better reach members of various underserved populations. These meetings began with SJTPO staff presenting material and afterwards having individuals partake in planned exercises. Members of the public were also given the opportunity to interact with SJTPO staff, ask questions, and offer comments on the RTP 2050 in a more informal setting.

Phase 2 took place between summer and winter of 2020. SJTPO hoped to hold in-person public meetings out of recognition of the fact that roughly one in five residents (79.7 percent) may not have access to the internet and others may have limited access. In-person outreach would have been targeted to be accessible to communities that are both traditionally underserved and have limited internet access. [Figure 66](#), below, shows the disparities in household internet access across the region.

Figure 66 – Household Internet Access



Three virtual public meetings were hosted in English and one public meeting was hosted in Spanish with the help of a consultant.

However, due to the COVID-19 pandemic, Phase 2 was adjusted to accommodate public needs and abide by Governor Murphy’s social distancing guidelines. Between mid-August and mid-September 2020, staff hosted three virtual meetings through the GoToWebinar conferencing platform. The three identical morning, afternoon, and evening meetings were more widely attended than traditional, in-person meetings, with a total of thirty-five individuals in attendance.

In early December 2020, SJTPO hosted a virtual public meeting in Spanish. Prior to this meeting, SJTPO staff never hosted a virtual public meeting in Spanish. Consultant support was provided by the Multilingual Outreach Service Study, a one-time contract with the Public Outreach and Engagement Team (POET) at Rutgers. In an effort to hear from the underrepresented members in the region, POET researched and provided SJTPO staff with a list of agencies in the region that work with and/or provide support to the underrepresented communities in the region. SJTPO staff contacted twenty-two (22) agencies via telephone and email to inform them of the Spanish virtual public meeting and other ways to provide input on the Plan.

To ensure SJTPO met all federal and state outreach regulations, SJTPO consulted its [Public Involvement Plan](#) (PIP). SJTPO staff advertised the virtual meetings via the SJTPO website, the e-list, social media posts, and paid advertisements in the local newspapers. Due to the unique nature of SJTPO only being able to hold virtual public meetings, staff thought it best to promote the posts via Facebook. Through targeted, paid advertisements, the posts were able to be seen by an audience of SJTPO's choosing. Audience details included living location, age, and people who match certain interests (i.e., people with an interest in the Spanish language). The advertising budget was \$40.00, with \$10.00 budgeted (\$10.00 spent) for the English virtual public meeting post and \$30.00 budgeted (\$29.99 spent) for the Spanish virtual public meeting post. Staff felt this advertising budget was appropriate, as staff had limited prior experience with advertising through Facebook and used these public meetings as a test of how well this form of advertisement worked for public meeting notices. Additionally, SJTPO staff created meeting flyers and emailed them to the agencies who work with and/or serve the underrepresented to distribute, as appropriate.

Phase 1 – Pre-RTP 2050 Public Outreach Events

Phase 1 of the RTP 2050 public outreach strategy took place between June 26, 2019 and August 1, 2019. During this time, SJTPO staff held a total of four public meetings. At these meetings, SJTPO staff presented an overview of the RTP and helped guide members of the public through two exercises. The first exercise focused on the prioritization of the ten RTP goals. Members of the public were given a handout and asked to rank how important the RTP goals were to them. The scale ranged from one being the most important to ten being the least important. Participants were asked to use each number once.

The second exercise was aimed at receiving feedback on the RTP strategies, which are focused on supporting and implementing the goals. Ten posters were setup around the venue. Each poster contained one of the ten goals and its accompanying strategies. Participants received green and red dots, as well as sticky notes. The green dots were to be used to indicate strategies the participants liked, whereas the red dots were to be used to indicate strategies the participants disliked. The sticky notes were made available so participants could indicate additional goals or strategies they would like to see included in the RTP 2050.

Phase 1 public meetings were as follows:

- **St. John's Episcopal Church – Parish Hall**
76 Market Street, Salem, New Jersey 08079
Wednesday, June 26, 2019 – 5:00 PM
- **Vineland City Hall**
640 E Wood Street, Vineland, New Jersey 08360
Monday, July 29, 2019 – 6:30 PM
- **Dante Hall Theater of the Arts**
14 N Mississippi Avenue, Atlantic City, New Jersey 08401
Thursday, June 27, 2019 – 5:00 PM
- **Cape May County Library**
30 Mechanic Street, Cape May Court House, New Jersey 08210
Thursday, August 1, 2019 – 5:30 PM



Also, during Phase 1, an online survey was available on the SJTPO website at www.sjtpo.org/public-comment. The online survey was created to collect comments during the early stages of the RTP 2050 development from individuals who could not attend the in-person public meetings. The online survey included the goal ranking exercise from the in-person public meetings and an open-ended question asking for thoughts on additional goals to include, if feasible.

Phase 2 – Draft RTP 2050 Public Outreach Events

Phase 2 of the RTP 2050 public outreach strategy took place between June 26, 2020 and December 18, 2020. During this time SJTPO staff held a total of four virtual public meetings, one in Spanish, due to the COVID-19 pandemic. The virtual public meetings were hosted using the GoToWebinar online meeting platform.

Each virtual public meeting was one-hour in length. Staff began each meeting with a presentation. Throughout the presentation, polling questions were used to engage attendees and to provide feedback on certain matters, such as what critical issues the attendees perceived to be present in their communities. The presentation was approximately forty-five (45 minutes) in length, allowing for fifteen (15) minutes or more for attendees to ask questions or provide comments.

The Spanish virtual meeting presentation was pre-recorded by a translator from CQ Fluency, the Disadvantaged Business Enterprise (DBE) firm for the Multilingual Outreach Services Study. The pre-recorded presentation was played by an SJTPO staff member. When it came time for the question-and-answer session, an interpreter from CQ Fluency was present to interpret questions, comments, and responses.

Phase 2 public meetings were as follows:

- **Wednesday, August 19, 2020**
10:00 AM – 11:00 AM
- **Monday, August 31, 2020**
2:00 PM – 3:00 PM
- **Thursday, September 10, 2020**
6:00 PM – 7:00 PM
- **Wednesday, December 9, 2020**
(Spanish Meeting)
6:00 PM – 7:00 PM

Input Received

As noted, public outreach for RTP 2050 began in the Summer of 2019, with Phase 1 of outreach. During this phase of outreach, staff relied on receiving public input at the four (4) in-person public meetings. At these public meetings, staff used clearly defined and well executed exercises to garner feedback from participants. The feedback received was used to prioritize the RTP goals and receive feedback on the goal strategies.

A year later, in the summer of 2020, SJTPO staff released the Draft RTP 2050 for public comment in a global pandemic. Ideally, staff would have hosted in-person meetings in recognition that face-to-face conversations often bring about larger,

more meaningful discussions and to acknowledge those in the region that may have limited access to internet-based outreach activities. However, in an effort to keep everyone safe and healthy, and to abide by social distancing orders, SJTPO staff pivoted its outreach from in-person to virtual.

In the sections below, readers can learn about the results of the exercises completed in Phase 1 of outreach, as well as the challenges and learned experiences of virtual outreach in Phase 2.

Phase 1 – Pre-RTP 2050 Public Outreach Feedback

At the four public meetings and as part of the online survey for Phase 1 of the RTP 2050 outreach, SJTPO staff asked members of the public to rank the importance of the ten RTP goals. After Phase 1 was complete, SJTPO staff compiled the results of the exercise.

Table 58 – Goal Prioritization (RTP 2040 vs RTP 2050)

Goal	RTP 2040	RTP 2050
Accessibility and mobility	Goal 1	Goal 1
Mitigate traffic congestion	Goal 3	Goal 2
Restore, preserve, and maintain existing system	Goal 6	Goal 3
Support the regional economy	Goal 2	Goal 4**
Improve resiliency and reliability	Goal 9*	Goal 5**
Travel and tourism	Goal 10*	Goal 6**
Improve transportation safety	Goal 4	Goal 7
Enhance integration and connectivity	Goal 7	Goal 8
Protect and enhance the environment	Goal 5	Goal 9
Improve security	Goal 8	Goal 10

*Goal 9 and 10 were added after voting was complete on RTP 2040.

**Initial tally resulted in tie between three goals, TAC feedback served as the tiebreaker.

As shown in [Table 58](#), above, the RTP 2050 results were compared to the RTP 2040, officially known as *Transportation Matters – A Plan for South Jersey*. From these results, SJTPO staff determined that public preference of the goals significantly changed since the last update, with the only consistent outcome being that “Accessibility and Mobility” remained the most important goal.

The goal prioritization exercise for the RTP 2050 also resulted in a three-way tie. “Improve Resiliency and Reliability,” “Travel and Tourism,” and “Support the Regional Economy” tied for fourth place. SJTPO staff solicited input from the TAC at the TAC Workshop held on August 12, 2019 to break the tie. TAC members collectively agreed that “Support the Regional Economy” ranked fourth, “Improve Resiliency and Reliability” ranked fifth, and “Travel and Tourism” ranked sixth.

Public preference of the goals significantly changed since the last RTP update.



Regarding the second exercise, SJTPO staff received feedback that suggested most of the strategies for each goal were well received by the public. [Table 59](#), below shows the two strategies where dislikes outnumbered the likes. SJTPO staff speculated that “advance security planning” may have received the most dislikes because it was not clear what the strategy entailed. SJTPO staff chose to keep this strategy because it supports a federally mandated goal by understanding what the goal requires. In addition, staff speculated that “align safety with state priorities” was poorly rated because it may have been received as local governments deferring to the state. However, this was kept because it is an essential element associated with several funding sources, such as the Highways Safety Improvement Program (HSIP), which is a federal funding source that requires projects align with the State Strategic Highway Safety Plan (SHSP). Further, some strategies like “Advance South Jersey Trails” were included under more than one goal. The ranking results for the “Advance South Jersey Trails” strategy, under goal 6 “Increase and enhance opportunities for travel and tourism” and goal 8 “Enhance the integration and connectivity of the transportation system” also did not score well with the public, receiving 33 percent and 40 percent dislikes for each goal, respectively. SJTPO has active and planned projects, including the Cumberland County Bike and Pedestrian Safety Action Plan and the Regional Trail Network – Feasibility Survey (Two-year), that will support this strategy. Staff is optimistic that these efforts will garner interest amongst bike/ped advocacy groups in the SJTPO region. Also, of note, is staff received three comments during Phase 1 of outreach. Staff did not have any recommendations because the comments were either a maintenance issue or a countermeasure, not a strategy.

Table 59 – Lowest Ranking Strategies

Strategy	Dislikes	Likes
10.D. Advance security planning		
Promote conversations among federal, state, and regional partners to define what transportation security means in the SJTPO region and how SJTPO can work to advance security planning.	4	1
7.E. Align safety with state priorities		
Ensure that safety investments are aligned with priorities established with the State’s Strategic Highway Safety Plan, which was developed in collaboration with New Jersey’s MPOs and other statewide partners.	1	0
6.A. Advance South Jersey Trails		
Continue to advance conversations and build a coalition of regional partners in the public, private, and non-profit sectors to develop and implement a vision for the South Jersey Trails regional trail network to connect major attractions within the region and to neighboring regions.	3	6
8.H. Advance South Jersey Trails		
Continue to advance conversations and build a coalition of regional partners in the public, private, and non-profit sectors to develop and implement a vision for the South Jersey Trails regional trail network to connect major attractions within the region and to neighboring regions.	2	3

Phase 2 – Draft RTP 2050 Public Outreach

As mentioned, Phase 2 public meetings were held virtually due to the COVID-19 pandemic. The public meetings were an hour in length with approximately forty-five (45) minutes for staff to present material on the RTP and fifteen (15) minutes for the question-and-answer session. Throughout the virtual public meetings, attendees engaged in seven polling questions. Of the total number of attendees for all four (4) meetings, SJTPO had thirty-four attendees. Of those attendees, twenty-eight (28) participated in the polling questions. However, of the total number of participants, not all of them participated in answering each question. The questions were as follows:

1. How is your day going?
2. Did you attend any of the Phase 1 public meetings?
3. What best describes your relationship with the SJTPO region?
4. What transportation issue(s) do you perceive to be a problem in your community?
5. How has COVID-19 impacted your driving habits?
6. How has COVID-19 impacted your level of biking/walking outdoors?
7. How helpful did you find today's public meeting?

The first question served as a warmup to ensure attendees knew how to use the polling software. The remaining six (6) questions were more useful in providing SJTPO staff with valuable information. For example, the engagement report provided by GoToWebinar noted that sixteen (16) out of the twenty-eight (28) total participants engaged in the second polling question asking if they attended any of the Phase 1 public meetings. Fifteen (15) of the sixteen (16) participants noted they did not attend any of the Phase 1 public meetings, whereas one (1) participant noted attending a Phase 1 public meeting. These results indicated that a virtual setting was conducive to hosting a public meeting, as SJTPO staff connected and engaged with new and/or more members of the region interested in transportation planning.

Additionally, of interest to SJTPO staff were the results to the fourth polling question asking about what transportation issue(s) attendees perceived to be a problem in their communities. The responses were of interest to SJTPO staff because the question pertained to [Section II](#). Five Critical Issues in Transportation Planning. This section is new to the RTP and details the issues and/or challenges that make it more difficult to advance projects in the SJTPO region. The goal of including this section was to begin a dialogue with federal, state, and local partners in the coming years to develop workable solutions.

Seventeen (17) out of the twenty-eight (28) total participants engaged in the fourth polling question related to the Critical Issues. The participants were able to select whichever issue(s) they deemed problematic in the SJTPO region. Of the five (5) Critical Issues, Funding Imbalance received twelve (12) participant votes, making it the highest voted Critical Issue. These results indicate that participants perceived a lack of funding to be the main issue as to why projects are difficult to advance in the SJTPO region. Major Projects received ten (10) votes. Inequitable Access received nine (9) votes, making it the third most prominent issue as to why projects are difficult to advance. Lastly, Regulatory burden and Infrastructure at Risk tied, each receiving eight notes (8).

Of the five Critical Issues, Funding Imbalance received twelve participant votes, making it the highest voted Critical Issue.



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The level of participant interest shown in this poll reiterated the point that these issues can make it more difficult to advance projects in the SJTPO region. The results from the polling question are shown in [Table 60](#), below.

Table 60 – Public Meeting Participants Vote on Critical Issues

Critical Issues	Participant Votes
Funding Imbalance	12
Major Projects	10
Inequitable Access	9
Regulatory Burden	8
Infrastructure at Risk	8

Overall, though Phase 2 of public outreach was held during a global pandemic and plans for outreach needed to shift from in-person to fully virtual, SJTPO staff felt that meaningful and valuable information was received by members of the public. Staff also learned from this virtual outreach process and is prepared to make further changes to enhance any virtual outreach plans for future projects and planning documents.

IX. MOVING SOUTH JERSEY FORWARD

In contrast to the plan updates that preceded it, RTP 2050 has taken more of a performance-oriented approach, in recognition of the federal emphasis on performance-based planning and systems performance. While the RTP is, by definition, a look towards the future and lays out a blueprint of where we, as a region, want to go, RTP 2050 also looks back at the four years since the last RTP update when *Transportation Matters: A Plan for South Jersey*, was released, assessing progress towards each of the 10 goals. Since *Transportation Matters*, there has been great progress in the SJTPO region. Overall regional accessibility has improved. While there is still work to be done to meet the demand, some new community shuttle systems have been implemented, meeting a significant need for more flexible transit. More and more municipalities are accommodating bicycle and pedestrians in their project plans, and an increasing number of municipalities within the SJTPO region have adopted Complete Streets policies.

With an abundance of rich agricultural areas, as well as its close proximity to large East Coast cities, the SJTPO region has been and remains a prime area for commerce. Freight and goods movement have achieved greater traction in recent years, and the 2017 release of the Statewide Freight Plan identified several key areas within the SJTPO region that need to be addressed. One such location, NJ 55 at NJ 47 interchange is currently part of an NJDOT Problem Statement with ensuing discussions on how to advance specific projects. As evidenced in RTP 2050, infrastructure within the SJTPO region, particularly along the coastal areas, has been fortified, making it more resilient to the ravages of the ever-increasing extreme

storm events of hurricanes, nor'easters, and heavy rainfall events. These adaptation measures should continue to help reverse the impacts of sea level rise. The decline in greenhouse gas emissions over the past several years also helps mitigate the impacts of these extreme weather events. And while the region still lies in an Eight-hour Ozone Nonattainment Area, the ambient air quality has improved, especially relative to the rest of the state. So, there have been strides in the regional transportation system and surrounding environment since *Transportation Matters: A Plan for South Jersey* was released in 2016, as RTP 2050 has shown.

In addition to the shore areas that remain a perennial draw for residents and tourists alike, and the influx of tax revenue this activity brings to the region and the state, the SJTPO is trying to build on its already substantial tourism base. With an abundance of protected land, both because of Pinelands and CAFRA regulations, and unique locations along several migratory bird routes, the SJTPO region is becoming and marketing itself as an eco-tourism destination as much as a beach and gaming destination. The South Jersey Trails Initiative is just one of several initiatives with the goal of creating a more extensive trail network in the region. The Bayshore Heritage Byway is a New Jersey Scenic Byway that connects a multitude of sites of natural, cultural, and historic significance.

Amid these success stories, there are still some major challenges. These include the recurring challenge of accommodating the annual seasonal influx of visitors on infrastructure that has far exceeded its serviceable life. There is still sparse public transit coverage in much of the region and gaps in the region's human services transit network. And while there has been some notable progress in strengthening the regional transportation infrastructure and making it more resilient, more needs to be done, particularly due to the significant miles of coastline within the SJTPO region. Further, the longstanding inequity in transportation funding that SJTPO receives, relative to the number of its users, has shown little signs of being rectified. RTP 2050 lays out a myriad of strategies to meet these challenges. While we have yet to fully realize the vision of the regional transportation system as embodied in RTP 2050, we have certainly made significant progress, and the path to attain that vision will help us keep *Moving South Jersey Forward*.



REGIONAL TRANSPORTATION PLAN 2050

MOVING SOUTH JERSEY FORWARD

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