MOVING OUR FUTURE FORWARD

2050 BINGHAMTON METROPOLITAN TRANSPORTATION PLAN

BMTS

The development of this plan was funded by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA).
The views expressed herein are solely those of the Binghamton Metropolitan Transportation Study, and do not represent an official position of the FHWA or FTA.

BMTS BINGHAMTON METROPOLITAN TRANSPORTATION STUDY

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BINGHAMTON METROPOLITAN TRANSPORTATION STUDY
POLICY COMMITTEE
RESOLUTION 2025-09

Resolution approving the Draft Long Range Transportation Plan, *Moving our Future Forward 2050.*

WHEREAS the Binghamton Metropolitan Transportation Study Policy Committee has been designated by the Governor of the State of New York as the Metropolitan Planning Organization responsible, together with the State, for the comprehensive, continuing, and cooperative transportation planning process for the Binghamton Urban Area, and

WHEREAS Federal regulations (23 CFR §450.324) require that the urban transportation planning process shall include development of a long range regional transportation plan that shall have a twenty year horizon and in air quality attainment areas be updated no less frequently than every five years

WHEREAS there has been developed a Draft Long Range Plan, *Moving our Future Forward 2050,* that has met Federal requirements for content, public outreach, and cooperative development, and

WHEREAS the BMTS Policy Committee has adopted the required financial plan and the Draft Plan is fiscally constrained to that plan, and

WHEREAS the BMTS Policy Committee has created a Planning Committee of technical representatives to advise it on matters concerning the implementation of the urban transportation planning process, and

WHEREAS the BMTS Planning Committee has reviewed and approved the Draft Long Range Plan *Moving our Future Forward 2050*

NOW BE IT RESOLVED that the BMTS Policy Committee approves *Moving our Future Forward 2050* as the long range transportation plan for the BMTS Region.

CERTIFICATION OF RESOLUTION 2025-09

I, the undersigned, duly elected Chair of the Binghamton Metropolitan Transportation Study Policy Committee, do hereby certify that the foregoing is a true and correct copy of BMTS Policy Committee Resolution 2025-09, adopted by consensus this 11th day of September 2025.

Michael Marinaccio, Chair
BMTS Policy Committee

9/16/25
Date

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CHAPTER 1

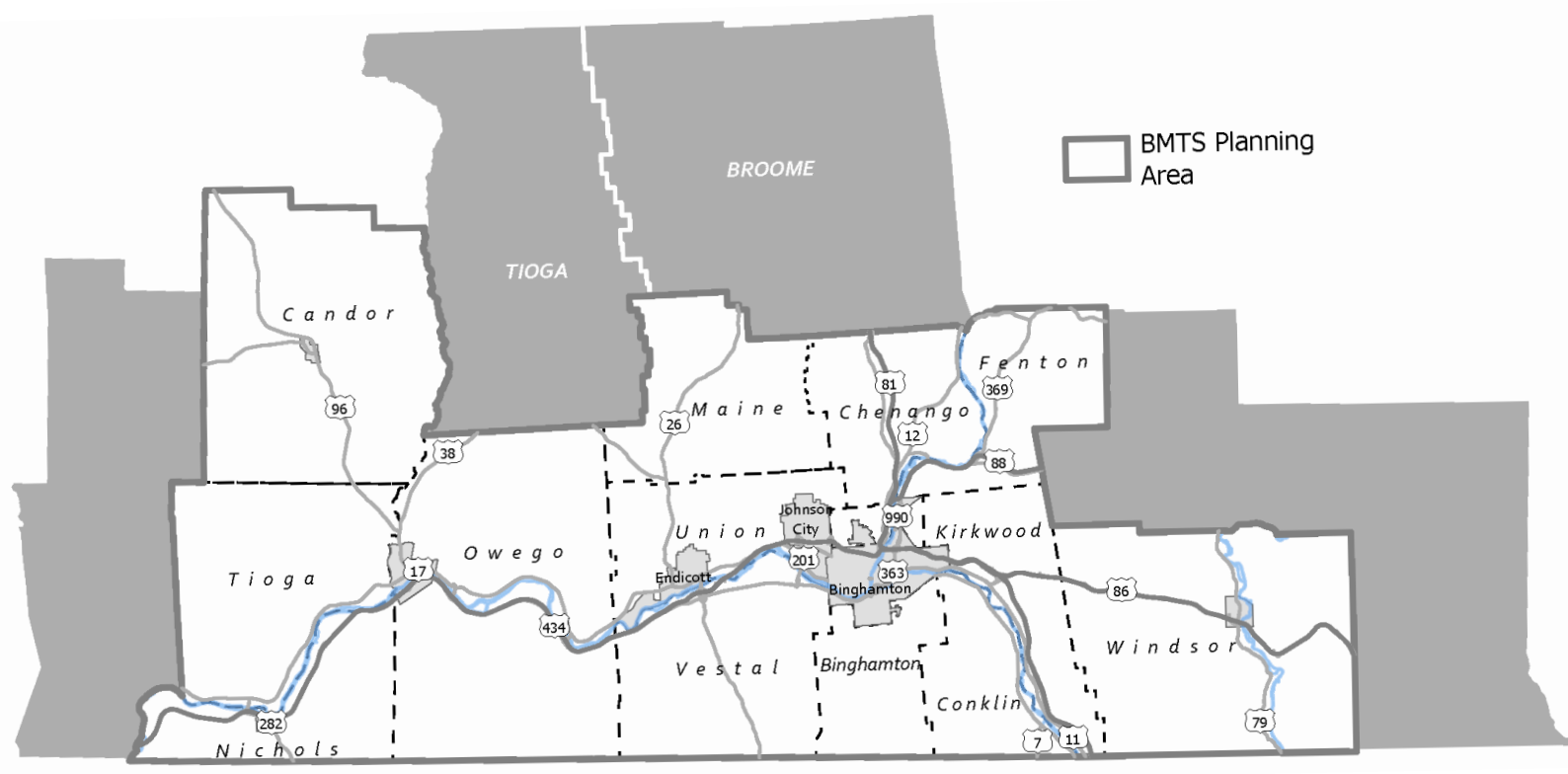
INTRODUCTION

Transportation plays a role in everyone's daily life. People travel to work, send their children to school, go to medical appointments, enjoy a meal at a restaurant or go to a movie. Businesses ship products, receive deliveries, and rely on access by both workers and customers. Transportation contributes to the region's quality of life, its sense of place, and its ability to thrive. A sound transportation plan can play an important role in how the BMTS region achieves its larger goals. Moving Our Future Forward 2050 fulfills that role.

Federal legislation requires every metropolitan area in the United States with a population of 50,000 or more (also known as an urbanized area) to establish a Metropolitan Planning Organization (MPO). MPOs must carry out a continuing, comprehensive, and cooperative (3C) transportation planning process, resulting in plans and programs consistent with the planning objectives of the metropolitan area, to be eligible for federal funds.

The Binghamton Metropolitan Transportation Study (BMTS) was designated by the Governor of the State of New York as the MPO for the Binghamton Urbanized Area and has fulfilled this function since 1964. BMTS' planning jurisdiction, called the Metropolitan Planning Area (MPA), is shown in Figure 1.1.

FIGURE 1.1 BMTS METROPOLITAN PLANNING AREA



*The Planning Area shown in BMTS' previous LRTP included a portion of Pennsylvania. In consultation with FHWA and NYSDOT, this portion was removed in 2024 based on the 2020 US Census urban area boundary

BMTS ORGANIZATIONAL STRUCTURE

The **BMTS Policy Committee** is the final decision-making body of the MPO. Committee members primarily include elected officials from the local governments that comprise the urbanized area of the region. Other members include Southern Tier 8 (regional planning agency), the New York State Department of Transportation, and Empire State Development. Representatives from the Federal Highway Administration and the Federal Transit Administration are advisory members.

The **BMTS Planning Committee** is comprised primarily of planning, engineering and public works professional staff from member municipalities. They provide technical review of plans and programs prior to Policy Committee action.

BMTS Staff provides technical analysis and support and facilitates coordination to guide transportation planning and decision-making within the BMTS planning area.

BMTS POLICY COMMITTEE

- Broome County
- Tioga County
- City of Binghamton
- Village of Endicott
- Village of Johnson City
- Village of Owego
- Town of Chenango
- Town of Dickinson
- Town of Kirkwood
- Town of Owego
- Town of Union
- Town of Vestal
- Southern Tier 8 (regional planning agency)
- New York State Department of Transportation
- Empire State Development
- New York State Department of Transportation Region 9*
- Federal Highway Administration*
- Federal Transit Administration*

*Advisory (non-voting)

THE LONG RANGE TRANSPORTATION PLAN

MPOs are required to develop a Long-Range Transportation Plan (LRTP) at least every 5 years. The LRTP is one of the MPOs core documents and provides the basis for setting transportation policy and selecting investments in transportation projects and programs to help achieve the desired performance of the transportation system for all users. Looking forward 25 years brings an increasing level of uncertainty over time, but also the opportunity to consider strategic actions to move toward the desired future.

To meet federal requirements, this plan must:

- Have a time horizon of at least 20 years into the future.
- Be updated at least every five years to reflect changing conditions and assumptions. (BMTS' previous LRTP, Looking Forward 2045: Moving our Future Forward, was adopted by the BMTS Policy Committee in October 2020).
- Include strategies that provide for the development of an integrated multimodal transportation system (including accessible pedestrian walkways and bicycle transportation facilities) to facilitate the safe and efficient movement of people and goods.
- Address performance-based planning through the inclusion of a system performance report.
- Incorporate a financial plan that demonstrates fiscal constraint for the recommended projects and programs.

The plan must also consider a set of 10 planning factors (see below) in a manner that reflects the scale and complexity of the MPO planning area (Appendix A).

FEDERAL PLANNING FACTORS

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, cross and between modes, for people and freight;
7. Promote efficient system management and operation;
8. Emphasize the preservation of the existing transportation system;
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
10. Enhance travel and tourism.

23 CFR 450.306(b)

TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

The Transportation Improvement Program is a five-year program of projects within the MPA funded by programs of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). It is another core document of BMTS, since it includes specific commitments to advance projects from planning to completion. Federal legislation requires that "each project or project phase included in the TIP shall be consistent with the approved metropolitan transportation plan".

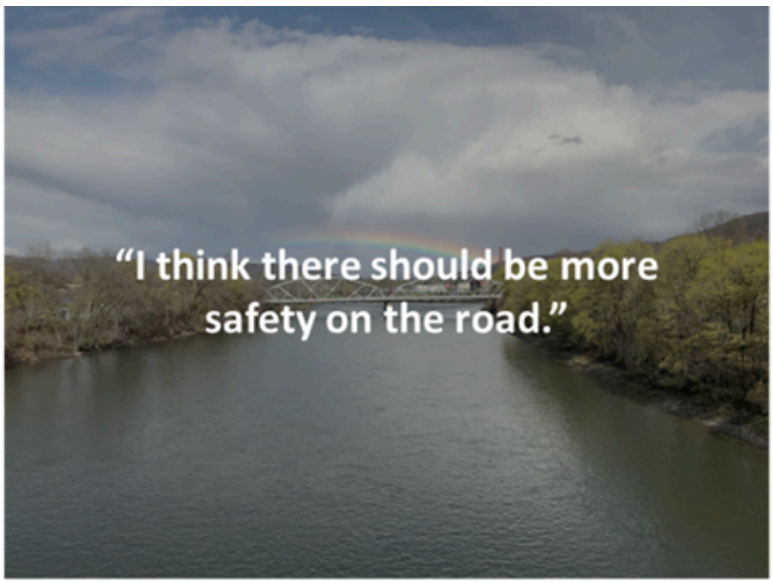
THE ROLE OF PUBLIC ENGAGEMENT

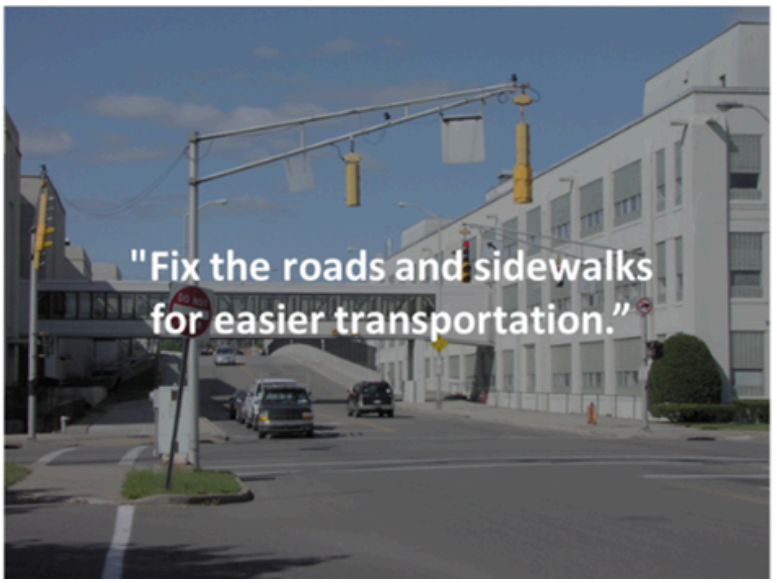
The public was consulted throughout the development of the LRTP. The vision, goals and objectives and the investment priorities and projects in the LRTP reflect public engagement during plan development. BMTS received over 300 comments, ideas, and responses to our public survey about the region's transportation needs, investment priorities, and opportunities for improving the transportation system. Input was also gathered during the summer of 2024 through various outreach activities, including interactive exhibits in Tioga County at Strawberry Fest and Cars in the Park Show, and Cars and Bikes at Otsiningo Park.

The responses encompassed a wide range of ideas and suggestions for all modes of transportation. While road maintenance and safety where the most cited issues, the combined comments related to alternative modes of transportation, including pedestrian and bicycle accommodations and public transit, outnumbered those related to road maintenance.

BMTS also solicited input from various stakeholders and the BMTS Planning Committee, which served as the Steering Committee for the development of the plan. Stakeholder meetings provided a means for direct input by key stakeholders including representatives of persons with disabilities, underserved communities, and transport modes like freight and aviation.

The public comment period for the plan was August 2025 and provided the public a final opportunity to review and comment on the recommended plan before it was finalized. More details about the public engagement process and survey responses can be found in Appendix B.





Summary of the primary transportation issues, prioritized by frequency of mention and concern from respondents:

Road Maintenance and Safety: Issues like potholes, cracks, broken guardrails, and general infrastructure deterioration were the most frequently cited concerns. People emphasized the need for durable repairs and better materials.

Public Transportation: Numerous comments highlighted the inadequacy of the bus system, including limited routes, infrequent schedules, and poor reliability. Many mentioned the need for bus shelters, improved apps, and extended operating hours.

Bicycle Infrastructure: Many respondents called for more protected bike lanes, better bike paths, and safer intersections for cyclists. Unprotected or poorly designed bike lanes were seen as unsafe.

Pedestrian Safety and Walkability: There was a strong call for more sidewalks, improved crosswalks, and safer walking paths, especially near major roads and shopping areas. Poor sidewalk conditions and lack of winter maintenance creates unsafe situations.

Rail Connectivity: A recurring theme was the desire to reinstate or expand passenger rail service to NYC, Albany, Philadelphia, and other cities. Many see rail as a viable alternative to car-centric infrastructure.

Sustainability and Alternative Transportation: Suggestions included less car-centric infrastructure, increased use of roundabouts, and promoting alternatives like biking and walking to reduce environmental and financial costs.

Traffic Management: Problems with traffic signals, unsafe driving behavior, and the need for better-designed intersections were frequently mentioned.

Rural and Suburban Access: Residents in rural or less central areas reported a lack of public transport options, leaving them dependent on cars or expensive services like Uber.

Emergency and Accessibility Services: Suggestions included improved emergency transport plans, better services for seniors and disabled residents, and ensuring all demographics are accommodated.

CHAPTER 2

VISION, GOALS & OBJECTIVES

The Vision Statement was created with input from the Steering Committee, Stakeholder Committee, and the public during the development of BMTS' 2045 Long Range Plan. Moving our Future Forward 2045 was a complete overhaul and considered an entirely new plan, therefore, Moving our Future Forward 2050 is an update to that plan. During outreach for this plan, it became clear that this vision, goals and objectives were still very valid and will remain the same as the 2045 plan. The LRTP centers around supporting the economy, improving communities, protecting the environment, and utilizing new technology and these are still the priorities for this region. Achievement of the vision is supported by a series of goals, each with specific objectives.

Each goal listed below is supported by several objectives and are intended to guide future development and move towards achieving the Vision Statement above. While goals are broad statements of intent, objectives are more specific and offer a means by which progress can be measured over time. This specificity provides insight to decision-makers and the public by linking actions to the vision. Figure 2.1 depicts the framework of the LRTP.

VISION STATEMENT

In 2050, the BMTS region will be recognized as a great place to live. People of all ages, abilities, and economic status will be able to travel safely and reliably throughout and beyond the region with access to destinations that meet their needs and desires. Technology and public policy will make transportation services available to all and provide efficient mobility for people and goods by whatever mode they choose.

Photo by Drones over Broome & Beyond

FIGURE 2.1 BMTS LRTP FRAMEWORK

CHAPTER 3

PERFORMANCE-BASED PLANNING

Federal law requires states and MPOs to use a performance-based planning and programming approach. This means they are responsible for showing how their investment decisions impact the quality and efficiency of the regional transportation system. Transportation users can see which projects are being done and how these projects improve their travel. Setting targets for each performance measure helps track progress over time and shows if projects and programs are meeting their goals.

Chapter 23 part 150(b) of the United States Code [23USC §150(b)] includes the following seven national performance goals for the Federal-Aid Highway Program:

1. **Safety.** To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. **Infrastructure condition.** To maintain the highway infrastructure asset system in a state of good repair.
3. **Congestion reduction.** To achieve a significant reduction in congestion on the National Highway System.
4. **System reliability.** To improve the efficiency of the surface transportation system.
5. **Freight movement and economic vitality.** To improve the National Highway Freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. **Environmental sustainability.** To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. **Reduced project delivery delays.** To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

FEDERALLY REQUIRED ROADWAY PERFORMANCE MEASURES

To achieve the national goals, the Federal Highway Administration (FHWA) has required states and MPOs to monitor their transportation systems using specific performance measures. These measures will be used to identify progress in achieving the set performance targets. The measures were released in three groups. PM1, the first group, addresses measures related to safety. PM2 addresses measures related to infrastructure conditions, specifically related to pavement and bridge conditions. The final group, PM3, addresses system performance measures, including system reliability, freight movement and environmental sustainability.

Table 3.1 lists these measures and relates them to the national goals.

TABLE 3.1 FEDERAL ROADWAY PERFORMANCE MEASURES

Final Rule	National Goal	Performance Measure
PM1	Safety	Number of fatalities
		Fatality rate
		Number of serious injuries
		Serious injury rate
		Number of non-motorized fatalities and serious injuries
Final Rule	**National Goal**	**Performance Measure**
PM2	Infrastructure Condition (Bridge and Pavement)	Percentage of pavements on the interstate system in good condition
		Percentage of pavements on the interstate system in poor condition
		Percentage of pavements on the non-interstate National Highway System (NHS) in good condition
		Percentage of pavements on the non-interstate NHS in poor condition
		Percentage of NHS bridges classified as in good condition
		Percentage of NHS bridges classified as in poor condition
Final Rule	**National Goal**	**Performance Measure**
PM3	System Reliability	Percent of person-miles traveled on the interstate system that are reliable
		Percent of person-miles traveled on the non-interstate National Highway System (NHS) that are reliable
	Freight Movement & Economic Vitality	Truck Travel Time Reliability Index (TTTR)
	Environmental Sustainability	Total emissions reductions from CMAQ projects (for criteria pollutants and precursors, where applicable)
		Annual hours of peak hour excessive delay per capita (for urbanized areas, where required)
		Percentage of non-single occupancy vehicle travel (for urbanized areas, where required)

For each performance measure, States and MPOs are required to set targets that must be reached within a designated timespan. Federal legislation provided each MPO with the choice to either set its own performance targets or agree to support the statewide targets. To date, BMTS has opted to support the New York state targets. Note that the final three System Performance measures do not apply to BMTS.

FEDERALLY REQUIRED TRANSIT PERFORMANCE MEASURES

All recipients of public transit funds, including transit operators, states, or local authorities, must establish performance targets for safety and equipment condition, develop transit asset management and safety plans, and report on their progress toward reaching targets.

The Transit Asset Management (TAM) rule was established by the FTA on July 26, 2016 to define the term "state of good repair" and to establish minimum requirements that apply to all recipients and subrecipients of federal transit funds that own, operate, or manage public transportation capital assets.

The TAM rule specifies four performance measures, which apply to four TAM asset categories: rolling stock (vehicles that provide passenger service), equipment (nonrevenue service vehicles), facilities, and infrastructure (rail fixed guideway systems). Table 3.2 describes these measures.

TABLE 3.2 FEDERAL TRANSIT ASSET MANAGEMENT PERFORMANCE MEASURES

Asset Category	FTA established Performance Measure
Rolling Stock	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark
Equipment	Percentage of non-revenue, support-service and maintenance vehicles that have met or exceeded their useful life benchmark
Facilities	Percentage of facilities within an asset class rated below condition 3.0 on the Transit Economic Requirements Model (TERM) scale
Infrastructure	Percentage of track segments with performance restrictions

The Public Transportation Agency Safety Plan (PTASP) rule was established on July 19, 2018. Under this rulemaking, providers of public transportation systems that are a recipient or sub-recipient of FTA Urbanized Area Formula Grant Program funds under 49 U.S.C. Section 5307, or that operate a rail transit system that is subject to FTA's State Safety Oversight Program, must develop and implement a PTASP based on a Safety Management Systems (SMS) approach. Each PTASP must include performance targets based on the safety performance measures established in FTA's National Public Transportation Safety Plan (NSP).

Providers subject to the rule must annually certify a PTASP, including targets for transit safety measures that cover fatalities, injuries, safety events, and system reliability. Within the BMTS Planning Area, BC Transit is the only transit provider, and they are subject to the PTASP rule. Table 3.3 lists the required measures.

The System Performance Report required by federal law (23 CFR 450.324 (f)(4)) is found in Appendix C. It includes the current targets for all the FHWA and FTA performance measures.

TABLE 3.3 FEDERAL TRANSIT SAFETY PERFORMANCE MEASURES

Performance Measure
Fatalities
Fatality Rate
Injuries
Injury Rate
Safety Events
Safety Event Rate
System Reliability

CHAPTER 4

COMMUNITY PROFILE & TRENDS

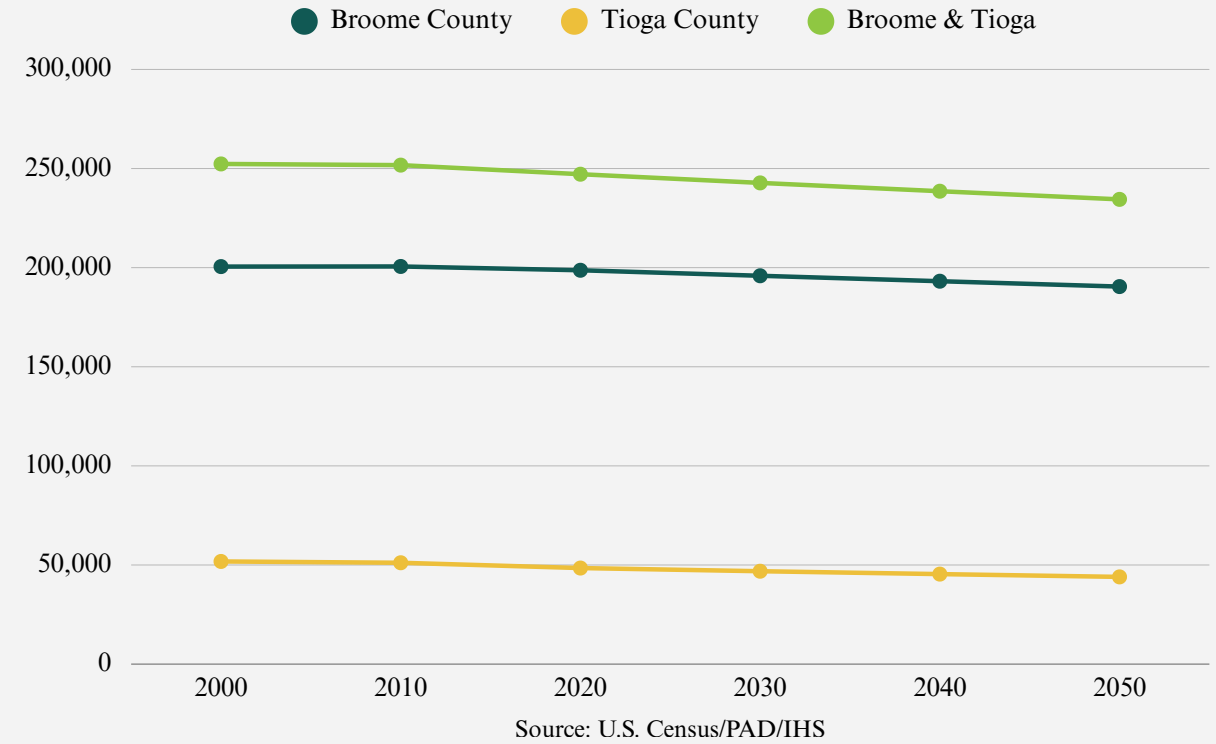
Examining the current community profile of the BMTS region and anticipating future needs helps to inform the MPO and decision makers how and where transportation investment priorities should be made. Below is a snapshot of demographic, economic, and travel characteristics that affect the transportation system.

POPULATION

Since 1980, there has been a slight but continuing decline in overall population for the BMTS region. From 2010 to 2020, the city of Binghamton and the town of Vestal experienced population growth, while the rest of the municipalities experienced population loss. To project future population trends for the extent of this plan, BMTS reviewed data from the US Census Bureau, Cornell University program on Applied Demographics (PAD) and IHS Global Insights (IHS). Because these sources use different methodologies, the forecasts were balanced. The expected population decline is 1.7% by 2050.

The BMTS MPA has a total population of 216,341. The total population of Broome and Tioga Counties combined (which includes the MPA) is 247,138.
(2020 Decennial Census)

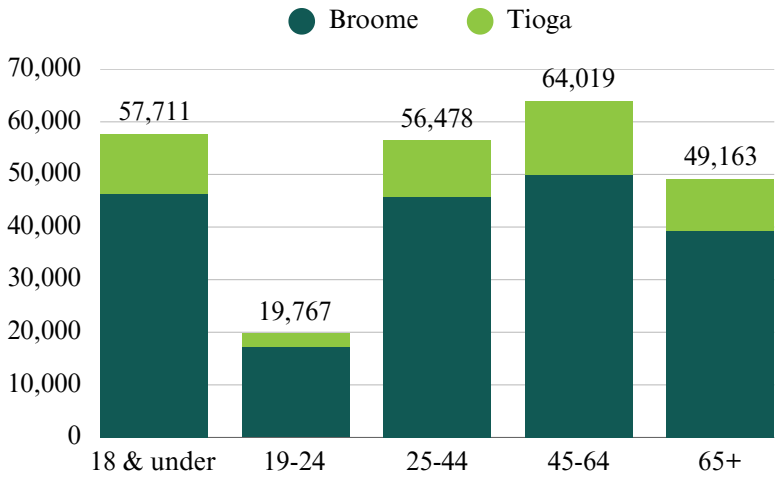
FIGURE 4.1 POPULATION TRENDS 2000 - 2050



Source: U.S. Census/PAD/IHS

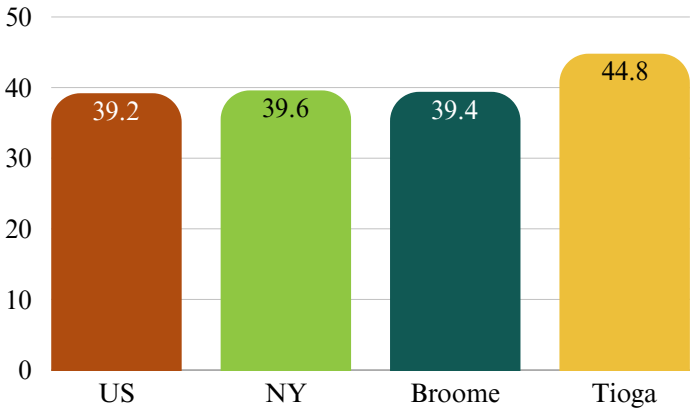
The median age in Broome County at 39.4 years is consistent with the median age of New York State and the Nation, while the median age in Tioga is about 5 years older. People 65+ currently comprise approximately 20% of Broome County's population and 21% of Tioga County's population. Population projections show that the percent of the population over 65 is projected to make up 27% of the total population by 2050, with the largest increase happening from 2020 to 2030.

FIGURE 4.2 POPULATION BY AGE



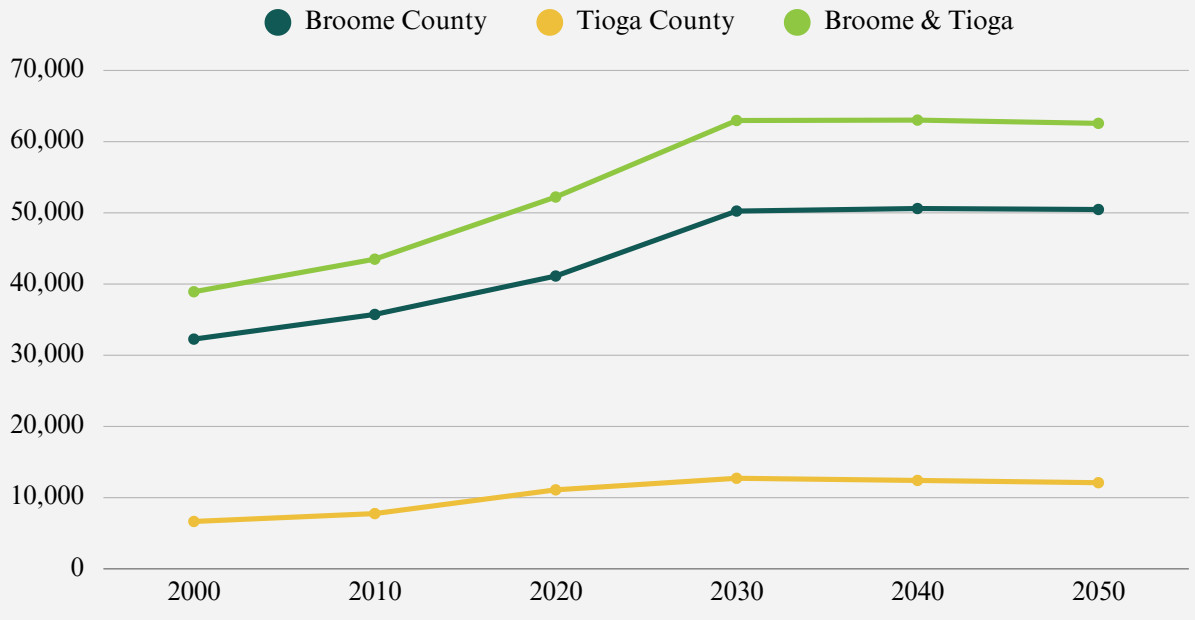
Source: 2020 Decennial Census

FIGURE 4.3 MEDIAN AGE



Source: 2023 ACS 5-Year Estimates

FIGURE 4.4 POPULATION AGE 65+



Source: U.S. Census/Cornell University Program on Applied Demographics (PAD)/IHS

EMPLOYMENT

Forecasting employment is more complex than forecasting population and requires a balanced approach when considering multiple data sources. These forecasts require obtaining underlying data on the activity of each sector of the regional economy. Education and health care are significant employers in Broome County. While total employment shows slow growth from 2020 to 2050, these sectors show the greatest potential for increase. The same is true of the service sector, particularly in Tioga County, which accounts for nearly half the region's jobs.

TABLE 4.1 EMPLOYMENT BY INDUSTRY

Broome County				
Industry Type	2024 Jobs	2034 Jobs	2024-2034 Change	2024-2034 % Change
Non-Farm	89,178	91,489	2,311	2.60%
Service Sector	95,954	98,532	2,578	2.70%
Education/ Health Services	17,154	18,471	1,318	7.7%
Tioga County				
Industry Type	2024 Jobs	2034 Jobs	2024-2034 Change	2024-2034 % Change
Non-Farm	14,129	14,963	834	5.90%
Service Sector	13,880	14,757	877	6.30%
Education/ Health Services	1,152	1,192	40	3%

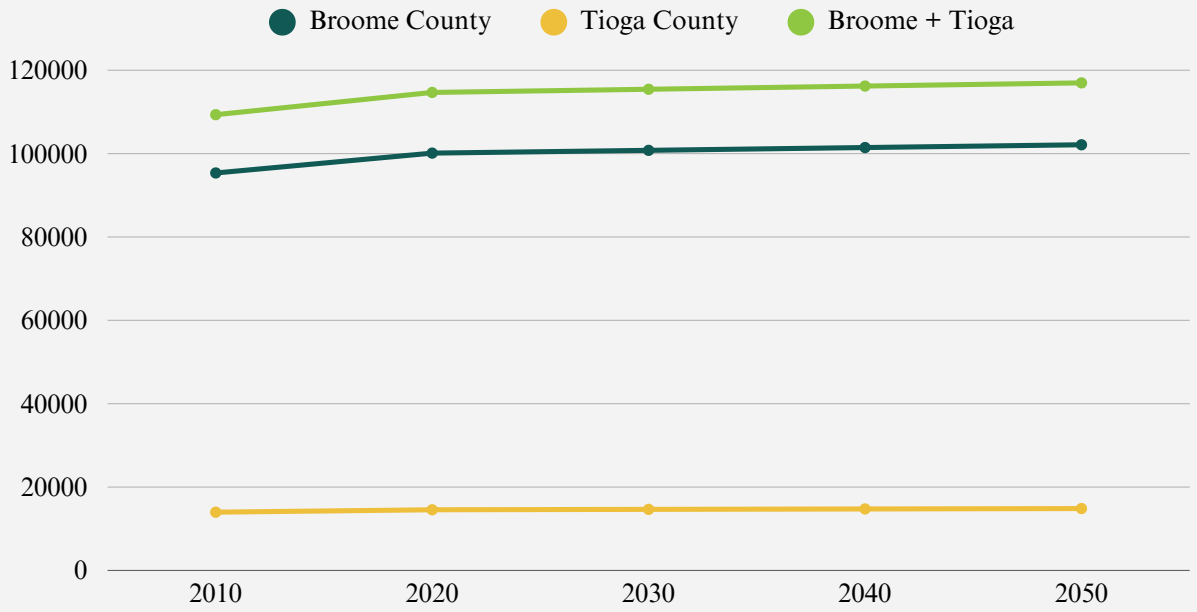
Source: Lightcast

Employment forecasts from IHS and Lightcast, a company that combines data from a wide range of government agencies, including the Bureau of Labor Statistics and U.S. Census Bureau, with information from online job postings, company websites, and social profiles to provide insights into workforce demand, were reviewed for this plan update. Lightcast forecast a nearly 5 percent increase in employment through 2034, whereas IHS shows a decline of 5 percent through 2050. After consultation with the New York State Department of Labor and the LRTP Steering Committee, Lightcast was chosen as the preferred data source for this plan update since it shows an increase in education and health care consistent with historic trends in the BMTS region. However, Lightcast only projects to 2034 while IHS projects 2050 the horizon year of this plan update. Therefore, the Steering Committee decided to take a balanced approach between the two sources and project overall employment growth at 2 percent through 2050 (Figure 4.5).

> More jobs are necessary in the urban areas of the county to make alternative forms of transportation viable for the majority of people.
>
> -BMTS OUTREACH SURVEY RESPONSE

> Major employers just outside the county are only accessible by car. Walking or cycling to these places is unreasonable but having reliable and consistent buses isn't.
>
> -BMTS OUTREACH SURVEY RESPONSE

FIGURE 4.5 TOTAL EMPLOYMENT (NON_FARM)



Source: Lightcast and IHS Global Insight

TRAVEL TRENDS

The BMTS region has a robust network of interstate and limited access highways and arterial roads that provide today's population with low commute times and little congestion. Congestion that does occur is constrained to highway interchanges and retail corridors during peak hours.

The average commute time is 19.5 minutes Broome County and 24 minutes in Tioga County. Figure 4.5 shows the commute time to work as a percentage of working residents for each county. Only 17% of those commuting for work in Broome County have a commute time over 30 minutes whereas in Tioga County, its 35%.

FIGURE 4.5 COMMUTE TIME TO WORK

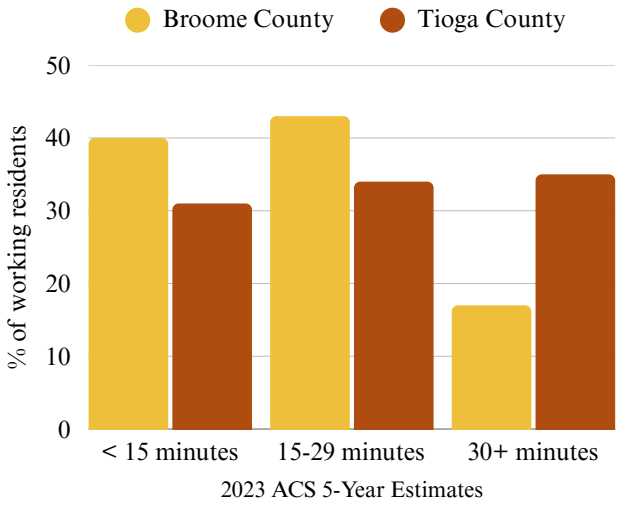


TABLE 4.2 MEANS OF TRANSPORTATION TO WORK

Means of Transportation to Work	
Car, truck, or van	84.9%
Public transportation (excluding taxicab)	1.6%
Walked	3.0%
Bicycle	0.6%
Taxicab, motorcycle, or other means	1.4%
Worked from home	8.7%

Source: 2023 ACS 5 Year Estimates

318 Survey Respondents said their primary mode of transportation is by passenger vehicle and 321 said that it is very easy to travel by that mode.

The majority of people travel by personal vehicle to work in the BMTS region. The short commute times by car and relatively low congestion contribute to the quality of life in the region for those who have access to a personal vehicle.

The 2018 BMTS household travel survey yielded a great deal of information about personal travel by residents of the region. Car travel for all trips was the predominant mode, accounting for 83% of trips, which is consistent with mode share for commute trips shown in table 4.2. The travel survey also showed that low-income households drive less, but walk and use transit more. A large proportion of walk trips are people walking to or from a bus stop or other mode.

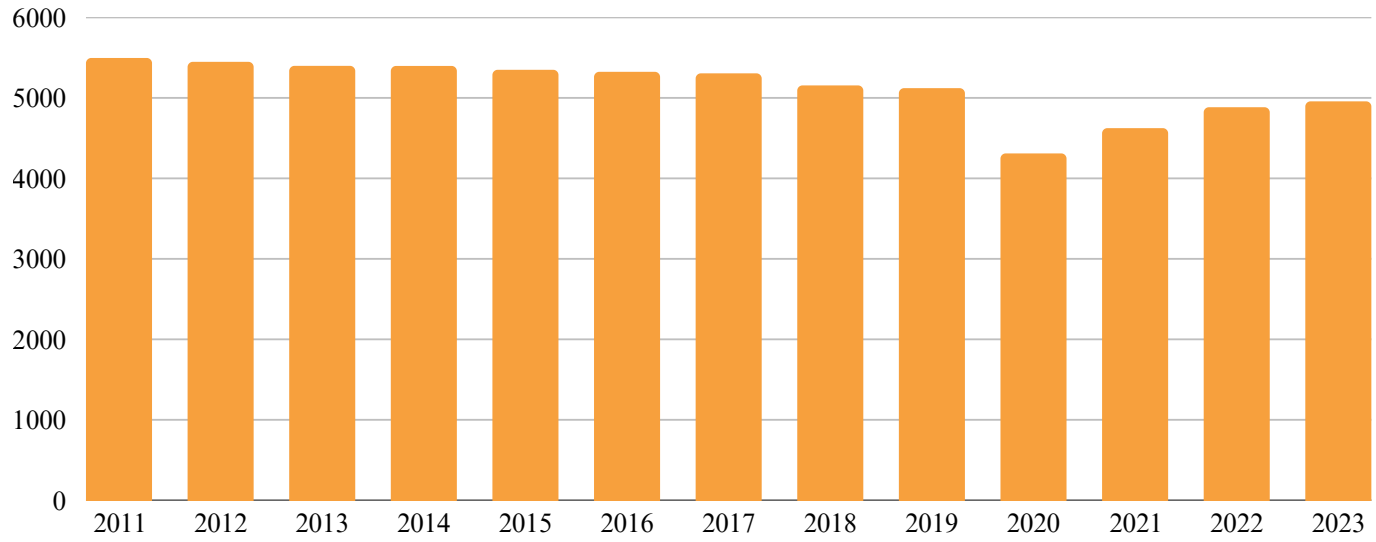
TABLE 4.3 HOUSEHOLD TRAVEL BY MODE SHARE

Mode	All Households	Households with income < $25,000
Car, truck, or van	83%	60.9%
Public transportation (excluding taxicab)	2.1%	4.1%
Walk (including walk to other mode, ex. bus stop)	11.5%	27.8%
Bicycle	0.4%	1.3%

Source: BMTS Household Travel Survey, 2018

Vehicle Miles Traveled (VMT) is the key measure of utilization of the region's roadways. Data shows there has been a modest decline in VMT for the BMTS planning area from 2011 through 2019, with a sharp decline in 2020. Since 2020, VMT has steadily increased.

FIGURE 4.6 VEHICLE MILES TRAVELED, BMTS MPA

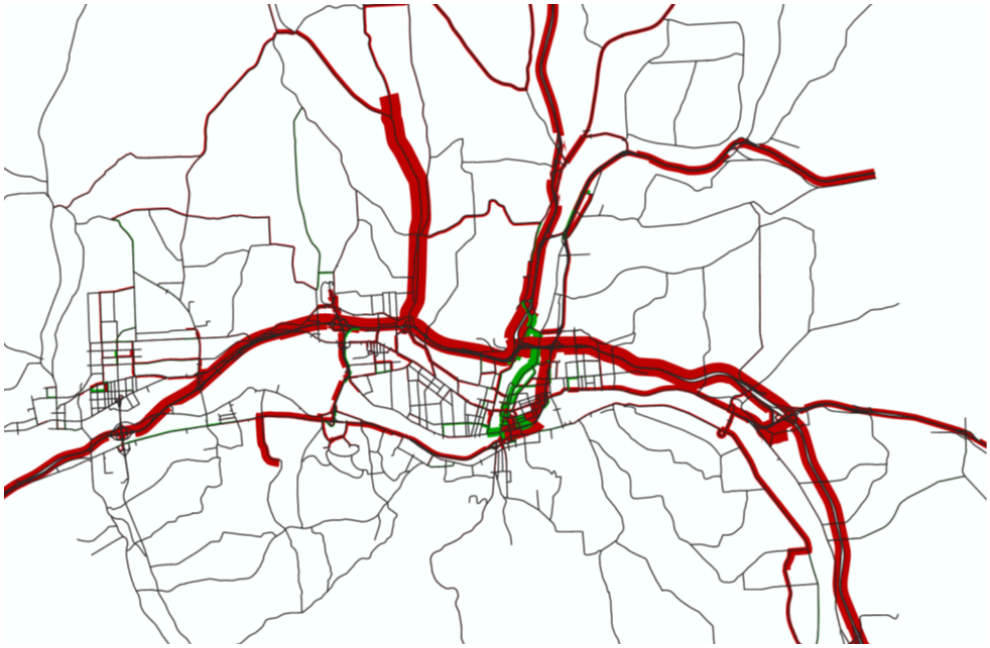


Source: NYSDOT Highway Services Data Bureau

BMTS maintains a travel demand model for the BMTS planning area. It is a traditional model that uses population and employment data on a zonal basis to forecast travel after it is calibrated to current traffic volumes on the roadway network. The BMTS travel demand model uses a variety of data to forecast future trip generation rates and project land use inputs, which are then used to estimate the levels of traffic and travel demand projected for the future.

The red lines in Figure 4.7 show where an increase in traffic is expected, while the green lines show a projected decrease. Traffic volumes on major roadways are anticipated to increase. External trips are anticipated to have a slightly higher growth rate, and major state highways reflect the most growth. Other localized large increases in traffic are associated with anticipated developments. Volume shifts will primarily be in the downtown Binghamton area in association with the upcoming Rt. 363 Gateway project.

FIGURE 4.7 FUTURE PROJECTION OF TRAFFIC VOLUMES (2050)



CHAPTER 5

THE TRANSPORTATION SYSTEM

This chapter is an overview of the current transportation system in the BMTS region. It includes roadways, bridges, traffic signals, pedestrian and bicycle facilities and public transportation. This system reflects a substantial investment of federal, state and local capital. Historically, capital investment in the BMTS region has emphasized the importance of preserving the existing transportation system. More recently, investments have been made to improve multi-modal options, while still emphasizing the preservation of the existing system.

When investing in assets, taking a system approach results in a better return on the capital investment. A system approach shows how state and local roads function together to meet travel needs. This approach is in line with New York State Department of Transportation's (NYSDOT's) approach to managing the assets it owns. Their central philosophy of improving safety is achieved by following their "Forward Four" principles (Figure 5-1).

FIGURE 5.1 NYSDOT FORWARD FOUR PRINCIPLES

ROADWAYS

New York State, Broome and Tioga counties, the City of Binghamton, and the urban towns and villages are each responsible for the roadways that they own. Table 5-1 presents the distribution of total roadway lane mileage in the BMTS region and also includes Federal Aid (FA) eligible lane miles by ownership, which is the primary focus of this plan.

TABLE 5.1 BMTS REGION LANE MILES & FEDERAL AID LANE MILES BY OWNERSHIP

Ownership	BMTS Planning Area	% by owner	Total Federal Aid Lane Miles	% by owner
NYSDOT	870.52	19.89%	865.76	61.7%
County	604.31	13.80%	300.42	21.4%
Town	2,308.95	52.74%	103.28	7.3%
City or Village	550.75	12.58%	134.89	9.6%
Other	43.22	0.99%	-	-
Total	**4,377.75**	**100.00%**	**1404.35**	**100%**

Source: 2020 NYSDOT Roadway Inventory System

Federal aid is available to fund projects located on the Federal Aid System. Roadways are categorized into functional classes based on their usage and role within the roadway network. Roadways that are classified as rural minor collectors and local roads are not eligible for federal aid funding, with some limited exceptions.

Pavement conditions of local federal-aid-eligible roads have been rated by BMTS utilizing Vaisala RoadAI, an artificial intelligence driven software that identifies road surface deficiencies from video recorded while driving the roadways. This information is shared with local governments to use when developing their annual paving programs and is reviewed when programming capital projects for the TIP. The intent is for local municipalities to use this data to guide investment on the Federal Aid system to keep the entire system in a state of good repair. NYSDOT also uses an automated system to collect data on pavement conditions for state-owned roadways. This information is used for managing pavement assets on the state system.

As shown in Figure 5.2, approximately 46% of all FA eligible, state-owned roadways in the MPA are either in excellent or good condition and approximately 68% of the non-state roadways are in excellent or good condition. Although there is still a need for ongoing maintenance and repair, most roadways on the Federal Aid System are in fair or better condition. In total, out of all surveyed roads, the majority were rated as either excellent or good as shown in Figure 5.3.

FIGURE 5.2 PAVEMENT CONDITION BY LANE-MILE FOR FEDERAL AID ELIGIBLE ROADS

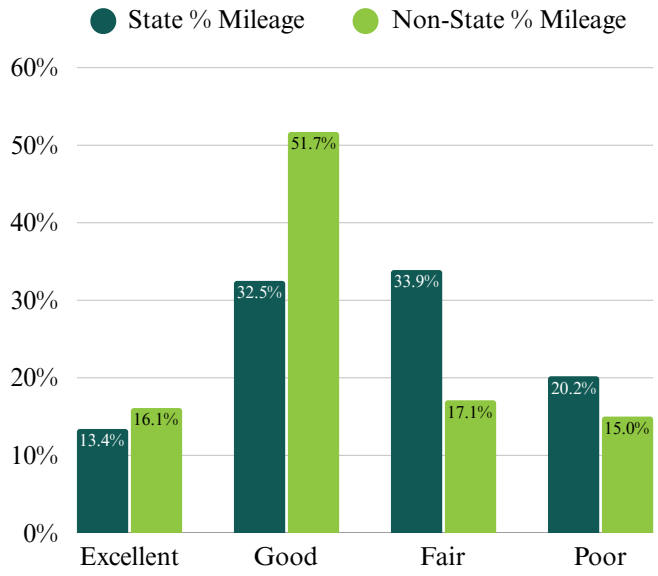
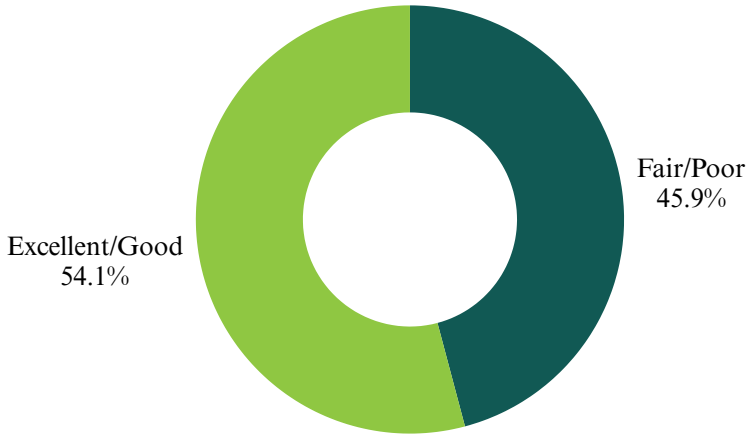


FIGURE 5.3 TOTAL MILEAGE EXCELLENT/GOOD VS FAIR/POOR

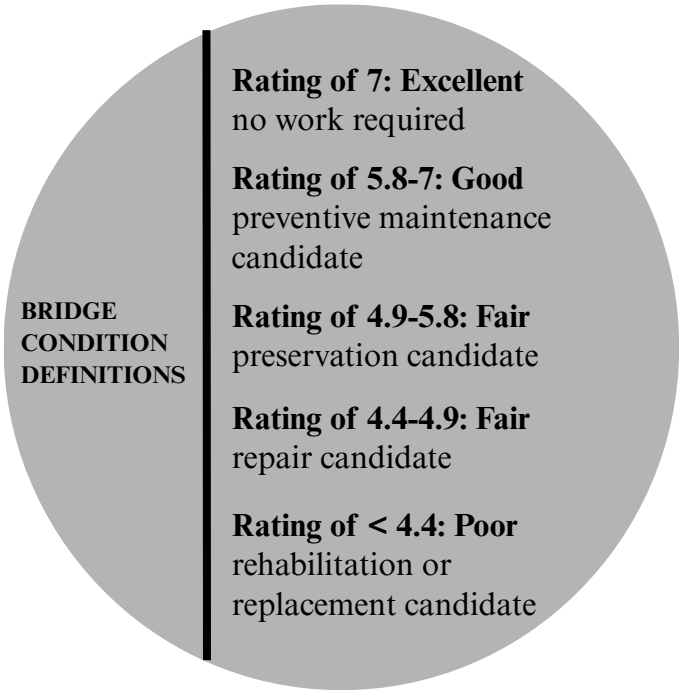


69% of survey respondents said maintaining our existing infrastructure was a main transportation challenge and 71% said that maintaining all elements of the transportation system in a state of good repair was a main objective.

BRIDGES

The BMTS planning area includes 476 publicly owned bridges. NYSDOT inspects them at least once every 24 months. Bridges are rated on a numerical scale of 1 to 7. The condition rating is a composite of scores for different elements of the bridge comprising the deck, substructure, and superstructure. The inspection also accounts for different bridge designs, including steel girder with concrete deck, prestressed concrete, and steel truss. This makes the condition ratings comparable, although the causes of deficiencies and the work required to correct them will vary.

FIGURE 5.4 BRIDGE CONDITION DEFINITIONS



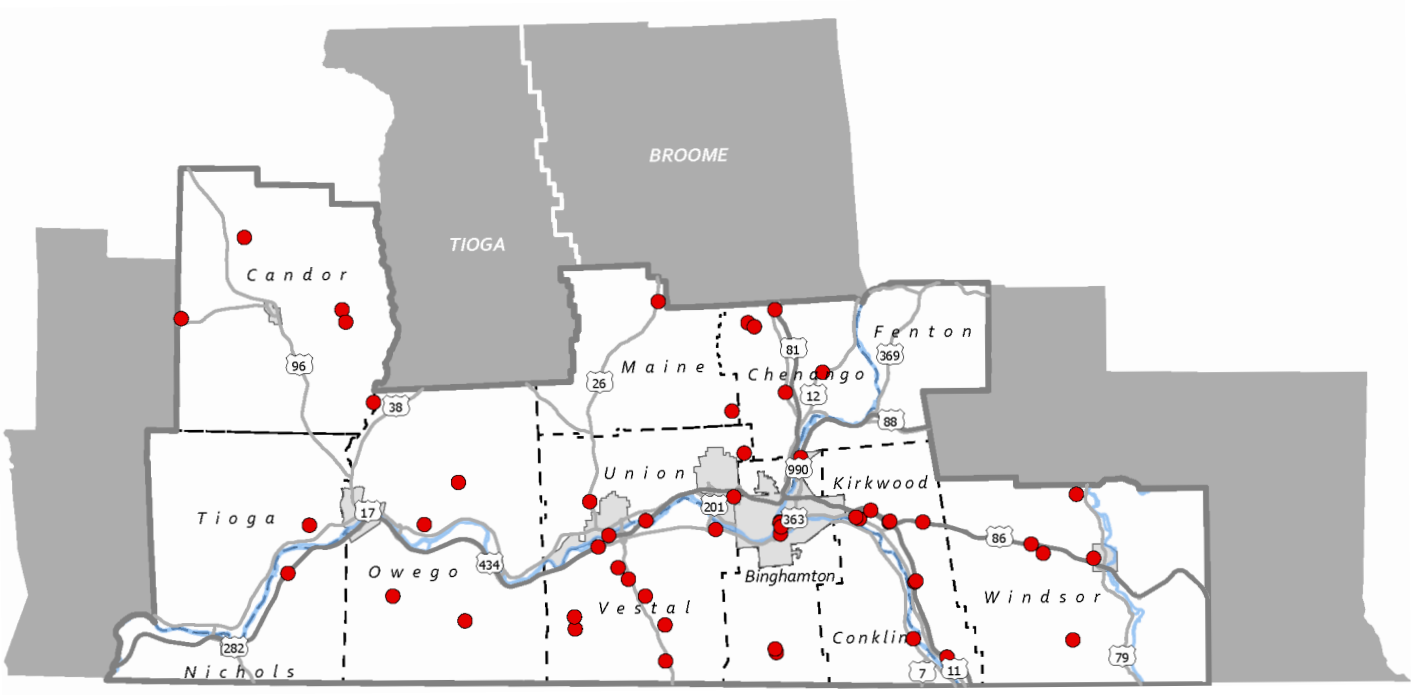
Of the bridges within the BMTS Planning Area, 74% are within Broome County and 26% are within Tioga County. In terms of ownership, 55% are NYSDOT-owned structures, 25% are county-owned, and 20% are locally-owned (Table 5.2, Figure 5.5). Of concern are the over 12% of the bridges in the region that are rated Poor. FHWA defines this bridge condition as one in which specific elements of substructure, deck, or superstructure are in poor or worse condition. They note that this does not necessarily make a bridge unsafe, but these bridges are candidates for repair or rehabilitation work or replacement. It is important to note that the percentage of bridges in "poor" condition has decreased by over 10% since the 2045 plan.

TABLE 5.2 BRIDGE CONDITION BY OWNER (2023)

Owner	# of Bridges	Average Condition Rating	# Poor	% Poor
NYSDOT	260	5.4	19	7.31%
City	15	4.88	2	13.33%
County	120	5.73	13	10.83%
Town	72	5.31	21	29.17%
Village	9	5.73	0	0.00%
Total	**476**	**5.41**	**55**	**12.13%**

Source: New York State GIS Clearinghouse, NYSDOT Bridges and Culverts 2023

FIGURE 5.5 BRIDGES WITH POOR CONDITION RATING (2023)



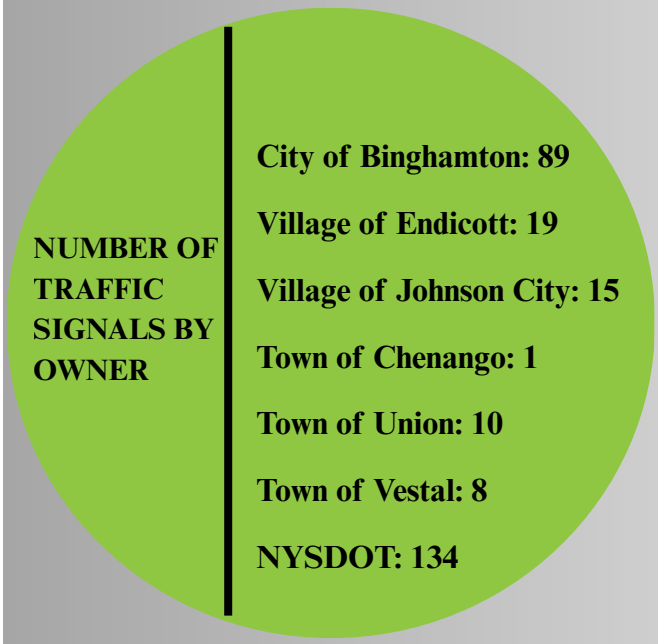
Source: New York State GIS Clearinghouse, NYSDOT Bridges and Culverts 2023

TRAFFIC SIGNALS

Traffic signals are crucial for the movement and safety of all users within the highway network. They assign right-of-way of movement for motor vehicles as well as pedestrians and bicyclists. Traffic signals also affect efficiency of travel, as the timing of signals impacts average delays for each approach or turn lane at an intersection.

The BMTS region includes 276 signals (Figure 5.6). The signal owners are responsible for maintaining their signals. All of these signals are located on the Federal Aid System, with at least one leg of the intersection being classified as a Collector or above and are eligible for federal aid. NYSDOT and the municipalities within the BMTS region have routinely invested in replacing aging signals with new technology. Signals are expensive, and with limited funding available, BMTS has adopted a policy of only using federal funds to replace signals that meet signal warrants as outlined in the Manual on Uniform Traffic Control Devices (MUTCD).

FIGURE 5.6 NUMBER OF TRAFFIC SIGNALS BY OWNER



Traffic Signal Replacement Project in the Village of Endicott

PEDESTRIAN AND BICYCLE FACILITIES

Walking and cycling are recognized as important modes of transportation in the region. Continued engineering and design improvements applied to the transportation system to safely accommodate pedestrians and cyclists must be combined with education, encouragement, and enforcement efforts to be effective.

TWO RIVERS GREENWAY

Multi-use trail networks that are separated from motorist traffic are an important component of a transportation system that provides for safe and comfortable pedestrian and bicycle travel. What has become the Two Rivers Greenway was first outlined in 1999 in the Binghamton Metropolitan Greenway Study. The greenway is intended to be a contiguous multiuse trail system that parallels the Susquehanna and Chenango rivers and leverages existing facilities like the trail system in Otsiningo Park.

Almost 17 miles of the Two Rivers Greenway have been completed to date with an additional 1.7 miles currently under construction. Figure 5.7 shows the existing Two Rivers Greenway segments (including those currently under construction).

Having data on trail use is important for supporting decisions on constructing additional segments. BMTS currently maintains 16 pedestrian and bicycle counters along the Two Rivers Greenway that provide a measure of activity at each of the count locations.

S. Washington Street Segment of the Two Rivers Greenway

FIGURE 5.7 TWO RIVERS GREENWAY

PEDESTRIAN FACILITIES

Sidewalks are most prevalent in the City of Binghamton and villages within the Urban Area, but significant gaps remain, more so with increased distance from the municipal centers. Some gaps are in critical locations such as along BC Transit routes and near schools. A comprehensive list of priority locations should be developed to inform future projects. Municipalities typically make sidewalk maintenance the responsibility of the abutting property owner. This can result in poor maintenance over time. Further, sidewalks often become impassable when snow and ice is not removed by property owners.

Enhancements have been made throughout the BMTS Area to improve pedestrian safety at intersections and midblock crossings. As signals are replaced, most locations now include countdown pedestrian signals. In some locations, audible pedestrian signals are also being installed. Rectangular Rapid Flashing Beacons (RRFB) and Pedestrian Hybrid Beacons (PHB) have been installed at unsignalized or midblock crossings where greater safety measures for pedestrians are needed.

Pedestrian Hybrid Beacon

Rectangular Rapid Flashing Beacon

BICYCLE FACILITIES

Street design, traffic volume, and automobile speed contribute to a rider's safety and comfort level while riding a bicycle. A few bicycle lanes have been installed in various municipalities across the BMTS region, but they are not connected or part of a greater network. Other on-road facility design methods found in the BMTS region are:

- Shared use lanes (sharrows): Application of pavement markings (a bicycle symbol and double chevrons) indicating that the lane is shared by both bicycles and motor vehicles.
- Wide curb lanes (WCLs): The lane nearest the curb is wider than a standard lane, allowing both motor vehicles and bicycles to share the space. A usable pavement width of 14 ft. is desired for wide curb lanes.
- Designated shoulders: Designated shoulder width of at least 5 ft. in urban areas and 6 ft. in rural areas.

For bicycle lanes, sharrows, WCLs and shoulders, maintenance of these facilities, including refreshing of pavement lines and symbols along with street sweeping, is key to their usability and effectiveness. Generally maintenance responsibility of these facilities is performed by the municiplaity that has jurisdiction over the roadway.

Bike lanes separated from motorist traffic by pavement markings, flexible bollards, on-street parking, curbing, or another type of physical barrier have been shown to significantly increase bicyclist comfort levels and safety. Where on-road bicycle facilities exist, the potential for conflict with a motor vehicle is lessened, thus making the system safer and more efficient for all modes.

The BMTS area has multiple signed bike routes including Local Bike Routes 1 through 7 and NYS Bike Routes 11 and 17. These bike routes are geared toward more experienced commuting and touring cyclists.

Lack of good routes or facilities (no sidewalks or bike lanes) was most cited as the primary barrier to walking and biking.

> "Bicycle infrastructure is generally poorly designed, and preferences the needs of drivers over the safety of cyclists."
>
> -BMTS OUTREACH SURVEY RESPONSE

BIKESHARE

Bikeshare systems provide a mobility option without the need for bicycle ownership. The BMTS region has one bikeshare program, which is run by the Binghamton University Transportation and Parking Services in partnership with Koloni. It offers free bicycle use to students, faculty, and staff for two hours a day, and $5 an hour beyond the two-hour time period. The program currently has 30 bikes and four docking stations on the Vestal campus.

Photo by Jonathan Cohen, Binghamton University Bikeshare

Source: Binghamton University

BC Transit investigated the feasibility of a regional bikeshare service in Broome County in 2024. After reviewing the sole response to a Request for Proposals, it was determined not to move forward at this time with the bikeshare service since it would require a significant amount of County funding to subsidize operations.

PUBLIC TRANSIT

Public transit fosters livable, sustainable, and economically vibrant communities. Public transit can contribute to a reduction in traffic and serve as a connection for users to jobs, education, and essential services. Public transit provides affordable transportation for all, including those without cars, students, seniors, non-drivers and low-income individuals. Public transit in the BMTS region contributes positively to our transportation system and to many of our LRTP goals such as empowering local business by supporting access to and for the workforces and by providing users the ability to access key destinations within and beyond our region. Below is an overview of the various transit services currently operating in the BMTS region, contributing to the region's multi-modal transportation network.

FIXED ROUTE

Broome County Transit (BC Transit) operates the only fixed route system and complimentary demand response (curb-to-curb) service in the BMTS region. BC Transit's fixed route service operates 18 routes with most originating, terminating, or passing though the Greater Binghamton Intermodal Transportation Center in downtown Binghamton. Weekday service typically runs from 6 AM to 6PM, with popular routes ending at 9PM. Routes generally run every 40 minutes. Select routes such as Route 51 (K-commuter), Route 53 (Corporate Park), and Route 57 (Shoppers Special), have limited-service hours and frequency. Various routes also maintain weekend operations but with limited-service hours. Riders of the fixed route system can pay for the fare on board with cash, through bus passes and ride cards available for purchase at various area locations, or with the GoPass app or smart card. All buses have bike racks on the front. Each rack can accommodate two bikes.

BC Transit uses 45 buses to operate their fixed route service. They began transitioning to zero emissions vehicles (ZEVs) with their most recent bus purchase to comply with NYS Executive Order 22 that requires that all light-duty non-emergency vehicle fleets be zero-emission by 2035 and all medium- and heavy-duty vehicle fleets be ZEVs by 2040. BC Transit is expecting the delivery of six battery operated electric buses this fall and an additional seven in 2026.

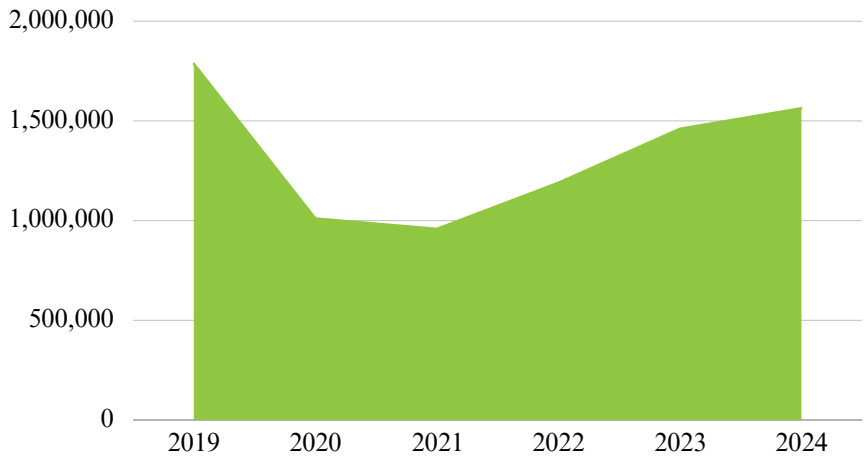
BC Transit Fixed Route Bus Stop Signage

> Bus routes are good, as someone without a car, but expanding their operating schedule to include earlier/later times would be great.
>
> -BMTS OUTREACH SURVEY RESPONSE

BC Transit recently completed a project that redesigned and replaced signage at all of their designated fixed route bus stops. This project also doubled the number of shelters along the fixed route system.

Transit ridership is an important performance metric that helps to inform investment decisions and plan for future ridership. Like many transit agencies across the country, BC Transit's fixed route service saw a sharp decline in ridership in 2020 and 2021 during the COVID-19 pandemic. Since then, numbers have steadily increased with ridership in 2024 at approximately 90% of what it was pre-pandemic.

FIGURE 5.8 BC TRANSIT FIXED ROUTE RIDERSHIP



Demographic analysis, conducted by BC Transit, showed that generally, transit-dependent people are being well served by the existing route locations. Transit-dependent populations are generally described as those who rely on public transportation as their primary means of transportation due to a lack of access to personal vehicles or other mobility options.

DEMAND RESPONSE

BC Lift/OFA Mini-Bus

Federal law requires that fixed route service providers employ a demand response service for persons with disabilities who cannot access the fixed route system. BC Lift is an on-call, curb-to-curb service that fills this role in the BMTS region. As federally mandated, all BC Transit routes must provide this service within a three-quarter mile radius of all fixed route service. BC Transit has implemented a pilot project increasing this radius to one and a half miles and will assess its effect once completed this fall.

BC Lift also serves clients of the Broome County Office for the Aging as the OFA Mini-Bus. OFA clients may receive an identification card to access the service regardless of disability status.

BC Country

Broome County also operates a curb-to-curb, demand response service targeting rural county residents. This limited service operates Monday through Friday and provides trips to and from six rural zones to the urban core through a reservation system.

BC Lift Vehicle

MICROTRANSIT

BC Transit plans to implement a microtransit service by the end of 2025. Microtransit is a flexible, shared-ride service through which users request and pay for transportation (typically a small van or shuttle) through a smartphone application. Microtransit's pickup and drop-off stops are predefined to allow better optimization of service. This new service will initially focus on the Kirkwood Conklin industrial area.

OFF CAMPUS COLLEGE TRANSPORT (OCCT)

OCCT serves Binghamton University students, faculty, and staff. It is operated by university students and uses buses owned and maintained by the university. OCCT operates on a fixed route basis, with routes that connect the main campus in Vestal to the University Downtown Center in Binghamton and the Health Sciences Campus in Johnson City. Routes also serve various student housing developments and other Binghamton, Johnson City, and Vestal destinations. Some overlap exists with BC Transit routes. OCCT also operates an internal campus shuttle.

TIOGA COUNTY

The only transit service currently operating in Tioga County is Chemung County's C Tran service that operates a single fixed route between Elmira and Owego along the State Route 17 / Interstate 86 corridor. It serves a limited number of destinations, including one in Nichols and three stops in Owego. It operates on a limited schedule of four runs each day, Monday through Friday.

INTERCITY BUS SERVICE

Intercity bus carriers serve the region, operating from the Greater Binghamton Transportation Center. Service consists of six commercial carriers: Coach USA, FlixBus, Greyhound, Megabus, OurBus, and Trailways. These carriers provide service to a variety of destinations throughout upstate NY as well as downstate NY, NYC and beyond.

COORDINATED PLAN

BMTS works with transit providers and human service organizations to connect funding opportunities and service optimization, as indicated in the BMTS Coordinated Public Transit – Human Services Transportation Plan, recently updated in 2024. The Coordinated Plan is a Federal Transit Administration (FTA) planning requirement involving transportation provider and human service agency collaboration to facilitate improvements in the efficacy of transportation services. The Coordinated Plan identifies transportation needs of individuals with disabilities, older adults, low-income individuals, outlines strategies to meet those needs, and prioritizes transportation services for funding and implementation.

MOBILITY MANAGEMENT

Mobility management is an approach to designing and delivering transportation services that starts and ends with the customer. It begins with a community vision in which the entire transportation network—public transit, private operators, cycling and walking, volunteer drivers, and others—works together with customers, planners, and stakeholders to deliver the transportation options that best meet the community's needs.

Getthere is the primary provider of mobility management services in Broome and Tioga counties. It is a program of the Rural Health Network of South-Central New York serving Broome, Tioga, Chenango, Otsego, and Delaware counties. Along with its partners, it seeks to improve transportation access and coordination in the region—particularly its rural communities. Getthere provides trip-planning and referral services, transportation education, and travel training for individuals.

The Broome County Department of Public Transportation and Tioga Opportunities, Inc. also perform mobility management services by providing information and referring consumers to other transportation providers when their respective services are not able to meet the consumer's needs.

CHAPTER 6

FUTURE TRANSPORTATION SYSTEM NEEDS

An important step in developing the LRTP was to collect data and information, analyze, and identify transportation needs in the BMTS region. BMTS also used the information received from outreach and engagement activities to determine needs. Many needs in the region lend to the inclusion of Complete Streets across the MPA. Complete Streets are designed to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Complete Streets also encourages the development of neighborhood-scale commercial and mixed land use. Complete Street design elements are context sensitive. For instance, while bicycle lanes and sidewalks might be appropriate in an urban setting, shoulders may be better suited along a rural roadway.

ROADWAY NEEDS

It is important to strategically invest resources in the regional transportation system to move toward a state of good repair. This is a continuous challenge due to the large gap between needs and available funding. Proper maintenance strategies for fair pavements can extend their service life and prevent them from deteriorating to a poor rating. Once a pavement is in poor condition, treatments to restore it are more costly.

Roadway design is important as it can influence how a corridor is used. Roadway design varies significantly between rural and urban areas due to differences in land use and travel needs. As roadways are repaved and reconstructed, improvements for all modes should be considered based on context.

BRIDGE NEEDS

To best utilize the available funding, investments in bridges must be strategic. BMTS recognizes the importance of bridge maintenance as a critical factor in having a safe and efficient transportation system. Over the years, numerous bridge projects have received funding through the TIP. BMTS will continue to include bridge maintenance as an important component of project development efforts.

TRAFFIC SIGNAL NEEDS

BMTS periodically evaluates signals to determine if they continue to meet MUTCD warrants as traffic conditions change. Those that do not are recommended for removal. Leaving unwarranted signals in operation creates a safety hazard, as drivers may come to not respect a red light. It also contributes to the maintenance burden of the owner. Similarly, increased vehicle traffic or pedestrian use may warrant installation of a signal at a new location.

When signals are removed, they can be replaced with signage, thus reducing maintenance costs. This allows limited funds to be more strategically invested in the remaining signalized intersections.

PEDESTRIAN NEEDS

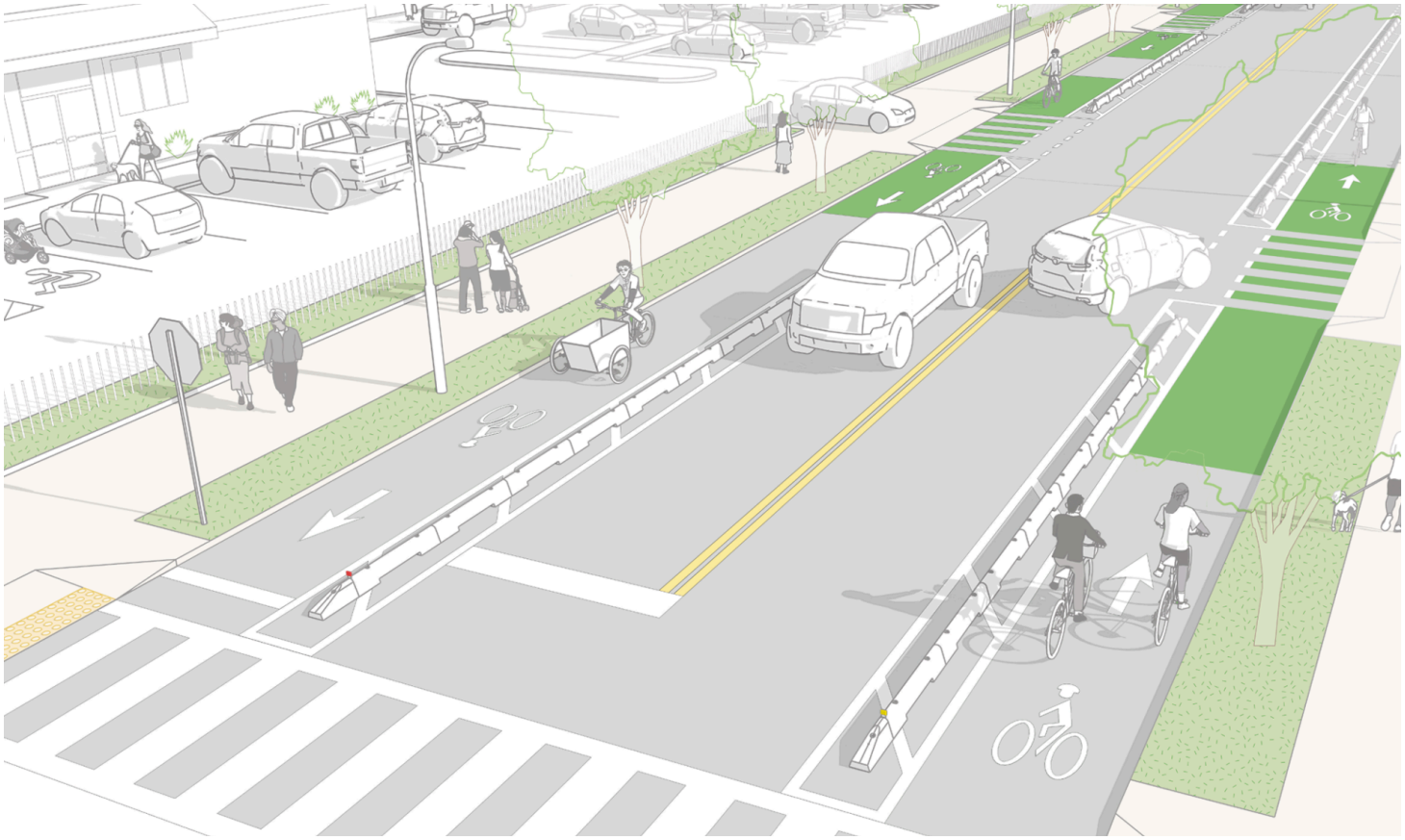
- Form a continuous sidewalk network in urban areas. Immediate needs include improving sidewalk access to schools, parks, commercials areas, and BC Transit stops.
- Conform to the recently updated Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG). The U.S. Access Board has published new guidelines for public rights-of-way, addressing sidewalks and streets, curb ramps, pedestrian signals, and on-street parking. These are designed to ensure accessibility where pedestrian ways are newly built or altered.
- Support ongoing sidewalk maintenance, including removal of ice and snow. New York State Highway Law places the responsibility for sidewalk maintenance on the roadway owner. Local governments are permitted to adopt ordinances that transfer that responsibility to the abutting property owner; this is most frequently the case. There are alternatives that transfer the responsibility from the property owner to the municipality.
    - The City of Ithaca created a program of Sidewalk Improvement Districts where property owners are assessed an annual fee. There is a lower fee for one- and two-family residences, and a higher fee that adds lot frontage and building size for others. The City collects the fees and funds an annual sidewalk repair program.
    - The Town of Chenango has implemented a program where property owners within a designated Commercial District are assessed an annual fee for seasonal snow removal by the Town Board based upon the number of linear feet of property abutting each sidewalk area.
- Provide the appropriate level of traffic control devices where pedestrians are crossing streets, based on the context and characteristics of the roadway, to maximize safety. These can include: high visibility crosswalks, raised crosswalks, curb extensions, installations of midblock crosswalks, RRFBs, or PHBs.
- During pavement rehabilitation projects, incorporate low-cost Complete Streets elements, such as painted crosswalks or signage, where appropriate.
- During new construction or reconstruction of roads and bridges, more extensive Complete Street improvements should be included, where appropriate.
- Complete the Two Rivers Greenway System.

> There needs to be more sidewalks for safe walking. Vestal parkway should have sidewalks/walking paths the full length. There should be sidewalks around the major shopping areas in Vestal.
>
> -BMTS OUTREACH SURVEY RESPONSE

BICYCLE NEEDS

- Inventory existing bicycle facilities and identify opportunities for new facilities, including bicycle parking.
- Encourage a consistent, system-wide application of bike lanes, sharrows, and shoulders, and identify a system of bicycle-safe streets so that cyclists can navigate safely and drivers become more aware of the likelihood of cyclists on certain roadways.
- Encourage installation of separated bike lanes on roadways with higher traffic volumes.
- Complete the Two Rivers Greenway system.
- Support additional trail development beyond the Two Rivers Greenway that will create a fully regional trail network.
- Expand bikeshare beyond the Binghamton University system with allowances for the safe inclusion of e-bikes that serve new customers and expand the effective range of bicycle trips.
- During pavement rehabilitation projects, incorporate low-cost Complete Streets elements, such as painted bike lanes or shoulders, where appropriate.
- During new construction or reconstruction of roads and bridges, more extensive Complete Street improvements should be included, where appropriate.

> There needs to be protected bike lanes in this area.
>
> -BMTS OUTREACH SURVEY RESPONSE

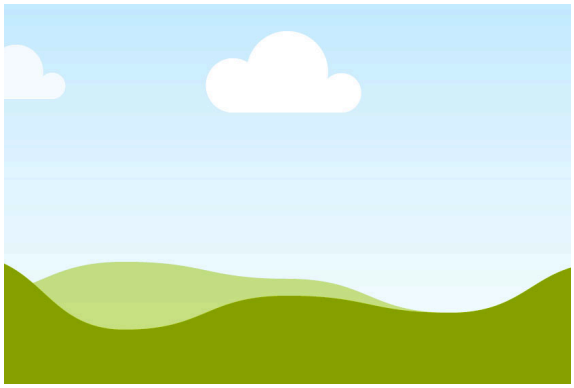


Source: NACTO

TRANSIT NEEDS

Though BC Transit does adequately serve transit users in the Binghamton area, there are considerable improvements to be made to improve passenger experience and increase ridership. Through collaboration with Broome County Department of Public Transportation, BMTS has identified the following needs:

- Increase frequency of fixed route service; Increasing fixed route service frequency could lead to an increase in ridership due to increased convenience.
- Expand hours of operation to better serve work force/shift work; Current service hours accommodate 1st shift workers, but not those with untraditional hours. Expanded service hours could help expand access to shift workers and service workers.
- Planning and implementation of initiatives to transition the fixed route fleet to ZEVs;
  - NYS Executive Order 22 directs state agencies to be more sustainable. The E.O. also requires that all light-duty non-emergency vehicle fleets be zero-emission by 2035 and all medium- and heavy-duty vehicle fleets be ZEVs by 2040. Transitioning to ZEVs will curb emissions, modernize BC Transit's fleet, and comply with state priorities.
- Implementing/enhancing communication technologies to improve service and passenger experience; BC Transit currently does not accept real-time payment for fares. Implementing this technology will streamline bus usage and enhance passenger convenience.
- Addition of passenger shelters to increase accessibility, security and ease of use; BC Transit recently completed a project that doubled the number of bus shelters at stops along their fixed route system but there is still a need to add more. Shelters enhance the overall experience for public transit users and provide a safe, designated location to wait for the bus.
- With the aging population, the demand for mobility services (transit and paratransit) for seniors is expected to increase significantly; Older adults are more likely to reduce or cease driving due to health, safety, or financial reasons, creating a heightened reliance on accessible and reliable transportation alternatives to maintain their independence and quality of life.
- Increase in available funding for capital bus purchases; Keeping buses in a state of good repair while reducing the environmental impact will be dependent on the continued availability of discretionary and formula grant funding
- Difficulty hiring and retaining bus operators and mechanics; BC Transit continues to experience difficulty hiring staff, particularly bus operators for demand response.
- As the number of battery electric vehicles increase, so will the demand for power; The need for a new facility location may be necessary due to power capacity constraints at the current Vestal facility.
- Sustain and increase available funding to enable current mobility management services to continue and expand.



BC Transit Bus Shelter

> "Frequency of buses needs to be increased. Roughly half an hour between buses means you have to schedule your time around transport and can't just show up at the stop. I'd like to use them but they are inconvenient."
> -BMTS OUTREACH SURVEY RESPONSE

The addition of passenger rail service was cited numerous times in the open comments section of the survey. Connections to Syracuse, NYC, Buffalo, Albany and Philadelphia were specifically mentioned.

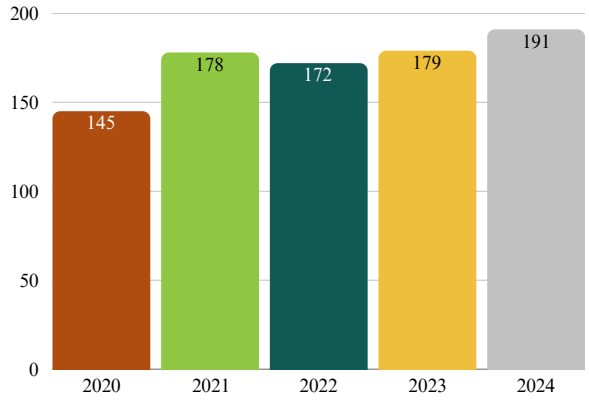
CHAPTER 7

SAFETY

Making sure that all users of the transportation system are able to safely travel by whatever mode they choose is a priority for the BMTS region. BMTS is currently developing a Safety Action Plan utilizing funding through the U.S. DOT SS4A grant program. Using the Safe System Approach, this plan will analyze data and gather public input to identify projects and strategies that will lead to the elimination of roadway fatalities and serious injuries. This plan will help guide funding investments with the goal of improving safety for all users in the BMTS region.

Data from NYSDOT's Crash Location & Engineering Analysis Reporting (CLEAR) shows that for the 5-year period from 2020-2024, there were 865 fatal or serious injury crashes within the BMTS Planning Area. During the COVID-19 pandemic, fatalities and serious injuries from crashes decreased, as residents drove fewer miles. But in 2021 and beyond, as pandemic-era restrictions loosened, and driving approached previous levels, fatalities and serious injuries have continued to increase.

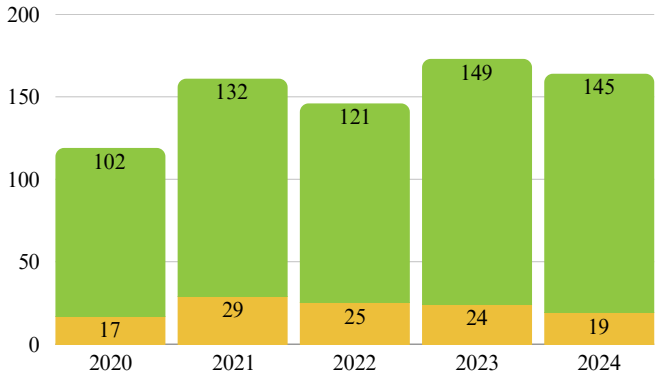
FIGURE 7.1 FATAL AND SERIOUS INJURY CRASHES



Source: NYSDOT CLEAR

According to the NYS Strategic Highway Safety Plan, Vulnerable Road Users (VRU) are defined as pedestrians, cyclists, motorized wheelchair users, and those on foot within work zones, and are of particular concern as there is a much higher chance of a fatality or serious injury occurring if the crash involves a vulnerable road user. Of the 649 crashes from 2020-2024 that involved a vulnerable road user in the BMTS Planning Area, 17% of those resulted in a fatal or serious injury. Being struck by a vehicle, even at low speeds, can cause serious injury; at typical speeds on streets, it can be fatal.

FIGURE 7.2 TOTAL / FATAL AND SERIOUS INJURY CRASHES INVOLVING A VRU



Source: NYSDOT CLEAR

BMTS is committed to using its resources to improve safety and reduce the number of crashes, particularly those that cause fatalities and serious injuries. Strategies are both short term and long term. BMTS will partner with NYSDOT and local government agencies, to implement policy and projects that are identified in the Safety Action Plan. These projects will be eligible for FHWA's HSIP funding. In the past, this funding has been difficult for local municipalities and states to spend due to the detailed analysis needed to establish eligibility.

FHWA's proven safety countermeasures and strategies have been established as effective in reducing roadway fatalities and serious injuries. BMTS is committed to widespread implementation of these countermeasures to accelerate the achievement of local, State, and National safety goals. BMTS will also continue to conduct road safety audits (RSA), collaborating with professional and community stakeholders to identify opportunities to improve roadway safety.

CHAPTER 8

FREIGHT MOBILITY

The movement of goods is central to the BMTS region's economy. In this region, freight moves primarily by truck, with some rail and air cargo. E-commerce is a fast growing segment of business and according to the New York State Freight Plan, e-commerce is poised to reshape logistics and local delivery networks dramatically.

In addition to e-commerce, new technology will affect many facets of freight movement in the coming years. Fully automated trucks may eventually complete long-haul moves without a driver. Urban delivery trucks may be partially replaced by unmanned aerial vehicles (drones) or small robots that travel in the street or on sidewalks.

TRUCK BASED FREIGHT

Within the BMTS region, trucks carry the most freight in terms of both tonnage and value. This aligns with trends across the United States and within New York. According to the Freight Plan, 69% of freight (by tonnage) in New York State moves by truck. The following corridors that cross or terminate in the BMTS region are identified by the Freight Transportation Plan as part of the New York State Freight Core Highway Network:

- I-81 Syracuse-Binghamton-Pennsylvania Corridor
- I-88 Albany-Binghamton Corridor
- I-86/NY 17 Harriman-Binghamton Corridor
- I-86 Binghamton-Erie Corridor

Most freight-generating industry in the BMTS planning area is located along these interstates. The Broome Corporate Park and Kirkwood Industrial Park have direct access to I-81. The Best Buy warehouse-distribution center is at the Lounsberry interchange of I-86. Others like Upstate Shredding-Weitsman Recycling in Owego must use state and local roadways to access the interstate system.

Bridge Identification Numbers (BINs) 1063161 & 1063162 carrying NYS Route 17 over Route 17C in the town of Union, Broome County, are a freight limiting factor for Route 17/I86. These bridges both have lower load ratings than comparable structures carrying Interstate traffic but are not posted. Restrictions depend on the load configuration, with some oversize loads allowed through at normal speed, some require crossing the structures at a significantly reduced speed, and others are diverted from the highway entirely.

At the time of this Plan, all major components (deck, superstructure, and substructure) are rated 7 (good). Paint and minor rehab activities are expected to take place in the near term but will not improve the load rating. A major rehabilitation or replacement of the structures are the only scopes of work by which significant improvements in load rating would be feasible and would likely not be completed during this Plan's time horizon.

URBAN DELIVERY

Delivery trucks of all sizes contribute to traffic on streets in commercial districts and residential areas. These include deliveries to businesses as well as offices and residences.

As e-commerce continues to increase, so will the volume of urban deliveries. While specific data are not available for the BMTS region, the volume of e-commerce deliveries is increasing substantially. The four primary parcel delivery services are the United States Postal Service (USPS), UPS, Amazon, and FedEx. All have distribution sites in the Binghamton region to facilitate overnight delivery and parcel pickup. Amazon is the corporate leader in e-commerce.

Another facet of e-commerce is the offer to consumers to "buy-online, pick up in store". Seen in grocery, retail, and home improvement stores, this service does not alter the number of trips to the store location, but it reduces the duration of the visit as consumers park in a specified location and have the order placed in their vehicle.

RAIL FREIGHT

The BMTS region includes facilities of three freight railroads:

- Class I: Norfolk Southern (NS) Southern Tier line from Buffalo through Binghamton to Port Jervis; and the former Delaware & Hudson (D&H) line from north of Albany through Binghamton into Pennsylvania.
- Class II (Regional): New York, Susquehanna & Western (NYS&W) Syracuse Branch. The NYS&W Utica Branch from Binghamton to Sherburne is out of service (in service north of Sherburne).
- Class III (Shortline): Owego & Harford (O&H). As a shortline railroad, the O&H depends on interchanging cars with NS. Scheduling these movements can be an impediment to accommodating customer needs.
- Terminals/yards: NS East Binghamton yard, NYS&W Bevier Street yard, O&H Owego yard.

Most of the rail traffic in the BMTS region is through traffic, as there are few rail-dependent industries. However, railroad access is important to industries' ability to remain competitive. Binghamton also lacks a rail-truck intermodal terminal where shipping containers are transferred from one mode to another. A business in the Binghamton area that relies on inbound or outbound containerized shipments must pay to have them trucked to or from an intermodal terminal in Syracuse, Scranton, or Mechanicville, or directly from the Port of New York and New Jersey.

AIR CARGO

BGM has modest cargo-handling capabilities. Mail and small parcels are accommodated on commercial passenger flights, but currently, Delta is the only commercial carrier serving the airport. The Broome County Department of Aviation reports that there are weekly flights carrying parcels via various operators .

PIPELINE FACILITIES

The BMTS planning region has three tank truck/pipeline-connected petroleum terminals. Pipelines are used to transport several petroleum products, including motor fuels, heating oil, and propane. These products are moved by truck from the terminals to wholesale distribution sites or retail locations. These trips contribute to truck traffic on BMTS-area roadways.

FUTURE NEEDS

According to the New York State Freight Plan, the volume and value of commodities moved on the transportation system in New York State are expected to grow by about 34 percent and 64 percent respectively by 2050. This includes an increase in trucking and rail, particularly Class I carriers.

System condition is important, especially as trucking volume increases. The Freight Plan identified a bridge repair project along I-81 that is currently programmed for construction in 2027.

With respect to e-commerce and urban goods delivery, the BMTS region must accommodate inevitable growth in a way that minimizes negative impacts on local roadways. These deliveries can put more demand onto roadways that that also serve pedestrians, bicyclists, transit buses and passenger vehicles.

All rail lines serving the BMTS region are cleared for double-stack operation and are single track with passing sidings. This can be a limiting factor in the ability to accommodate a growing number of trains on a line.

The Freight Plan did not identify specific needs or projects on the rail corridors serving the Binghamton region to accommodate predicted growth in traffic.

CHAPTER 9

ENVIRONMENT & RESILIENCY

Resilient communities prioritize future generations' needs in their policies and strategic plans while embracing uncertainty in a positive manner. Transportation plays a significant role in these policies and plans. Having a multimodal transportation system can result in a healthier population, less traffic congestion and vehicle pollutants, fewer crashes, and fewer environmental impacts. Transportation investments and improvements should protect the health of the natural environment while supporting and contributing to the built environment in a manner that improves community health.

Resilience means anticipating, preparing for, and adapting to changing conditions while withstanding, responding to, and recovering from disruptive events. The location of the BMTS Planning Area along the Susquehanna and Chenango rivers means flood risk from extreme storms is high. Resiliency planning in our region focuses heavily on extreme weather events due to flooding vulnerability. Figure 8-1 shows an example of flooding in Binghamton after Tropical Storm Lee.

Communities must also be resilient in the face of disruptive events beyond weather. Disruptive events can include economic upheaval in global or local markets, technology-related issues, or cybersecurity failures that affect traffic control networks. A resilient system can continue to provide access to critical facilities when components of that system, like bridges, culverts, roadways, or traffic management centers, are not operational.

54% of survey respondents said reducing environmental impacts of transportation decisions and operations was a main objective for our region.

Resilient freight movement also benefits from availability of multiple modes. If roads are closed, can emergency supplies be brought in by rail? Siting of manufacturing facilities and warehouse/distribution centers is often influenced by the reliability and resilience of highway and rail access. The same may be true of last-mile deliveries. If people cannot go out to grocery stores, is the system resilient enough to bring food to them?

Flooding in Binghamton after Tropical Storm Lee

CURRENT PLANNING EFFORTS

HAZARD MITIGATION PLANS

Broome and Tioga County each updated their Hazard Mitigation Plans in 2024. These plans provide a well-documented baseline of conditions in each county, along with the means to address multiple hazards. Prepared initially in response to the Disaster Mitigation Act of 2000, these plans help state and local governments prepare for and reduce the potential impacts of natural hazards. Hazard Mitigation plans enable the development of more disaster-resistant communities by identifying and implementing actionable and achievable risk reduction plans. Many goals across each county's plan are similar.

GOALS OF THE BROOME COUNTY HAZARD MITIGATION PLAN

1. Protect life, property, and the economy from natural hazards through planning, preparing, and mitigating.
2. Increase public awareness and enhance current outreach programs to provide resources to stakeholders, local government officials, businesses, and the general public on the different risks, resilience strategies, and safety measures associated with natural hazards.
3. Encourage, expand, and strengthen partnerships between government agencies, private sector businesses, and non-profit organizations to develop public outreach strategies and provide resources and involvement before, during, and after disasters, and to create a more resilient Broome County.
4. Enhance emergency service planning to include natural hazard event planning impacts on populations and property.
5. Improve the resilience of critical facilities, community lifelines, and other buildings located within hazard-vulnerable areas to reduce impacts of natural hazard events and climate change influenced hazards in Broome County.
6. Ensure consistency between goals, objectives, and mitigation strategies from the Broome County Hazard Mitigation Plan with existing and future land-use planning documents, existing regulatory programs, zoning code updates, and flood damage prevention ordinances, as well as state and federal hazard mitigation strategies.

GOALS OF THE TIOGA COUNTY HAZARD MITIGATION PLAN

1. Protect life and property.
2. Increase public awareness and preparedness/understanding of natural hazards and their risks.
3. Reduce hazard impact on the economy.
4. Protect open space, agricultural land, the environment, and natural resources.
5. Promote and support partnerships.
6. Enhance emergency management, preparedness, response, and recovery.

Most relevant to this LRTP is Broome County's Goal 5, which aims to improve the resilience of critical facilities, community lifelines, and other buildings located within hazard-vulnerable areas to reduce impacts of natural hazard events and extreme weather in Broome County. Tioga County's Goal 1 to "protect life and property" is also applicable to the LRTP. Both goals reflect this LRTP's overarching goal of ensuring a resilient transportation system.

RESILIENCY PLANS

Broome County is currently developing a Countywide Resiliency Plan. Once completed, the Plan will assess the risks and vulnerabilities of critical infrastructure and other key assets to climate hazards such as more frequent and intense extreme weather events, flooding, drought, extreme temperatures, and snow storms. The Plan will be used to inform other planning initiatives and identify projects and actions for inclusion in future Capital Improvement Plans.

CLIMATE SMART COMMUNITY PROGRAM

New York State's Climate Smart Community (CSC) program is designed to encourage ongoing implementation of actions that reduce greenhouse gas emissions and help communities adapt to the effects of climate change. The program offers free technical assistance, grants, and leadership recognition. Communities can apply for certification based on achieving goals that include enhancing community resilience to climate change and implementing climate smart land use and materials. Broome County and the Village of Owego received Climate Smart Community Bronze certifications in 2024.

BROOME-TIOGA STORMWATER COALITION

Water quality is another environmental concern in the BMTS region since the impervious surfaces of our transportation system, including roadways, sidewalks, and multi-use trails can create stormwater runoff that transports pollutants into our streams and rivers. The New York State Department of Environmental Conservation (NYSDEC) oversees the permit program for municipal separate stormwater sewer systems (MS4s) in compliance with federal law.

As of 2025, there are 15 designated MS4s within Broome and Tioga Counties which form the Broome-Tioga Stormwater Coalition (BTSC). In both Broome County's and Tioga County's Stormwater Management Program Plan, general permit requirements dictate that in the development of environmental plans, the County must incorporate principals of Low Impact development (LID), Better Site Design (BSD), and other Green Infrastructure Practices, defined by the Environmental Protection Agency, as a resilient approach to managing the impacts of wet weather. Counties must account for natural resource protection and impervious surface reduction, along with other measures in their planning.

BMTS GREEN STREETS INFRASTRUCTURE GUIDE

BMTS has developed a Green Streets Infrastructure Guide to provide guidance on how to better incorporate stormwater management needs into municipal projects and local development projects. Adhering to these best practices can improve stormwater quality and reduce runoff.

Green Infrastructure feature along a portion of the Two Rivers Greenway

CYBERSECURITY

Cybersecurity will play a greater role in ensuring resilient communities as services become connected and more functions are automated. Numerous cities and regions have adopted strategies focused on leveraging digital technology to improve quality of life. An increasing number of devices are connected using the Internet of Things (IoT). IoT is used for managing urban systems such as the electric grid, waste collection, street lighting, parking, and curb space usage. As shown in Table 8-1, there are direct transportation functions and other systems that affect the mobility of people and goods that become vulnerable to cyber intrusion as a consequence of IoT connections.

TABLE 9.1 CYBERSECURITY CONCERNS

SECTOR	FUNCTIONS
ITS	Communications networks
	Input devices (roadside units, sensors, CCTV)
	Output devices (dynamic message signs, traveler information systems, traffic signal systems)
Public Safety	PSAP operations (911 calls, emergency services dispatch)
	Emergency services radio communications and operations
	Medevac helicopter services
Transport Technology	Vehicle on-board systems
	Connected vehicle systems
	Automated vehicle operation
	Unmanned aerial vehicle (UAV) operations
	Supply chain logistics and e-commerce
Utilities	Electricity
	Cellular communications

Source: Transportation Security Administration

Note: CCTV – Closed-Circuit Television PSAP – Public Safety Answering Point (911 dispatch center) UAV – Unmanned Aerial Vehicle

The importance of developing partnerships among federal, state, and local government agencies and private sector organizations is a critical means to continuously update protections and monitor potential intrusions. Smaller communities are often more at risk because they typically have fewer information technology resources. BMTS can play an important role in organizing and developing these partnerships to ensure that all the member municipalities have access to necessary resources.

FUTURE NEEDS

Summarized below are BMTS' needs to meet the environmental and resilience goals of this chapter:

- Identify at risk infrastructure in the BMTS planning area to understand how flooding and other extreme weather events might affect the transportation network, the economy, and transit users;
- Improve multimodal transit in the BMTS planning area and encourage alternatives to single-passenger vehicle travel;
- Work with government agencies and private sector agencies to update and plan for potential intrusions on computerized elements of the transportation system.

CHAPTER 10

FUTURE MOBILITY & TECHNOLOGY

The last decade has been characterized by a rapid transformation in mobility. New technology has precipitated changes in how people travel and how freight moves. The nature of future mobility technology suggests these changes will continue for years, with uncertain timelines for development or deployment and often unpredictable outcomes for how people and goods move.

CONNECTED VEHICLES

An area of emerging technology called connected vehicles (CVs) has been in development for several years. CV technology allows vehicles to communicate directly to traffic operations centers (TOCs), roadside devices, and with each other. A message may appear in the vehicle that the traffic signal ahead will turn red, or that there is a crash two miles ahead and diversion routes are available. Numerous safety benefits can occur once there are many CVs in the fleet.

61% of respondents said that utilizing technology to improve accessibility, mobility and quality of life was a main objective for our region.

ITS is generally used to describe the application of advanced technology to the operation of transportation systems. The goal of ITS deployment is to improve the efficiency, reliability, and safety of travel. CVs are viewed as a new component of ITS. The BMTS region is served by a Transportation Operations Center operated by NYSDOT in cooperation with the Broome County emergency services dispatch center where they manage the ITS system for the region. NYSDOT's TOC has not yet deployed any CV technology.

AUTOMATED VEHICLES

Numerous companies, both vehicle builders and technology providers, have been testing various features of automated vehicles (AVs) for close to two decades. These technologies span the spectrum from now-common driver-assist features like lane-departure warning, adaptive cruise control, and parking assist to full automation using cameras, LIDAR, and radar sensors in concert with artificial intelligence programming. While great advances have been made, and companies including Waymo have deployed driverless cars in multiple states, the timeline for fully driverless vehicles on most public roadways remains highly uncertain.

The primary benefits of AV technology are significant improvements to safety and mobility. Research by the National Highway Traffic Safety Administration found that driver behavior is cited as a cause in 94% of crashes. While AVs are not expected to avoid all crashes, the expectation is that the crash rate will drop by a large margin once there are many AVs on the road. AVs are also expected to be connected, taking advantage of the CV technology described above. The access benefit results from providing safe, convenient travel to those who cannot drive, including the young, old, and persons with disabilities.

AV technology also brings challenges. The most immediate is what is expected to be decades of mixed traffic with AVs and conventional vehicles sharing the road. AVs are programmed to obey all traffic laws, including speed limits; human operators often do not, whether intentionally or due to impairment/intoxication, distraction, or drowsiness. Consideration is being given to AV-only lanes on freeways, but this does not address mixed operation on urban streets.

Companies are also testing AV trucks. These trucks use technology like that of AV cars and have the potential to solve may challenges specific to long-haul trucking.

ELECTRIC VEHICLES

This technology includes both Battery Electric Vehicles (BEVs) and Fuel Cell Electric Vehicles (FCEVs). Plug-in hybrids are often considered EVs, but they still rely on internal combustion motors for charging. The primary benefit of the EV is a reduction in air emissions. While there are no emissions from the vehicle itself, the overall savings considers the generation of the electricity. Savings also accrue to the owner. The cost of electricity is often less than gasoline. EVs also have much simpler drivetrains than conventional internal combustion vehicles, so maintenance costs are reduced.

The limitation on EVs has been battery cost, short driving range, and recharging time. However, battery technology continues to improve, so that the newest generation of BEVs have an advertised range exceeding 300 miles. The cost of BEV batteries has been on a downward trend. Charging technology continues to improve as well.

Electric Vehicle Charging Infrastructure

The Infrastructure Investment and Jobs Act (IIJA) established a National Electric Vehicle Infrastructure (NEVI) Program that provides funding to state governments to deploy electric vehicle (EV) fast chargers along designated EV corridors to establish an interconnected EV charging network across the nation.

In 2024, NYSDOT adopted a NEVI plan allowing them to access these federal funds. The NEVI program requires funds to be invested within one travel mile of designated EV corridors, with charging stations no more than 50 miles apart. I-81, I-86, and I-88 are designated EV corridors within the BMTS Planning Area. Currently there are three existing NEVI compliant charging stations in the BMTS region and an additional one scheduled for construction towards the end of 2025.

CHAPTER 11

FINANCIAL PLAN

Federal law requires that the BMTS LRTP include a financial plan that demonstrates how the adopted transportation plan can be implemented. This plan addresses both the future revenues and expenditures. It establishes the foundation for fiscal constraint, a key concept that states that the estimated cost of all of the projects and programs in the LRTP may not exceed the reasonably expected forecast of revenues available to implement the plan. The result is that the plan is a realistic assessment of how goals and objectives can best be met.

The revenue estimates are developed cooperatively by BMTS, NYSDOT, and Broome County as the public transportation operator. The NYSDOT Regional Office calculates Federal highway formula funding targets for BMTS based on a percentage of the Region-wide target, determined by lane miles, VMT, and local and state-owned asset needs in the BMTS area. These targets are then discussed with Broome County to ensure consistency with their forecasting and cost estimation methods. Forecasts are based on current targets by fund source, and projected inflation provided in Statewide NYSDOT guidance. These estimated revenues are programmed to fund construction and ongoing operation and maintenance of the existing Federal Aid System.

The LRTP is required to show programmed expenditures in year-of-expenditure dollars. This means that costs must be adjusted for inflation. Like revenue, the partners in the MPO process must agree on inflation forecasts.

EXPECTED REVENUE

Revenue forecasts were developed for five 5-year time periods or "blocks" to cover the entire 25-year LRTP timeframe. The first block (2026–2030) reflects BMTS' newly adopted TIP. For each subsequent five-year program block, the agreed-upon revenue forecast methodology increases revenue by 3% for each of the formula programs of FHWA and FTA.

Listed below are the FHWA and FTA formula-based programs that are included in IIJA. These are the core revenue sources shown in Table 11-1.

New York State also provides funding for MPO transportation purposes through the New York State Dedicated Highway and Bridge Fund. Part of this is through provision of matching funds for federal aid. Most of the FHWA and FTA programs are 80% federally funded. NYSDOT provides the nonfederal share of state system projects. The State Dedicated Highway and Bridge Fund may also be used to fully fund capital projects on state highways.

BMTS and its members may seek additional federal discretionary grants and explore opportunities for private funding through public-private partnerships. If any such funding is obtained, the LRTP will be amended to include it.

Federal Highway Administration

- **National Highway Performance Program (NHPP)**. Funds projects on the NHS. Projects are selected by NYSDOT.
- **Surface Transportation Block Grant Program (STBGP)**. This is the most flexible FHWA fund source and can be used on any facility that is part of the Federal Aid System. This program also includes the following set asides:
  - Transportation Alternatives Program. Project selection is based on a competitive process.
  - Off-System Bridge. This fund source is for use on bridge projects off the Federal Aid System.
- **Highway Safety Improvement Program (HSIP).** Funds may be used on any public road for purposes that reflect the priority actions of the state's Strategic Highway Safety Program.
- **Carbon Reduction Program (CRP).** Eligibility generally includes projects focused on reducing carbon dioxide (CO2) emissions from on-road highway sources.
- **Bridge Formula Program (BFP).** Funds may be used for highway bridge replacement, rehabilitation, preservation, protection, or construction projects on public roads.
- **National Highway Freight Program (NHFP).** Funding to improve the efficient movement of freight on the National Highway Freight Network (NHFN)

Federal Transit Administration

- **Urbanized Area Formula Grant (§5307).** This is the primary source of FTA funds for urban transit systems. Eligible uses include capital projects like bus purchases and preventive maintenance of buses purchased with FTA funds. In metropolitan areas of population less than 200,000, like BMTS, these funds may also be used for operating assistance.
- **Buses and Bus Facilities Formula Program (§5339).** Funds may be used to purchase buses and for bus facilities.
- **Enhanced Mobility of Seniors and Individuals with Disabilities (§5310).** Funds are used for projects to purchase and operate vehicles that serve the transportation needs of the target populations. Projects are selected by the state with input from the MPO.

TABLE 11.1 EXPECTED REVENUE

BMTS LRTP Financial Plan Revenue Forecast ($ in millions)							
FUND SOURCE		**Time Blocks (3% increase after 2030)**					**PLAN TOTAL**
		2026-2030	**2031-2035**	**2036 - 2040**	**2041-2045**	**2046-2050**	
FHWA	NHPP	$176.611	$181.909	$187.367	$192.988	$198.777	$937.652
	STPBG	$67.059	$69.071	$71.143	$73.277	$75.475	$356.025
	HSIP	$19.888	$20.485	$21.099	$21.732	$22.384	$105.588
	STP-OFF	$13.356	$13.757	$14.169	$14.594	$15.032	$70.909
	TAP	$0.00	$1.900	$1.957	$2.016	$2.076	$7.949
	BFP-Main	$85.694	$88.265	$90.913	$93.640	$96.449	$454.961
	CRP	$2.142	$2.206	$2.272	$2.341	$2.411	$11.372
	NHFP	$5.500	$5.665	$5.834	$6.010	$6.190	$29.199
FHWA Total		**$370.250**	**$383.258**	**$394.754**	**$406.598**	**$418.795**	**$1,973.655**
FTA	Sec 5307	$30.645	$31.564	$32.511	$33.487	$34.491	$162.698
	Sec 5339	$6.170	$6.355	$6.546	$6.742	$6.944	$32.757
	Sec 5310	$2.495	$2.570	$2.647	$2.726	$2.808	$13.246
FTA Total		**$39.310**	**$40.489**	**$41.704**	**$42.955**	**$44.244**	**$208.702**
New York State Dedicated Funds (SDF)		$153.665	$153.665	$153.665	$153.665	$153.665	$768.325
Total Funds Available for LRTP		**$563.225**	**$577.412**	**$590.123**	**$603.218**	**$616,704**	**$2,950.682**

BMTS will invest in system preservation and asset management, mobility, and safety as shown in Table 11-2. Table 11-3 lists the transit investments for the LRTP. While these categories are useful for planning purposes, projects can meet multiple objectives. For example, a pavement or bridge rehabilitation project that is classified as system preservation may also address identified safety considerations and may also improve mobility by adding sidewalks or bike lanes.

Appendix C includes a list of illustrative projects that are not able to be programmed within a fiscally constrained plan. If additional funds become available, these projects will be considered by the BMTS Planning and Policy Committees for programming.

TABLE 11.2 FHWA FUNDED INVESTMENTS

FHWA Funded LRTP Investments ($ in millions)							
		2026-2030	**2031-2035**	**2036 - 2040**	**2041-2045**	**2046-2050**	**TOTAL**
Preventive Maintenance/ Operating Assistance	**85%**	**$310.400**	**$319.34**	**328.919**	**338.787**	**348.951**	**$1,646.03**
Highway	31%	$96.112	98.9954	101.965	105.024	108.175	510.2717
Bridge	42%	$130.216	134.122	138.146	142.291	146.559	691.3344
Other Assets	12%	$37.205	38.3212	39.4708	40.6549	41.8746	197.5264
Mobility	**7%**	**$25.533**	**26.299**	**27.088**	**27.9006**	**28.7376**	**135.5582**
Safety	**8%**	**$29.180**	**30.0554**	**30.9571**	**31.8858**	**32.8423**	**154.9206**
TOTAL	**100%**	**$364.750**	**375.693**	**386.963**	**398.572**	**410.529**	**1936.507**

TABLE 11.3 FTA FUNDED INVESTMENTS

FTA Funded LRTP Investments ($ in millions)						
	2026-2030	**2031-2035**	**2036 - 2040**	**2041-2045**	**2046-2050**	**TOTAL**
Preventive Maintenance & Operating Assistance	**$30.645**	**$31.564**	**$32.511**	**$33.487**	**$34.491**	**$162.698**
BC Transit Bus Replacement	**$6.170**	**$5.355**	**$5.546**	**$4.742**	**$4.944**	**$26.757**
Facility Improvements	**$0.00**	**$1.000**	**$1.000**	**$2.000**	**$2.000**	**$6.000**
TOTAL	**$36.820**	**$37.919**	**$39.057**	**$40.229**	**$41.435**	**$195.455**

Plan Summary

The Moving Our Future Forward 2050 update is driven by a vision of the future of the BMTS region that rests on enhancing communities, improving the economy, and protecting the environment. This plan will guide the investment of public funds in projects, programs, and strategic actions to make progress toward these goals.

BMTS is committed to a performance-based planning process. Working with partner agencies, including NYSDOT, BMTS will monitor the condition and performance of the regional transportation system across all modes. As NYSDOT submits performance targets for federally prescribed performance measures of safety, asset management, and system performance, BMTS will consider its options to support those targets or create its own. The degree to which progress is made on achieving the targets will guide selection of candidate projects for each successive TIP update.