Environmental Justice Analysis

2014 – 2018
Transportation Improvement Program

Binghamton Metropolitan Transportation Study

JUNE 2014
BINGHAMTON METROPOLITAN TRANSPORTATION STUDY

POLICY COMMITTEE

RESOLUTION 2014-03 Resolution accepting the Environmental Justice Analysis for the 2014 – 2018 BMTS Transportation Improvement Program

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 Chapter 1, Part 450, Subpart C, and 49 CFR Chapter VI, Part 613, Subpart B) require that the urban transportation planning process shall include development of a Unified Planning Work Program which shall annually describe all urban transportation and transportation related planning activities anticipated within the next one or two year period, and will document the work to be performed with technical assistance provided under the Federal Highway Administration metropolitan planning (PL) program and the Federal Transit Administration Section 5303 program, 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 approved the Environmental Justice Plan on May 8th, 2014 and recommended Policy Committee approval, and

WHEREAS the approved 2013-2014 Unified Planning Work Program included a task to complete the Environmental Justice Analysis for the 2014-2018 Transportation Improvement Program, and

WHEREAS BMTS staff has completed the analysis, and

NOW THEREFORE BE IT RESOLVED THAT the BMTS Policy Committee accepts the Environmental Justice Analysis for the 2014-2018 Transportation Improvement Program as complete and approves the plan.

CERTIFICATION OF RESOLUTION 2014-03

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 2014-03, adopted by consensus this 26th day of June, 2014.

Michael Marinaccio, Chair

Date: July 1, 2014
I. INTRODUCTION TO ENVIRONMENTAL JUSTICE

A. Definition of Environmental Justice

The U.S. EPA’s Office of Environmental Justice defines environmental justice as follows:

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

B. Regulatory Framework of Environmental Justice

Under Title VI and related statutes, each Federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving Federal financial assistance on the basis of race, color, national origin, age, sex, disability. The Civil Rights Restoration Act of 1987 clarified the intent of Title VI to include all program and activities of Federal-aid recipients, subrecipients and contractors whether those programs and activities are federally funded or not.

On February 11, 1994, President Clinton signed Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The Executive Order requires that each Federal agency shall, to the greatest extent allowed by law, administer and implement its programs, policies, and activities that affect human health or the environment so as to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations.

In April 1997, the U.S. Department of Transportation (DOT) issued the DOT Order on Environmental Justice to Address Environmental Justice in Minority Populations and Low-Income Populations (DOT Order 5610.2) to summarize and expand upon the requirements of Executive Order 12898 on Environmental Justice. The Order generally describes the process for incorporating environmental justice principles into all DOT existing programs, policies, and activities.

(Source: https://www.fhwa.dot.gov/environment/environmental_justice/facts/)

The provisions of these laws and orders apply to the New York State Department of Transportation and to all agencies which participate in BMTS via contracts with NYSDOT or a federal agency for the receipt of Federal funds. These include Broome County as host agency for the BMTS Central Staff. Also, any consultants or subcontractors to the above named agencies are required to meet the Title VI provisions.

BMTS as an organization is responsible for the following:

1. Integration of Title VI Concerns in the MPO Planning Process: The MPO planning process must be structured so that the needs of minority neighborhoods are considered in developing long-range plans and short term improvement programs. It must also ensure minority and non-minority areas are compared to provide equitable transportation service and access.

2. Female and Minority Representation on MPO Committees and Advisory Boards: The MPO should ensure that women, minorities, and persons with disabilities, both individually and through their organizations, are represented in the citizen participation effort, including membership on formal committees, boards, and advisory committees.
3. Public Participation in the MPO Planning Process: The MPO should ensure that there is adequate opportunity for the public to provide legitimate input into the planning process. This shall be accomplished through timely notification and affording the opportunity for the public to speak at meetings of MPO Committees, boards, and advisory committees.

4. Compliance with the Americans with Disabilities Act of 1990: The MPO should ensure that those projects which are used to meet the requirements of regulations implementing the Americans with Disabilities Act appear in the Annual or Biennial Element of the TIP.

The BMTS Policy Committee is fully committed to ensuring that its transportation plans, programs, policies, and activities equitably serve the community.

C. BMTS Approach to Environmental Justice

In response to environmental justice regulations, BMTS developed a process to assess the impacts of the transportation planning process regarding the Transportation Improvement Program (TIP) on the target populations. Three core principles of environmental justice must be considered to ensure that it has been properly integrated into the transportation planning process.

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

The results of the analysis in this Environmental Justice Report will be used to determine criteria for the future selection of transportation projects. The analysis will also provide a methodology for conducting ongoing environmental justice analysis on future TIPs.

D. Overview of the Report

Section II of the report, Define Populations, defines the target populations and provides a geographical representation of the target area where the target populations are prevalent. The transportation needs of the target population are identified and discussed. Section III describes the public involvement process used in the transportation planning process. Section IV identifies and discusses the type, mode, and thresholds of the measures that will be applied to the TIP. Alternative modes of transportation and freight are also discussed in this section. Section V provides an overview of the transportation planning process and special projects that specifically address the transportation needs of the target populations. Section VI provides an overview and conclusion of the analysis.

II. DEFINE POPULATIONS AND NEEDS

A. Target Population Identification and Data

1. Methodology and Data Source

In response to Executive Order 12898, BMTS has identified minority and low-income residents as target populations to measure potential disproportionately high and adverse human, health, or environmental effects of its programs, policies, and activities.
Demographic data were sought regarding characteristics of these target populations for the BMTS planning area. *(See MAP 1)*

**BROOME COUNTY** – City of Binghamton, Town of Binghamton, Town of Chenango, Town of Conklin, Town of Dickinson, Town of Fenton, Town of Kirkwood, Town of Main, Town of Union, Town of Vestal, Town of Windsor, Village of Endicott, Village of Johnson City, Village of Port Dickinson, and Village of Windsor.

**TIOGA COUNTY** – Town of Candor, Town of Nichols, Town of Owego, Town of Tioga, and Village of Owego

**PENNSYLVANIA** – The Binghamton Urbanized Area extends into Pennsylvania as a result of 2000 US Census and continues to be true for the 2010 US Census. The area includes the Interstate 81 and US 11 corridor through Great Bend, and Hallstead.

Based upon an agreement reached with the Pennsylvania Department of Transportation and the Northern Tier Regional Planning & Development Commission (designated as a Rural Planning Organization by PennDOT), Federal aid projects in the Pennsylvania portion of the BMTS area are to be included in the BMTS Transportation Improvement Program for information only; and in the Pennsylvania Statewide TIP (STIP) for programming purposes.

Accordingly, this environmental justice analysis for the TIP will not include the Pennsylvania portion of the Binghamton Urban Area.
The source for the population data that will be used for the environmental justice analysis is the 2010 Census. The U.S. Census Bureau collects socio-economic and demographic data on 10 year intervals, with the most recent one occurring in 2010.

Census data at the census tract level of geography was used to provide the information in sufficient detail to accurately identify concentrations of the target populations. Block group level data is not available as it was in past EJ Analyses. Due to the fact that the census tract boundaries do not match with those of the BMTS planning area, the study area boundaries were expanded to conform to the borders of municipalities that are part of the BMTS Planning Area. Analysis of this data resulted in identifying a target area where concentrations of the target populations exist, and in the identification of planning measurements that were used to test the effects of changes to the transportation system in the target area. (See MAP 2)

2. Define Target Population Thresholds

To identify minority population concentrations, the United States percentage of minorities (37%) is used as a threshold. Census tracts with minority population percentages above the threshold were considered to have a concentration of minorities, and therefore, were included as part of the target area to test for environmental justice compliance.

The threshold for a census tract to be classified as one with a low-income population concentration is one with 20% or more of the population below the Poverty Level. This criterion matches the Census-defined category for Census tracts called, Poverty Areas. Census tracts
that met this criterion were considered part of the target area to test for environmental justice compliance.

The demographics identified for measuring environmental justice are listed below.

<table>
<thead>
<tr>
<th>2010 Thresholds of Target Populations</th>
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</thead>
<tbody>
<tr>
<td>Data Set</td>
</tr>
<tr>
<td>Total Population</td>
</tr>
<tr>
<td>Total Households</td>
</tr>
<tr>
<td>Minority Population</td>
</tr>
<tr>
<td>Low Income Population</td>
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</tbody>
</table>

3. Distribution of Selected Populations

With a total population of 215,385, the study area can be classified as a small urban area.

Minority Populations

The U.S. Census 2010 defined race categories in the following manner: “White” refers to a person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicated their race(s) as “White” or reported entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian. “Black or African American” refers to a person having origins in any of the Black racial groups of Africa. It includes people who indicated their race(s) as “Black, African Am., or Negro” or reported entries such as African American, Kenyan, Nigerian, or Haitian. “American Indian or Alaska Native” refers to a person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment. This category includes people who indicated their race(s) as “American Indian or Alaska Native” or reported their enrolled or principal tribe, such as Navajo, Blackfeet, Inupiat, Yup’ik, or Central American Indian groups or South American Indian groups. “Asian” refers to a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. It includes people who indicated their race(s) as “Asian” or reported entries such as “Asian Indian,” “Chinese,” “Filipino,” “Korean,” “Japanese,” “Vietnamese,” and “Other Asian” or provided other detailed Asian responses. “Native Hawaiian or Other Pacific Islander” refers to a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicated their race(s) as “Pacific Islander” or reported entries such as “Native Hawaiian,” “Guamanian or Chamorro,” “Samoa,” and “Other Pacific Islander” or provided other detailed Pacific Islander responses. “Some Other Race” includes all other responses not included in the White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander race categories described above. Respondents reporting entries such as multiracial, mixed, interracial, or a Hispanic or Latino group (for example, Mexican, Puerto Rican, Cuban, or Spanish) in response to the race question are included in this category. (SOURCE: US Census Bureau - http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf)

The study area has a small minority population with a total of 27,892 people, which is 12.9% of the total population. These numbers show an increase in the minority population when compared to the previous environmental justice’s analysis using Census 2000 data that counted 17,789 minorities within the study area, which was 7.05% of the area’s total population of 208,837. The increase is likely due to in-migration of minorities, as well as more minorities in association with
continued Binghamton University student population increases. It is believed that the changes in counting minority population between the 2000 and 2010 Censuses did not have a significant impact on the increase in minority population. The increase in the study area's total population from the previous environmental justice analysis is largely due to the new and larger urban area boundary defined by the 2000 Census, and to the expansion of the study area beyond the BMTS Urban Area to include entire municipalities due to the use of census tract level data.

Concentrations of the minority population were generally located in the vicinity between Main Street and the length of Clinton Street, as well as from west to east, in between Hawley Street, Henry Street & Court Street, and the north bank of the Susquehanna River in Binghamton. Another concentration was in Johnson City in the area bounded by Floral Avenue, Riverside Drive, Grand Avenue, and Main Street. (See MAP 3)

![Map of Environmental Justice Target Area: Binghamton UA](image)

**Low-income Population**

In the previous environmental justice analysis, low-income population concentrations were defined as block groups with median household income levels less than 70% of the Median Household Income for the study area. The median household income for the study area was $36,312 and the threshold (70% of the Median Household Income) is $25,418.

Since only Census Tract level data was available for the new environmental justice analysis, it was decided to use “Persons below Poverty Level” rather than Household Income as the poverty measure. This more directly identifies poverty distribution, and there is a Census defined...
category for census tracts called “Poverty Areas”, which are defined as census tracts with 20% or more of the population below the Poverty Level.

Census tracts identified as Poverty Areas, and thus low-income concentrations, were located mainly in the business districts of Binghamton, Johnson City, and Endicott. Several areas outside the business districts, generally in the vicinity of public housing developments, were also identified as Poverty Areas. (See MAP 4)
III. PUBLIC INVOLVEMENT PROCESS (PIP)

A. Evaluate PIP

In addressing the issue of public participation, the BMTS Policy Committee has adopted the following policy:

PUBLIC PARTICIPATION POLICY

The Binghamton Metropolitan Transportation Study, having been designated by the Governor of the State of New York as the Metropolitan Planning Organization (MPO) for the Binghamton urbanized area, is required by Federal law to involve the public in the development of its plans and programs.

"Before approving a long range plan, each metropolitan planning organization shall provide citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, and other interested parties with a reasonable opportunity to comment on the long range plan, in a manner the Secretary [of Transportation] deems appropriate."
- 23 US Code Sec 134 (g)(4)
- 49 US Code Sec 1607 (g)(4)

"Before approving a transportation improvement program, a metropolitan planning organization shall provide citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, and other interested parties with reasonable notice of and an opportunity to comment on the proposed program."
- 23 US Code Sec 134 (h)(6)
- 49 US Code Sec 1607 (h)(6)

The BMTS updated Participation Plan was approved on February 28, 2007. It is available for review on the Reports & Documents page of the BMTS website at www.bmtsonline.com. The participation Plan states that:

BMTS sees effective public participation in terms of a number of steps.
- The first is characterized as “getting in touch with the public”. How can we make sure that our public outreach efforts are effective in educating the public about what BMTS does, and how their input can influence our plans and programs?
- The second is opportunity for public participation. What can we do to make it easy for members of the public to provide meaningful input to our plans and program?
- The third is opportunity for stakeholder participation. What should we do to make sure the stakeholders identified in SAFETEA-LU, and others identified by BMTS, have clear access to the process?
- The final step is response and documentation. What actions should we take to make sure that the public and stakeholders know that their input was in fact considered and their participation meaningful?

In fulfilling its commitment to public participation, the BMTS carries out a number of activities. All BMTS Policy and Planning Committee meetings are open to the public. In addition to media announcements prior to meetings, a mailing list of community, environmental, and transportation organizations is notified. Well publicized public forums are held in accessible locations and at various times of day for major planning and programming efforts, especially the Transportation Plan and Transportation Improvement Program. Opportunities were offered for input on both the pre-draft and draft versions of this TIP, and to generally discuss transportation investment priorities. Also with regard to the Transportation Improvement Program, private providers of transportation and
representatives of the employees of the Broome County Department of Public Transportation are notified early in the program development process, and offered the opportunity to propose projects and provide other appropriate input. The same parties are given the opportunity to review and comment on the draft program before it is presented for committee approval. With regard to specific technical studies or project development efforts, ad hoc advisory committees are created as is deemed appropriate. This is especially the case when a plan or project will have a measurable local or regional impact.

BMTS maintains a website at www.bmtsonline.com on which notices of public involvement opportunities are posted, drafts of all BMTS reports, documents, TIP and Plan are available for review and comment, and a mechanism offered for public communication. A Facebook account is also used by BMTS to garner input from the public, as well as to foster ongoing dialogue with the public.

Federal funds (FHWA-PL and FTA §5303) are programmed each year for public participation. This provides for all of the above activities as well as routine dissemination of information.

IV. QUANTITATIVELY ASSESS AND ANALYZE FEDERAL INVESTMENTS IN THE REGIONAL TIP

A. Identification of Measures

The small urban area nature of the BMTS planning area combined with the area’s current trend of loss in population and moderately paced economic development has a significant impact on the TIP. The priorities for the TIP have been system preservation, and to make needed improvements to existing transportation facilities. As a result, actions in the TIP projects have largely consisted of reconstruction, rehabilitation, and safety improvement projects, with construction of only a few new facilities.

As measures derived from the Binghamton Regional Traffic Model were considered, it became apparent that except for new construction projects, the impacts of the road projects primarily involving reconstruction or rehabilitation did not change significantly from the preexisting condition for variables such as average travel times, proximity to attractions, congested vehicle miles of travel, and property displacement. However, each project does entail general improvements in accessibility, mobility, safety, economic growth, and quality of life.

It has been determined that the best measure to quantitatively evaluate environmental justice compliance of the TIP is to list the programmed projects and tally the ones that are located within the target area. The tally will give an indication of the investment being made in the target area. Additionally, new construction projects and their impacts on the target area will be discussed individually. Finally, the impacts on the target population from projects involving other modes of transportation including pedestrian and bicycle, public transportation, and freight will be addressed.

B. Application of Measures

The objective of the TIP is to obtain the most efficient use possible of the metropolitan transportation system by recognizing opportunities to improve access and mobility of people and freight. This can be accomplished by optimizing roadway operation, improving transit service, providing for non-motorized travel, and removing impediments to truck movement.

Numerous improvements to the metropolitan transportation system have resulted from the TIP planning effort.
Projects on current TIP: (See MAP 5)

### Projects within BMTS Environmental Justice Target Area

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Clinton Street over Chenango River</td>
<td>Bridge</td>
<td>2014</td>
</tr>
<tr>
<td>Exchange Street over Susquehanna River</td>
<td>Bridge</td>
<td>2014</td>
</tr>
<tr>
<td>Front Street Gateway</td>
<td>Reconstruction</td>
<td>2014</td>
</tr>
<tr>
<td>Hawley St./Collier St. Traffic Signal</td>
<td>Safety</td>
<td>2014</td>
</tr>
<tr>
<td>Arch Street over Olive Street</td>
<td>Bridge</td>
<td>2015</td>
</tr>
<tr>
<td>Prospect Mtn. Phase 2</td>
<td>Interstate</td>
<td>2015</td>
</tr>
</tbody>
</table>
### BMTS 2014-2018 TIP: Projects outside BMTS Environmental Justice Target Area

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>NY 38B over Crocker Creek</td>
<td>Bridge</td>
<td>2014</td>
</tr>
<tr>
<td>Catatonk Hill Rd. over Catatonk Creek</td>
<td>Bridge</td>
<td>2014</td>
</tr>
<tr>
<td>East River Road over Wappas. Creek</td>
<td>Bridge</td>
<td>2014</td>
</tr>
<tr>
<td>Hooper Road over NY 17C</td>
<td>Bridge</td>
<td>2014</td>
</tr>
<tr>
<td>E. Arterial Hwy. and W. Arterial Hwy.</td>
<td>R &amp; P</td>
<td>2014</td>
</tr>
<tr>
<td>I-81 Resurfacing Exit 6 to Exit 7</td>
<td>R &amp; P</td>
<td>2014</td>
</tr>
<tr>
<td>Riverside Dr./Beethoven St. Traffic Signal</td>
<td>Safety</td>
<td>2014</td>
</tr>
<tr>
<td>NY 26/Sheedy Road</td>
<td>Safety</td>
<td>2014</td>
</tr>
<tr>
<td>Gateway Rest Area</td>
<td>Misc.</td>
<td>2014</td>
</tr>
<tr>
<td>I-81 over Loughlin Road &amp; Colesville Rd.</td>
<td>Bridge</td>
<td>2015</td>
</tr>
<tr>
<td>NY 17C over Patterson Creek</td>
<td>Bridge</td>
<td>2015</td>
</tr>
<tr>
<td>I-81 over NY 990G</td>
<td>Bridge</td>
<td>2015</td>
</tr>
<tr>
<td>NY 369 over Page Brook</td>
<td>Bridge</td>
<td>2015</td>
</tr>
<tr>
<td>County Road 96 over NY S&amp;W</td>
<td>Bridge</td>
<td>2015</td>
</tr>
<tr>
<td>Reynolds Rd. Harry L. Dr. to Overbrook Rd.</td>
<td>R &amp; P</td>
<td>2015</td>
</tr>
<tr>
<td>NY 26/E. Maine Rd.</td>
<td>Safety</td>
<td>2015</td>
</tr>
<tr>
<td>NY 17C over Campville Creek</td>
<td>Bridge</td>
<td>2017</td>
</tr>
<tr>
<td>NY 79 over Chenango River</td>
<td>Bridge</td>
<td>2017</td>
</tr>
</tbody>
</table>

Of the 24 projects from the 2014 – 2018 TIP, six (25%) are within the target area. With regard to this measure and the types of projects listed, it would appear that significant investments have been made in the target area, and that there are no adverse impacts on the target populations and no disproportionate impacts among the population groups.

**New Construction Projects**

- **Greater Binghamton Greenway**
  (See Section V - OVERVIEW OF PLANNING PROCESS AND SPECIAL PROJECTS)

**C. Other Modes**

1. **Pedestrian and Bicycle Facilities**

Walking and biking becomes a primary mode of transportation for individuals who cannot or choose not to use a motorized vehicle. Each metropolitan planning organization (MPO) is required to create a Pedestrian and Bicycle Plan that will serve as a guide to develop a pedestrian and bicycle friendly transportation system. In 1995, BMTS began this process with the formation of the Pedestrian and Bicycle Advisory Committee, whose purpose was to provide obtain input for the Plan from key professions and the public. During June of 1996, the BMTS Pedestrian and Bicycle Plan was adopted. The Pedestrian and Bicycle Plan has since been updated with the adoption of a separate Pedestrian Plan during June 2013, and with a Bike Plan to be completed during 2014. The plans (available in the Reports & Documents page of www.bmtsonline.com) are comprised of a set of goals and objectives to make the region more bikeable and walkable.

Implemented Objectives of these Plans, pertaining to the TIP include:

- Every capital project in the metropolitan area is reviewed by BMTS and its Pedestrian & Bicycle Advisory Committee to ensure appropriate provisions for bicyclists, pedestrians, and public transportation users are included. A BMTS staff member also takes part in the NYS
Department of Transportation Region 9’s Bicycle and Pedestrian Committee that also reviews all state capital projects for its region. These opportunities for project reviews have resulted in the construction of sidewalks and bicycle lanes, as well as multi-use trails as a part of numerous projects. (See MAP 6 – Bike Routes and Multi-use Trails)

- **Greenway Feasibility Study** (see Section V - OVERVIEW OF PLANNING PROCESS AND SPECIAL PROJECTS)

The implementation of these elements and the other action items of the BMTS Pedestrian & Bicycle Plan, updated Pedestrian Plan, and soon to be completed Bike Plan produce benefits for the entire population of the Binghamton urban area by:

- Increasing accessibility and mobility
- Promoting healthy living by encouraging more physical activity through providing more walking and biking opportunities

Both have been identified as needs for the target populations.
2. Public Transit

Both Broome and Tioga Counties operate public transportation services within the Binghamton Urban Area.

Broome County:
BC Transit, an operation of the Broome County Department of Public Transportation (BCDOPT), is a fixed route public transportation system owned and operated by Broome County. BC Transit has forty-two, forty foot long buses and five thirty-foot buses with over twenty different routes covering eighty square miles of the urbanized core of the Triple Cities (Binghamton, Johnson City and Endicott). Also covered are the areas between or near each of the Triple Cities, such as Vestal, Westover, Endwell, Union, and West Corners to name a few. (See MAP 7)

BC Transit uses a "Modified Pulse System”. The B.C. Junction, located at the Greater Binghamton Transportation Center near the intersection of Henry St and Prospect Ave in downtown Binghamton, is the main transfer point where up to 13 BC Transit buses meet allowing passengers to transfer for free to other buses, making much of the urban core easily accessible.

BC Transit operates seven days a week, except on certain holidays. BC Transit has a standard fare of $2.00. Senior Citizens 65 and older with a validated Office for Aging card can ride for $1.00, as well as persons with disabilities with valid B.C. Transit handicap I.D.. Transfers, Children age 5 and under, and Binghamton University students with valid I.D. are FREE. Several multiple day and multiple ride bus passes are also available.
The BCDOPT also operates a paratransit service for the urban area called, BC Lift. BC Lift serves residents who are unable to use the fixed route BC Transit service due to physical or mental handicaps. In compliance with the ADA, BC Lift operates throughout the BC Transit service area, and during the same hours. Another paratransit service called BC Country serves county residents living outside the urban area.

See [www.ridebctransit.com](http://www.ridebctransit.com) for more details on public transportation in Broome County.

**Tioga County:**

In 1992, Tioga County created a public transit service. This system is based upon a Coordinated Service Operator agreement that creates a partnership between Tioga County and the carrier. First Transit, Inc. is the private operator under contract with Tioga County, and Ride Tioga is the designated Coordinated Service Operator (i.e. the carrier). The County and the carrier jointly determine routes, fares, and schedules while the operator assumes all costs of operation, management, and development of the transit system. Ride Tioga is not required to provide services that do not yield a profit. The County has funded Ride Tioga with Medicaid funds, and has not needed to provide direct subsidies; however, it will need to provide $377,000 for the 2014 budget year. The primary cause of the need for Tioga County to provide funds is due to the Medicaid travel arrangement policies and procedures of the Syracuse-based Medical Answering Services, which was recently awarded the state contract to assign Medicaid transports, including those in Tioga County. Rather than scheduling trips with Ride Tioga’s fixed route or Dial-A-Ride paratransit services as a priority, rides using taxi services are being scheduled. This has severely impacted Ride Tioga’s ridership, which will also significantly reduce the amount of State Operating Assistance (STOA) Ride Tioga County receives. The County Legislature is currently considering whether funding Ride Tioga can continue.

Among the services Ride Tioga provides is a regional fixed route system. The fixed routes originate in Tioga County, mainly in Owego or Waverly, and serve the County’s communities as well as providing service from Tioga County into Broome (Endicott, Vestal, and Broome Community College) and Tompkins Counties. The fare for the Owego-Endicott-Vestal fixed route is $2 or a monthly pass for unlimited rides can be purchased for $30. Seniors (60 years of age or older) qualify for half fare, but must display either a Medicare card or a Tioga Transport half fare card. Up to three children five years old and younger may ride free when accompanied by an adult. The fares for the other fixed commuter routes vary for each route and for the distance traveled along each. All the commuter routes also offer monthly passes for unlimited rides, while the Cornell route offers an OMNIRIDE pass through Cornell University. Fixed route service is available on weekdays from 5:45 AM to 7:00 PM, however hours vary by route.

Ride Tioga also operates a paratransit service referred to as Dial-A-Ride. This is a curb-to-curb service that supplements the fixed route service and is available only to those who have difficulty in accessing and using the fixed route system. Poor accessibility may be constituted by mobility limitations, dangerous pedestrian conditions, or simply proximity to the nearest bus stop. When at all possible, transportation needs are met by the fixed route system, even if it is necessary to slightly deviate buses from their regular course. A zone based fare is used for Dial-A-Ride. The one-way charge begins at $3 for the first zone and $1 more for each additional zone one travels through. Monthly passes are also available. This service is available weekdays from 8 AM - 5 PM. For more information on Ride Tioga Public Transit, go to [http://www.tiogacountyny.com/agencies/public-transit.html](http://www.tiogacountyny.com/agencies/public-transit.html).

The passage of MAP-21 produced several significant changes in the structure of the Federal transit program since SAFETEA-LU and when that program structure was established by ISTEA. Some programs have been eliminated and incorporated into existing programs, and planning requirements had minor changes. The most important planning requirement is the function of the MPO to coordinate among transit operators and the state. BMTS Central Staff, NYSDOT, and the Broome County and Tioga County officials responsible for the provision of public transportation have increased coordination to insure the proper consideration of public transit in the metropolitan transportation system and in TIP projects.
The Urban Transit Element of the TIP must include all projects within the urban area to be funded under Sections 5307, 5310, and 5339 of the FTA program. In addition, this TIP includes projects funded under the Section 5311 program for rural public transportation, to provide a more informed and complete view of public transit in the study area.

- **Section 5307 (Urbanized Areas Formula Grants)** is a general fund block grant that provides the major source of funding for urban bus systems. It can be used for both capital purchases and operating subsidies. The program remains largely unchanged with a few exceptions. The chief exception is that activities under the former Job Access and Reverse Commute (JARC – Section 5316) program, to facilitate the provision of transportation services to low-income people entering the workforce, are now eligible under the urbanized area formula program. This includes operating assistance with a 50% local match for employment-related activities. In addition, the urbanized area formula for distributing funds now includes the number of low-income individuals as a factor. There is no floor or ceiling on the amounts that can be spent on job access and reverse commute activities. Additionally these funds are not subject to the coordinated planning process nor do they require a solicitation to program the funds.

- **Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities** program provides formula funding to increase the mobility of seniors and persons with disabilities. Funds are apportioned base on each State’s share of the targeted populations and new for MAP21 are now apportioned to both State (for all areas under 200,000) and large urbanized areas (over 200,000). The former New Freedom program (5317) is folded into this program. The New Freedom program provided grants for services to those with disabilities that went above and beyond the requirements of the Americans with Disabilities Act (ADA). These funds require that projects awarded be in agreement with the Coordinated Human Service and Public Transportation Plan that was part of the SAFETEA-LU legislation. There are several significant changes to the program. One is that operating assistance is now an eligible expense for 5310. The program requires 55% of funding be planned and spent on projects that serve seniors and individuals with disabilities where public transit is not appropriate to serve their needs. The remainder of the funding can be used to initiate projects over and above ADA requirements to improve access to public transportation for individuals with disabilities. Funding levels are determined by statistics from the American Community Survey (ACS) rolling five year program and will be updated each year for the subsequent apportionments. The TIP estimates Section 5310 funding for 2014 through 2018 to be $217,000 each year.

Since the funds are apportioned to the urban areas there must be new designations to accept and program the funds. This is a major change in how funds are apportioned in the state. The process for programming these funds is being discussed with the MPO Transit Working Group and the current FTA Designated Recipients. The State can be designated as the DR in small urban areas but the apportioned funds must stay within the area where it was originally allocated.

- **Section 5311 (Rural Area Formula Grants)** provides funding for both capital projects and operating subsidies for public transportation in small urban (less than 50,000 population) and rural areas. Broome and Tioga Counties are considered part rural, and therefore are eligible to receive Section 5311 funds.

There are transfers of 5311 funding to urban areas fewer than 200,000, like the Binghamton urban area. The funding is captured in the 5311 line in the statewide program. For TIP/STIP programming these funds are generally put on as a block and except for outright transfers are only added to an individual TIP for informational purposes.

- **Section 5339 (Bus and Bus Facilities Program)** – A new formula grant program is established under Section 5339, replacing the previous Section 5309 discretionary Bus and
Bus Facilities program. This capital program provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities.

The TIP indicates $326,000 in Section 5339 funds are allocated for each year of the TIP for BC Transit coach replacement buses. The yearly allocations may need to be combined depending on availability of other state or local funding sources that will be needed for the required local funding match, and to have enough funds to cover the bus costs.

SAFETEA-LU imposed a new planning requirement that in order to use §5310, 5316, and 5317 funding programs, there must be an adopted Coordinated Public Transit-Human Services Transportation Plan (a.k.a. Coordinated Plan). MAP-21 continues the requirement of the Coordinated Plan, though as noted above, the former New Freedom – Section 5317 program has been folded into the Section 5310 program with the process for programming the funds yet to be determined, and the former JARC - Section 5316 type projects now funded under the Section 5307 program are no longer subject to the coordinated planning process nor require a solicitation to program the funds. However, it is encouraged to consider the findings and recommendations of the Coordinated Plan when programming those funds.

The purpose of the Coordinated Plan is to be more efficient in the use of transportation resources used to meet the needs of elderly, disabled, and low-income residents. The plan identifies needs, both gaps and redundancy of services in meeting those needs, and strategies to address the deficiencies. A process must then be established to competitively select projects for the Section 5310 program, based on how well they address the recommended strategies in the Plan. The BMTS Policy Committee approved the original Coordinated Plan in June 2007. To assist in the development of the Coordinated Plan, BMTS created and continues to oversee a Coordinated Transportation Committee that meets quarterly, bringing transportation providers and stakeholders together to implement the Coordinated Plan. The Coordinated Plan Update has been adopted by the Policy Committee during June 2013. An example of a strategy being addressed is the Rural Health Network of South Central New York taking the lead to create the Mobility Management of South Central New York (MMSCNY) – a call center (a.k.a. Get there) that is free to the public, which is a one stop shop for transportation information. Dissemination of transportation information, travel planning, promotion of the area’s web-based ridesharing service, and travel training are among the services that the MMSCNY provides. (See http://www.rhnscny.org/programs/btmmp)

BC Transit and Ride Tioga broadly serve the residents of the target area, as well as an extensive portion of the Study Area. The TIP supports BC Transit through replacement of coaches, substantial operating assistance, and capital improvements. Ride Tioga also receives federal operating assistance for the urban area portion of their service. BMTS also works directly with the BCDOPT, and with Ride Tioga through its Tioga County Public Transit Advisory Committee to assist the respective transit service providers in their planning efforts. As BMTS continues to work directly with the BCDOPT and Ride Tioga in their planning efforts, and promote enhanced transit services within the TIP, weaknesses in the transit service will be reduced. Utilization and implementation of the Coordinated Public Transit-Human Services Transportation Plan will also work to achieve greater public transportation efficiency through coordination among transportation providers. Such efforts will ensure that the low-income and minority populations are not disproportionately disadvantaged, and that their transportation needs are met.

3. Rideshare
   (See Section V - OVERVIEW OF PLANNING PROCESS AND SPECIAL PROJECTS)
4. Freight

In the Binghamton Urbanized Area, the composition of freight movement by weight is about 90% by truck, 10% by rail, with a minute fraction moving by air. It is an important objective of BMTS to provide safe and efficient movement of freight, while ensuring that neighborhoods housing predominantly low-income or minority populations are not being subjected to a disproportionately high percentage of the negative externalities associated with freight movement.

The following projects on the TIP will have a significant impact on freight movement.

- **Front St./Clinton St. Intersection Reconstruction** – This project is comprised of reconstruction of the intersection to correct vertical clearance deficiency of railroad overpass; improve truck access to City’s First Ward. Construction and completion during 2014.

- **I-81/NY 17 Interchange Reconstruction (Phase 1 – under construction & Phase 2 - 2015)**
  - **Phase 1 – Under construction with Completion Date of 12/31/15.**
    - Replacement of the bridges carrying each direction of the roadway over the Chenango River. These structures have been determined to be nearing the end of their useful life.
    - Realignment of the curves around Prospect Mountain
    - Relocation of diverge and merge decision points to the tangent (straight) section of the roadway west of the curve
    - Relocation of the Mygatt Street exit further west, connecting to either Mygatt Street or Prospect Street
    - Replacement of the bridge over Chenango Street to accommodate Phase 2 work
    - Construction of noise barriers
  - **Phase 2 – (Programmed for 2015)**
    - The work necessary to address the weaving section between Interchange 4 and the I-81/NY 17 merge/diverge, including additional structures over the Chenango River.
    - Redesign and reconstruction of Interchange 4
    - Construction of noise barriers
    - Design and construct multi-use trail for pedestrians and bicyclists adjacent to Front Street from Prospect Street to Bevier Street Bridge.

These projects will work to improve safety and efficiency of freight movement by trucks. Although this project is within the target area, the impacts of freight movement by truck will not increase significantly. In fact, the residential area adjacent to the I-81/NY 17 project will benefit from the construction of noise barriers.

V. OVERVIEW OF PLANNING PROCESS AND SPECIAL PROJECTS

A. Review of Planning Process to Determine How Environmental Justice Requirements are Addressed

BMTS’ transportation planning efforts aim toward providing the safest and most efficient transportation system as possible, offering maximum mobility and access for all people and freight. Modal choices include the automobile, bus, bicycle, and walking. The transportation planning process and its products are responsive to changing social, economic, environmental, and demographic conditions.
It is the traveler’s decision regarding their choice of mode for any given trip, but their choice is affected by the service provided by the various elements of the transportation system. These services result from the prioritization of funding and programming of construction that is cooperatively undertaken by the members of the BMTS Policy and Planning Committees. These Committees are comprised of elected leaders and officials of the Binghamton Urban Area’s municipalities, and the New York State Department of Transportation (NYSDOT). Such cooperation is required for availability of federal transportation funds.

BMTS also has a Central Staff currently consisting of the Executive Director, one Traffic Engineer, one Transportation Analyst, two Senior Transportation Planners, and one Account Clerk/Typist. The Central Staff’s main services include: transportation engineering assistance to local municipalities and NYSDOT; traffic modeling; transportation planning assistance to local municipalities, Broome and Tioga County transit systems, and NYSDOT; Geographic Information System (GIS) development and utilization; and providing requested information to the public.

All the components of the BMTS transportation planning process mentioned above are effective and provide the opportunity to address environmental justice requirements.

B. Review of Special Projects and Their Applicability to Environmental Justice

1. Binghamton Metropolitan Greenway Study & Implementation Plan

In January of 1999, BMTS initiated the Binghamton Metropolitan Greenway Study to determine the feasibility of developing riverbank trails along the Susquehanna and Chenango Rivers within the Binghamton Urbanized Area. The study, completed in December 1999, produced a list of riverbank trail proposals that were connected by the signed, on-road bike route network in areas where trail development was not feasible. The total system of recommended trails was estimated to cost $15 million for construction alone. A phased implementation plan was proposed, with total system implementation estimated to take fifteen to twenty years. The Study consultants also provided information on funding trails, general design guidelines, and information on maintenance, safety, and security issues. BMTS held several public informational meetings to get input on the Study, as well as having the BMTS Planning and Policy Committees comment on it. Based on that input and the Study’s recommendation, BMTS developed the Binghamton Metropolitan Greenway System Implementation Plan that prioritized trail segments for development. The plan was to initially develop trail extensions from existing trails, develop new trail loops within specified parks, connect trail extensions and park trail systems, and ultimately build recommended river crossings.

During September 2005, the NYSDOT Region 9 Bicycle & Pedestrian Committee, on which BMTS serves, initiated an ongoing effort to coordinate municipal leaders and reinvigorate the implementation of the proposed greenway trails. The objective is to complete the entire trail system in less time than suggested in the original implementation plan by having municipalities work together, developing partnerships with the private and nonprofit sectors, and marketing the system to the public.

Completed during December 2012, the Two Rivers Greenway (TRG) Sign Plan & Design Guide brands the regional network of trails as one continuous system. The regional trail system was named the Two Rivers Greenway and a logo was developed for signage and trail system promotion. The TRG Sign Plan & Design Guide is available on the BMTS website at www.BMTSonline.com.
Listed below are existing trails and new trail projects that will be constructed during 2014 through 2018:

**Existing Trails:**
- Chenango Valley State Park Trails (Located in the Town of Fenton, adjacent to the Binghamton Urban Area boundary)
- Chugnut Riverwalk (Village of Endicott/Town of Union)
- Otsiningo Park Trail (Broome County Park in the Town of Dickinson)
- Otsiningo Park Trail - North Extension (Broome County)
- Port Dickinson Community Park Trails (Village of Port Dickinson)
- Vestal Rail-Trail (Town of Vestal)
- Chenango Riverwalk – Confluence Park to Cheri Lindsey Park (City of Binghamton)
- Owego Riverwalk (Village of Owego)

**New Trails that are Funded During the Previous TIP Time Period of 2011 - 2015 and will be Under Construction During 2014:**
- Vestal Rail-Trail Section 2 – West Extension to Castle Gardens (Town of Vestal)
- Conklin Multi-Use Trail Phase 1 – Trail adjacent to Powers Road and Corporate Drive. (Broome County/Town of Conklin)
- Susquehanna River Trail – Trail along north side of river from the S. Washington St. Bridge to the Exchange St. Bridge. (City of Binghamton)

**New Trails that are Funded and will be Constructed During the TIP Time Period of 2014 - 2018:**
- Chenango River Trails Connection Project – Cheri Lindsey Park to Bevier St. Bridge (City of Binghamton)
- Front Street Trail – Prospect St. to Bevier St. Bridge/Otsiningo Park (NYSDOT/City of Binghamton - Part of I81/NY17 Interchange Project)
- Two Rivers Greenway Sign Project – This project implements the Two Rivers Greenway (TRG) Sign Plan & Design Guide that brands the regional network of trails as one continuous system. Signs will be installed on existing TRG trails as prescribed in the TRG Sign Plan & Design Guide.

**Illustrative Projects on TIP Time Period of 2014 – 2018:**
These projects shown on the illustrative list may be programmed if funding becomes available.
- NYS 434 Greenway – Trail from S. Washington St. Bridge along south bank of Susquehanna River, connecting to MacArthur Park via tunnel under NYS 434 or bridge over 434, and connecting to Vestal Ave. through MacArthur Park. The trail will then extend along the south side of NYS 434, connect to Vestal Avenue at Lennox Drive., continue to Clubhouse Road, and onward to Binghamton University. Design work has been funded and performed by the NYSDOT Main Office, though final design has not been completed. Funding sources will be investigated for construction.

The trail system traverses the target area for this Study and the entire Binghamton Urban Area. The benefits of the trails will be available to the low-income and minority populations, as well as the rest of the Urban Area’s population. Benefits of trails include: the provision of transportation alternatives by connecting homes, workplaces, schools, parks, shopping centers and cultural attractions; provision for exercise and healthy living; environmental conservation; encouragement of economic development and tourism; and overall improved quality of life for the area.

### 2. Transportation Enhancements Program

Nontraditional transportation projects, such as developing trails and facilities that encourage walking and biking rather than using motorized travel modes, benefit the environment and the low-income communities. The social benefits and avoided costs resulting from walking and biking are numerous. The Transportation Enhancements Program (TEP) is a federal program...
administered by the NYSDOT that is designed to fund such projects that are outside the norm of traditional transportation programs. BMTS encourages and supports the construction of bicycle and pedestrian facilities in its planning area.

One project application located in the BMTS planning area was submitted by Broome County, while the Village of Deposit, at the eastern end of Broome County, also submitted an application for the final round of TEP funds under Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Both applications were awarded TEP funds.

The projects are listed below:

**Broome County** – The *South Otsiningo Riverfront Multi-Modal Trail* project includes the reconstruction and widening of an existing 8-foot wide walking path through Otsiningo Park along the Chenango River to a 12-foot wide multi-modal trail. The primary goal of this project will be to establish a transportation corridor for cyclists of all abilities, and will connect Binghamton’s Chenango River Trail Connection Project to the North Otsiningo Park Trail. The trail will be a total length of approximately 7000 linear feet. Federal Funds = $406,300; Total Cost = $507,880

**Village of Deposit** – The *Front St. Streetscape Improvements (Court St. to Dean St.)* project includes construction of sidewalks, installation of bike racks, traffic control devices for pedestrians (e.g. crosswalks, markings and signage, etc.), high visibility crosswalks and streetscaping, which includes benches, trash containers, lighting, and plantings along the sidewalk system in the heart of the Downtown Business District. The project would enhance pedestrian accessibility and safety within the Downtown Business District and improve pedestrian linkages to surrounding neighborhoods and the riverfront. These improvements would help to reduce resident dependence on automobiles and lead to a more aesthetically pleasing, socially and economically vibrant Downtown Business District. Federal Funds = $820,000; Total Cost = $1,069,641

3. **Safe Routes to School**

The SAFETEA-LU transportation reauthorization legislation includes the national Safe Routes to School program. It made available $612 million in Federal funds over five fiscal years for both infrastructure and non-infrastructure projects to accommodate and encourage children in grades K – 8 to walk or bike to school. Each state receives a portion of the funds based on its percentage of the national total of school-aged children in grades K – 8, but not less than $1 million each year. The funds went to the State DOT and the agency is required to use a portion of these funds for a full-time, SRTS program coordinator. SRTS funds may be awarded to State, regional, and local agencies, and to nonprofit organizations. The Federal share of such projects may be 100%.

*(SOURCE: National Center for Bicycling and Walking)*

A final SRTS solicitation was conducted during 2012. One SRTS project within the Binghamton Urban Area has been awarded funds totaling $132,000. The project sponsored by the Village of Windsor will improve pedestrian safety and access to Palmer Elementary School and the Middle School (Windsor School District) by replacing 1,925 linear feet of sidewalk along the west side of NYS Rt. 79 from the Village Hall to the schools. The project is scheduled to be completed during 2015. It is not located within the target area for this analysis.

4. **Transportation Alternatives Program**

Under MAP-21, the Transportation Alternatives Program (TAP) was created to fund the nontraditional transportation projects that encourage walking and biking rather than using motorized travel modes. It consolidated the TEP and SRTS programs from SAFETEA-LU.
A solicitation for project applications will be announced during February 2014. Successful projects will be amended to the TIP.

5. **Rideshare – Broome-Tioga Greenride**

On July 7, 2009 BMTS kicked-off the Broome-Tioga Greenride ridesharing website ([www.Broome-Tioga.Greenride.com](http://www.Broome-Tioga.Greenride.com)). This free service enables people with similar commuting and travel routes and schedules to contact each other and arrange to share a ride. This service can also be utilized by those who do not drive or do not have access to an automobile. Ridesharing benefits include: easing traffic congestion and parking demand, reducing pollution, reducing fuel consumption, and reducing automotive costs.

As of January 27, 2014, 602 Greenride accounts have been created, with 368 rideshare match searches resulting in an average of just over 3 emails sent per sender to potential ride matches.

BMTS continues to promote Broome-Tioga Greenride, with assistance from the Mobility Management of South Central New York service (a.k.a. Get There Call Center), in an effort to increase the number of accounts created. The best success in this effort has been through direct outreach to employers, and subsequent creation of employer portals on the Greenride website that they administer.

Broome-Tioga Greenride is funded with FHWA PL Funds. A contractor was hired to provide the rideshare website service. That contract ends on March 31, 2014, and BMTS is currently in the process of transitioning the rideshare service to the 511NY Rideshare platform and will be called Broome Tioga Rideshare with a website address at [www.btrideshare.com](http://www.btrideshare.com). BMTS will be able to continue to offer comparable and enhanced rideshare services to the region at no cost other than for some Central Staff time and promotion efforts.

6. **Transportation Tomorrow: 2035 – Creating A Sustainable Future**

During September 2010, the BMTS Policy Committee adopted the BMTS Transportation Plan titled, Transportation Tomorrow: 2035 – Creating A Sustainable Future. Because of the significance of the 2030 – Placemaking for Prosperity Plan, and the amount of work still undone, Transportation Tomorrow: 2035 can be considered a modest update.

An innovative approach called, scenario planning, was used to create the long term transportation plan for 2030. Scenario planning is a process in which transportation professionals and citizens work together to analyze and shape the long-term future of their communities. Using a variety of tools and techniques, participants in scenario planning assess trends in key factors such as transportation, land use, demographics, health, economic development, environment, and more. The participants bring the factors together in alternative future scenarios, each of these reflecting different trend assumptions and tradeoff preferences. In the end, all members of the community—the general public, business leaders, and elected officials—reached agreement on a preferred scenario. This scenario becomes the long-term policy framework for the community’s evolution, and is used to guide decision-making.

In the final step of the scenario development process, the Project Advisory Committee, the Community Vision Team, and a public workshop each addressed the range of alternative scenarios. There was broad agreement on recommending that the BMTS Transportation Plan for the next twenty-five years be based on a “moving inward” scenario combined with the modest population growth forecast of 10,000. This then has formed the basis for input into the Binghamton Regional Traffic Model, which is used to forecast travel demand within the metropolitan area. It also forms the basis for understanding the context in which transportation investment and improvement sits. This is important, since the Plan can define not only projects, but also transportation policies and strategies.

The moving inward scenario entails prioritizing transportation plans and projects that will work to revitalize urban centers, and slow down the current trend of sprawling suburban development.
Projects that enhance pedestrian, bicycle, and public transportation will also be considered more of a priority.

The Transportation Tomorrow: 2035 Plan uses new population and land use forecasts, but continues to be based on the “moving inward” scenario. The most significant change in the 2035 Plan is a new focus on sustainability, and how transportation can contribute or potentially detract from achieving a sustainable region.

The World Commission on Environment and Development, known as the Brundtland Commission, was convened by the United Nations in 1983 to address deterioration of the human environment and consumption of natural resources. That Commission developed what has become a widely quoted definition of sustainability and sustainable development: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The Commission’s final report demonstrates how complex this seemingly simple idea is; it addresses such diverse topics as human population, food security, energy, and industrial development.

Subsequent work proposed a notion of the “three pillars” of sustainability: environmental quality, social equity, and economic development. These sectors generate demands that often seem to be in conflict with one another, and with the base definition. For example, a proposed economic development activity requires the input of natural resources that can be environmentally damaging, while the cost of certain environmental protection actions may have negative implications for social equity. To achieve sustainability, these competing demands must be reconciled.

How does transportation fit into the understanding of sustainability? Perhaps the most obvious relationship is petroleum based fuel consumption of energy by the transport sector, and the resulting carbon dioxide/greenhouse gas (GHG) emissions. Another factor is transportation demand that is created by location of land uses: where people live in relation to where they work, shop, go to school, and meet other needs; and where businesses are located in relation to customers, workforce, and shippers. Sustainable transportation strategies can achieve reduced Vehicle Miles Traveled (VMT) without reduced economic activity through appropriately planned land use across a region.

What makes the Greater Binghamton Region a sustainable place over the next 25 years? To begin to explore that question, representatives of local governments and the public were asked to participate in a “SWOT Analysis”. This is a standard tool of strategic planning that looks at Strengths, Weaknesses, Opportunities, and Threats. In this case, people were asked about strengths and weaknesses both now at the Plan horizon of 2035.

Based on that initial understanding of the Greater Binghamton Region, the next step was to begin to outline how transportation investment may help move toward a desired future by taking advantage of opportunities and avoiding threats. This step was accomplished by first stating a vision, because “if you don’t know where you’re going, any plan will do”.

The VISION:
In 2035, Greater Binghamton will be a successful, livable, and vibrant region, and its regional transportation system will have the following characteristics:

- Sustainability. Community sustainability will be supported in terms of reduced energy consumption and greenhouse gas emissions; and improved public health and social equity.
- Accessibility: All users will have convenient, mode-neutral access to employment, education, services, and other destinations.
- Mobility. Personal travel and goods movement will be efficient, with many modes of travel and excellent connections among them.
• Safety: All users will be able to travel safely and with a sense of security, regardless of which mode they choose to use.
• System Preservation: Transportation infrastructure will be maintained in a state of good repair, as the foundation for providing safe, efficient mobility

Goals and objectives were then crafted to guide the investments and move the region toward where it wants to go. For more details, the Transportation Tomorrow: 2035 – Creating A Sustainable Future plan can be viewed online at www.BMTSonline.com.

The Environmental Analysis target area receives much attention in the BMTS Transportation Plan as a result of the chosen scenario and sustainability focus. The impacts on the target area and target populations from proposed plans and projects in the BMTS Transportation Plan will be beneficial.

VI. OVERVIEW OF RESULTS AND RECOMMENDED STRATEGIES

A. Conclusions

This report represents an analysis of BMTS’ Transportation Improvement Program for 2014 - 2018. BMTS staff will continue to augment the methodologies used in this report by reviewing efforts of other organizations undertaking similar studies, seeking out new data sources, and through further consultation with representatives of the general community and target community concerning environmental justice issues.

In general, the measures used for the analysis did not reveal significant environmental justice issues. It can be concluded that there is an absence of any disproportionate adverse impacts on the target population, and the benefits of the transportation system seemed to be proportionately spread amongst the total population.

B. Recommendations for Improving Data

The 2010 US Census data set was used for this environmental justice analysis. The census is the most detailed and comprehensive set of information available. This will likely remain true throughout the future, and will therefore remain the best information source to measure environmental justice compliance of BMTS transportation planning and policy.

Opportunities to consider other sources of data will exist, however, when environmental justice analyses are performed for future TIPs.