






Long Range Transportation Plan (LRTP) 2011 Update

A long range transportation plan that seeks to preserve the infrastructure, improve safety, provide system connectivity, improve mobility, increase access, protect air quality and support economic growth in the Greater Syracuse area.

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LONG RANGE TRANSPORTATION PLAN

Syracuse Metropolitan Planning Area

Final Report

July 2011

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Long Range Transportation Plan (LRTP) – 2011 Update
Table of Contents

Long Range Transportation Plan (LRTP) – 2011 Update
Appendices

Appendix A – Public Participation

Appendix B – Conformity Analysis

Appendix C – Transportation-Land Use CD

Appendix D – LWRP and Comprehensive Plan Summaries

Appendix E – SAFETEA-LU Consultation Contact List

Appendix F – Greenhouse Gas and Energy Analysis

Acronyms

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
ALIS	Accident Location Information System
Amtrak	Passenger railroad company
APC	Automatic Passenger Counter
APU	Auxiliary Power Unit
AVL	Automatic Vehicle Locator
BMS	Bridge Management System
BPCMS	Bridge and Pavement Condition Management System
BTU	British Thermal Unit
CAAA	Clean Air Act Amendments
CBD	Central Business District
CenterState CEO	CenterState Corporation for Economic Opportunity
Centro	Common name for CNYRTA
CLASS	Centralized Local Accident Surveillance System
CMAQ	Congestion Mitigation and Air Quality
CMS	Congestion Management System
CNG	Compressed Natural Gas
CNYRPDB	Central New York Regional Planning Development Board
CNYRTA	Central New York Regional Transportation Authority
CO	Carbon Monoxide
CO2	Carbon Dioxide
CoE-ES	Center of Excellence in Environmental Systems
COMCO	Cayuga Oswego Madison Cortland and Onondaga Development Corporation
CSS	Context Sensitive Solutions
CSX	Railroad
CSXT	Railroad
CTPP	Census Transportation Planning Package

DPZ	Duany, Plater, Zyberk & Associates (A Planning Firm)
DVMT	Daily Vehicle Miles Traveled
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
F.O.C.U.S.	Forging Our Community's United Strength
FTA	Federal Transit Administration
GIS	Geographic Information System
GOP	Goal Oriented Program
HOV	High Occupancy Vehicle
HPMS	Highway Performance Monitoring System
HUD	Housing and Urban Development
IAP	Industrial Access Program
ICG	Intragency Consulting Group
LEV	Low Emissions Vehicle
IEN	Information Exchange Network
I/M	Inspection Maintenance
ISTEA	Intermodal Transportation Efficiency Act of 1991
ITS	Intelligent Transportation Systems
JARC	Job Access Reverse Commute
LED	Light Emitting Diode
LRTP	Long Range Transportation Plan
LWRP	Lakefront Water Revitalization Program
MDA	Metropolitan Development Association
MMC	Mobility Management Center
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NHS	National Highway System
NO	Nitrous Oxide
NS	Northern Suffolk
NYS DEC	New York State Department of Environmental Conservation

NYS&W	New York, Susquehanna & Western Railway
NYSAMPO	New York State Association of Metropolitan Planning Organizations
NYSDMV	New York State Department of Motor Vehicles
NYSDOT	New York State Department of Transportation
NYSP	New York State Police
NYSTA	New York State Thruway Authority
OCPB	Onondaga County Planning Board
OCDOT	Onondaga County Department of Transportation
PARP	Petroleum Addiction Rehabilitation Park
PIP	Public Involvement Plan
PMS	Pavement Management System
PSAP	Public Safety Answering Point
ReMAP	Regional Mobility Action Plan
SAC	Study Advisory Committee
SEP	State Energy Plan
SCI	Shared Cost Initiative
SEQR	State Environmental Quality Review
SIDA	Syracuse Industrial Development Agency
SIMS	Safety Information Management System
SIP	State Implementation Plan for Air Quality Redesignation Request
SMARTNET	Syracuse Metropolitan Area Regional Transportation Network
SMTC	Syracuse Metropolitan Transportation Council
SNI	Syracuse Neighborhood Initiative
SOV	Single Occupancy Vehicle
SyREN	Syracuse Regional Emergency Network
TAC	Transportation Advisory Committee
TANF	Temporary Assistance to Needy Families
TCM	Transportation Control Measure
TCSPPP	Transportation/Community Systems Preservation Pilot Program
TE	Transportation Enhancements
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program
TMC	Transportation Management Center

TMODEL	Software program used for Transportation Modeling
TND	Traditional Neighborhood Design
TNT	Tomorrow's Neighborhoods Today
TransCAD	Software program used for Transportation Modeling
TSE	Truck Stop Electrification
UPWP	Unified Planning Work Program
USDOT	United States Department of Transportation
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound.

SMTC Policy Resolution

RESOLUTION

SYRACUSE METROPOLITAN TRANSPORTATION COUNCIL POLICY COMMITTEE

July 21, 2011

WHEREAS, the Syracuse Metropolitan Planning Area (MPA) contains a complex, multimodal transportation system, which must be maintained in a good state of repair to preserve the infrastructure, increase safety, increase security, provide system connectivity, improve mobility, increase access, support economic development and growth, and protect/enhance the environment; and

WHEREAS, the Syracuse Metropolitan Transportation Council (SMTC) has been designated by the Governor of the State of New York as the Metropolitan Planning Organization (MPO) responsible, together with the New York State Department of Transportation, for the comprehensive, continuing, and cooperative transportation planning process for the Syracuse MPA, including the preparation of the Long Range Transportation Plans; and

WHEREAS, the current Federal Metropolitan Planning Regulations (23 CFR Part 450) mandate that MPOs update their Long Range Transportation Plans every four years in nonattainment and maintenance areas; and

WHEREAS, the SMTC has prepared the Long Range Transportation Plan 2011 Update to examine and consider changes in trends and conditions, and to confirm the validity of the forecasts and assumptions used in the 1995 Long Range Transportation Plan and the subsequent Updates of 1998, 2001 , 2004 and 2007; and

WHEREAS, Onondaga County was designated in October 1993 as a maintenance area under the provisions of the Clean Air Act of 1990; and

WHEREAS, the New York State Department of Environmental Conservation established a State Implementation Plan for Onondaga County containing motor vehicle emissions budget for transportation conformity purposes; and

WHEREAS, the transportation conformity analysis prepared for the Long Range Transportation Plan 2011 Update and the 2011-2015 Transportation Improvement Program meet all applicable requirements in 40 CFR Part 93 and conform to the purpose of the State Implementation Plan as approved by the Interagency Consultation Group; and

WHEREAS, the Long Range Transportation Plan 2011 Update was developed collectively by the SMTC Central Staff and the SMTC Planning Committee, including coordination and consultation with Federal, State, and Tribal land management, wildlife and regulatory agencies as appropriate; and been made available for public comment; and

Adoption of the
Long Range Transportation Plan 2011 Update

SMTC Policy Resolution No. 2011-04

WHEREAS, all public comments received have been evaluated, addressed as appropriate and documented as an appendix to the report; and

WHEREAS, the SMTC Policy Committee is the policy making body of the MPO having the authority to adopt the Long Range Transportation Plan 2011 Update.

NOW THEREFORE BE IT RESOLVED, that the SMTC Policy Committee hereby adopts the Long Range Transportation Plan 2011 Update and the conformity determination for the Long Range Transportation Plan 2011 Update and the 2011-2015 Transportation Improvement Program.

Kathleen A. Rapp
Chairperson
SMTC Policy Committee

Date: July 21, 2011

Carl F. Ford
Secretary
SMTC Policy Committee

Date: July 21, 2011

Syracuse Metropolitan Transportation Council
Long Range Transportation Plan 2011 Update
Executive Summary

Chapter I: Introduction

What is the SMTC?

In 1966, the Governor of the State of New York established the SMTC to serve as the local Metropolitan Planning Organization (MPO) for the Syracuse MPA. The purpose of the MPO is to carry out the continuous, comprehensive, and cooperative transportation planning process for the Metropolitan Planning Area's (MPA). The MPA includes all of Onondaga County and small parts of Oswego and Madison Counties.

As Syracuse's MPO, the SMTC also acts as a forum where long term and immediate transportation planning decisions are made for the region. These decisions are made through committees comprised of officials representing local, State, and Federal governments or agencies who utilize consensus building models to make transportation planning decisions. Many of these committees are run by SMTC staff; however, the governing committees are staffed solely by member agency representatives.

Purpose of LRTP

The LRTP is a blueprint to guide the Syracuse Metropolitan Area's transportation development over a 20-year period. Updated every four years to reflect changing conditions and new planning principals, the LRTP is based on projections of growth and travel demand coupled with financial assumptions and public input. In addition, the LRTP establishes a vision and goals that guide projects associated with the Unified Planning Work Program (UPWP) and the Transportation Improvement Program (TIP).

The LRTP planning process engages the public and considers major urban transportation planning concerns such as environmental quality, access to transportation, alternative transportation modes (especially bicycle and pedestrian), the impact of land development on the transportation system, highway congestion, and maintenance of the existing infrastructure.

The SMTC developed its first LRTP in 1995. The *2020 Long Range Transportation Plan* included descriptions of existing land use patterns, economic conditions, demographics, and an extensive inventory of transportation conditions. The plan identified goals, objectives, and actions designed to achieve concepts fundamental to a "desired plan." That plan focused on enhancing mobility, safety, environmental sustainability, economic development, land use, and facility investments.

The SMTC produced updates to the 1995 plan in 1998, 2001, 2004, 2007, and now in 2011. These updates were not designed as independent documents, but as supplements to be used in conjunction with the 1995 plan. These updates generally reviewed:

- The goals, objectives, and actions outlined in the 1995 plan;
- Emerging transportation and demographic trends, planning concepts, and resulting transportation needs;
- Bridge, pavement, and safety conditions and resulting needs; and
- The energy and air quality impacts of resulting projects (as identified in the TIP).

The SMTC launched public involvement efforts related to each update. An advisory committee oversaw the development of each update. The original LRTP and all updates have remained policy-level plans.

During the last two decades, several changes in federal legislation have had a substantial impact on how MPOs conduct transportation planning. These include the Clean Air Act Amendments (CAAA) of 1990, the Americans with Disabilities Act (ADA) of 1990, the Intermodal Transportation Efficiency Act (ISTEA) of 1991, the TEA-21 of 1998, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation of 2005.

Collectively, these acts address such major urban transportation planning concerns as environmental quality (especially air quality), access to transportation (especially for those with mobility difficulties), alternative transportation modes (especially bicycle and pedestrian), the transportation-land use linkage (especially the impact of land development on the transportation system), highway traffic congestion and maintenance of the existing transportation infrastructure. The legislation directs the planning focus of agencies such as the SMTC to these new areas of concern.

Public Involvement Process

Engaging the public early and often in the planning process is critical to the success of any transportation plan or program, and it is required by numerous state and federal laws. This legislation calls on MPOs such as the SMTC to provide citizens, affected public agencies, representatives of transportation agencies, private providers of transportation and other interested parties with a reasonable opportunity to comment on transportation plans and programs.

With the passage of the SAFETEA-LU transportation bill in 2005, MPOs were mandated to follow additional public participation requirements for their LRTPs. Currently, SAFETEA-LU has expired; however, the federal government has not passed any new legislation to date and the 2005 version of the transportation bill remains in effect through subsequent rolling extensions.

Within SAFETEA-LU, Congress introduced a new requirement for development and use of a documented participation plan for the MPO which defines and outlines a process for providing various interested parties within the MPO reasonable opportunities to be involved in the metropolitan transportation planning process. To that end the SMTC developed a broad umbrella Public Participation Plan (PPP) that identifies such opportunities.

For many of the SMTC's activities, a project-specific Public Involvement Plan (PIP) is created that sets the framework for the public participation opportunities that will be available throughout the course of the project. A proactive and dynamic PIP development process ensures the continual review of public involvement objectives and concepts.

Input from stakeholder groups is important to the success of the SMTC planning projects in meeting identified needs. Stakeholder groups may vary depending on the nature of the project, but could include such groups as freight shippers, business developers, property owners, community leaders, social service agencies, fire and police representatives, and/or representatives of public transit. PIPs also pinpoint when in the project the public involvement meetings will be held that allow for the exchange of information and input.

As noted within the project-specific PIP for the LRTP 2011 Update, the SMTC created a Study Advisory Committee (SAC) to assist in management of the LRTP and provide needed input and direction to the update. IN addition, the SMTC completed significant outreach for the LRTP through the development and use of a survey completed in conjunction with the Syracuse-Onondaga County Planning Agency (SOCPA) during late 2009. The intent of the *Community Planning & Transportation Resident Survey* was to inform the LRTP, along with SOCPA's *Sustainable Development Plan* for Onondaga County (currently being developed). At various SMTC public meetings for specific SMTC studies the SMTC noted the update of

the LRTP and provided information on how to offer feedback on long range transportation planning in the MPA. This ensured a captive audience and gave the SMTC an opportunity to reach a broad segment of the population. At these meetings, the SMTC shared a few slides on the LRTP and pointed to the project web site and opportunity to complete a questionnaire similar to the survey that was mailed to random households within Onondaga County. Additionally, the public was invited to complete questionnaires at the Onondaga County Traffic Safety Advisory Board's (OCTSAB) Share the Road Expo in September 2010. The draft LRTP 2011 Update was also sent to interested parties for review and comment. The final draft LRTP 2011 Update was available for public comment for a 30-day period, during which time a public meeting was scheduled (for July 12, 2011).

Planning Process

The SMTC is mandated to develop three documents that are the ingredients to transportation planning and programming in the MPA: the LRTP, the UPWP, and the TIP. Together, these three documents represent the beginning, middle, and end to an effective transportation planning process. Descriptions of each of the three key documents are included within Chapter 1. The LRTP represents the starting point in which the transportation goals and objectives for the future are set forth in a document adopted by the SMTC Policy Committee.

LRTP Goals

The original 1995 LRTP provided the policy framework for fulfilling transportation needs within the MPO. The Goals of the LRTP are as follows:

<u>Community Safety</u>

- Goal: To enhance the safety of the people using the transportation system.

<u>Community Mobility</u>

- Goal: To improve the mobility options for people within the Syracuse Metropolitan Planning Area (MPA).

<u>Community Environment</u>

- Goal**:** To provide a clean and environmentally sound transportation system for current and future residents.

<u>Community Economy</u>

- Goal: To enhance the area's economic competitiveness, thereby increasing opportunities for employment.

<u>Community Land Use</u>

- Goal: To promote the development of an efficient urban area and a sense of community through transportation planning.

<u>Community Facilities</u>

- Goal: To provide safe, clean, well maintained and efficient transportation infrastructure.

This 2011 Update emulates previous LRTP updates (2001, 2004, and 2007) by addressing and updating the implementation actions associated with the plan's specific goals. The identification of implemented action plans involved discussions with the member agencies responsible for their respective TIP projects. The chapters within the LRTP Update are organized by goal. The implemented action plans are presented following a discussion of existing conditions and trends tied to each of the goals. The implemented action plans are summaries rather than complete descriptions. In many cases, overlap exists because a particular action plan may apply to multiple goals. For example, a highway project can fulfill both a safety and a mobility goal.

Chapter 2: Existing Conditions

Demographic Overview

The existing conditions and needs within the Syracuse Metropolitan Transportation Council (SMTC) study area have stayed relatively stable during the course of the past LRTP updates with minor exceptions. This chapter summarizes the current demographic conditions of the SMTC study area as they relate to the mission of the SMTC, and to point out the continued trend of certain demographic, economic, and land use conditions. This 2011 Update includes a basic profile of some of the most important demographic trends and changing conditions that affect transportation planning in the SMTC area. When possible, the SMTC utilized Census 2010 data to update demographic data within this chapter (the Census Bureau has yet to release all Census data). The Syracuse MPA continues to experience the following types of population change, economic transition, and land use shifts that are not uncommon to most Northeast communities:

- A declining metropolitan area population, and a shift in population away from the city core to suburban and rural areas;
- A changing economic base from manufacturing to a more diversified information and service-based economy;
- A continued land-use pattern toward suburban sprawl and decreasing density;
- A concentration of poverty in the City of Syracuse; and
- Increased commuting into Onondaga County and from the City to the suburbs.

During the past decade, Onondaga County, the City of Syracuse, and several towns and villages within the MPA have developed plans that identify growth management strategies designed to address these trends. For instance, the Onondaga County Settlement Plan (2001) and the Onondaga County 2010 Development Guide (1998) support, among other things:

- Redirecting growth towards urban centers,
- Capitalizing on infill opportunities,
- Smart Growth and New Urbanism Planning Principles, and
- Managing growth through the provision of sustainable, cost-effective infrastructure.

Onondaga County is in the process of creating a new County plan (Onondaga County Sustainable Development Plan) with a focus on settlement patterns that will foster sustainability. This new effort will replace the 1998 Development Guide, but will include many of the same principals. The County Plan will be closely linked with the County's Climate Change Action Plan (currently being developed) and the LRTP.

The City of Syracuse also undertook extensive planning efforts during the development of its Comprehensive Plan 2025 (2005). The City's plan complements many of the recommendations and policies established within the Settlement Plan and the 2010 Development Guide, most notably by recapturing growth and development opportunities. Through the implementation of effective enhancement strategies, the City is striving to maximize the use of its existing infrastructure that once supported a population of more than 220,000.

Future Projections

The SMTC utilizes travel demand modeling to enable the agency to more accurately predict future travel patterns and volumes. This tool is valuable in transportation planning activities to assist in determining the best solution for identified transportation problems and issues. Additionally, it can be used to examine the consequences of capital investments via the TIP. This allows the SMTC to better understand the regional impact of the project. Because of the utility of travel demand models at predicting future travel patterns

and volumes, they are also critical to the process of Air Quality and Conformity. The model allows for the agency to predict future volumes and speeds on selected roadway elements and then, by following an involved procedure and additional computer software analysis, the impact on air quality can be quantified to a degree.

Travel demand model software uses current and projected population and land use statistics to estimate impacts of proposed transportation infrastructure projects. Modeling is a useful and essential tool, helping planners to project improvements and predict typical impacts of land development actions. Additionally, it is mandated that the SMTC utilize modeling as part of its air quality conformity process.

Based on SMTC's travel demand model outreach meetings with community representatives, projected population for the MPA area for the year 2035 is approximately 455,000. This represents an approximate decrease of 3% for the region over a 28 year period (2007 to 2035). In addition, the number of households in the region is projected to grow by nearly 4% over the same timeframe. The projected increase in households and decrease in population indicates a declining average number of people per household in the region (these population and household projections were developed prior to the release of 2010 US Census data).

Chapter 3: Facilities
Goal
To provide safe, clean, well maintained and efficient transportation infrastructures.

The Facility Chapter contains information about the surface transportation system within the MPA, including detailed discussions on roadways and functional classification, bridge and pavement conditions, transit, bicycle and pedestrian facilities, air/water/rail facilities and other related topics.

Roadways
The transportation system is organized by *"functional classification."* Functional classification is the process by which roads are categorized into classes according to the type of service they are meant to provide.

Basic to this process is the recognition that individual roads and streets do not serve travel independently but are part of a greater network. This network *"channels"* traffic in a logical, safe and efficient manner and helps to define the functional classification hierarchy. A simplified hierarchy of a functional classification (from lowest class to highest) consists of local roads, major and minor collector roads, minor arterial, and principal arterials. Functional classification codes are given to all federal-aid eligible roads.

The MPA's surface transportation system includes approximately 3,500 centerline miles of roads. The vast system of existing highways and bridges in the MPA area require a large amount of maintenance in order to ensure adequate operational characteristics. The majority (72%) of money spent on the Transportation Improvement Program (TIP) from Federal Highway Administration (FHWA) is used for maintaining the existing road network in the MPA.

Bridge & Pavement Conditions
Onondaga County has 492 bridges on the various State, County and local roads, as well as on or over the New York State Thruway. The New York State Department of Transportation (NYSDOT) maintains a Bridge Management System (BMS) for all of these bridges. The State only inspects bridges with spans of 20 feet or greater for Onondaga County Department of Transportation (OCDOT). OCDOT maintains 255 drainage structures that are classified as bridges. The BMS rates the bridge deck, bearings and other structural elements on a weighted scoring system. State and local bridges are rated by the NYSDOT on a scale of 1.0 to 7.0. Bridges with a condition rating of less than 5.0 are deemed as being in a deficient

condition. However, a deficient condition does not mean that the bridges are unsafe, but rather they are candidates for rehabilitation work, replacement or even perhaps closure.

The NYSDOT uses a Pavement Management System (PMS) that attempts to maximize the effectiveness of the limited dollars spent on maintaining pavements. Pavements have a varying life cycle dependent on many conditions. A PMS allows the NYSDOT and other highway departments to determine the pavement rating relative to all other pavements in a jurisdiction. It also allows year-to-year monitoring of pavements and, most importantly, it facilitates predictions of when to cost effectively overlay, rehabilitate or reconstruct a road. Knowing where a pavement is in its life cycle allows a determination of the most cost-effective treatment.

This information illustrates the necessity for infrastructure maintenance and safety concerns in the MPO area. These critical issues emphasize the need for maintenance funding to be allocated to the MPO on an annual basis.

Bicycle & Pedestrian Facilities

Since the publication of the original 1995 LRTP, a slight but important shift has occurred creating a larger emphasis on bicycle and pedestrian facilities planning than previously existed. The increase in facilities for non-motorized travel creates a stronger multimodal orientation than was reflected in original 1995 LRTP. This section of the LRTP notes several of the bicycle and pedestrian plans and projects currently underway in the MPA area, including the Loop the Lake Trail, the extension of the Syracuse Creekwalk, the Connective Corridor, and the addition of bike lanes to City streets.

Transit

Centro operates the public transportation system in Onondaga, Oswego, Oneida and Cayuga Counties. Centro operates fixed-route public transit systems and demand-responsive paratransit service with a total fleet of 254 buses. CNY Centro, the Onondaga County fleet, consists of 188 buses (25 of which are paratransit). Bicycle racks can be found on the front of most Centro buses and all future bus purchases will include bike racks and will be clean fuel-technology vehicles.

The majority of Centro's routes meet at the central point of the regional hub-and-spoke system at the intersection of Fayette and Salina Streets in the City of Syracuse. It is at this Common Center that nearly two thirds (65%) of the Syracuse metropolitan region's bus riders transfer to other routes. Centro has undertaken a major capital investment that involves the development of a new Common Center located at the intersection of South Salina Street and Adams Street, the location of the former American Red Cross building. The new Common Center will consist of an enclosed seating area for passengers as well as a covered bus loading and unloading area where transfers may be made out of the general flow of traffic. The new Common Center project will be completed in winter 2011/2012.

Air/Water/Rail Facilities

Hancock International Airport is the only airport providing commercial air passenger service in the SMTC area and the four-county Syracuse Metropolitan Statistical Area (MSA). Hancock International Airport is owned and operated by the City of Syracuse. In June 2011, the New York State Assembly approved legislation to create a regional airport authority for the Syracuse Hancock International Airport (the Federal Aviation Administration must approve the plan for the authority). The MPA also contains four local airports: Skaneateles Aerodrome, located in Skaneateles; Michaels Field, located in Cicero; Marcellus Airport, located in Marcellus; and Camillus Airport located in Camillus. The local airports are privately owned and open to the public, except for the Marcellus Airport which is not opened to the public. The number, condition, and type of runways vary by airport.

The New York State Canal Corporation is responsible for the overall operation, maintenance and rehabilitation of the 524-mile New York State Canal System. The statewide Canal System is made up of four canals: the Erie Canal, the Champlain Canal, the Oswego Canal and the Cayuga-Seneca Canal. In the Metropolitan Planning Area, the Canal System includes Oneida Lake, the Oneida River, Onondaga Lake, the Oswego River, the Seneca River and Cross Lake

Rail facilities within the SMTC area consist of both passenger and freight facilities. Rail passenger service in the SMTC area is provided through the National Railroad Passenger Corporation (Amtrak), which provides intercity rail passenger service on three different routes (Lake Shore Limited, Empire Service, and Maple Leaf) in the Central New York region[1]. Primarily a freight railroad, the Finger Lakes Railway has offered passenger services along the Finger Lakes Railway since 2000 in the form of special excursions sponsored by local organizations[2].

The William F. Walsh Regional Transportation Center (RTC) opened in 1998 by the CNYRTA provides improved interconnectivity between bus and rail transportation modes, as well as a greater presence for Amtrak in the Syracuse Metropolitan Area. The RTC has an enclosed seating area, one boarding platform, a small food court area, and is home to bus services provided by Greyhound and Trailways.

A number of initiatives being considered have the potential for improving passenger rail service in Central New York. The State of New York is currently assessing the feasibility of high-speed rail service across Upstate. If this service is implemented, changes will be required in the configuration of the William F. Walsh Regional Transportation Center to accommodate high-speed trains and the resulting increase in the number of rail passengers. The New York State Empire Corridor connects all of New York's largest cities. The vision for the corridor is to increase speeds to 110mph and add daily round trips, with one of the largest investments being the construction of a third track between Albany and Buffalo.[3]

Rail freight services in the Central New York region include one major (Class 1) carrier, CSX Transportation; one regional carrier, New York, Susquehanna & Western Railway; and one shortline railroad, Finger Lakes Railway.

Chapter 4: Mobility
Goal
To improve the mobility options for people within the Syracuse Metropolitan Planning Area (MPA).

The Mobility Chapter examines the various modes of transportation within the MPA, including vehicular travel, bicycle and pedestrian travel, public transit, water transportation, air passenger transportation, rail passenger service and freight movement.

Vehicular Travel
By far, the most common mode of transportation in Onondaga County is the passenger motor vehicle, and the popularity of this mode of travel continues to increase over time. Between 1960 and 2000 (Census 2010 Journey to Work data has not yet been released), the percentage of the Onondaga County labor force driving to work increased from 71% to 90%. Of those using vehicles to access work in the MPA, the vast majority are driving alone. According to the 2000 census, 89% of MPA workers who drove to work did so by driving alone. Eleven percent drove in a car with more than one person. In 2000, commuting by

[1] *Information referenced from the Centro Web site: http://www.centro.org/Regional.aspx.*
[2] *Finger Lakes Railway, Passenger Services, http://www.fingerlakesscenicrailway.com/railroad.*
[3] *The White House, Office of the Press Secretary, Fact Sheet: High Speed Intercity Passenger Rail Program: Northeast Region, January 28, 2010, http://www.whitehouse.gov/the-press-office/fact-sheet-high-speed-intercity-passenger-rail-program-northeast.*

driving alone was particularly prevalent in the northern suburbs and in the towns of Onondaga, Manlius, and Camillus, where over 86% of workers drove alone to work. In contrast, only 65.9% of workers from the City of Syracuse drove alone to work in 2000.

Bicycle & Pedestrian Travel

According to the Census, 4%, or 8,906, of workers over the age of 16 in the Syracuse MPA walked or bicycled to work in 2000. The region lags behind the rest of the state, where 6.2% of workers walked to work and 0.8% used other means in 2000. Of those who walked or bicycled to work in the MPA, 70.8% lived within the City of Syracuse. The next highest percentage, 4.2%, lived in Salina. Within the City of Syracuse, most pedestrians and bicycles are found in the vicinity of University Hill. The 2006 *University Hill Transportation Study* estimated a daily total of 89,000 pedestrian trips and 12,848 bicycle trips in this area. Most of these were the product of students and employees, and many were discretionary, or non-commute, trips.

Despite the prevalence of pedestrian and bicycle activity in some key locations in the community, Onondaga County has seen a downward trend in terms of pedestrian commuting over the last several decades. In 1960, 9.9% of the county population walked to work. By 2000, the percentage of walking commuters had decreased to 3.8%. Since the census began tracking bike commuters in 1990, the percentage of bike commuters in Onondaga County has remained stable at 0.2%.

Public Transit

According to the census, 2.5%, or 5,589, of workers over the age of 16 in the MPA used public transit to access work in 2000. Of those who used transit to access work in the MPA, 74.2% lived in the City of Syracuse. The next highest percentages (4.3%) were found in Salina and Clay.

However, considerably more people are using the transit system in the MPA for non-work reasons. Centro transported an average of 33,000 passengers per day in FY 2007-08, the last year for which data is available. The 2009 data based on farebox totals indicates that Centro's most popular route is the James Street/Lamson Street bus, with the South Salina/Brighton Avenue route following closely behind. The Syracuse University/Downtown bus, the South Avenue bus, and the Court Street/Park Street bus also have high ridership.

Water Transportation

The New York State Canal Corporation is responsible for the overall operation, maintenance, and rehabilitation of the New York State Canal System. Lock E-23 in Brewerton is historically the busiest lock in the entire New York State Canal System. Lock E-24 in Baldwinsville is generally the second or third busiest in the state. Most of the boats passing through these locks are recreational vessels. In 2010, traffic on the New York State Barge Canal increased nearly two percent over 2009 and more than five percent over 2008, when a rainy summer and the national economic downturn reduced recreational traffic.

Air Passenger Transportation

Over the past decade, enplanements at Hancock Airport have mirrored national trends, dipping in 2001 and generally increasing in the years thereafter. Air traffic forecasts show an increase in passengers. The airport's *Master Plan Update,* completed in September 2006, predicts an increase of over 50% by 2022. Enplanements in Syracuse have generally been stable around 1 million annually since 2004.

Rail Passenger Service
Rail passenger service in the SMTC area is provided primarily through the National Railroad Passenger Corporation (Amtrak). Syracuse rail passenger traffic on Amtrak is substantial, traditionally ranking third behind New York City and Albany in ridership.

Freight Movement (Air/Highway/Rail/Water)
Among the attractions to doing business in Onondaga County and the Central New York region is the crossroads location of the County for air, highway, rail and water transportation and the variety of freight movement services available. Air cargo service is available at Syracuse Hancock International Airport, which is directly linked to Interstate 81. U.S. Customs inspection services are also available at Hancock Field. Two interstate highways intersect at Syracuse, the New York State Thruway (Interstate 90) and Interstate 81, providing excellent truck access to the SMTC planning area. Rail freight services in Onondaga County are available from three providers. Water transportation is available on the New York State Canal System.

Chapter 5: Land Use
Goal
To promote the development of an efficient urban area and a sense of community through transportation planning.

Land Use Trends
The 1995 SMTC LRTP and subsequent updates identified five general types of land use prevalent in the SMTC Study Area, including a moderately dense urban core; suburban towns, villages and hamlets; farmland; shoreline; and scattered development. These types remain indicative of present conditions, though the trend towards suburbanization and outward growth of the metropolitan area is beginning to affect the distinction between urban and rural landscapes and are creating new patterns of development in the County. Several economic development projects both planned and underway may have impacts on future development patterns as well.

Suburban Development ("Suburbanization")
Not unlike other municipal areas across the United States and the northeast, the SMTC MPA has experienced an increase in suburban development while overall MPA population numbers remain relatively constant. Suburbanization typically occurs in rural fringe areas with development patterns often consisting of segregated, low density uses. Land use planners refer to unmanaged, low density development patterns that lack a sustainable environmental, economic, and social balance as "suburban sprawl". The term "suburban sprawl" may consist of residential and nonresidential development patterns.

Suburban and traditional development patterns are both vital and serve important roles to help meet a community's needs. However, it is important to maintain a balance of transportation and development patterns to ensure that the land uses can support the cost of infrastructure and that traffic patterns as well as the natural and social environment are not adversely affected. When the transportation-land use balance is not maintained traffic worsens; congestion increases; air and water pollution increases; more costly roads are built or widened; the young, the elderly, people with disabilities, and the lower income population segments often become immobilized and isolated; and opportunities for social interaction and the local economy falters.

Land Use & Transportation
A reactive trend referred to as the "transportation-land use cycle" occurs when the transportation-land use balance is not maintained. In developing communities, traffic congestion often leads people to ask for

added highway capacity, which in turn will attract more development, which in turn creates more congestion, which in turn leads people to ask for added highway capacity, and so on and so on. As such, transportation planners contest that in many cases you cannot build your way out of congestion by adding additional travel lanes. Instead, transportation planners advocate for integrating land use planning and community design principles with transportation planning principles to effectively eliminate congestion.

The NYSDOT is also continuing to recognize the important linkage between land use and transportation. Introduced by the NYSDOT in 2000, and supported by the FHWA, *Context Sensitive Solutions* (CSS) is "a philosophy wherein safe transportation solutions are designed in harmony with the community. CSS strives to balance environmental, scenic, aesthetic, historic, cultural, natural resources, community and transportation service needs."[4]

Another initiative being undertaken by New York State is the Smart Growth Initiative, which has a mission to work with 'localities to use smart, sensible planning to create livable communities, protect our natural resources and promote economic growth."[5] New York State recently enacted the New York State Smart Growth Public Infrastructure Policy Act. The SMTC is currently participating in various Smart Growth working groups with the NYSDOT and other NYS MPOs in an effort to assist with determining how smart growth requirements (as outlined in the new NYS law) should be addressed within MPO LRTPs, the NYSDOT Master Plan, planning studies and TIP project selection processes. As the Smart Growth law directly applies to State Infrastructure Agencies, the NYSDOT formed these working groups to address the requirements of this law.

Finally, the Land Use chapter details region-wide planning efforts, including summaries of existing Comprehensive Plans and Local Waterfront Revitalization Programs.

Chapter 6: Economy
Goal
To enhance the area's economic competitiveness, thereby increasing opportunities for employment.

Transportation Crossroads of Central New York
Syracuse and Onondaga County benefit from their location at the center of New York State. The establishment of the Erie Canal and the subsequent development of prominent railroad corridors as well as the interstate highway system across Onondaga County ensured Central New York's rise to prominence through continual access to major transportation routes for nearly two centuries.

Today, Onondaga County continues to benefit economically as the transportation crossroads of Central New York. Interstate 81 serves as a significant north-south corridor reaching from Canada to Tennessee. It also intersects the NYS Thruway just north of the City of Syracuse in the center of Onondaga County. The NYS Thruway runs east-west across all of New York State linking with major interstate corridors in neighboring states. NYS Route 481 also plays a role in the regional transportation network, stretching from I-81 north of the City of Syracuse to the City of Oswego (Interstate 481 runs from I-81 south of the city to I-81 north of the City). Other significant east-west corridors that span across the state include NYS Route 20 and NYS Route 5. Additionally, NYS Route 31 serves as the northern Onondaga County connector.

In addition, the MPA is served by extensive multi-modal transportation hubs, which include: the Syracuse Hancock International Airport, the deep water Port of Oswego, a CSX intermodal freight rail center, and

[4] *Source: NYSDOT web site: Power Pt. Presentation on Context Sensitive Solutions.*
[5] *Source: http://smartgrowthny.org/index.asp.*

the Regional Transportation Center that offers Amtrak passenger rail service and commercial bus services. This network is critical in terms of carrying freight which in turn supports the economy. For example, according to the I-81 Corridor Coalition, I-81 is estimated to carry 12% of the United States Gross Domestic Product (GDP). The network is also critical in terms of providing access for commuters to Downtown Syracuse and the University Hill area, where many Central New Yorkers are employed.

Current Economic Conditions

As defined by the New York State Department of Labor, the Central New York Labor Market Region consists of five counties – Cayuga, Cortland, Madison, Onondaga and Oswego. While broader than the SMTC planning area, it is important to understand the regional economy and its impact on the transportation system. The CNY region covers an area of approximately 3,600 square miles and has an estimated population of approximately 782,000[6]. The region generally forms an area of interdependent economic activity, with Onondaga County at its core.

Many of the region's largest employers are located in Onondaga County. These companies and institutions include the State University of New York Health Science Center, Syracuse University, Wegmans Food Markets, Inc., St. Joseph's Hospital Health Center, Crouse Hospital, Lockheed Martin, National Grid, and Loretto to name a few[7].

According to SMTC Travel Demand Model Outputs (2007-2035 Employment Data), the business sectors with the highest estimated number of employees in the MPA currently are education, retail/trade industries and health. The City of Syracuse is the municipality with the highest number of employees both the education and health industries at 14,376 and 20,730 respectively. Several institutions of higher learning are located in the University Hill area. In addition, most health sector jobs are located at hospitals and medical office buildings on University Hill or at St. Joseph's Hospital. Syracuse also has the majority of retail and trade employees at 8,358, followed by Clay and DeWitt.

The next largest number of employees works in the fields of manufacturing, financial and real estate, and business and professional. The Town of DeWitt has the highest number of employees working in the manufacturing field, followed by the City of Syracuse and the Town of Salina. The City of Syracuse is the municipality with the largest number of employees in the financial and real estate and business and professional sectors.

The job sectors with the least number of employees include mining and agriculture. Only the Towns of Cicero, Clay, DeWitt, Geddes and the City of Syracuse report employees working in the mining industry. The Towns of DeWitt, Onondaga, Salina and the City of Syracuse show the most number of employees (around 66 in each municipality) working in the agriculture sector.

As calculated through the SMTC's Travel Demand Model, the number of jobs in the MPA region is projected to grow by 12% from 252,753 in 2007 to 282,753 in 2035.

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[6] *Empire State Development, Central New York Regional Office, Inside Central New York, http://www.esd.ny.gov/RegionalOverviews/CentralNY/InsideRegion.html.*

[7] *Greater Syracuse Economic Growth Council Resource Center, Major Employers, http://www.syracusecentral.com/market_data/major_employers/top25.htm.*

Chapter 7: Environment
Goal
To provide a clean and environmentally sound transportation system for current and future residents

Environmental Mitigation
Environmental mitigation is the process of consistency of transportation planning with applicable federal, state and local energy conservation programs, environmental goals, and objectives. Environmental mitigation is incorporated into the current LRTP's goals for establishing project priorities. The SMTC member agencies are engaged in environmental mitigation activities at the planning and project level through the implementation of (a) National Environmental Policy Act (NEPA) and State Environmental Quality Review Act (SEQRA) regulations and (b) Context Sensitive Solutions (CSS) which ensure that projects are in harmony with the community, and that they preserve environmental, scenic, aesthetic, historic, and natural resource values of the area in which they are located. The SMTC's LRTP is essentially a policy level document that does not specifically contain many significant projects in the out-years for which potential mitigation activities would be appropriate. Specific mitigation measures will be examined at the project phase via the SEQR/NEPA process and are therefore beyond the scope of this document. However, environmental mitigation is a major consideration in local major investment studies, planning studies, and other planning efforts.

Air Quality & Transportation Conformity
The SMTC works with various agencies in regards to air quality and conformity. Air quality, as it pertains to the operations of the SMTC and its member agencies includes the state and federal requirements for transportation conformity[8], project level analysis for Congestion Mitigation/Air Quality (CMAQ) funding, and requirements for the State Energy Plan (SEP) and Greenhouse Gas analysis.

Transportation conformity ("conformity") is a way to ensure that Federal funding and approval is applied to those transportation activities that are consistent with air quality goals. Conformity applies to transportation plans, such as the SMTC Long Range Transportation Plan, the Transportation Improvement Program (TIP), and projects funded or approved by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA) in areas that do not meet or previously have not met air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide. These areas are known as "non-attainment areas" or "maintenance areas," respectively.

Transportation projects must demonstrate conformity in order to be funded. A conformity determination demonstrates that the total emissions projected for a plan or program are within the emissions limits ("budgets") established by the State Implementation Plan (SIP), and that transportation control measures (TCMs) are implemented in a timely fashion. TCMs are specific programs designed to reduce emissions from transportation sources by reducing vehicle use, changing traffic flow or congestion conditions.

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[8] *Transportation conformity ("conformity") is a way to ensure that Federal funding and approval is applied to those transportation activities that are consistent with air quality goals. Conformity applies to transportation plans (such as the SMTC Long Range Transportation Plan [LRTP]), Transportation Improvement Programs [TIPs], and projects funded or approved by the Federal Highway Administration [FHWA] or the Federal Transit Administration [FTA]) in areas that do not meet or previously have not met air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide. These areas are known as "non-attainment areas" or "maintenance areas," respectively. Transportation projects must demonstrate conformity in order to be funded.*

Examples include programs for improving public transit, developing high occupancy vehicle (HOV) facilities, and ordinances to promote non-motor vehicle travel.

The SMTC LRTP is a blueprint that guides investment in the surface transportation system in our metropolitan area, and is therefore required to be in conformity with the regional air quality plan or SIP. This is due to Onondaga County being designated a "maintenance" area for Carbon Monoxide (CO). Regarding ozone emissions, in 2010 the EPA proposed to strengthen the national air quality standard from its current 0.075 parts per million (ppm) to a range within 0.060-0.070 ppm. According to the EPA, "the proposed revisions are based on scientific evidence about ozone and its effects on people and sensitive trees and plants."[9] The EPA intends to issue a final decision in July 2011 as to the new standard. To date, Onondaga County is presently in conformance with all applicable standards relative to ozone. Should the federal government officially strengthen this threshold, it is probable that Onondaga County, based on prior emissions data, would eventually be reclassified as a non-attainment area. This reclassification would then require the monitoring and analysis of said emissions as per the federal transportation conformity regulations.

In examining the results of the conformity analysis for the SMTC relative to this LRTP 2011 Update, the output shows that carbon monoxide emissions between the base year of 2007 and the forecast year of 2035 will be significantly reduced. The SMTC remains in conformity with a classification of maintenance.

Chapter 8: Safety and Security
Goal
To enhance the safety of the people using the transportation system.

Safety
This goal is rooted in ensuring a safe transportation system for all users as well as instilling a sense of security for all users. Safety projects continue to be a priority in the SMTC MPA. Safety projects not only look at automobile safety, but also address pedestrian and bicyclist safety.

The SMTC completed an analysis of the ten highest accident locations in the MPA by jurisdiction from 2006-2009 as determined through the NYSDOT Accident Location Information System (ALIS), and the locations with the most bicycle and pedestrian accidents during the same time frame. The SMTC member agencies play a key role in reducing the number and severity of accidents, with much of the local effort directed at engineering improvements to the highway system itself. The presence of a high number of accidents does not always indicate a problem with a particular location. A road with a large number of accidents may actually have a relatively low accident rate due to high traffic volumes. Other locations that have a low number of accidents may have a relatively high accident rate due to low traffic volumes. The highest accident locations between June 2006 and June 2009 are Thompson Road/Carrier Parkway (New York State), Onondaga Road/Old Route 5 (Onondaga County), and West Hiawatha Boulevard/Solar Street (City of Syracuse).

The locations with the most bike and pedestrian accidents during the same three years are as follows:

Pedestrian Accidents
Location (# accidents)
South Salina/East Fayette Streets (9)
South Clinton /West Fayette Streets (5)
Lodi/Butternut Streets (4)

[9] *http://www.epa.gov/glo/actions.html.*

Midland/West Ostrander Avenues (4)
NY 175/Valley Drive (4)

Bicycle Accidents
Location (# accidents)
South Geddes/Seymour Streets (4)
Brewerton Road/Ramp I-81 to US 11 (3)
South Salina/East Fayette Streets (3)

The majority of pedestrian accidents occurred in downtown Syracuse, near Centro's current transit hub, where numerous pedestrians wait for buses on a daily basis.

The SMTC also conducts an annual Safety Improvement Analysis (SIA) (formerly known as the Accident Surveillance Program) as part of the SMTC's UPWP. The program, which is intended to identify and analyze priority vehicular collision locations, is offered to both the OCDOT and the City of Syracuse DPW. The most recent SIA completed during the 2010-2011 UPWP program year addressed ten priority collision locations as determined by the OCDOT. The objective of the SIA report is to provide the member agency with an assessment of their ten priority vehicular collision locations.

Security
SAFETEA-LU Legislation
Within the SAFETEA-LU legislation, an additional planning factor was added to address security as its own entity. Furthermore, according to the Federal Register Final rule for Metropolitan Transportation Planning, *"the metropolitan transportation plan should include a safety element that incorporates… emergency relief and disaster preparedness plans and strategies and policies that support homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users."*

The FHWA/FTA's 2009 review of the SMTC called out the importance of security considerations in the SMTC Planning Process. Security issues include significant disruptions to the transportation system, either long or short term, intentional or not. Previously, the issue of security had not yet become a significant part of the MPO planning processes. However, the issue of security is now a part of the MPO planning process, notably via the SAFETEA-LU legislation through the separation of the safety and security planning factor, and the requirements for addressing security within the metropolitan transportation plan.

The SMTC's role in addressing security concerns has been primarily supportive in nature, as most issues related to security and transportation are outside the purview of the MPO. However, the SMTC can and does act as a conduit to facilitate interagency cooperation to that end.

One of the most significant components of security in the MPO area is the Intelligent Transportation Systems (ITS) initiative. ITS refers to the application of electronics, communications, hardware, and software that support various services and products to address transportation challenges. When deployed in an integrated fashion, ITS allows the surface transportation system to be managed as an intermodal, multi-jurisdictional entity, appearing to the public as a seamless system. Commonly used ITS components include Variable Message Signs and Dynamic Message Signs.

Chapter 9: Emerging Initiatives/Projects, Long Term Outlook & Financial Plan

Emerging Initiatives
There are several emerging initiatives and projects relating to transportation planning that currently have a direct impact on the planning activities in the MPO area. The first include concepts like Smart Growth and

Complete Streets. New York State recently enacted the New York State Smart Growth Public Infrastructure Policy Act. As such, several State agencies including NYSDOT are required to align construction of new or expanded infrastructure projects or the reconstruction of existing projects, to the extent practicable, with Smart Growth criteria. The overall approach of NYSDOT is to build upon existing programs in NYSDOT and integrate Smart Growth principles in existing federal and state mandated planning and project development processes.

Complete Streets are those designed for everyone – regardless of age and ability. "A complete street may include: sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more."[10] Recently there has been a national push for Complete Streets and the development of Complete Streets policies, which has also been gaining momentum locally. Legislation for Complete Streets at both the state and national levels is presently under consideration.

Emerging Projects

The I-81 Challenge is one of the largest planning projects undertaken in the Syracuse Metropolitan Planning Area in decades. In 2009, on behalf of the NYSDOT, the SMTC began working on the I-81 Public Participation Project. The goal of this project is to facilitate the public participation effort in conjunction with NYSDOT's study of the I-81 Corridor. Together, the Public Participation Project, the NYSDOT's I-81 Corridor Study and the I-81 Travel Demand Modeling Project (another project undertaken by the SMTC to assist NYSDOT in evaluating existing and future traffic conditions along I-81 in the MPA), form *The I-81 Challenge.*

University Hill is a thriving educational and institutional center. The Hill is home to more than 16,000 residents, three educational institutions, four major hospitals and healthcare facilities and the 50,000-seat Carrier Dome located on the Syracuse University Campus. [11] University Hill is poised for continued development and growth. The SMTC completed the University Hill Transportation Study in 2007 to create a multi-modal transportation plan that supports the existing and future land uses and guides transportation decisions on the Hill. The goal of the study was to keep the institutions viable by identifying creative land use policies and innovative transportation alternatives, and reduce the need for more cars and parking. Collectively, more than 4 million square feet of development is forecast by the institutions over the next two decades. This growth can contribute significantly to the Central New York economy.

The Connective Corridor project – another emerging project in the University Hill area, was kicked-off by Syracuse University Chancellor Nancy Cantor who wanted to create a symbolic and functional means of linking Syracuse University to the City of Syracuse. The project involves streetscape improvements and will improve travel and access to various modes of transportation to better link its neighborhoods, institutions, and businesses. The corridor will also reflect and promote the different historical and cultural attractions to the city, to make downtown Syracuse a destination for people and business development.

Over the past 20 years, the City of Syracuse and several public and private partners have been working to redevelop a long vacant and underutilized area in the northern part of the city. Sometimes referred to as *Oil City* due to the large concentration of oil storage facilities and industrial businesses, the area is undergoing a continued transformation into what is now known as the *Syracuse Lakefront.* The project

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[10] Complete Streets, *Complete Streets FAQ, http://www.completestreets.org/complete-streets-fundamentals/complete-streets-faq.*

[11] *Home to Syracuse University, Crouse Hospital, State University of New York (SUNY) Upstate Medical Center, SUNY College of Environmental Science and Forestry, the Veterans Administration Hospital and other important institutions and businesses, this area attracts a significant number of people each day for employment, learning, research and living.*

involves the ongoing redevelopment of a former industrial district to include retail/entertainment and mixed-use development of the Inner Harbor, historic Franklin Square, and on additional available land within the Lakefront area. The Lakefront Planning Study and the Carousel Center Expansion/DestiNY USA projects will continue to play a big role in the development of the Syracuse Lakefront.

Long Term Outlook

First and foremost, as shown in the previous sections of this plan, the vast majority of financial resources relating to transportation for the Syracuse Metropolitan Transportation Council (SMTC) area are committed to maintaining the extensive, diverse, and aging infrastructure that already exists in the community. This infrastructure maintenance includes, but is not limited to the major activities that are discussed in the LRTP 2011 Update. It is expected that the majority of the resources that will be expended in the near future relate to maintenance via the activities previously discussed and other required actions. However, there are some notable exceptions, such as the potential for future projects requiring additional capacity, new transit initiatives, additions and improvements to the non-motorized system (bicycle/pedestrian system), potential new development, and ITS programs.

Financial Plan

The 2020 LRTP, when first published in 1995, anticipated a total of $3.050 billion in funding over the 25-year planning period. This LRTP 2011 Update anticipates a total of $5.363 billion in funding over the remaining term of the planning period. The major sources of funding include the federal government at 38.0% ($2,026 million) of the total, the State Dedicated Fund at 27% ($1,435 million), Onondaga County at 6% ($342 million) and the City of Syracuse at 1 % ($76 million). The balance is comprised of other State and local sources at 20% ($1060 million) and Centro operating revenue at 8% ($433 million). It is anticipated that all traditional funding mechanisms will be exhausted with the implementation of this LRTP 2011 Update.

1 INTRODUCTION

1.0 INTRODUCTION

The Long Range Transportation Plan (LRTP) is a blueprint for the Syracuse Metropolitan Planning Area's (MPA) transportation development over a 20-year period. The MPA includes all of Onondaga County and small parts of Oswego and Madison Counties (See Map 1-1).

Updated every four years to reflect changing conditions and new planning principles, the LRTP is based on projections of growth and travel demand coupled with financial assumptions and public input. In addition, the LRTP establishes a vision and goals that guide projects associated with the Unified Planning Work Program (UPWP) and the Transportation Improvement Program (TIP).

The LRTP planning process engages the public and considers major urban transportation planning concerns such as environmental quality, access to transportation, alternative transportation modes (especially bicycle and pedestrian), the impact of land development on the transportation system, highway congestion, and maintenance of the existing infrastructure.

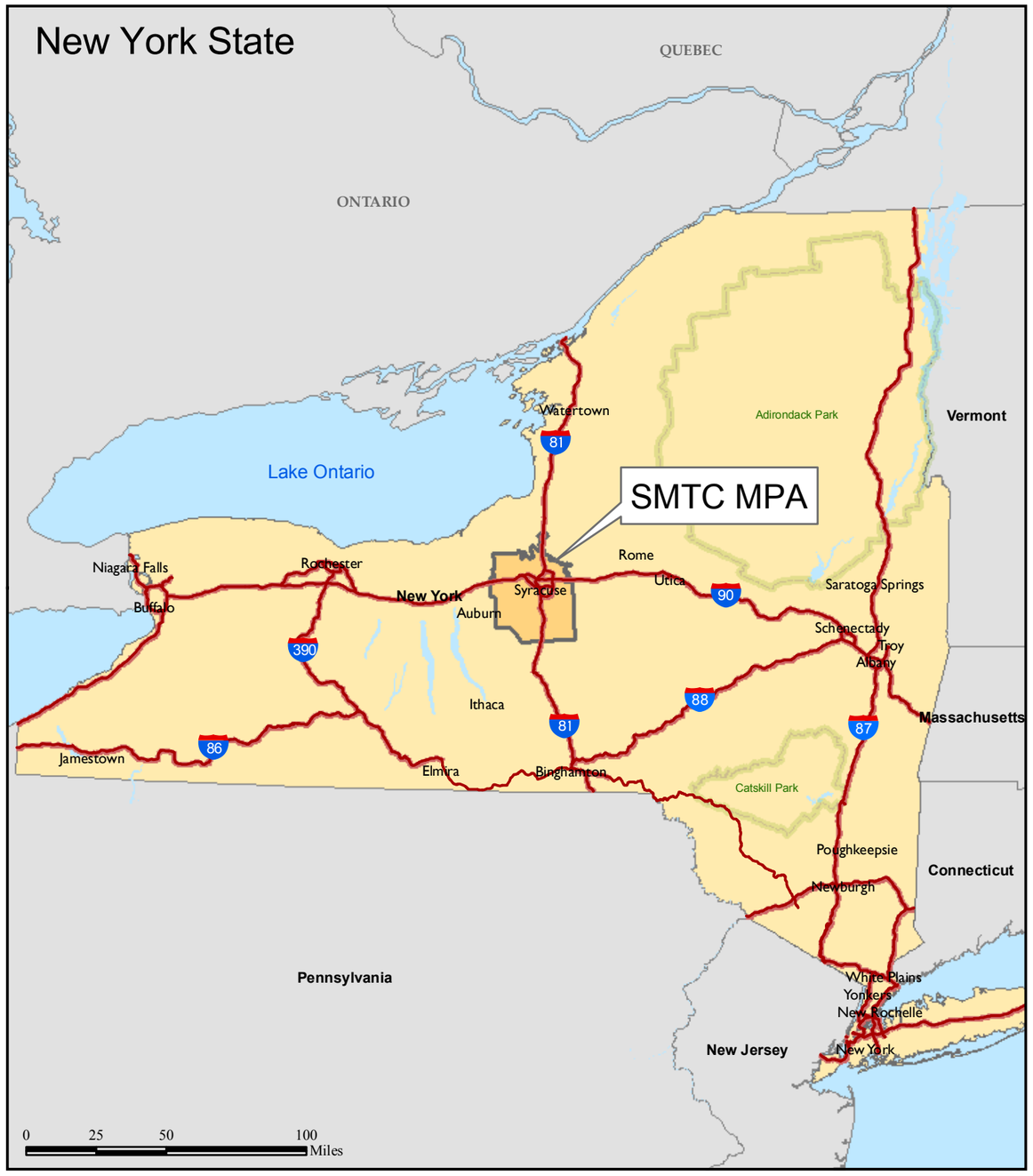
1.1 SYRACUSE METROPOLITAN TRANSPORTATION COUNCIL (SMTC)

1.1.1 WHAT IS THE SMTC?

In 1966, the Governor of the State of New York established the SMTC to serve as the local Metropolitan Planning Organization (MPO) for the Syracuse MPA. The purpose of the MPO is to carry out the continuous, comprehensive, and cooperative transportation planning process for the MPA.

In addition to maintaining a LRTP, the SMTC conducts a number of specific transportation planning activities as part of its biennial UPWP. The SMTC is also responsible for the maintenance of the area's TIP, a multi-year program that funds capital projects related to transit, local roadways and interstates, bridges, bicycle and pedestrian amenities, and more. The UPWP and the TIP are described in greater detail in section 1.3.

As Syracuse's MPO, the SMTC also acts as a forum where long term and immediate transportation planning decisions are made for the region. These decisions are made through committees comprised of officials representing local, State, and Federal governments or agencies who utilize consensus building models to make transportation planning decisions. Many of these committees are run by SMTC staff; however, the governing committees are staffed solely by member agency representatives.



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SMTC Metropolitan Planning Area

Long-Range Transportation Plan 2011 Update

Map 1-1

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Legend
- Interstate
- U.S. Highways
- State Highways
- SMTC MPA
- County

Additionally, the SMTC provides an opportunity for citizens to participate in the discussion of specific transportation issues and encourages public participation via public meetings, surveys, questionnaires, workshops, and open houses, to name a few. The SMTC also conducts studies to gauge citizen desires, completes technical corridor reviews, utilizes multimedia educational tools, and maintains a public participation guide, "A Citizens Guide to Transportation Planning." A copy of this guide can be viewed on the Agency's website: www.smtcmpo.org.

The SMTC planning process leads to the allocation of millions of dollars in federal transportation funding each year. The MPO process helps facilitate programming of federal transportation dollars. This funding goes toward projects involving the study of infrastructure improvements for public transportation, bicycling, pedestrians, freight shipping, highways, and more. In short, SMTC's funding is available for almost any transportation project on air, land, or water.

It is important to note that the SMTC cannot implement particular transportation improvements, but serves as a collaborative forum where transportation issues are studied. The SMTC makes recommendations to other local, state, or federal agencies regarding which improvements to undertake.

1.1.2 SMTC COMMITTEE STRUCTURE

The SMTC is comprised of officials representing local, state, and federal governments or agencies having interest or responsibility in transportation planning and programming. To facilitate and encourage maximum interaction among these groups and the local community, the SMTC has adopted a committee structure that consists of a Policy Committee, a Planning Committee, and an Executive Committee. These committees are served by the SMTC central staff, and oversee SMTC transportation planning activities.

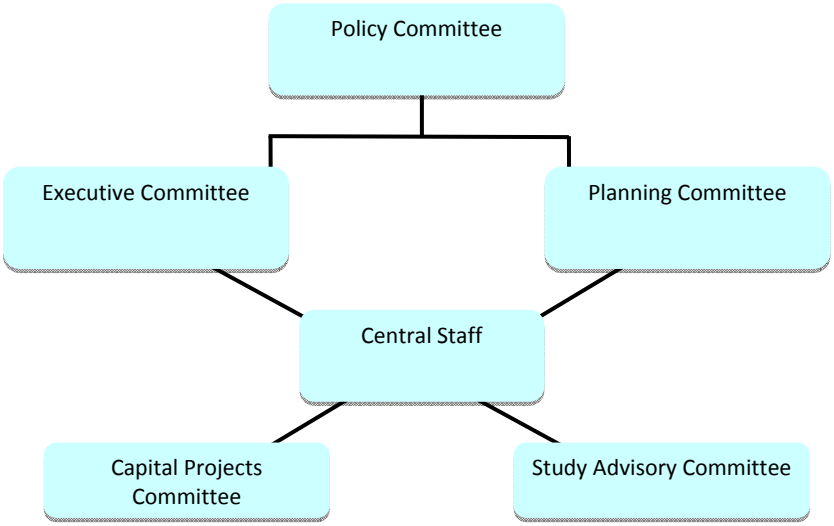
The Policy Committee consists of representatives that have an interest or responsibility in transportation planning and/or programming in the MPA. The primary responsibility of the Policy Committee is to establish policies for the overall conduct of the SMTC.

SMTC Policy Committee members include representatives from:

- the CenterState Corporation for Economic Opportunity,
- the City of Syracuse Office of the Mayor,
- the Central New York Regional Planning and Development Board (CNYRPDB),
- the Central New York Regional Transportation Authority (CNYRTA),
- the Empire State Development Corporation,
- the New York State Department of Environmental Conservation (NYSDEC),
- the New York State Department of Transportation (NYSDOT),
- the New York State Thruway Authority (NYSTA),
- the Onondaga County Office of the Executive,
- the Onondaga County Legislature,

- the Onondaga County Planning Board,
- the Syracuse Common Council, and
- the Syracuse Planning Commission.

Figure 1-1



Oswego and Madison Counties are represented on the Policy Committees as non-voting, advisory agencies, as is the Onondaga Nation. As depicted in Figure 1-1, the Policy Committee oversees both the Executive Committee and the Planning Committee.

The Planning Committee, which is established by the Policy Committee, is composed of professional representatives of Policy Committee member agencies having direct or indirect responsibility for transportation planning and implementation. Their primary responsibility is to monitor all technical activities, including the development of a draft UPWP and TIP for recommendation to the Policy Committee. They also direct and consider all major studies and planning activities for recommendation to the Policy Committee.

The Executive Committee is comprised of Planning Committee members. It provides oversight of the day-to-day operation of the agency, including financial management, personnel, and other administrative requirements.

1.1.3 SMTC Jurisdictional Boundaries: The Metropolitan Planning Area

The SMTC is responsible for transportation planning activities within its designated MPA – defined by the most current U.S. Census (2000) as the urbanized area, plus the area anticipated to be urbanized within a 20-year period. The most recent Census data available during the development of this 2011 Update is from 2000. The U.S. Census has been conducted for 2010; however, results and detailed data from this effort will not be available until after the completion of this LRTP.

The MPA boundary was last updated in spring 2003 to reflect the 2000 U.S. Census. As shown in Map 1-1, the SMTC's MPA includes all of Onondaga County and small portions of Oswego County (the Town of Schroeppel including the entire Village of Phoenix, and areas that extend north along Interstate 81 and New York State Route 11, and the entire Village of Central Square) and Madison County (including the Bridgeport area along Oneida Lake as well as a portion along I-90).

Within the MPA, the SMTC houses a specified Urban Area – the official "urban/rural" demarcation for Federal Highway Administration (FHWA) purposes. It is important for the purposes of highway functional classification, roadway design standards, funding, and outdoor advertising control.[1]

Based on the 2000 U.S. Census, the SMTC's Urban Area consists of the City of Syracuse, additional metropolitan areas within Onondaga County, and also urbanized portions of Oswego and Madison Counties that are contiguous to Onondaga County. It is anticipated that the Urban Area will be modified to reflect the 2010 U.S. Census counts. The portions of the Urban Area and the MPA that are outside of Onondaga County coincide. Thus, the only portions of the MPO that are outside of Onondaga County are the expanded urban areas, which are likely to change following the 2010 U.S. Census. See Map 1-2 for the Urban Area Boundary based on the current 2000 U.S. Census.

1.2 Long Range Transportation Plan (LRTP) Process

1.2.1 History of the LRTP and Subsequent Updates

The SMTC developed its first LRTP in 1995. The *2020 Long Range Transportation Plan* included descriptions of existing land use patterns, economic conditions, demographics, and an extensive inventory of transportation conditions. The plan identified goals, objectives, and actions designed to achieve concepts fundamental to a "desired plan." That plan focused on enhancing mobility, safety, environmental sustainability, economic development, land use, and facility investments.

The SMTC produced updates to the 1995 plan in 1998, 2001, 2004, 2007, and now in 2011. These updates were not designed as independent documents, but as supplements to be used in conjunction with the 1995 plan. These updates generally reviewed:

- The goals, objectives, and actions outlined in the 1995 plan;
- Emerging transportation and demographic trends, planning concepts, and resulting transportation needs;
- Bridge, pavement, and safety conditions and resulting needs; and
- The energy and air quality impacts of resulting projects (as identified in the TIP).

[1] *Federal Highway Administration, New York Division and Federal Transit Administration, Region II Office,* FHWA/FTA Review of Transportation Planning Process in Syracuse, *NY, September 2005, p. 10.*

SMTC Metropolitan Planning Area

Long-Range Transportation Plan 2011 Update

Map 1-2

0 1 2 4 Miles

SMTC

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www.smtcmpo.org

Data Sources: SMTC, NYSDOT, 2010
Prepared by SMTC, 04/2011

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The SMTC does not guarantee the accuracy or completeness of this map.

Legend

- Interstates
- Roads
- Urban Area (2000 Census)
- City of Syracuse
- Village
- Town
- Onondaga Nation

The SMTC launched public involvement efforts related to each update. An advisory committee oversaw the development of each update. The original LRTP and all updates have remained policy-level plans.

During the last two decades, several changes in federal legislation have had a substantial impact on how MPOs conduct transportation planning. These include the Clean Air Act Amendments (CAAA) of 1990, the Americans with Disabilities Act (ADA) of 1990, the Intermodal Transportation Efficiency Act (ISTEA) of 1991, the TEA-21 of 1998, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation of 2005.

Collectively, these acts address such major urban transportation planning concerns as environmental quality (especially air quality), access to transportation (especially for those with mobility difficulties), alternative transportation modes (especially bicycle and pedestrian), the transportation-land use linkage (especially the impact of land development on the transportation system), highway traffic congestion and maintenance of the existing transportation infrastructure. The legislation directs the planning focus of agencies such as the SMTC to these new areas of concern.

The 1995 LRTP's goals were created during brainstorming sessions with the 2020 Visioning Committee. This Committee established a vision and six goals, 23 objectives, and 46 recommended action plans to achieve that vision. The original goals, objectives, and actions are reflected annually in the development of the UPWP.

Since the 1995 LRTP publication, the SMTC has placed more emphasis on bicycle and pedestrian facilities planning. This multimodal orientation is not reflected in great detail within the original LRTP. Other issues that are currently receiving more attention, but are not noted in the original plan, include enhancements that make transportation facilities accessible under the Americans with Disabilities Act of 1990 (ADA).

General quality-of-life issues are also becoming increasingly important in the MPA. The SMTC anticipates that a growing amount of public attention will be given to the maintenance of the bridge and pavement infrastructure. For example, many of the interstate bridges were built during the 1950s and are showing signs of aging. Therefore, the need is for infrastructure renewal more so than the construction of new roads.

Other issues needing future attention are the roads originally designed for home to market use. Some of these roads have been strip-developed and simultaneously serve as local streets, collectors and arterials, in the absence of a more fully developed hierarchical road network. There may be instances of improving regional links on the interstate system to support area economic development.

This 2011 Update represents modifications to previous SMTC long range plans, reflecting only changing conditions and new legislation. Therefore, the 2011 Update should not be viewed as a stand-alone document, but instead should be used in conjunction with the previously published LRTPs. In looking forward, the SMTC will begin planning for a new long term vision for the comprehensive rewrite of the LRTP soon after this 2011 LRTP Update is forwarded to the Federal Highway Administration (FHWA). A large public participation effort will be designed to identify the new vision and goals for the 2015 long range transportation plan.

1.2.2 PUBLIC INVOLVEMENT PROCESS

Engaging the public early and often in the planning process is critical to the success of any transportation plan or program, and it is required by numerous state and federal laws. This legislation calls on MPOs such as the SMTC to provide citizens, affected public agencies, representatives of transportation agencies, private providers of transportation and other interested parties with a reasonable opportunity to comment on transportation plans and programs.

With the final passage of the SAFETEA-LU transportation bill in 2005, MPOs were mandated to follow additional public participation requirements for their LRTPs. Currently, SAFETEA-LU has expired; however, the federal government has not passed any new legislation to date and the 2005 version of the transportation bill remains in effect through subsequent rolling extensions. Please see Appendix A for a summary of the SAFETEA-LU requirements, and SMTC's Plan for meeting these requirements for the 2007 Update. The 2007 LRTP also serves as a useful reference as it discusses SAFETEA-LU requirements in greater detail.

With the passage of SAFETEA-LU, Congress introduced a new requirement for development and use of a documented participation plan for the MPO which defines and outlines a process for providing various interested parties within the MPO reasonable opportunities to be involved in the metropolitan transportation planning process. To that end the SMTC developed a broad umbrella Public Participation Plan (PPP) that identifies such opportunities (see Appendix A).

For many of the SMTC's activities, a project-specific Public Involvement Plan (PIP) is created that sets the framework for the public participation opportunities that will be available throughout the course of the project. Please refer to Appendix A to review the project-specific PIP for the LRTP 2011 Update. A proactive and dynamic PIP development process ensures the continual review of public involvement objectives and concepts.

Input from stakeholder groups is important to the success of SMTC planning projects in meeting identified needs. Stakeholder groups may vary depending on the nature of the project, but could include such groups as freight shippers, business developers, property owners, community leaders, social service agencies, fire and police representatives, and/or representatives of public transit. PIPs also pinpoint when in the project the public involvement meetings will be held that allow for the exchange of information and input.

The SMTC is continually strengthening its public involvement process. In addition to holding public meetings, the SMTC recruits the necessary technical personnel and community representatives, as appropriate, to serve on a project-specific Study Advisory Committees (SAC). SACs consist of representatives from affected organizations, local and state governments and agencies, and selected community representatives. SACs meet regularly with the SMTC to assist in managing projects and provide needed input and direction.

In addition to the SAC, a project-specific list of interested stakeholders (a broader group of interested individuals with significant relation to or interest in a particular planning study or activity) is maintained by the SMTC. Stakeholders are sent pertinent study information, kept apprised of significant study developments, notified of all public meetings, and encouraged to provide feedback regarding the project. Separate stakeholder meetings may also be held at various points during some projects to allow the SMTC to report on the progress of a study effort and solicit input.

The SMTC continually researches visualization techniques to improve communication with the public. In addition, SMTC continues to engage in statewide shared cost initiative projects that include training in visualization techniques (including the use of Synchro and SimTraffic) for MPO staff. These visualization techniques, including Geographic Information Systems (GIS) mapping and photo simulations, allow the SMTC to improve and expand upon its already extensive public involvement efforts. Following are some of the noteworthy methods the SMTC has used to inform and invite the public to participate:

- SMTC web site: www.smtcmpo.org,
- Press releases,
- Social networking websites (blogs, Facebook),
- SMTC newsletter, *Directions,*
- Final Reports on CD-ROM and sent via e-mail (PDF file),
- Distribution of fact sheets and meeting announcements flyers,
- Project-specific newsletters,
- SMTC brochure: *A Citizens Guide to Transportation Planning,*
- Media relationships and press releases and advertisements,
- Representation on the F.O.C.U.S. (Forging Our Communities' United Strengths),
- Coordination with the City of Syracuse's Tomorrow's Neighborhoods Today (TNT),
- Orientation Packet for Planning and Policy Committee members,
- Native American Tribal Consultation – Onondaga Nation,
- New York State Association of Metropolitan Planning Organizations (NYSAMPO) brochure,
- Comment cards, surveys (including the use of Survey Monkey) and questionnaires (paper and on-line), and
- Open houses & workshops.

The I-81 Challenge

In 2009, on behalf of the NYSDOT, the SMTC began working on the I-81 Public Participation Project. The goal of this project is to facilitate the public participation effort in conjunction with NYSDOT's study of the I-81 Corridor. Together, the Public Participation Project, the NYSDOT's I-81 Corridor Study and the I-81 Travel Demand Modeling Project (another project undertaken by the SMTC to assist NYSDOT in evaluating existing and future traffic conditions along I-81 in the MPA), form *The I-81 Challenge*, one of the largest planning projects undertaken in the Syracuse Metropolitan Planning Area in decades (see Chapter 3 – Facilities for more information on *The I-81 Challenge*).

Briefly, the goal of the overall process is to get to a preferred option for the I-81 viaduct, which is nearing the end of its lifespan. The preferred option will need to meet various federal requirements (engineering standards, environmental standards, etc.), be supported by the community, and be fundable. The project is a partnership between the SMTC and NYSDOT, with other federal regulating agencies and the public being involved throughout the process.

The SMTC's role is to provide the community with ongoing information about the process, about the condition of I-81, about the potential options and impacts; and to gather information from the public about their values – what do people want a solution to achieve? What's important to people about I-81 now and in the future? What option best achieves these public goals? A technical component in our travel demand modeling will be used as one tool in evaluating options.

To date, the SMTC has held over 20 focus group meetings with 175 participants. Large public meetings were held in early May 2011 to engage the community in this process. Questionnaires, a series of self-running presentations on history, case studies, and regional planning issues, and interactive stations were part of the large public meetings, attended by nearly 700 people.

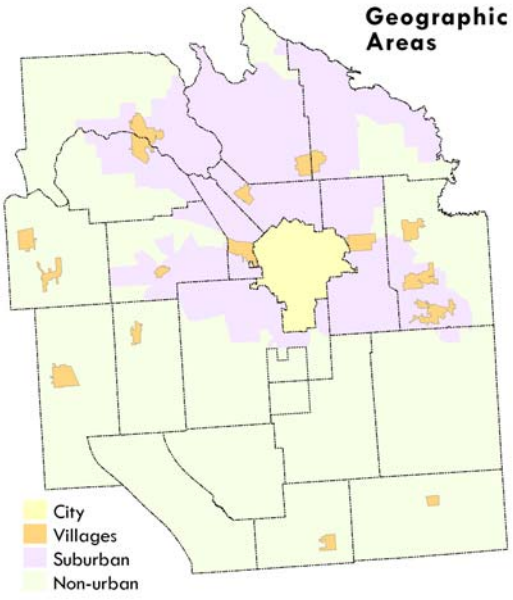
In addition, the SMTC has recently worked with the NYSDOT to learn more about Limited English Proficient (LEP) populations in the MPA, their needs, and how best to provide access as part of *The I-81 Challenge*. The SMTC and NYSDOT jointly drafted a LEP Plan for *The I-81 Challenge* utilizing methodology suggestions from the NYSDOT's Office of Civil Rights Draft LEP Toolkit (based on the FTA's guidance). The data gathered for *The I-81 Challenge* project clearly show that there are many people in the study area/MPA speaking languages other than English. As with all projects, the SMTC will strive to make *The I-81 Challenge* accessible to all people, including LEP populations. Given this, the SMTC developed the LEP Plan as a short-term approach to include LEP populations with plans to evaluate and update the Plan periodically, to ensure its effectiveness.

Specific LRTP 2011 Update Outreach

As noted within the project-specific PIP for the LRTP 2011 Update, the SMTC completed significant outreach for this LRTP Update through the development and use of a survey completed in conjunction with the Syracuse-Onondaga County Planning Agency (SOCPA) during late 2009. The intent of the *Community Planning & Transportation Resident Survey* was to provide information for the LRTP, along with SOCPA's *Sustainable Development Plan* for Onondaga County (currently being developed).

LRTP Survey

The statistically valid survey, developed with and administered by the National Research Center, Inc. (NRC), examined the opinions of a representative sample of Onondaga County residents. The survey included questions intended to assess opinions about land development and design, transportation habits and preferences, and basic demographic information.



A set of 3,900 households was randomly selected from within the boundaries of Onondaga County to receive the *Community Planning & Transportation Resident Survey* by mail. These households were selected so that they represented each of four areas within the County equally: city (City of Syracuse), villages, suburban areas (town areas inside the Onondaga County Sanitary District boundary), and non-urban areas (all remaining areas). This allowed examination of survey results by area of residence with the greatest precision possible.

A total of 922 completed surveys were received, for a response rate of 25%. Survey results were weighted so that respondent age, gender, race/ethnicity, type of housing and place of residence were represented in the proportions reflective of all Onondaga County adults. The 95 percent confidence level for this survey is generally no greater than plus or minus 3.5 percentage points around any given percent reported for the entire sample.

Additional questionnaires were offered to the general public at meetings and through access from SMTC and SOCPA web sites (using Survey Monkey to form the web survey). These questionnaires asked the same questions as the survey however they were not part of the statically significant calculation because they were not randomly distributed to county residents.

Survey Highlights

Survey results generally reflected strong support for the principles of "smart growth" and regional planning and a desire to explore more and different transportation options. Several survey questions explored respondents' attitudes toward new development and the degree to which public funding should be spent to encourage growth in new areas.

- The types of development most desired by respondents over the next 30 years were small shops and businesses, farms, and manufacturing/warehouses. Fewer respondents favored new housing and large stores and office buildings.

- More than three-quarters of respondents thought new development should take place in already developed communities with available buildings or unused land.

- Similarly, a sizable percentage of respondents (37%) believed that infrastructure should not be expanded at all until the region experiences population growth, and very few (9%) thought local governments should expand infrastructure anytime as a way to support growth.

- A strong majority of respondents (77%) also felt that housing and buildings should be closely spaced, with sidewalks leading to nearby shop and parks, even if it means having smaller homes and less space for parking.

- A question designed to assess public support for various "smart growth" principles found strong support for all of the ideas tested. Among these principles, protecting environmental assets, protecting farms and scenic resources, and reducing energy usage were of highest importance to respondents. While still very favorable, ideas focused on mixing housing types, mixing housing and commercial development, and connecting neighborhoods garnered the least support of those listed.

A series of questions was also designed to assess residents' attitudes toward existing transportation infrastructure, test opinions regarding future transportation needs, and identify travel habits.

- Respondents reported driving alone or with children for the great majority of all trips, regardless of purpose. This mode was particularly prevalent for commuting purposes, where 85% of respondents reported driving alone or with children. Respondents were more likely to report carpooling for social/recreational purposes and shopping trips than for other trip purposes. Walking was most prevalent for social/recreational trips as well.

- Those who live in the city were more likely to walk or bike (45%) compared with those in villages (30%), suburban areas (19%), and non-urban areas (12%). The

most common reasons for not walking or bicycling more often included distance, weather, and lack of facilities.

- More than half (58%) of respondents rated how well the overall transportation system in Onondaga County meets their needs as 'excellent' or 'good.' Respondents were generally satisfied with their ability to access places they usually visit and the traffic flow on major streets.

- However, residents were less satisfied with the availability and condition of alternative modes in Onondaga County. A sizable majority of respondents rated the availability and condition of pedestrian and bicycle facilities as fair or poor. Respondents were also unsatisfied with the condition of roads and bridges.

- Only 16% of respondents thought that the best long-term solution for reducing traffic congestion in Onondaga County was to build new roads; instead, they supported improving transit options and creating denser communities.

- In testing acceptance of other potential changes to the transportation system, the survey found strong support for such transportation options as regional and local train, expanded and express bus service, carpooling, walking, and bicycling. Half of respondents indicated that they would drive less if other types of travel were more convenient and accessible.

Overall, survey results indicate strong support for planning that focuses on existing infrastructure and community assets, protection of natural and scenic areas, and focused growth in existing centers. The survey also illustrates a need for improvements to existing transportation assets and the exploration of alternative modes of transportation.

The results of the statistically valid survey are included in Appendix A. Key findings are referenced throughout this LRTP document as appropriate.

Other Outreach

In addition, at various SMTC public meetings for specific SMTC studies (such as the James Street Road Diet public meeting, within various I-81 presentations, and the East Genesee Street Sidewalk Study), the SMTC noted the update of the LRTP and provided information on how to provide feedback on long range transportation planning in the MPA. This ensured a captive audience and gave the SMTC an opportunity to reach a broad segment of the population. At these meetings, the SMTC shared a few slides on the LRTP and pointed to the project web site and opportunity to complete a questionnaire similar to the survey that was mailed to random households within Onondaga County. Additionally, the public was invited to complete questionnaires at the Onondaga County Traffic Safety Advisory Board's (OCTSAB) Share the Road Expo in September 2010.

The draft LRTP 2011 Update was also sent to interested parties for review and comment. The final draft LRTP 2011 Update was available for public comment for a 30-day period, during which time a public meeting was held. The final draft document was presented to the SMTC's Planning and Policy Committees for final approval.

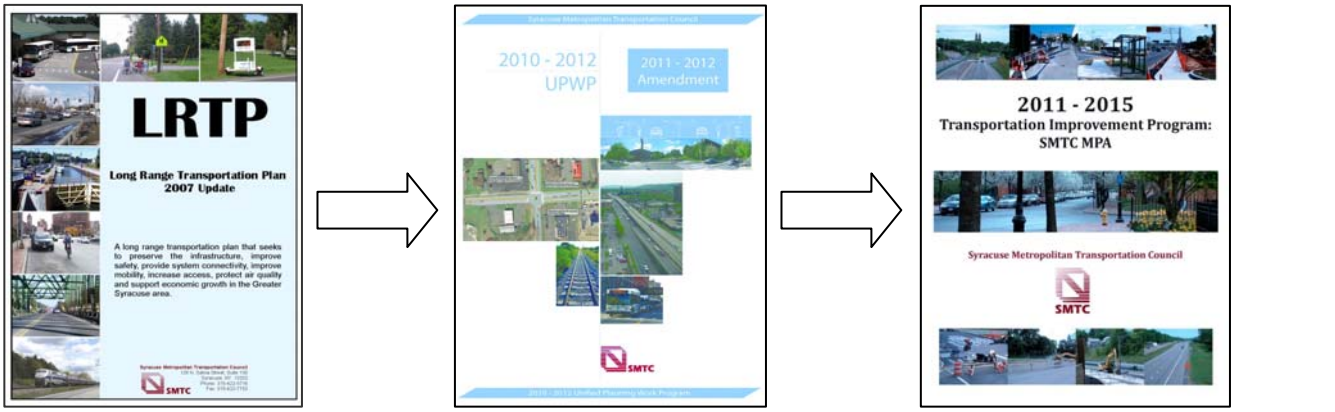
1.3 PROCESSES AND FUNDING

1.3.1 THE LRTP, THE UPWP, AND THE TIP

The SMTC is mandated to develop three documents that are the ingredients to transportation planning and programming in the MPA: the LRTP, the UPWP, and the TIP. Together, these three documents represent the beginning, middle, and end to an effective transportation planning process. Descriptions of each of the three key documents are included throughout this chapter. The illustration in Figure 1-2 depicts the interrelationship between the three documents. The LRTP represents the starting point in which the transportation goals and objectives for the future are set forth in a document adopted by the SMTC Policy Committee.

FIGURE 1-2

THE PLANNING AND PROGRAMMING PROCESS



Long Range Transportation Plan (LRTP)

Unified Planning Work Program (UPWP)

Transportation Improvement Program (TIP)

1.3.2 UNIFIED PLANNING WORK PROGRAM PROCESS

The UPWP identifies transportation planning activities that are to be undertaken in the SMTC study area in support of the goals, objectives, and actions established in the LRTP. The SMTC central staff, working with the Planning Committee and the NYSDOT, annually initiates the process of developing the UPWP and prepares a final draft for the consideration of both the Planning and Policy Committees. The intent in developing a comprehensive UPWP is to ensure annual planning projects relate to the region's overarching vision and goals as expressed in the LRTP. Examples of specific UPWP transportation planning activities include:

- traffic corridor studies;
- transportation data collection;
- safety improvement analyses;
- congestion management; and
- multimodal transportation planning (including bicycle and pedestrian planning).

The SMTC's Operations Plan outlines a framework for the UPWP, which the central staff is expected to accomplish, and provides guidance with respect to a financial plan to support the UPWP. The UPWP is intended to be consistent with the Operations Plan, as well as the metropolitan planning requirements for SAFETEA-LU and its implementing regulation (23 CFR Part 450, Subpart C and 49 CFR Part 613, Subpart A). Compliance with these regulations frames much of this program. Further, the UPWP strives to address the NYSDOT planning emphasis areas that are intended to implement the state's policies for urban area transportation planning. This is to ensure that projects conceived by the SMTC comply with the federal and state policies and that local issues progress in a timely manner.

The status of the current UPWP is reviewed monthly by the SMTC's Executive Committee to ensure that it is being carried out in a manner consistent with the MPO's goals. While it is the mission of the central staff and the Executive Committee to complete work efforts within a program year, task elements may be designed to span multiple fiscal years and therefore are carried through multiple UPWPs. Each year an estimate of transportation planning funds available for new programs is made. Policy direction and scope of the UPWP are developed with member agency participation based on their needs.

The staff, working with member agencies, establishes a list of candidate projects for inclusion in the next year's UPWP. Estimates of amounts and sources of funding to accomplish the planning program are developed. The Planning Committee then prioritizes the continuing program and the new projects. A draft UPWP is developed for Planning Committee review and recommendation of acceptance to the Policy Committee. The Policy Committee has the final responsibility to adopt the UPWP.

Since the first LRTP Update (1998), the SMTC has achieved measurable progress on several major transportation planning projects. These projects address a variety of transportation and land-use

issues in specific geographic locations. The projects were initially selected for inclusion in the SMTC annual UPWP. Examples of projects completed since the 2007 LRTP Update include the following:

- Downtown Parking Analysis and Mapping Study (2007);
- Fayetteville-Manlius Road/Route 257 Pedestrian Accommodation Feasibility Study (2007);
- University Hill Comprehensive Transportation Study (2007);
- Transportation/Land Use Educational Outreach CD (2008);
- Seymour-Shonnard Corridor Study (2008);
- University Hill Bike Network Project (2008);
- Coordinated Public Transit Human Services Transportation Plan (2008);
- Downer Street Corridor Study (2009);
- Clay/Cicero Route 31 Transportation Study (2009);
- University Hill Park & Ride Feasibility Study (2009);
- Liverpool Modeling Technical Memo (2009);
- Carrier Site Access Transportation Study (2009);
- University Hill Phase II Feasibility Study (2009);
- Onondaga County Signal Optimization Project - Phase 1 (2010);
- Almond Street Pedestrian Corridor Study (2010);
- Near Northside Parking & Wayfinding Study (2011);
- the periodic Congestion Management Process (CMP) and Environmental Justice (EJ) Report; and
- annual projects such as the Safety Improvement Analysis and Bridge and Pavement Condition Management System (BPCMS).

These projects, together with the implementation actions identified in the goals/objectives section of this document, provide an overview of the wide-range of activities being carried out by the SMTC and its member agencies. Map 1-3 shows the locations of the major transportation planning projects carried out under the UPWP since the 2007 Update.

		UPWP Projects Completed Since 2007
	1	Downer St Corridor Study (2009)
	2	Clay/Cicero Route 31 Transportation Study (2009)
	3	Liverpool Modeling Technical Memo (2009)
	4	Carrier Site Access Transportation Study (2009)
	5	Near Northside Parking & Wayfinding Study (2011)
	6	Downtown Parking Analysis and Mapping Study (2007)
	7	Seymour-Shonnard Corridor Study (2008)
	8	Almond St Pedestrian Corridor Study (2010)
	9	Fayetteville-Manlius Rd/Rt 257 Pedestrian Accommodation Feasibility Study (2007)
		University Hill Studies
	10	University Hill Comprehensive Transportation Study (2007)
	11	University Hill Bike Network Project (2008)
	12	University Hill Park & Ride Feasibility Study (2009)
	13	University Hill Phase II Feasibility Study (2009)
		MPA-Wide Studies (not numbered)
		Transportation/Land Use Educationl Outreach CD (2008)
		Coordinated Public Transit Human Services Transportation Plan (2008)
+		Onondaga County Signal Optimization Project - Phase 1 (2010)
		Periodic
		Congestion Management Process (CMP)
		Environmental Justice (EJ) Report
		Annual
+		Safety Improvement Analysis
		Bridge and Pavement Condition Management System (BPCMS)

+ Safety Improvement Analysis Locations

+ Signal Optimization Locations

LYSANDER
CLAY
CICERO
VAN BUREN
Baldwinsville
North Syracuse
Liverpool
Onondaga Lake
SALINA
DEWITT
Central Square
Oneida Lake
Jordan
ELBRIDGE
Elbridge
CAMILLUS
Camillus
Solvay
GEDDES
Syracuse
East Syracuse
Minoa
MANLIUS
Fayetteville
Manlius
SKANEATELES
Marcellus
ONONDAGA
Skaneateles
MARCELLUS
Onondaga Nation Territory
POMPEY
LAFAYETTE
Skaneateles Lake
Otisco Lake
OTISCO
SPAFFORD
TULLY
Tully
Fabius
FABIUS

1 2 3 4 5 6 7 8 10 - 13 9

Locations of UPWP Projects Completed Since the 2007 LRTP Update

Long-Range Transportation Plan 2011 Update

Map 1-3

0 1 2 4 Miles

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The SMTC does not guarantee the accuracy or completeness of this map.

SMTC
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Data Sources: SMTC, NYSDOT, 2010
Prepared by SMTC, 04/2011

Legend
- Interstates
- Roads
- Village
- City of Syracuse
- Town
- Onondaga Nation

1.3.3 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROCESS

The SMTC is responsible for the maintenance of the area's TIP, a five-year program that funds capital projects related to public transportation, local roadways and interstates, and bicycle and pedestrian amenities. Several pieces of federal legislation significantly affect the TIP and the planning and programming of transportation projects.

Previous federal transportation bills required that a TIP be approved/submitted every two years with a minimum of three fiscal years incorporated. According to the February 14, 2007 Final Statewide and Metropolitan Planning Rules and Regulations, a TIP may now be submitted at least every four years and include a minimum of four fiscal years for all states and MPOs. While the TIP is usually approved biennially, the document may be amended as needed. SAFETEA-LU regulations state that the TIP must contain no less than four years worth of projects. ISTEA, TEA-21, and SAFETEA-LU, as well as the Metropolitan Planning Regulations, mandate that a TIP:

1. Identify transportation improvement projects recommended for advancement during the program years. The projects required are those located within the study area and receiving any Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funds;
2. Identify the criteria and process for prioritization for inclusion of projects in the TIP and any changes from past TIPs;
3. Group improvements of similar urgency and anticipated staging into appropriate staging periods;
4. Include realistic estimates of total costs and revenue for the program period;
5. Include a discussion of how improvements recommended from the Long Range Transportation Plan's Transportation Systems Management Plan were merged into the program;
6. List major projects from previous TIPs that were implemented and identify any major delays in planned implementation;
7. Describe progress in implementing any required Transportation Control Measures as identified in the State Implementation Plan for Air Quality Redesignation Request (SIP);
8. Include an air quality conformity analysis of the TIP to the SIP with a list of all projects found to conform in previous TIPs that should be considered as a base case for conformity analysis; and
9. Include a Financial Plan that demonstrates how the approved TIP can be implemented.

The TIP should also include regional highway and transit projects of regional significance that are being implemented by the state, city, county, and CNYRTA for which no federal funding is requested. In addition, under Title 23 USC, Part 93 (Conformity), Subpart A, under Section 93.105, the MPO is required to submit projects considered for inclusion in the TIP to the Interagency Consultation Group (ICG) for review and concurrence as to exemption status for air quality conformity. The ICG consists of the MPO, New York State Department of Transportation

Environmental Science Bureau (NYSDOT ESB), New York State Department of Environmental Conservation (NYSDEC), US Environmental Protection Agency (EPA), Federal Transit Administration (FTA), and the Federal Highway Administration (FHWA). The MPO has established a process for timely submission and review not only of projects at the time of TIP development, but also when projects are added or deleted via amendment during the program year.

According to SMTC policy, funding should be prioritized for use in maintaining the current infrastructure with minimal focus on expansion. An examination of the recent transportation expenditures shows the majority of funding going towards maintenance of existing infrastructure. Map 1-4a and 1-4b shows the locations of capital projects on the most current TIP.

1.4 LRTP GOALS

The original 1995 LRTP provided the policy framework for fulfilling transportation needs within the MPO. The member agencies of the SMTC, representing state, regional, county, city, and other organizations, cooperate in carrying out the action plans.

1.4.1 RELATIONSHIP TO PLANNING FACTORS

In all of its transportation planning activities, the SMTC is required to consider and integrate the following planning factors as outlined in SAFETEA-LU:

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;
4. Increase the accessibility and mobility options available to people and freight;
5. Protect and enhance the environment, promote energy conservation and improve the quality of life; and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation; and
8. Emphasize the preservation of the existing transportation system.

These planning factors are directly reflected in the LRTP's goals and objectives, developed as part of the original 1995 long range plan.

1.4.2 GOALS

Community Safety

- Goal: To enhance the safety of the people using the transportation system.

Community Mobility

- Goal: To improve the mobility options for people within the Syracuse Metropolitan Planning Area (MPA).

Community Environment

- Goal**:** To provide a clean and environmentally sound transportation system for current and future residents.

Community Economy

- Goal: To enhance the area's economic competitiveness, thereby increasing opportunities for employment.

Community Land Use

- Goal: To promote the development of an efficient urban area and a sense of community through transportation planning.

Community Facilities

- Goal: To provide safe, clean, well maintained and efficient transportation infrastructure.

This 2011 Update will emulate previous LRTP updates (2001, 2004, and 2007) by addressing and updating the implementation actions associated with the plan's specific goals. The identification of implemented action plans involved discussions with the member agencies responsible for their respective TIP projects. In the chapters that follow, the implemented action plans are presented following a discussion of existing conditions and trends tied to each of the goals. The implemented action plans are summaries rather than complete descriptions. In many cases, an overlap exists because a particular action plan may apply to multiple goals. For example, a highway project can fulfill both a safety and a mobility goal.

Locations of Capital Projects on the Most Current TIP (MPA)

Long-Range Transportation Plan 2011 Update

Map 1-4a

SMTC
100 Clinton Square
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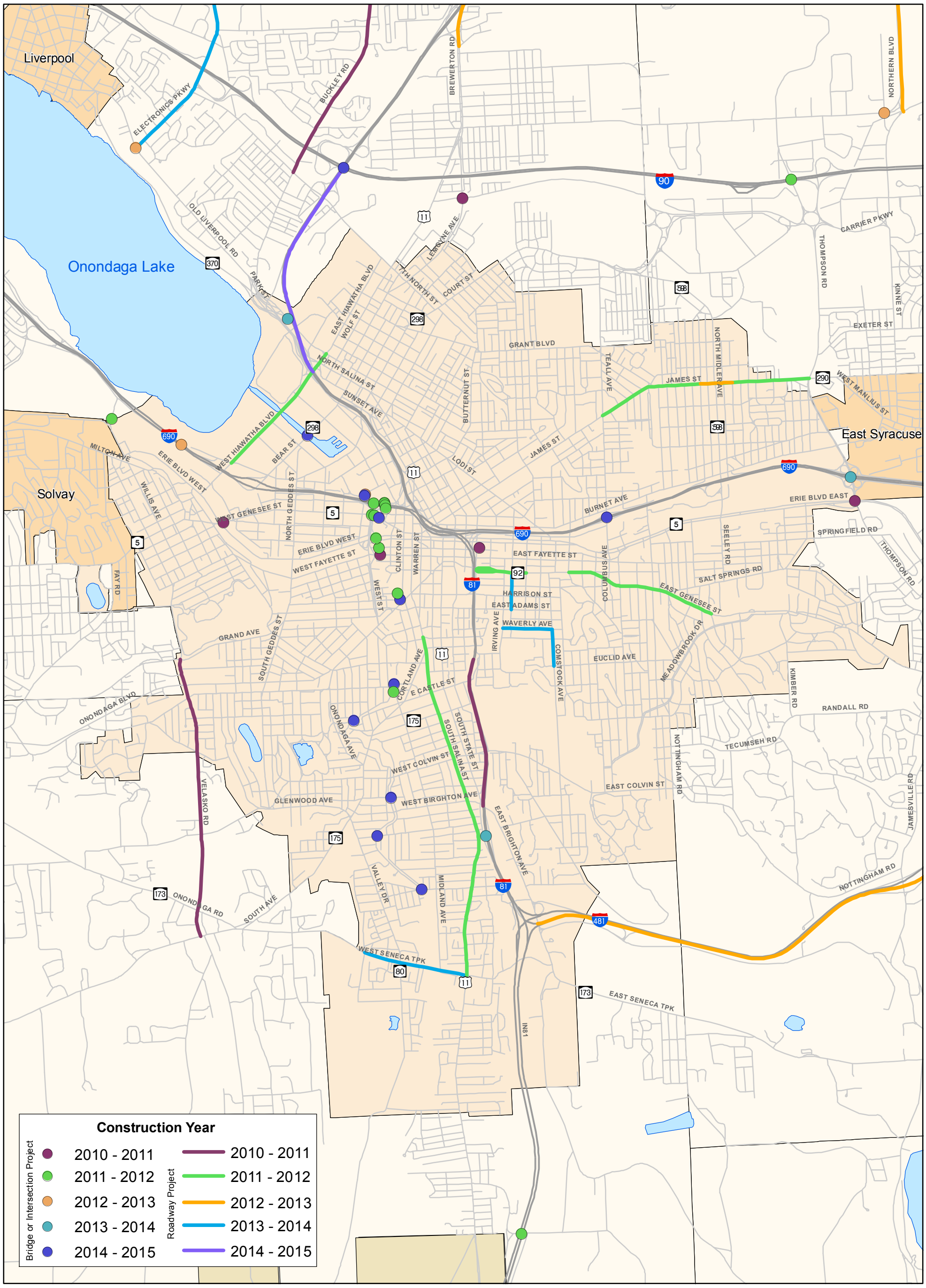
(315) 422-5716
Fax: (315) 422-7753
www.smtcmpo.org

Data Sources: SMTC, NYSDOT, 2010
Prepared by SMTC, 03/2011

0 1 2 4 Miles



Construction Year

Bridge or Intersection Project	Roadway Project
2010 - 2011	2010 - 2011
2011 - 2012	2011 - 2012
2012 - 2013	2012 - 2013
2013 - 2014	2013 - 2014
2014 - 2015	2014 - 2015

Locations of Capital Projects on the Most Current TIP (City)

Long-Range Transportation Plan 2011 Update

Map 1-4b

SMTC

100 Clinton Square
126 North Salina St, Suite 100
Syracuse, NY 13202
(315) 422-5716
Fax: (315) 422-7753
www.smtcmpo.org

Data Sources: SMTC, NYSDOT, 2010
Prepared by SMTC, 04/2011

0 0.25 0.5 1 Miles

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The SMTC does not guarantee the accuracy or completeness of this map.

2 EXISTING CONDITIONS

2.1 DEMOGRAPHIC OVERVIEW

The existing conditions and needs within the Syracuse Metropolitan Transportation Council (SMTC) study area have stayed relatively stable during the course of the past LRTP updates with minor exceptions as noted within the following sections. This chapter summarizes the current demographic conditions of the SMTC study area as it relates to the mission of the SMTC, and to point out the continued trend of certain demographic, economic, and land use conditions. This 2011 Update includes a basic profile of some of the most important demographic trends and changing conditions that affect transportation planning in the SMTC area.

The Syracuse MPA continues to experience the following types of population change, economic transition, and land use shifts that are not uncommon to most Northeast communities:

- A declining metropolitan area population, and a shift in population away from the city core to suburban and rural areas,
- A changing economic base from manufacturing to a more diversified information and service-based economy,
- A continued land-use pattern toward suburban sprawl and decreasing density,
- A concentration of poverty in the City of Syracuse, and
- Increased commuting into Onondaga County and from the City to the suburbs.

During the past decade, Onondaga County, the City of Syracuse, and several towns and villages within the MPA have developed plans that identify growth management strategies designed to address these trends. For instance, the Onondaga County Settlement Plan (2001) and the Onondaga County 2010 Development Guide (1998) support, among other things:

- redirecting growth towards urban centers,
- capitalizing on infill opportunities,
- Smart Growth and New Urbanism Planning Principles, and
- managing growth through the provision of sustainable, cost-effective infrastructure.

Onondaga County is in the process of creating a new County plan (Onondaga County Sustainable Development Plan) with a focus on settlement patterns that will foster sustainability. This new effort will replace the 1998 Development Guide, but will include many of the same principals. The County Plan will be closely linked with the County's Climate Change Action Plan (currently being developed) and the LRTP.

The City of Syracuse also undertook extensive planning efforts during the development of its Comprehensive Plan 2025 (2005). The City's plan complements many of the recommendations and policies established within the Settlement Plan and the 2010 Development Guide, most notably by

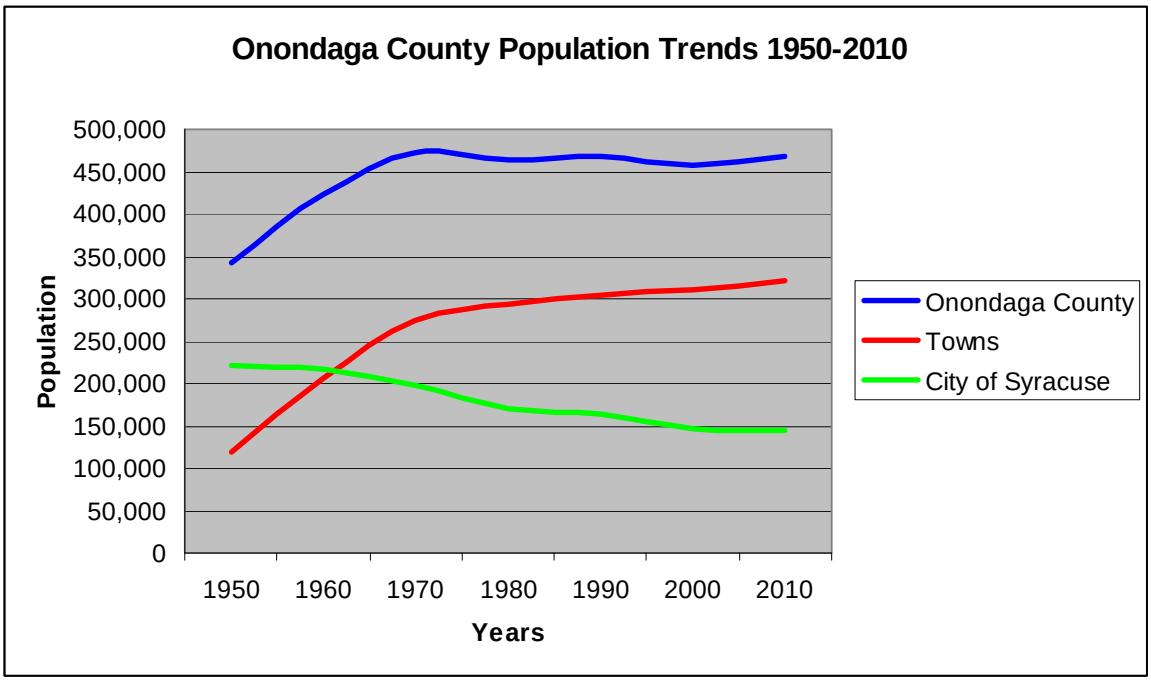
recapturing growth and development opportunities. Through the implementation of effective enhancement strategies, the City is striving to maximize the use of its existing infrastructure that once supported a population of more than 220,000.

Analyzing demographic trends and how they relate to transportation planning in the MPA enables the SMTC to develop effective transportation recommendations that support and complement local and regional planning goals, including LRTP goals. Please note that limited 2010 Census data are readily available at this time, therefore some sections below reference data from the 2000 Census.

2.1.1 CURRENT POPULATION DISTRIBUTION

Population shifts within Onondaga County continue to occur, mostly as a shift in population from the City of Syracuse to suburban towns. Table 2-1 charts the historic population changes in Onondaga County since Syracuse's peak population of 220,583 in 1950. At that time, the City of Syracuse made up 65% of the total County population. In 2010, it made up only 31% of the total County population. The table illustrates a growing suburban population, at the expense of a declining City population.

Table 2-1



According to the 2010 Census, fewer people have left the City of Syracuse over the last ten years (see Table 2-2). In addition, Onondaga County on the whole over the last ten years has seen a slight increase (1.9%) in population.

Between 2000 and 2010 the City of Syracuse lost 0.9% of its population, while many surrounding towns within Onondaga County have shown increases. The following towns grew by more than 10% since 2000: Lysander (12.8%), Cicero (13.0%), and Pompey (15.0%). The Town of Onondaga showed an increase of nearly ten percent (9.7%), in its population over the last ten years, and the Town of Hastings grew by 7.3%. The towns of Camillus, Van Buren and DeWitt saw increases of around 4% in their populations.

The following towns lost population between 2000 and 2010: West Monroe (-4.0%), Geddes (-3.5%), Elbridge (-2.8%), Skaneateles (-1.6%), Marcellus (-1.7%), Clay (-1.0%), Otisco and Schroeppel (-0.8%), and Fabius (-0.5).

Table 2-2
Total Population Change for SMTC MPA
Local Government Areas, 2000 to 2010

Geographic Area	Total Population		Population Change	
	April 1, 2000	April 1, 2010	Number	Percent
Onondaga County	458,336	467,026	8,690	1.9
Camillus town	23,152	24,167	1,015	4.4
Cicero town	27,982	31,632	3,650	13.0
Clay town	58,805	58,206	-599	-1.0
De Witt town	24,071	24,967	896	3.7
Elbridge town	6,091	5,922	-169	-2.8
Fabius town	1,974	1,964	-10	-0.5
Geddes town	17,740	17,118	-622	-3.5
LaFayette town	4,833	4,952	119	2.5
Lysander town	19,285	21,759	2,474	12.8
Manlius town	31,872	32,370	498	1.6
Marcellus town	6,319	6,210	-109	-1.7
Onondaga town	21,063	23,101	2,038	9.7
Onondaga Nation Reservation	1,473	468	-1,005	-68.2
Otisco town	2,561	2,541	-20	-0.8
Pompey town	6,159	7,080	921	15.0
Salina town	33,290	33,710	420	1.3
Skaneateles town	7,323	7,209	-114	-1.6
Spafford town	1,661	1,686	25	1.5
Syracuse city	147,306	146,041	-1,265	-0.9
Tully town	2,709	2,738	29	1.1
Van Buren town	12,667	13,185	518	4.1
Hastings town, Oswego Cty	8,803	9,450	647	7.3
Schroeppel town, Oswego Cty	8,566	8,501	-65	-0.8
Sullivan town, Madison Cty	14,991	15,339	348	2.3
West Monroe town, Oswego Cty	4,428	4,252	-176	-4.0

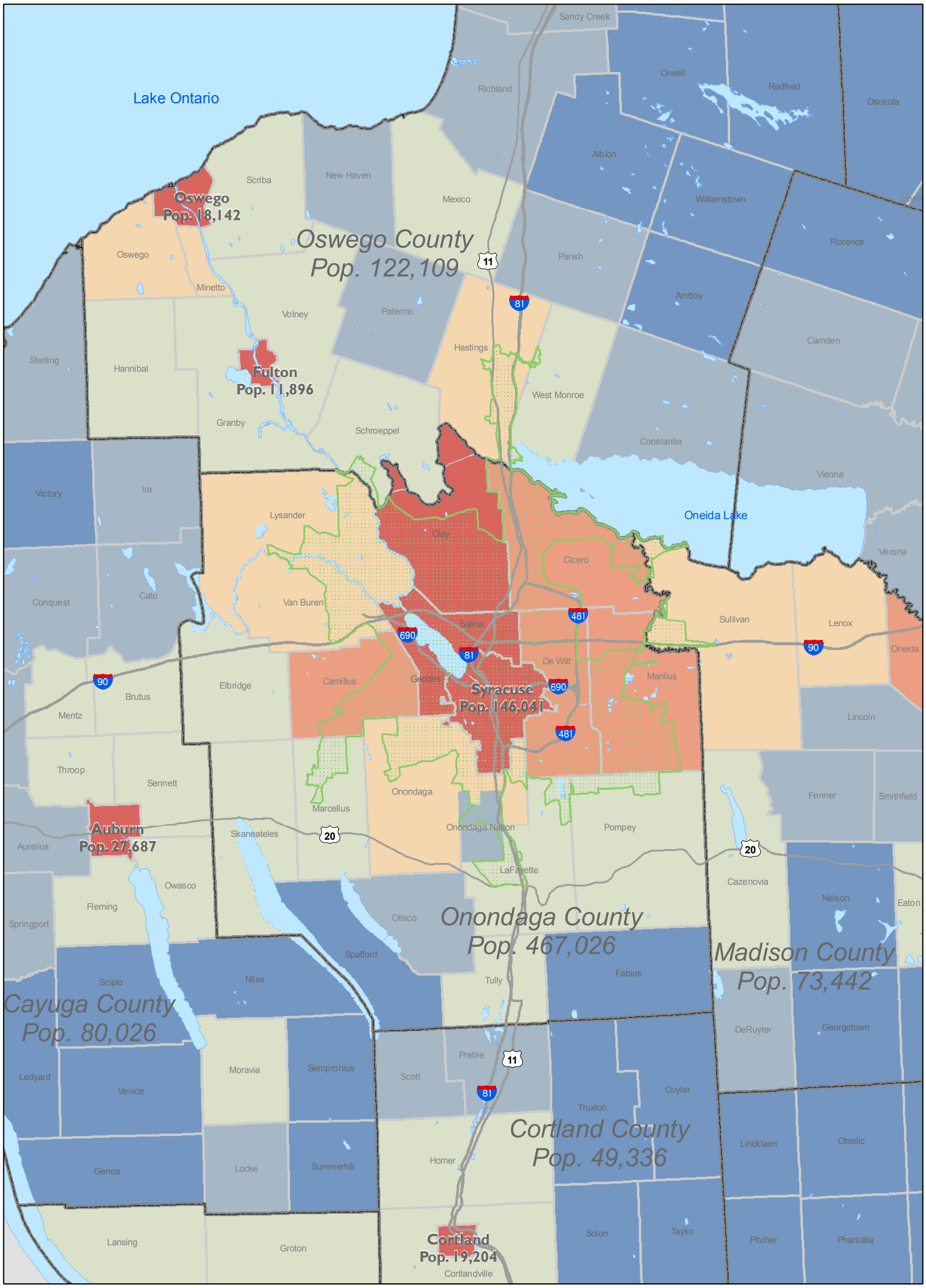
Source: U.S. Census Bureau. 2010 Census Redistricting Data (PL 94-171). Released March 24, 2011.
Compiled by Empire State Development.
Restructured by SMTC, 4/2011.

Map 2-1 shows Central New York's regional population distribution using population density (people per square mile of land area) data from Census 2010. Onondaga County is the most populous county in Central New York, with the City of Syracuse as its traditional city core, surrounded by suburban and rural towns, villages and hamlets. As represented by SMTC's Urban Area boundary, the most populated areas of Onondaga County continue to be in the City of Syracuse and nearby towns to the north and east.

According to the 2010 Census, the population density in Onondaga County is 600 per square mile, which includes a peak density of 5,796.7 persons per square mile in the City of Syracuse and a low density of 42.2 persons per square mile in the rural Town of Fabius.[1] In comparison, the population density of New York State is 411.2 persons per square mile, and the United States population density is much lower at 87.4 persons per square mile.[2]

[1] *Table 1: Total Population, Housing Units, Land Area, and Population Density, New York State Local Areas, 2010 Census: Public Law 94-171 Data (http://www.esd.ny.gov/NYSDataCenter/Census2010.html Census 2010).*

[2] *US Census 2010 – http://2010.census.gov/2010census/data/index.php*



Regional Population Density

Long-Range Transportation Plan 2011 Update

Map 2-1

SMTC
100 Clinton Square
126 North Salina St, Suite 100
Syracuse, NY 13202
(315) 422-5716
Fax: (315) 422-7753
www.smtcmpo.org

0 3 6 12 Miles

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Legend

- Urban Area (2000 Census)
- County
- City/Town

Persons per Square Mile

- 0 - 49
- 50 - 99
- 100 - 199
- 200 - 499
- 500 - 1000
- 1000 +

2.1.2 AGE DISTRIBUTION

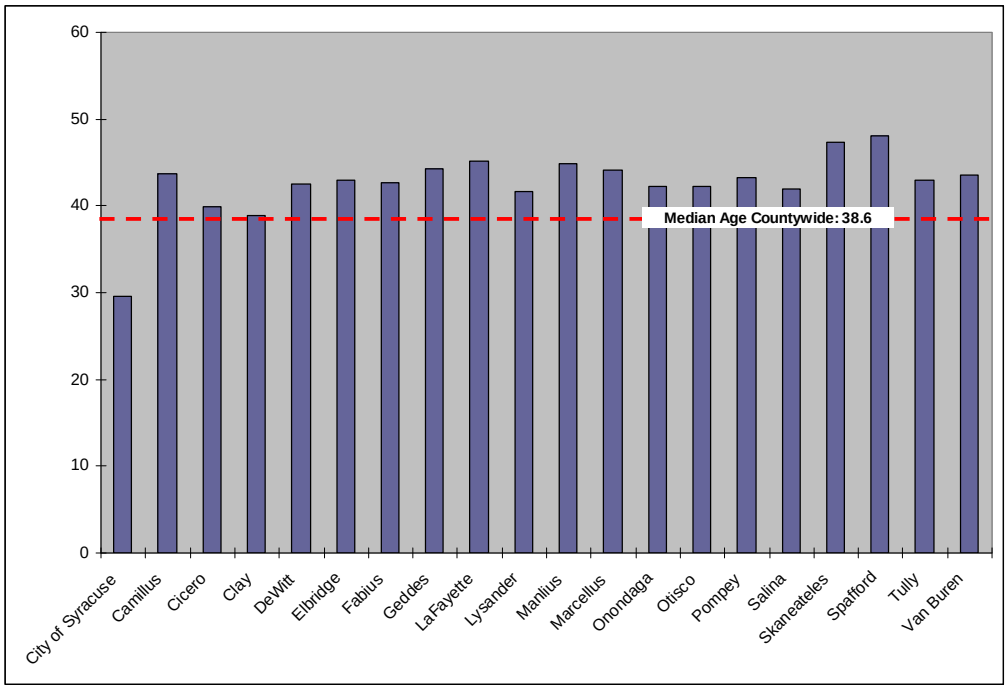
Median Age

Nationally, the trend is toward an aging population, largely driven by the aging of the Baby Boom generation. The median age in the United States was 30 in 1980 and has been rising steadily since then; in 2009 it was 36.8. In Onondaga County, the median age was 38.6 in 2010, up from 36.3 in 2000. The median age increased in all of the towns in the county between 2000 and 2010 (note that at the time of this writing, data are not yet available for the Onondaga Indian Reservation).

Data for the City of Syracuse runs counter to these trends. The presence of Syracuse University, with an enrollment of approximately 20,000 undergraduate and graduate students, has a substantial impact on the city's age distribution. As Table 2-3 shows, the city's median age, 29.6, was substantially lower than that of any of the towns in the county. The city's median age fell slightly in 2010, from 30.5 in the year 2000. Half of the city's residents were under 30 in 2010; in the county's 19 towns, 36 percent of the population was under 30.

Table 2-3

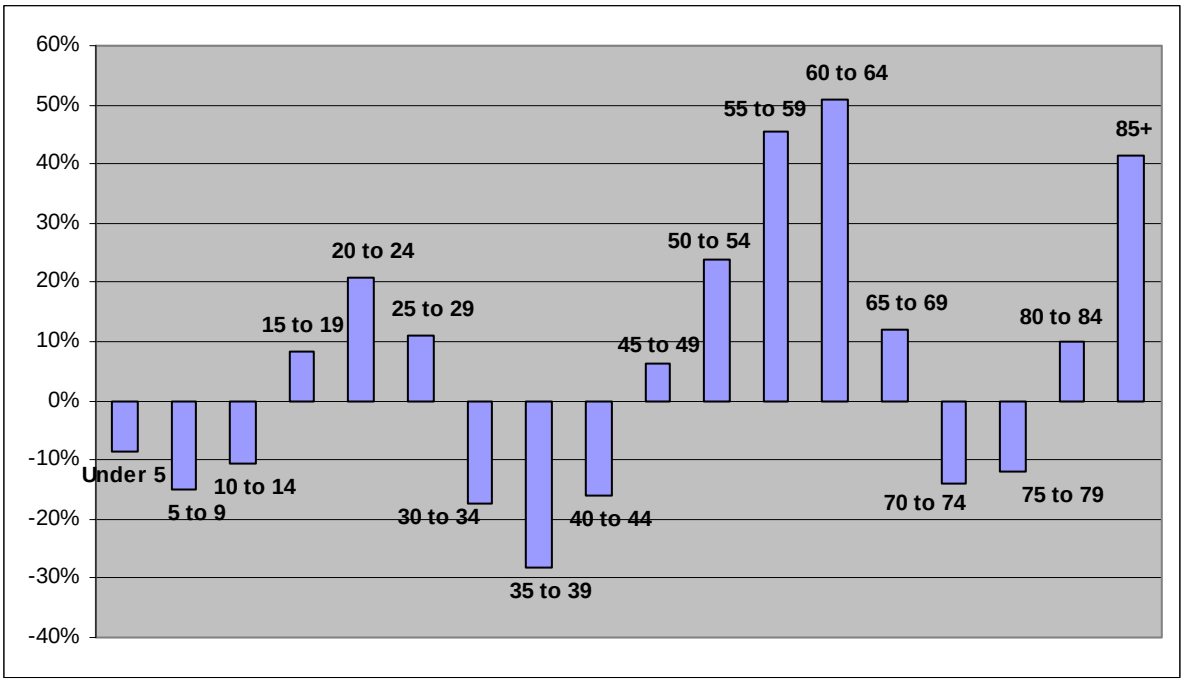
Median Age in Onondaga County, City of Syracuse and Towns, 2010



Source: US Census, 2010 Demographic Profile Data

Table 2-4

Percent Change in Age Groups, Onondaga County, 2000 to 2010



Source: 2000 Census (SF1) and 2010 Census Demographic Profile Data

Population Change by Age Group, 2000 to 2010

Children and Young Teens

Countywide, the population age 14 and under fell between 2000 and 2010. This trend held in all towns in the county and in the city of Syracuse: in both the city and the county as a whole the decline was 11 percent. In a few towns, such as Pompey, Lysander and Cicero, the decline was smaller (five percent or less); no town saw an increase in this age group. This decline was also seen at the state level: the number of children under 15 fell by ten percent statewide in this period. Nationally, the size of this age group increased three percent between 2000 and 2010 (note that at the time of this writing the most recent data available at the national level is from the 2009 US Statistical Abstract; national level data is referred to as being from 2010 for ease of comparison).

Teens and Young Adults (15 to 29)
Sometimes called "Echo Boomers", because they are the children of Baby Boomers, the 15 to 29 year old age group grew substantially between 2000 and 2010, both locally and nationally. This age group is not as large as the Baby Boom generation (roughly the population ages 45 to 64). In Onondaga County, Echo Boomers make up 22 percent of the population, while Baby Boomers make up 27.5 percent of the population. Nevertheless, this generation's relatively large size means that it is likely to affect the provision of public transportation services, such as public school buses, parking and – as more members of this generation enter the workforce and become commuters – highway capacity.

Onondaga County gained population in this 15 to 29 year old age group between 2000 and 2010. This segment of the population grew by 13 percent countywide, eleven percent in the City of Syracuse and by much higher proportions in towns such as Onondaga, DeWitt and Pompey (54 percent, 47 percent and 30 percent, respectively). All towns gained population in this age group, other than the Towns of Tully and Spafford, where it shrank by one percent and 12 percent, respectively. The 15 to 29 year old age group grew by eight percent statewide and eleven percent nationally.

Ages Thirty to Forty-Four
Table 2-4 shows substantial losses in Onondaga County in the population age 30 to 44. Countywide, this age group shrank by 21 percent; the City of Syracuse and all towns in the county also saw a double-digit drop in this group. Statewide and nationally there were substantial declines in this age group between 2000 and 2010 (14 percent and six percent, respectively). This drop is primarily the result of the unusually large size of the Baby Boom generation: Generation X (made up of children born between the mid-1960s and late 1970s) is substantially smaller than the Baby Boom generation.

Ages 45 to 64
In 2011, the oldest members of the Baby Boom generation (born between 1944 and 1964) turned 65, a significant milestone because of this generation's size: it makes up more than a quarter of the nation's population. As a result, the number of people in the 45 to 64 year old age group represents the greatest growth between 2000 and 2010, both locally and nationally.

In Onondaga County, this age group grew by 27 percent; in New York State it grew by 22 percent and nationally it grew by 28 percent. In the City of Syracuse, this age group grew by 23 percent. All towns saw double-digit increases in this age group, with Otisco, Cicero, Lysander, Pompey and Onondaga registering growth above 40 percent.

Ages 70 to 79
Statewide, the population age 70 to 79 fell by six percent, possibly driven by out-migration to Sunbelt states such as Arizona, Florida and Nevada. In Onondaga County, this population group declined by 13 percent and in the City of Syracuse it shrank by 34 percent. Several towns had large

increases in this population group, however, including Pompey, Fabius, Tully and Lysander (53 percent, 30 percent, 30 percent and 25 percent, respectively).

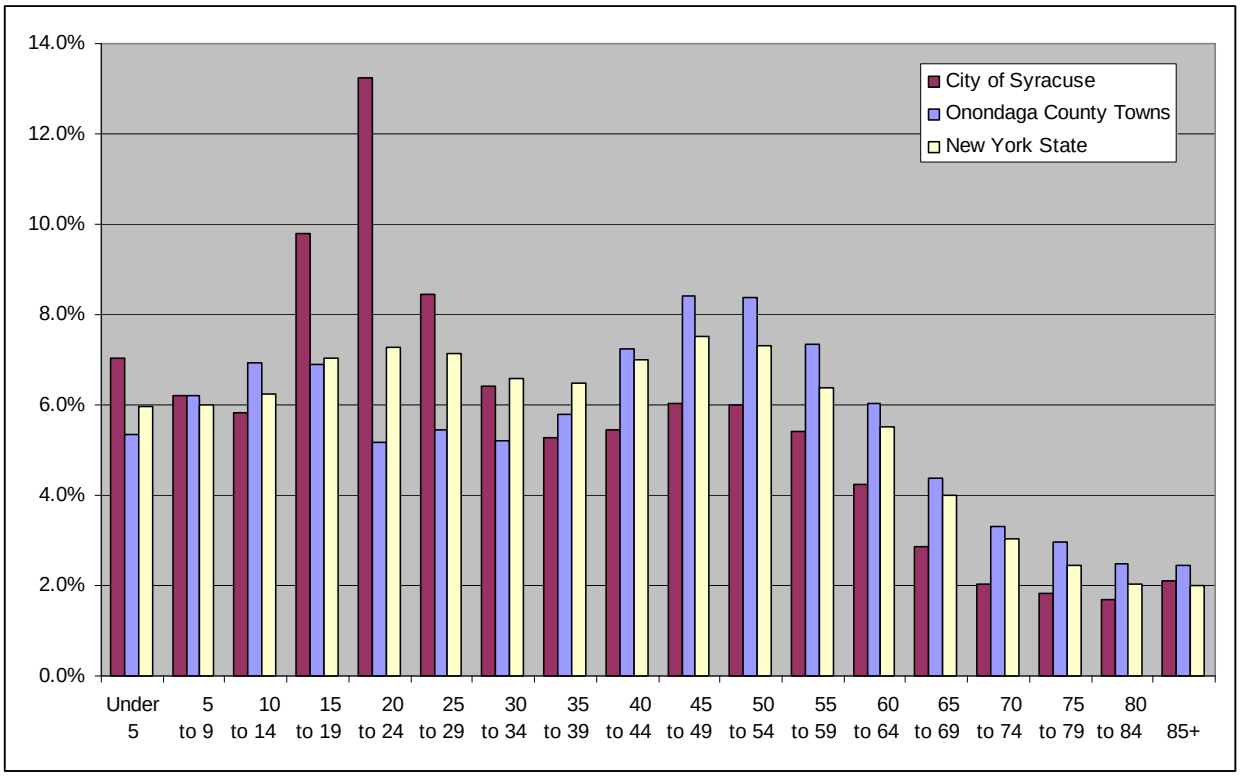
Ages 80 and Above

Significantly, the population age 80 and above increased substantially countywide from 2000 to 2010 and by very high rates in some towns (as high as 91 percent in the Town of Lysander, although it should be noted that these proportional increases represent fewer than 500 people in most cases). At the same time, the population in this age group fell by 12 percent in the City of Syracuse.

This suggests that the challenge of providing public transportation to senior citizens will continue to pose a problem to transportation planners. Seniors generally have a greater reliance on public transportation and are more likely to have limited mobility than other parts of the population. With more seniors in low density suburban towns, rather than urban areas more conducive to efficient public transit, creative approaches to serving this population may be needed in the future. See Table 2-5 for a comparison of population by age group in the towns of Onondaga County, the City of Syracuse and New York State as a whole.

Table 2-5

Proportion of Population by Age Group in Onondaga County Towns, City of Syracuse and New York State, 2010



Transportation Needs for Senior Citizens

At the suggestion of the FHWA in furthering environmental justice initiatives, and recognizing a growing elderly population (as discussed above), the LRTP 2004 Update represents the first time that the SMTC has devoted specific attention to senior citizen transportation needs. In preparing the LRTP 2004 Update, discussions were held with the Onondaga County Department of Aging and Youth. According to the most recent information available, there are at least 140 facilities (not including traveling services for seniors such as meal delivery) that meet a variety of human needs at specific locations within Onondaga County[3]. The Office for the Aging indicates that they are aware of various difficulties in trying to meet the transportation needs of senior citizens. A major issue for many of their clients is the lack of access to desired destinations using Centro's public transit buses or Centro's Call-A-Bus, the latter providing more individual curb-to-curb service. The Office for the Aging indicated that some of these accessibility issues are due to individual decisions by seniors regarding their place of residence. While some people may express frustration with the fact that public transit buses do not meet their needs, there is not always a recognition that living in a relatively isolated location that is removed from the public transit network is a self-created hardship.

Even for those living near the Centro transit bus network, accessibility can be a problem as a result of a lack of mobility due to physical limitations. In that environment, the client needs to rely on non-Centro based community transportation services, family and/or acquaintances; these alternatives may not always offer the exact type of support desired. According to recent Office for the Aging information, at least 25 transportation services providing access to general or specific destinations are available[4]. The list does not include church or other local services that may be available.

In addition to the transportation needs of seniors traveling from senior facilities to various destinations, it is possible that a need exists by those employed at the senior facilities for traveling to the workplace, particularly in view of the fact that many of these jobs are in the lower wage scale. A few examples of senior facilities that are currently serviced by Centro include Brighton Towers, Bernadine Apartments, Iroquois Nursing Home, Loretto Geriatric Center, Onondaga Senior Apartments, Conifer Village, St. Mary's Apartments, Limestone Gardens, Redfield Village, Bennett Manor, James Square Apartments, Colonial Village, St. Camillus Health & Rehab, Bishop Ludden Apartments, Toomey Abbott Tower, Menorah Park, Van Duyn Hospital, and Villa Scalabrini. Some employees may not have access to an automobile and need to rely on public transit to reach the work site, or utilize a carpool arrangement if feasible. A key opportunity for future study is the coordinated communication between representatives of non-drivers (Office of the Aging, Department of Social Services, etc.) for the future transportation needs of the elderly population.

The nation is undergoing demographic changes, resulting in a larger aging population (including the aging baby boomer generation). This change is substantial in Onondaga County because of the dual factors of the aging population as well as a declining total population. Over a single generation, the

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[3] *Onondaga County Department of Aging & Youth,* Resources for Seniors and Long Term Care Services in Onondaga County, *2007, pp 29-47.*

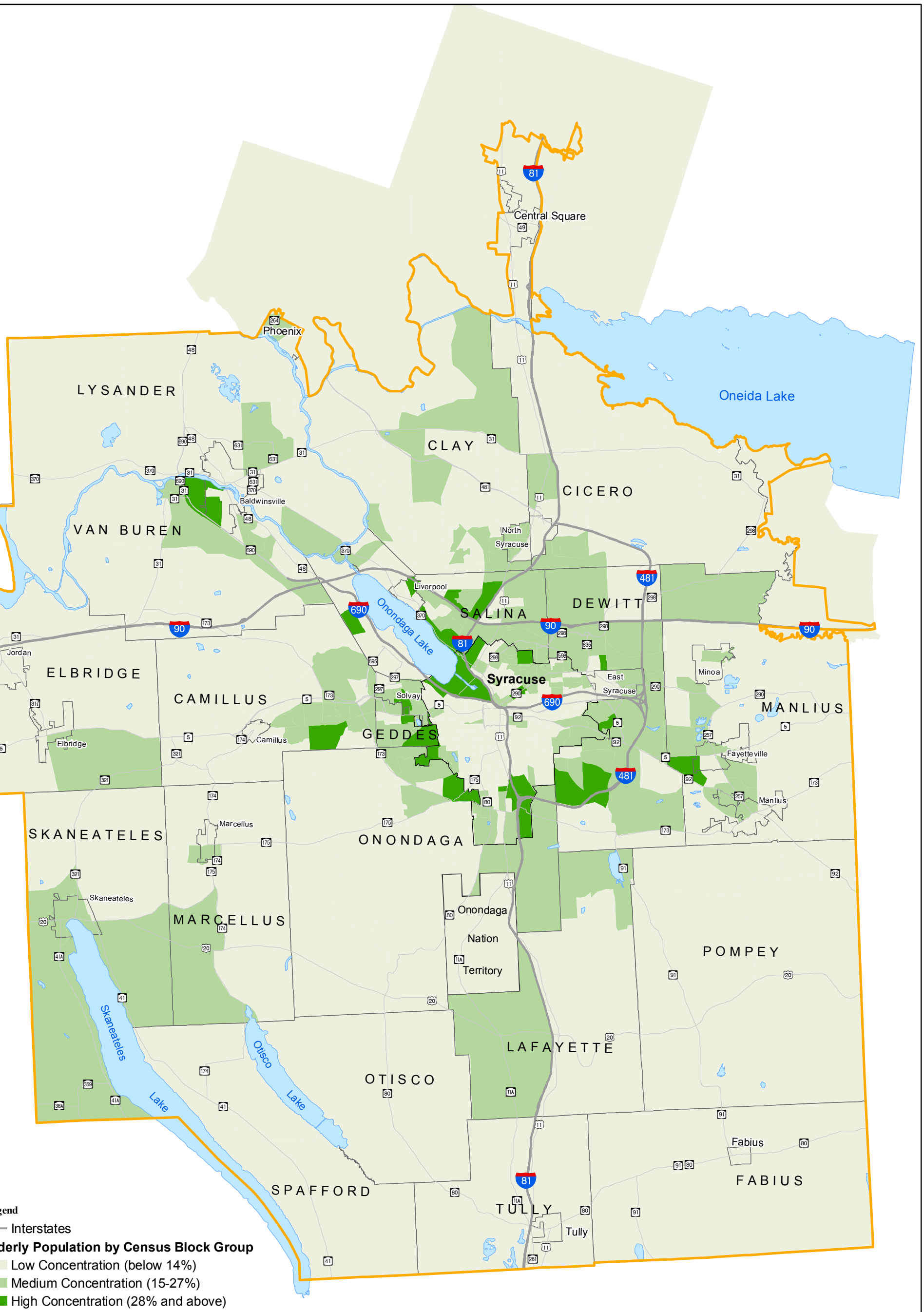
[4] *Onondaga County Department of Aging & Youth,* Resources for Seniors in Onondaga County, *2007, p. 50.*

number of those 65 and older in Onondaga County has more than doubled. In 1970, the total Onondaga County population was 472,835, of which 26,632 were 65 and over, or 5.6% of the population. By 2000, the Onondaga County population had declined to 458,336 and the number of those 65 and over had grown to 63,294, or 13.8% of the population.[5] Please see Map 2-2 for concentrations of elderly populations (65+) in the MPA. [6] These data suggest that Onondaga County is facing conflicting changing conditions. While the portion of County resources available for non-mandated programs (Federal and State) is declining, due primarily to mandated Medicaid programs, the number of people who are becoming eligible for Medicaid assistance and the resulting cost is growing. Consequently, resources available for meeting other needs, such as non-Medicaid support for senior citizens, are shrinking.

Transportation needs for senior citizens vary as age increases. For example, seniors in the 65-85 age group have different mobility requirements than seniors that are over age 85. Potential transportation needs for senior citizens that may increase in future years include walkable neighborhoods with a variety of goods and services nearby, transit and paratransit options, and visual improvements to the transportation system such as larger signs, wider pavement markings, and more handicapped parking. The current land use pattern and transportation system options may not address the needs of the growing population of senior citizens.

[5] *U.S. Bureau of the Census, 1970 and 2000.*

[6] *Syracuse Metropolitan Transportation Council, Coordinated Public Transit – Human Services Transportation Plan, December 2008, p. 6: The elderly community, for the purposes of the Coordinated Plan, consists of individuals at or over the age of 65. However, it should be noted that federal policies allow individual organizations some flexibility in defining this value. As a whole, the elderly community constitutes nearly 14% of the total population within the SMTC MPO. This sets the low concentration threshold at block groups with less than 14% of elderly individuals. Block groups with over 28% of elderly individuals are considered high concentration areas. Medium concentration areas occur when between 15% and 27% of the population is considered elderly.*



Concentrations of Elderly Population (65+)

Long-Range Transportation Plan Update 2011

Map 2-2

SMTC
100 Clinton Square
126 North Salina St, Suite 100
Syracuse, NY 13202
(315) 422-5716
Fax: (315) 422-7753
www.smtcmpo.org

Data Sources: SMTC, NYSDOT, 2010
U.S. Census Bureau 2000
Prepared by SMTC, 04/2011

0 1 2 4 Miles

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Legend
SMTC MPA
Interstates
Federal/State Routes

2.1.3 FAMILIES AND HOUSEHOLDS

Table 2-6 provides a summary of Census 2010 family and household characteristics for Onondaga County Households, including comparable 2000 and 1990 information.

Table 2-6

Household and Family Characteristics
Onondaga County 1990, 2000 and 2010

	1990	2000	2010	Change 1990-2000	Change 2000-2010
Number of Households	177,898	181,153	187,686	1.83%	3.61%
Family Households	118,575	115,320	115,283	-2.75%	-0.03%
Non-Family Households	59,323	65,833	72,403	10.97%	10.0%
Householder Living Alone	47,047	53,225	57,606	13.13%	8.23%
Average Household Size	2.55	2.46	2.40	-3.53%	-2.44%
Average Family Size	3.12	3.07	3.02	-1.60%	-1.63%

Source: U.S. Census Bureau, 2010 Table DP-1, 2000 SF1 Table P18, 1990 STF1 Table P015

As with the changes between 1990 and 2000, 2010 Census data show a continuing national trend represented in Onondaga County with smaller families, fewer married families, and more individuals living alone. The data shows a negligible decrease in the number of Family Households, and a 10% increase in Non-Family Households between 2000 and 2010. Of those Non-Family Households, nearly 80% were one-person households (just as they were between 1990 and 2000. The implications of these trends on transportation planning in the SMTC area may prove significant in terms of personal mobility and housing choice, and resulting in changes in vehicles per household, vehicle usage, carpooling, and land use development patterns.

2.1.4 INCOME AND POVERTY

Please note that as of the writing of this document the U.S. Census Bureau has not yet released 2010 data on income and poverty. However, data from 2009 (American Community Survey data) are discussed as included as appropriate.

As part of the 2007 LRTP Update, the SMTC examined income and poverty for individuals living within the MPA. The Census Bureau uses the federal government's official definition for poverty. "Following the Office of Management and Budget's (OMB) Statistical Policy Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using Consumer Price Index (CPI). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps)."[7]

In 2000, Onondaga County residents had a per capita income of $21,336 and a poverty rate of 12.2%; both rates coincide closely with national averages. However individuals living below poverty are concentrated in the City of Syracuse, where residents have a per capita income of just over $15,000 and a poverty rate (27.3%) at least three times that of surrounding Onondaga County towns, as shown in Table 2-7. In 2009[8], Onondaga County residents had a per capita income of $27,038 and a poverty rate of 13.7%. City of Syracuse residents have a per capita income of $17,652 in 2009, and although current poverty rate data are not available at this time for Syracuse, the per capita incomes reported in 2009 inflation-adjusted dollars (U.S. Census Bureau, 2005-2009 American Community Survey Estimates) tend to indicate that this trend continues.

[7] *US Census Bureau – Poverty.* How the Census Bureau Measures Poverty (Official Measure). *Source: U. S. Census Bureau, Housing and Household Economic Statistics Division. Last Revised: December 14, 2005. [http://www.census.gov/hhes/www/poverty/povdef.html].*

[8] *U.S. Census Bureau, 2005-2009 American Community Survey Estimates*

Table 2-7

	2000 Per Capita Income*	2000 % of Individuals Below Poverty Level	1990 % of Individuals Below Poverty Level	1980 % of Individuals Below Poverty Level	2009 Per Capita Income Estimates**
Camillus	$22,591	4.3%	3.1%	3.3%	$29,863
Cicero	$21,527	5.1%	3.7%	4.3%	$29,170
Clay	$22,011	5.7%	4.0%	4.3%	$28,849
DeWitt	$29,198	7.2%	5.8%	5.8%	$36,311
Elbridge	$18,682	6.9%	5.8%	9.0%	$24,518
Fabius	$21,206	5.7%	4.5%	NIA	$27,614
Geddes	$20,986	8.2%	5.9%	4.9%	$27,203
LaFayette	$24,591	5.1%	3.5%	3.0%	$29,201
Lysander	$26,187	3.8%	4.5%	4.1%	$36,828
Manlius	$31,825	3.3%	2.7%	4.1%	$37,790
Marcellus	$25,628	3.2%	4.8%	5.6%	$29,060
Onondaga	$25,522	4.2%	2.7%	4.9%	$31,865
Onondaga Nation	$15,425	7.6%	2.9%	NIA	NIA
Otisco	$19,726	5.7%	7.8%	NIA	$25,718
Pompey	$27,970	3.9%	2.9%	5.1%	$38,985
Salina	$21,839	7.4%	3.6%	4.3%	$25,908
Skaneateles	$28,624	3.2%	3.6%	4.2%	$44,524
Spafford	$24,014	5.2%	5.1%	NIA	$35,136
Syracuse (City)	$15,168	27.3%	22.7%	18.4%	$17,652
Tully	$25,223	6.7%	5.1%	NIA	$32,401
Van Buren	$20,997	6.6%	4.4%	6.4%	$25,313
Onondaga County	$21,336	12.2%	10.3%	9.6%	$27,038
United States	$21,857	12.4%	13.1%	13.0%	$27,041

*Source: U.S. Census Bureau 2000, Summary File 3, Table DP-3; U.S. Census Bureau 1990, Summary File 3, Table DP-4; U.S. Census Bureau 1980, Census of Population – General Social and Economic Characteristics. *Per Capita Income is not included for 1990 and 1980 due to the fact that the dollar amounts would have to be adjusted for inflation to be comparable to Census 2000 Per Capita Income dollars. NIA= No Information Available., **in2009 inflation-adjusted dollars - Source: U.S. Census Bureau, 2005-2009 American Community Survey Estimates. Note: 2010 data on percent of families and individuals below the poverty level was not available at the time of this writing.*

This trend appears to have continued over time, with the City of Syracuse holding a greater percentage of the population living below the poverty level. In general, the majority of towns in Onondaga County have seen either an increase in those living below poverty level or fluctuation of increases/decreases in those living below the poverty level since 1980. The Towns of Marcellus,

Otisco, and Skaneateles have seen decreases in the percentage of residents living below the poverty level over all three decennial censuses.

The outward population shift from Syracuse of those with greater financial resources has resulted in a disproportionate concentration of people facing a variety of challenges. From a transportation planning perspective, this group is an important concentration of potential clients for transit utilization (i.e., for those not having access to an automobile due to income, age and other related issues). A larger reliance on public transportation and greater use of alternate forms of transportation such as walking or bicycling are prevalent in the City, likely due to the concentration of poverty, significant elderly populations, and the dense pattern of land use in the City of Syracuse.

2.1.5 ENVIRONMENTAL JUSTICE POPULATIONS

In recent years, the concept of environmental justice has become a very important aspect of transportation planning. The USDOT, which governs the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), has mandated that environmental justice be included in all aspects of transportation planning. The value of such an analysis is important to transportation planning operations in that agencies and related contractors who receive federal funding are required to comply with various relevant regulations set forth by the USDOT. This concept focuses on the equal and fair treatment of all persons, particularly racial or ethnic minorities and low-income populations. In addition, it is unlawful to disproportionately distribute the benefits or disadvantages of transportation planning amongst disparate areas of minority/income group concentration.

There are three fundamental principles at the core of environmental justice planning:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.[9]

After taking into consideration the federal definition of environmental justice, the SMTC determined that for this region, there might be other variables that should be considered in the analysis portion of the report. The USDOT's planning regulations require MPOs to "seek out and consider the needs of those traditionally underserved by existing transportation systems, including, but not limited to, low-income and minority households." Additionally, the USDOT notes that the elderly and the disabled are groups that could experience adverse impacts.[10] Therefore, the SMTC

[9] *Transportation & Environmental Justice Case Studies. U.S. Department of Transportation Federal Highway Administration, Federal Transit Administration. December 2000. pp ii.*

[10] *http://www.fhwa.dot.gov/environment/ejustice/facts/index.htm*

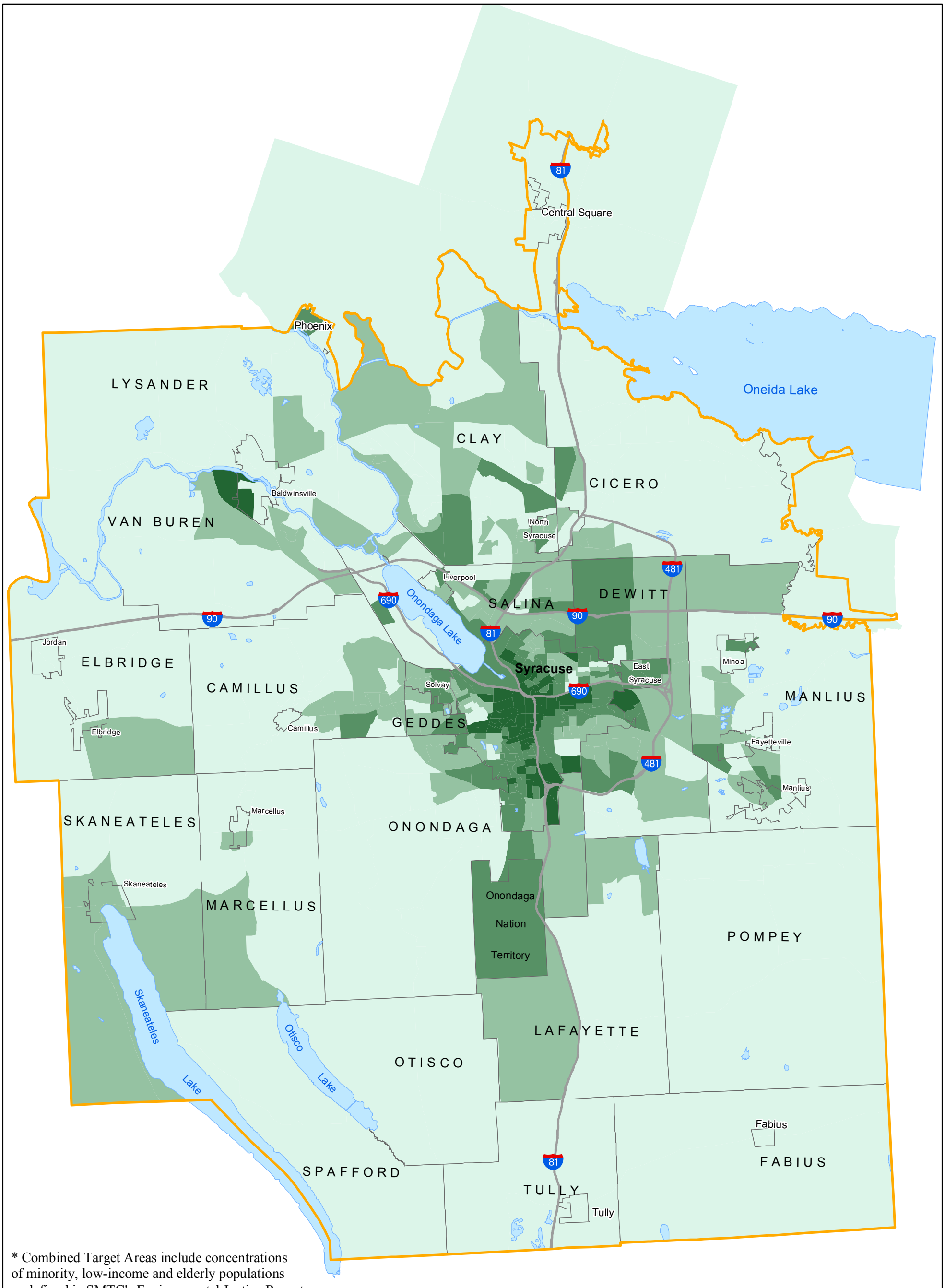
explanation was broadened to also include senior citizens and disabled populations. Since these groups may have transportation related needs, data was gathered and maps produced as part of the SMTC's environmental justice reporting process.

To date, the SMTC has prepared a study to evaluate recent and future transportation planning projects/programs within the MPA. Through the utilization of Census 2000 data, the *Environmental Justice Analysis* was specifically developed for identifying transportation planning projects/programs in relation to Block Groups within the MPA. The goal of this analysis was to ensure that both the positive and negative impacts (construction/rehabilitation related improvements, maintenance of the existing infrastructure, congestion) of transportation planning conducted by the SMTC and its member agencies are fairly distributed amongst all socioeconomic populations. Based upon the primary assessment, the environmental justice study showed that the transportation planning activities preformed by the SMTC are not known to have been disproportionately distributed regarding the designated target populations. In an effort to further evaluate and define environmental justice populations and transportation data together, the *Environmental Analysis* document was updated in 2005 to utilize Census Transportation Planning Package (CTPP) data. CTPP "is a special set of tabulations from the decennial census designed for transportation planners that can be used to evaluate existing conditions, develop and update travel demand models, and to analyze demographic and travel trends. The CTPP provides tabulations of households, persons, and workers and summarizes information by place of residence, place of work, and for worker flows between home and work."[11] CTPP data analyses included the examination of several tables based on poverty and disability characteristics. These particular datasets were also mapped at the Census Block Group level in GIS to provide a visual representation of current travel trends and mobility options available to said populations.

Future year activities will involve periodic assessments of the planning activities and their relevant implications, and participation from stakeholders throughout the MPO area. The following map (Map 2-3) represents consolidated target areas for environmental justice activities within the SMTC study area. It includes concentrations of minority, low income, and elderly populations. Mapping and reporting via the SMTC's *Environmental Justice* document will be updated once 2010 Census data is readily available in an appropriate format.

Subsequent actions include strategies for improving the accessibility and distribution of goods and services at neighborhood levels through land use and development patterns.

[11] *http://www.fhwa.dot.gov/ctpp/about.htm*



* Combined Target Areas include concentrations of minority, low-income and elderly populations as defined in SMTC's Environmental Justice Report.

Environmental Justice Target Areas

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Map 2-3

0 1 2 4 Miles

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Data Sources: SMTC, NYSDOT, 2010
U.S. Census Bureau 2000
Prepared by SMTC, 04/2011

Legend
- SMTC MPA
- Interstates

Combined Target Areas*
By Block Group
- Below Threshold
- Low-Priority Areas
- Medium-Priority Areas
- High-Priority Areas

2.2 FUTURE PROJECTIONS

2.2.1 TRAVEL DEMAND MODELING

Travel demand model software uses current and projected population and land use statistics to estimate impacts of proposed transportation infrastructure projects. Modeling is a useful and essential tool, helping planners to project improvements and predict typical impacts of land development actions. Additionally, it is mandated that the SMTC utilize modeling as part of its air quality conformity process (see Appendix B for further discussion of modeling and air quality conformity).

Travel demand modeling is the utilization of a computer software package to replicate the "real world" transportation system around us including roads, intersections, traffic control devices, congestion delays, use of a transit system, etc.

Once the computer model can accurately replicate the existing conditions of an area, it can then be used to predict future travel patterns and demands based on changes in the transportation system (e.g., new roads, wider roads with more capacity, closed roads); changes in land use (e.g., more residential development, a new industrial site, etc.); and changing demographics (e.g., more or less people in a specific area, access to a vehicle.).

Travel demand forecasting is a state-of-the-art analysis tool used in the transportation planning process. By simulating the current roadway conditions and the travel demand on those roadways, deficiencies in the system can be identified. It is also an important tool in planning future network enhancements and analyzing currently proposed projects. Travel demand models are developed to simulate actual travel patterns and existing demand conditions. Networks are constructed using current roadway inventory files containing data for each roadway within the network.

Travel demand is generated using socioeconomic data such as household size, automobile availability, and employment data. Once the existing conditions are evaluated and adjusted to satisfactorily replicate actual travel patterns and vehicle roadway volumes, the model inputs are then altered to project future-year conditions. Using these inputs, the model is able to derive future capacity limitations relative to the current roadway system. Once these deficiencies are identified, potential improvements are evaluated by rerunning the model with an "improved or modified" transportation system.

A range of different street networks, and even different land use patterns, are tested this way. Future-year traffic projections are based on numerous assumptions about how population, employment, automobile operating costs, and other factors will change over time. As such, future-year projections are only as good as the assumptions that are made. By simulating the current

roadway conditions and the travel demand on those roadways, deficiencies in the system can be identified.

The purpose of travel demand modeling at the SMTC is to enable the agency to more accurately predict future travel patterns and volumes. This tool is therefore valuable in transportation planning activities to assist in determining the best solution for identified transportation problems and issues. Additionally, it can be used to examine the consequences of capital investments via the TIP. For example, the model can perform a before and after comparison of a bridge replacement or road widening project and yield traffic volumes for the segments of interest. This will allow the SMTC to better understand the regional impact of the project. Because of the utility of travel demand models at predicting future travel patterns and volumes, they are also critical to the process of Air Quality and Conformity (discussed in Appendix B in detail).

The model allows for the agency to predict future volumes and speeds on selected roadway elements and then, by following an involved procedure and additional computer software analysis, the impact on air quality can be quantified to a degree.

In addition to simulating vehicular traffic, the model can be adjusted for transit vehicles, bicycles, and pedestrians. The model is a traditional, four-step model that involves the processes of (1) trip generation, (2) trip distribution, (3) mode choice, and (4) trip assignment. SMTC's travel demand model utilizes TransCAD software and includes a Geographic Information Systems (GIS) interface. The model is used by the SMTC staff to perform a wide range of transportation planning activities.

For a detailed discussion of the model, its inputs and outputs, and the model development process please refer to the SMTC's *Travel Demand Model Validation Report* or for a discussion on the model outputs as they relate to VMT and air quality conformity, please refer to Appendix B.

2.2.2 Model Inputs for Future Year Projections

Based on SMTC's travel demand model outreach meetings with community representatives, projected population for the MPA area for the year 2035 is approximately 455,000. This represents an approximate decrease of 3% for the region over a 28 year period (2007 to 2035).

Table 2-8 shows the change in households for municipalities within the MPA between 2007 and 2035. The table indicates that the number of households in the region is projected to grow by nearly 4% over this 28 year period. There is generally a decline in households in the City of Syracuse and growth in communities outside the City. Map 2-4 depicts the anticipated change in household density between 2007 and 2035 within the MPA.

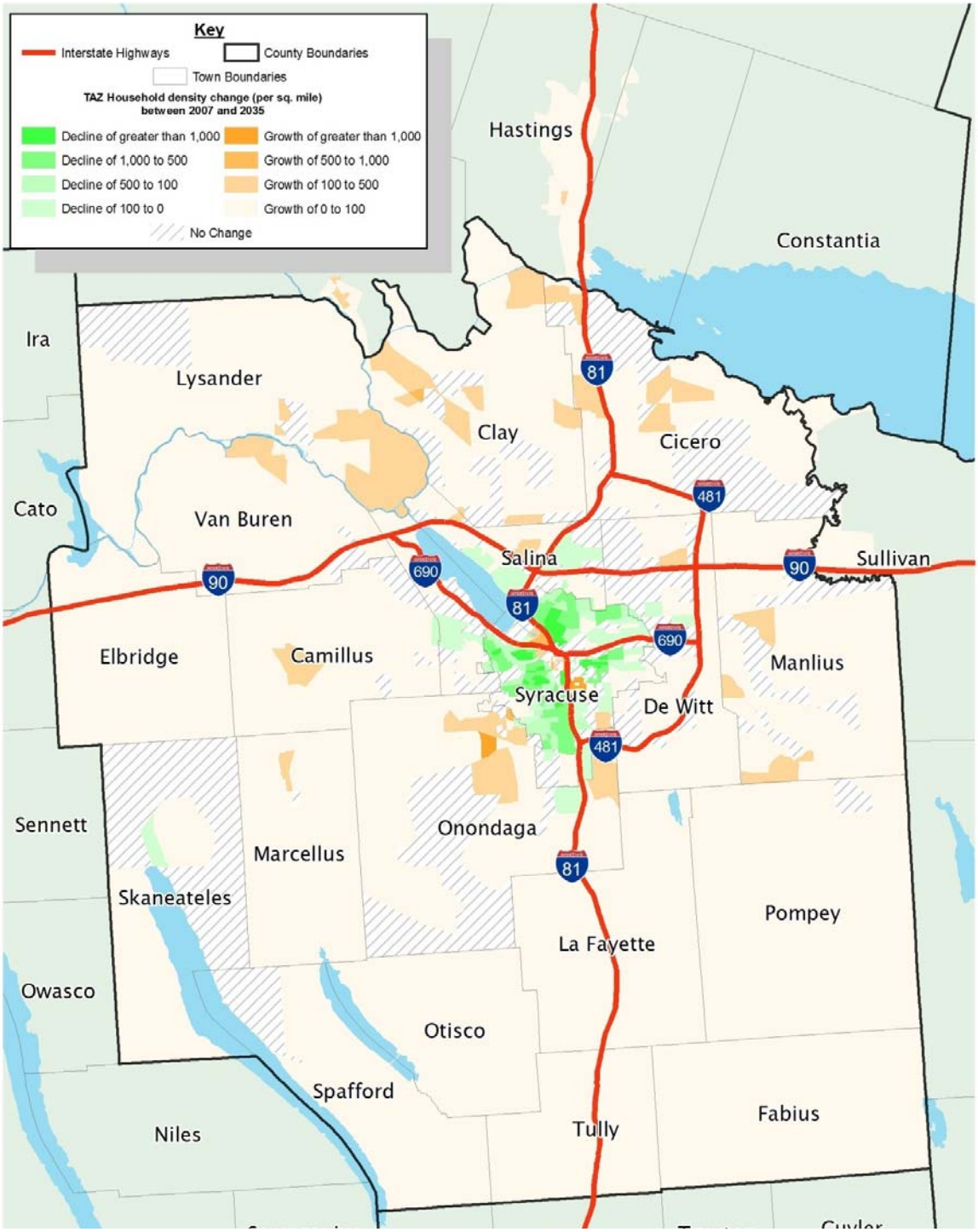
The projected increase in households and decrease in population indicates a declining average number of people per household in the region. These population and household projections were developed prior to the release of 2010 US Census data.

Table 2-8
Households by Municipality in 2007 and 2035

Municipality	Households			
	2007	2035	Change	% Change
Camillus	9,306	10,220	914	9.8%
Cicero	11,210	12,838	1,628	14.5%
Clay	22,204	24,476	2,272	10.2%
Dewitt	10,190	10,527	337	3.3%
Elbridge	2,478	2,627	149	6.0%
Fabius	701	838	137	19.5%
Geddes	7,491	7,469	(22)	-0.3%
Lafayette	2,213	2,472	259	11.7%
Lysander	7,731	9,782	2,051	26.5%
Manlius	13,077	14,865	1,788	13.7%
Marcellus	2,413	2,725	312	12.9%
Onondaga	8,290	10,009	1,719	20.7%
Otisco	903	1,045	142	15.7%
Pompey	2,269	2,605	336	14.8%
Salina	13,978	14,163	185	1.3%
Skaneateles	3,210	3,253	43	1.3%
Spafford	749	808	59	7.9%
Syracuse	56,981	50,565	(6,416)	-11.3%
Tully	1,078	1,209	131	12.2%
Van Buren	5,227	5,746	519	9.9%
Onondaga Nation*	*Included in the Towns of Lafayette and Onondaga			
Onondaga County	**181,699**	**188,242**	**6,543**	**3.6%**
Hastings	1,910	2,157	247	12.9%
Schroeppel	1,031	1,112	81	7.9%
West Monroe	119	130	11	9.2%
Oswego County	**3,060**	**3,399**	**339**	**11.1%**
Sullivan	1,084	1,313	229	21.1%
Madison County	**1,084**	**1,313**	**229**	**21.1%**
MPA TOTALS	**185,843**	**192,954**	**7,111**	**3.8%**

Note: Towns include Village data; Household data does not include group quarters; Madison and Oswego County Data is limited to SMTC MPA

Map 2-4: Change in Household Density between 2007 and 2035



3 FACILITIES

3.1 GOAL

To provide safe, clean, well maintained and efficient transportation infrastructure.

3.1.1 FACILITIES OBJECTIVES

- To increase the percentage of bridges with condition ratings of better than 5.0 to 80 percent and to increase the percentage of bridges with deck area condition ratings of greater than 5.0 to 83 percent of the total number of bridges by 2020.

- To stabilize pavement conditions at or above the following levels for all medium and high volume roads (greater than 2,500 Annual Average Daily Traffic [AADT]): 11% poor; 26% fair and average condition rating of 7.0 for all medium and high volume roads by 2020.

- To maintain and/or rebuild sidewalks and other pedestrian or bicycle facilities most used by pedestrians and cyclists.

- To maintain transit system facilities, providing safe and reliable service through 2020.

- To ensure connections between transportation modes for passenger travel and goods movement, through facility location and design.

3.2 TRENDS

The following sections contain detail about the surface transportation system within the MPA, including detailed discussions on roadways and functional classification, bridge and pavement conditions, transit, bicycle and pedestrian facilities, air/water/rail facilities and other related topics.

3.2.1 ROADWAYS

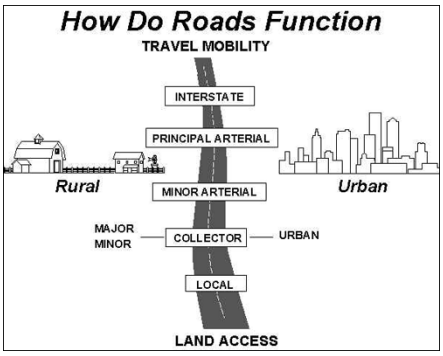
The MPA's surface transportation system includes a total of approximately 3,534.88 centerline miles of roads. The roads are owned and maintained by various jurisdictions including the New York State Department of Transportation (NYSDOT), the New York State Thruway Authority (NYSTA), the Onondaga County Department of Transportation (OCDOT), the City of Syracuse, and the towns and villages in Onondaga, Oswego, and Madison Counties.

The NYSDOT and the NYSTA own approximately 13.1% of the system (which equals about 462.27 centerline miles). The NYSDOT system contains the majority of the main commuter routes. Other key jurisdictional ownerships in the MPA are the OCDOT and City of Syracuse. The

OCDOT is responsible for 22.7% of the system (803.20 centerline miles) and the City of Syracuse is responsible for 11.9% of the system (420.71 centerline miles). In addition to those itemized above, other jurisdictions are responsible for the balance of the system. These jurisdictions include Oswego and Madison Counties, as well as numerous towns and villages in all three counties.

Functional Classification

The transportation system is organized by *"functional classification."* Functional classification is the process by which roads are categorized into classes according to the type of service they are meant to provide.



Individual roads and streets do not serve travel independently but are part of a greater network. This network *"channels"* traffic in a logical, safe and efficient manner and helps to define the functional classification hierarchy. A simplified hierarchy of a functional classification (from lowest class to highest) consists of local roads, major and minor collector roads, minor arterial, and principal arterials.

Functional classification codes are given to all federal-aid eligible roads. The following codes are used in the SMTC study area: principal arterial, minor arterial, collector and minor collector. Arterials provide the highest level of mobility, at the highest speed, for long, uninterrupted travel. Arterials generally have higher design standards than other roads, often with multiple lanes and some degree of access control. Collectors provide a lower degree of mobility than arterials. They are designed for travel at lower speeds and for shorter distances. Collectors are typically two-lane roads that collect and distribute traffic from the arterial system. The minor collectors' code applies to rural parts of the SMTC study area.[1] Another functional classification code, local roads, consist of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement.

Table 3-1 provides the number of centerline miles by jurisdiction and functional classification for the SMTC MPA.

1 Definitions taken from the Federal Highway Administration's Conditions and Performance Report, Chapter 2. For further information, visit the website: [http://www.fhwa.dot.gov/environment/flex/ch03.htm].

Table 3-1

Centerline Miles by Jurisdiction and Functional Classification
SMTC MPA

	Principal Arterial	Minor Arterial	Major/Urban Collector	Minor Collector	Local	Total
NYSDOT	185.98	105.67	110.01	24.34	4.84	430.83
NYSTA	31.44	0.00	0.00	0.00	0.00	31.44
OCDOT	27.30	86.47	170.81	107.39	411.23	803.20
City of Syracuse	20.42	63.54	32.31	0.00	304.45	420.71
Towns/Villages	0.00	8.49	40.54	3.46	1,529.35	1,581.84
Private	0.00	0.00	0.00	0.00	243.97	243.97
Oswego County	0.00	2.37	7.24	0.02	2.52	12.15
Madison County	0.00	0.00	8.86	0.00	1.88	10.74
Total	265.14	266.54	369.77	135.20	2,498.23	3,534.88

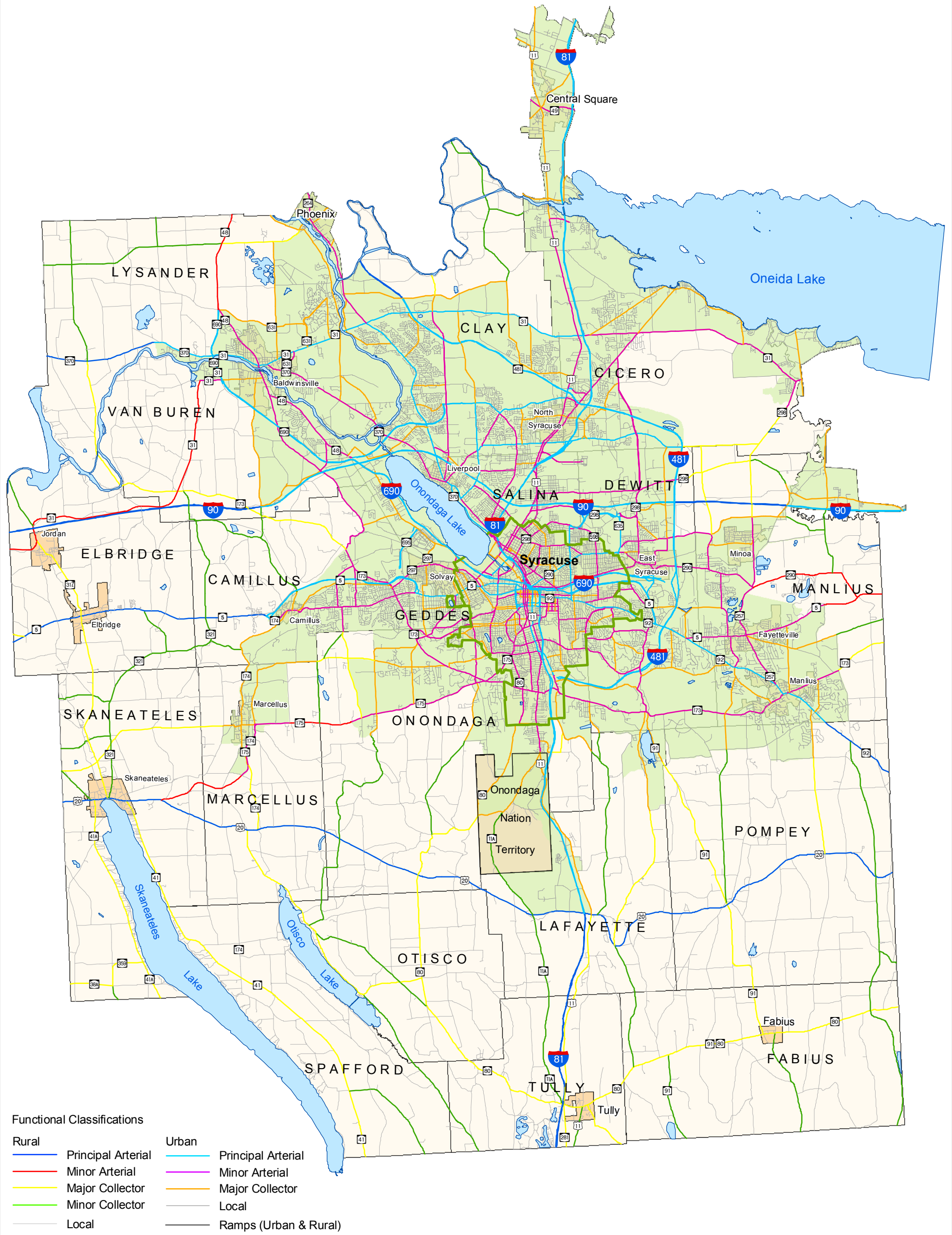
Source: SMTC's Geographic Information System

The functional classification system was revised based on the 2000 Census and associated updated MPO boundaries. The SMTC Policy Committee approved these revisions on March 3, 2004 and subsequently submitted them to NYSDOT and FHWA. The revisions received federal approval from FHWA. See Map 3-1 for the Functional Classification system within the SMTC MPA.

3.2.2 INFRASTRUCTURE MAINTENANCE

The vast system of existing highways and bridges in the MPA area require a large amount of maintenance in order to ensure adequate operational characteristics. The majority of money spent on the Transportation Improvement Program (TIP) from Federal Highway Administration (FHWA) is used for maintaining the existing road network.

The 2011-2015 TIP was adopted by the SMTC Policy Committee on July 27, 2010. The multi-year program apportions $279,594,000 in Federal Highway funds (federal funds only) and $47,000,000 in Federal Transit funds (federal funds only). With the required "match" dollars, the Highway program equates to approximately $339,000,000; while the Transit program is approximately $63,000,000.



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Functional Classification

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Map 3-1

0 1 2 4 Miles

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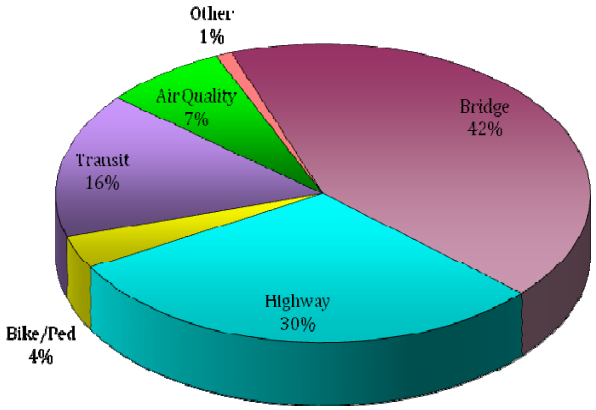
Legend

- Urban Boundary
- City of Syracuse
- Village
- Town
- Onondaga Nation

From the Highway program of projects, approximately 4%, or $14,000,000 is programmed to transportation related enhancements such as trails and projects for bicycles and pedestrians. The vast majority of all funds under the Highway program, $290,573,000 (72%), are for maintenance of existing infrastructure.

TIP funding by category:

- $401,679,000 TIP dollars (combination of FHWA, FTA and local match dollars)
- $290,573,000/72% for Maintenance (bridges and highways)
- $29,871,000/7% for Air Quality
- $14,232,000/4% for new Bicycle/Pedestrian facilities
- $63,063,000/16% for new Transit
- $3,940,000/1% for new Other.



As depicted, it is clear that the majority of capital money for the surface transportation network in the MPA area is for maintenance (i.e., bridges and highway), leaving modest funds for system expansion. In past TIP documents, there were capacity improvement projects planned that utilized FHWA obligated funds (i.e., the Belgium Bridge on Route 31), but generally, there have been minimal new capacity projects and system additions in recent years.

Aging Infrastructure

The condition of bridges in the SMTC area has been a critical funding issue for a number of years. There are a large number of bridges in Onondaga County. The percentage of these bridges that are deficient along with the limited amount of money available for funding improvements has made this a key improvement area noted by the NYSDOT.

There are a large number of interstate bridges that also need repair within the same timeframe because many are of the same age. Specifically, there are 124 bridge spans on the I-81 viaduct alone

that will need to be addressed within the next decade. While a significant effort has been made in the last decade to remedy this problem, many bridges still are in need of repair and compete for a limited amount of federal money.

The age of the MPA's infrastructure is, in turn, causing maintenance costs to rise. Many of our roads and bridges, built during the 1950's and 1960s, will reach the end of their life expectancy in the next twenty years. As this infrastructure reaches the end of its life cycle, expensive repairs must be undertaken more frequently until the entire roadway or structure must be removed and replaced or reconsidered.[2] It should also be noted that the region is significantly impacted by the freeze-thaw cycle which tends to prematurely age pavement conditions and increase the frequency of needed repairs. Large volumes of snow increase soft costs for plowing.

Most member agencies have programs for infrastructure maintenance, including pavement and bridges. The City, OCDOT, NYSDOT and NYSTA all have active PMS (pavement management systems) that include routine scoring of pavements and repaving a pre-determined number of centerline miles of roadway each year. The repaving program consists of in-house work (for routine pavement maintenance and minor repairs) and contractual work (for major overhauls and maintenance paving). By following a periodic treatment cycle (for example, every eight to ten years) for the pavement maintenance program, the initial pavement investment is preserved, with the possibility of avoiding a future total pavement overhaul for quite some time. Additionally, the SMTC includes the Bridge and Pavement Condition Management System (BPCMS) annually on its UPWP. The goal of this effort and corresponding report is to publish the conditions of the bridges and pavement in the MPO area for each member agency that is responsible for infrastructure maintenance. This tool is an additional aid that can be utilized by member agencies in setting their road maintenance priorities.

Privatization of Infrastructure

Municipalities are increasingly looking toward public-private partnerships as public budgets become constrained and maintenance costs escalate. Companies are being given multi-decade leases to manage or build roads for the municipalities. These partnerships can remove the construction and maintenance burden from municipalities, while providing incentives to the private company.[3] These incentives are varied, though they usually involve roadway tolling or tax relief for the company.

Here in Central New York, privatization often manifests when private home builders construct elaborate road networks within sub-divisions. Though privately constructed, the municipality usually takes ownership and responsibility for the road maintenance, which becomes increasingly burdensome as the infrastructure ages.

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2 Engineers See Dangers in Aging Infrastructure http://www.nytimes.com/2007/08/02/us/01cnd-engineer.html?ex=1343707200&en=48220e5c524f0e9d&ei=5090&partner=rssuserland&emc=rss

3 "Leasing of Landmark Turnpike Puts State at Policy Crossroad" http://online.wsj.com/article/SB121971201641371425-email.html

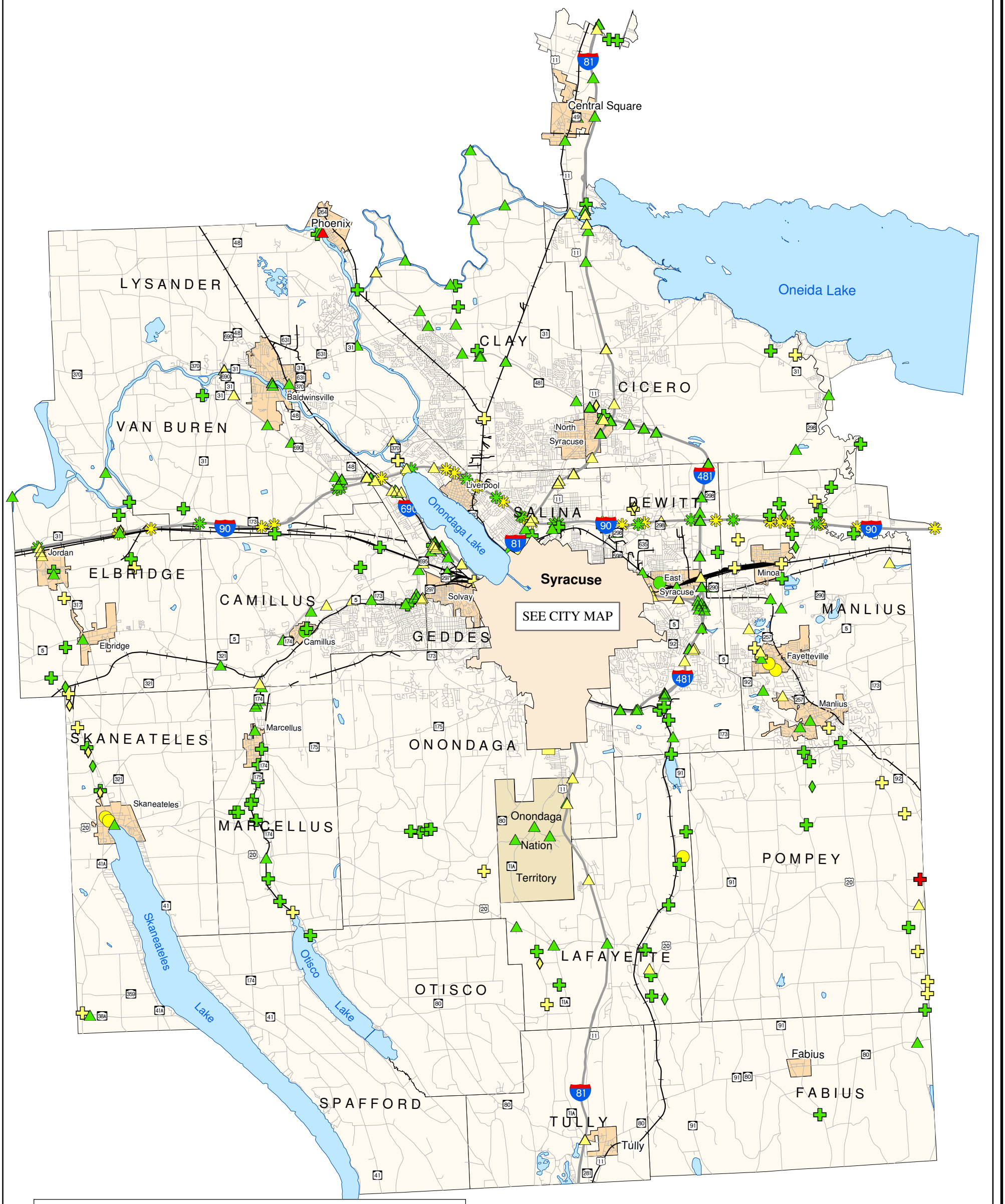
Local governments across the country are often unable to maintain their existing infrastructure due to insufficient and an unsustainable tax base. As such, it is not uncommon for municipalities to promote development, especially residential development, in an effort to increase tax revenues. However, the cost of maintaining the additional infrastructure increases exponentially as it ages. This compounds the burden on local municipalities as the cumulative and long-term costs are not offset by the additional generated tax revenue.

3.2.3. BRIDGE CONDITIONS

Onondaga County has 492 bridges on the various State, County and local roads, as well as on or over the New York State Thruway. The NYSDOT maintains a Bridge Management System (BMS) for all of these bridges. The State only inspects bridges with spans of 20 feet or greater for OCDOT. OCDOT maintains 255 drainage structures that are classified as bridges. The BMS rates the bridge deck, bearings and other structural elements on a weighted scoring system. State and local bridges are rated by the NYSDOT on a scale of 1.0 to 7.0. Bridges with a condition rating of less than 5.0 are deemed as being in a deficient condition. However, a deficient condition does not mean that the bridges are unsafe, but rather they are candidates for rehabilitation work, replacement or even perhaps closure (see Maps 3-2a and 3-2b for bridge conditions).

Critically deficient bridges are those that have one or more critical bridge elements rated less than 3.0. Critical bridge elements include the structural deck, bridge abutments and supporting columns. Critically deficient bridges are given a priority for funding over those that are deficient. Many bridges with overall condition ratings of less than 3.0 have to be closed to some or all traffic.

State and local bridges are inspected every two years, regardless of condition rating. All State and local bridges that have a structural active flag, an inactive red flag, or active yellow flag are inspected every year. The condition ratings for Onondaga County, Oswego County and Madison County as well as all State and Thruway Authority bridges in Onondaga County are presented in Table 3-2. According to the NYSDOT, future conditions are based on a tradeoff between an additional five years worth of further deterioration and programmed work on some of the bridges.



State Bridges
- Critically Deficient
- Deficient
- Non-Deficient

County Bridges
- Critically Deficient
- Deficient
- Non-Deficient

City Bridges
- Deficient
- Non-Deficient

Thruway Bridges
- Deficient
- Non-Deficient

Town Bridges
- Deficient
- Non-Deficient

Village Bridges
- Deficient
- Non-Deficient

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Bridge Ratings in the MPA

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Map 3-2a

0 1 2 4 Miles

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Bridge Ratings in the City of Syracuse

Long-Range Transportation Plan 2011 Update

Map 3-2b

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Data Sources: SMTC, NYSDOT, 2010
Prepared by SMTC, 03/2011

0 0.25 0.5 1 Miles

City Bridges
- Deficient
- Non-Deficient

Town Bridges
- Deficient
- Non-Deficient

County Bridges
- Critically Deficient
- Deficient
- Non-Deficient

Village Bridges
- Deficient
- Non-Deficient

Thruway Bridges
- Deficient
- Non-Deficient

State Bridges
- Critically Deficient
- Deficient
- Non-Deficient

SEE INSET

INSET

0 0.1 0.2 Miles

Table 3-2
2009 Bridge Conditions in MPA

Bridge Jurisdiction	Total Number of Bridges	Non-Deficient		Deficient Bridges (Both "Deficient" and "Critically Deficient")		*Deficient Bridges by Type*			
						Deficient Bridges		*Critically Deficient Bridges*	
		Number	*Pct*	*Number*	*Pct*	*Number*	*Pct*	*Number*	*Pct*
City of Syracuse	32	15	47%	17	53%	*17*	*53%*	*0*	*0%*
Onondaga County DOT	95	68	72%	27	28%	*26*	*27%*	*1*	*1%*
Oswego County	3	3	100 %	0	0%	*0*	*0%*	*0*	*0%*
Madison County	1	1	100 %	0	0%	*0*	*0%*	*0*	*0%*
New York State DOT	299	194	65%	105	35%	*103*	*34%*	*2*	*1%*
New York State Thruway Authority	41	14	34%	27	66%	*27*	*66%*	*0*	*0%*
Towns in the MPA	14	6	43%	8	57%	*8*	*57%*	*0*	*0%*
Villages in the MPA	7	2	29%	5	71%	*5*	*71%*	*0*	*0%*
Total	**492**	**303**	**62%**	**189**	**38%**	***186***	***38%***	***3***	***1%***

Source: SMTC 2010 SMTC Bridge and Pavement Management System Report

Onondaga County DOT had 62 non-deficient bridges in 2005 (i.e., 65%), and 68 non-deficient bridges in 2010 (i.e., 72%). Oswego and Madison County bridges within the MPA remained unchanged and were 100% non-deficient during the same time period. Meanwhile, the number of non-deficient bridges maintained by the City of Syracuse, the New York State DOT, the New York State Thruway Authority, and the towns and villages in the MPA dropped during the same five years. Overall, the percent of non-deficient bridges within the MPA dropped from 65% in 2005 to

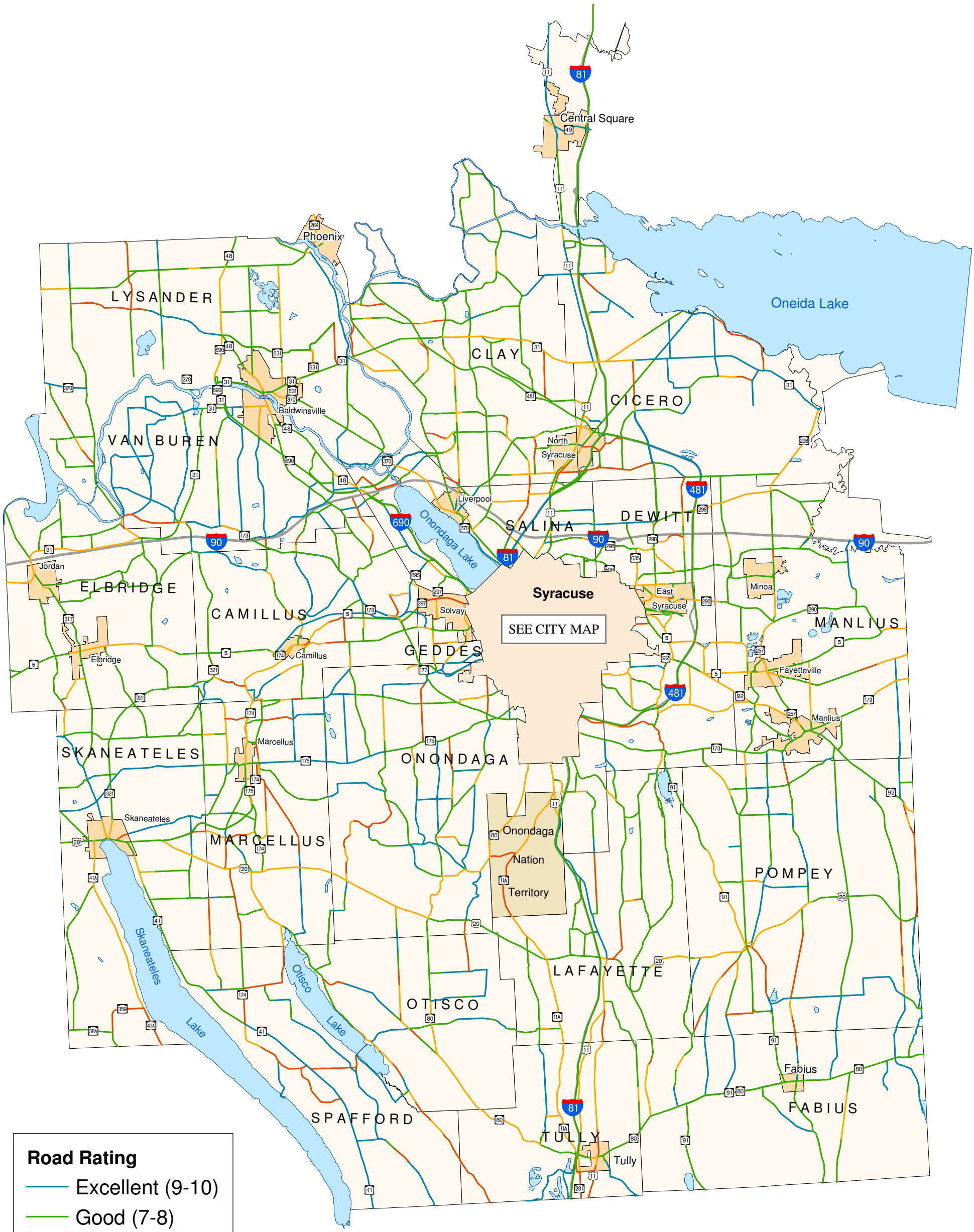
62% in 2010.[4] As such, in 1997, forty-four (44) percent of all bridges within Onondaga County were considered to be deficient or priority deficient. The proportion of deficient bridges in the SMTC's planning area decreased to approximately 38% in 2009.

3.2.4. PAVEMENT CONDITIONS

The NYSDOT uses a Pavement Management System (PMS) that attempts to maximize the effectiveness of the limited dollars spent on maintaining pavements. Pavements have a varying life cycle dependent on many conditions.

A PMS allows the NYSDOT and other highway departments to determine the pavement rating relative to all other pavements in a jurisdiction. It also allows year-to-year monitoring of pavements and, most importantly, it facilitates predictions of when to cost effectively overlay, rehabilitate or reconstruct a road. Knowing where a pavement is in its life cycle allows a determination of the most cost-effective treatment. See Maps 3-3a and 3-3b for pavement conditions. Please note that there is no definition for "Rated Roads" on the maps. For the purposes of this document, "Rated Roads" equates to all roads under the jurisdiction of the NYSDOT, NYSTA, OCDOT, City of Syracuse and local (town or village) federal aid-eligible roads.

[4] *In 2005, 53% of bridges were non-deficient in the City of Syracuse, 71% of state-owned bridges were non-deficient, 37% of Thruway-owned bridges were non-deficient, 50% of town–owned bridges were non-deficient, and 43% of village-owned bridges were non-deficient.*



Road Rating

- Excellent (9-10)
- Good (7-8)
- Fair (6)
- Poor (1-5)

*Including all federal-aid eligible roads and rated non federal-aid eligible roads.

All Rated Roads* in the MPA

Long-Range Transportation Plan 2011 Update

Map 3-3a

0 1 2 4 Miles

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

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(315) 422-5716
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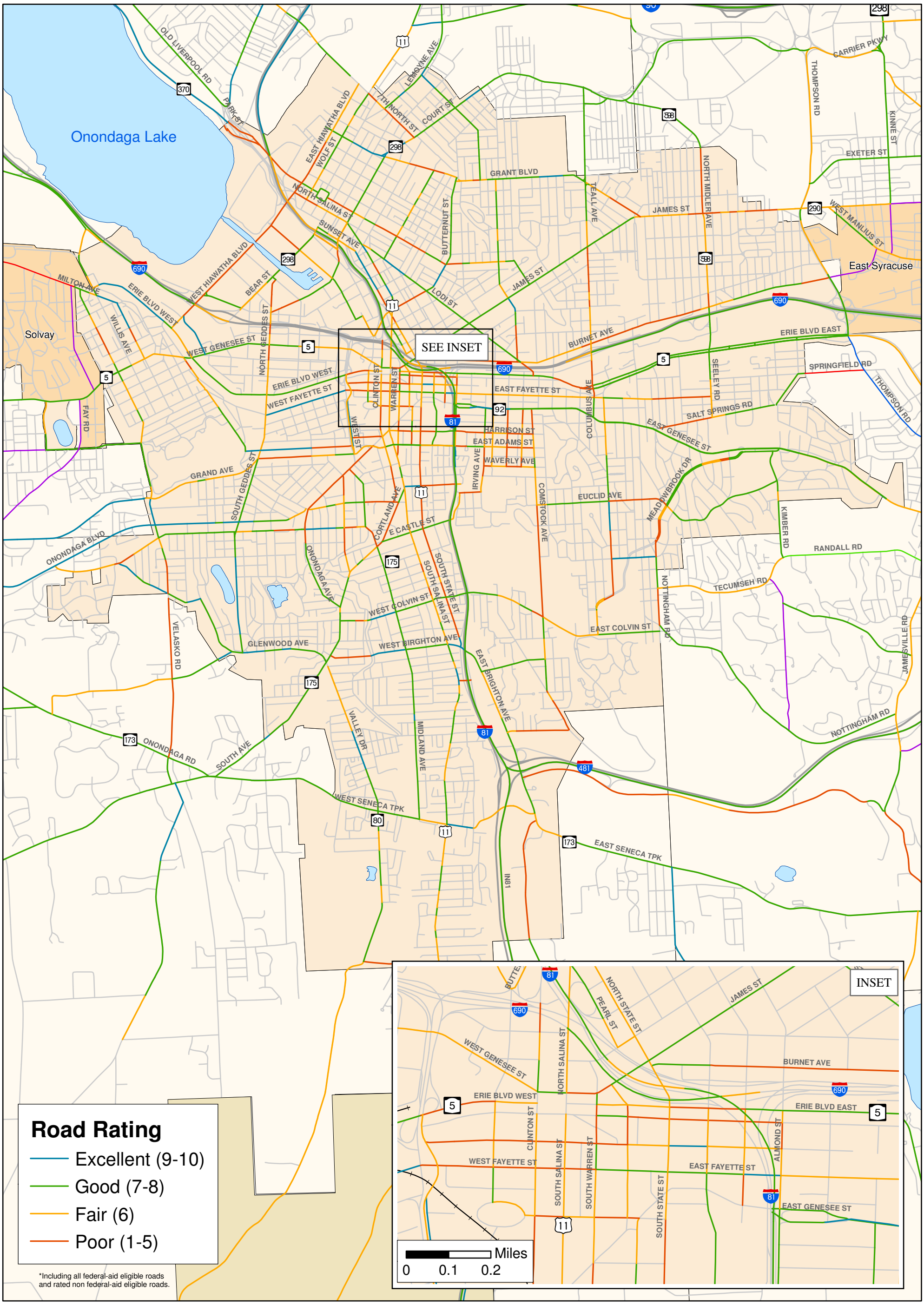
Data Sources: SMTC, NYSDOT, 2010
Prepared by SMTC, 03/2011



All Rated Roads* in the City of Syracuse

Long-Range Transportation Plan 2011 Update

Map 3-3b

0 0.25 0.5 1 Miles

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Assessing Pavement Conditions

The NYSDOT system uses a visual rating system with a scale of 1 to 10 for surface conditions, which are categorized as follows: below 5.0 is considered poor, 6.0 is fair, 7.0-8.0 are good, and 9.0-10.0 are excellent condition. Table 3-3 shows the average pavement rating of state roadways within Onondaga County and the percent of pavement that is considered in poor condition.

Table 3-3

State Pavement Conditions Onondaga County

Year	Average Condition	Percent Poor
2001	7.02 (Good)	5.1%
2002	7.03 (Good)	4.2%
2003	6.74 (Fair)	3.4%
2004	6.81 (Fair)	2.5%
2005	6.90 (Fair)	2.4%
2006	6.88 (Fair)	3.4%
2007	6.8 (Fair)	5%
2008	7.2 (Good)	1%
2009	6.8 (Fair)	7%

Source: NYSDOT, Pavement Condition of New York's Highways

As reflected in Table 3-3, the average pavement conditions on the State highway system have slightly decreased, overall, since 2001 while the percent of poor pavement has consistently been below the 2020 goal of less than 11 percent having poor pavement conditions. In 2010, 31% of the pavement in the State highway system was rated fair: The goal for 2020 is to reduce this to 26%. Overall, the State roads are slightly below the goal of reaching an average condition rating of 7.0 for all medium and high volume roads by 2020.

The Onondaga County Department of Transportation (OCDOT) and the City of Syracuse also maintain pavement management systems. The City of Syracuse rates approximately half of the pavement each year in the City on a 1-10 scale, similar to the NYSDOT scale. In 2009, 45% of the City's rated pavement was rated "good" or "excellent", 27% was rated "fair" and 29% was rated "poor". The overall rating for pavement on City streets was 6.4 (fair). The City performs annual preventive maintenance to maintain pavements in good condition and to slow the rate of deterioration on improved streets, thereby reducing the life-cycle costs.

The OCDOT system is not identical to the NYSDOT system, although the system is comparable since OCDOT also uses a 1-10 scale. In 2010, the overall rating for County pavement was 7.4 (good), with 79% of rated roads rated good or excellent, 11% rated fair and 11% rated poor.

The OCDOT has three different paving programs: a hot mix, a cold mix, and Surface Treatment Program. Onondaga County currently paves approximately 38 miles of roadway per year using hot mix, 15 miles per year using cold mix, and 55 miles per year with surface treatment. To adequately maintain system condition, the OCDOT anticipates that approximately 48 miles of highway per year need to be paved using hot mix, 19 miles per year using cold mix and 75 miles per year using the Surface Treatment Program.

The aforementioned information, including bridge and pavement data illustrates the necessity for infrastructure maintenance and safety concerns in the MPO area. These critical issues emphasize the need for maintenance funding to be allocated to the MPO on an annual basis.

3.2.5. BICYCLE & PEDESTRIAN FACILITIES

Over the past several years, federal legislation and funding for transportation has given increasing consideration to bicycle and pedestrian travel and related infrastructure. Starting with the 1991 Intermodal Transportation Efficiency Act (ISTEA), new national attention was placed on bicycle and pedestrian provisions and MPOs were mandated to consider bicycling and walking as transportation plans were prepared. The Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) continued to expand both legislative requirements as well as funding opportunities for pedestrian and bicycle facilities to be used for transportation purposes.

One reason that these non-motorized modes of travel are gaining in stature and importance is their positive effects on air quality. The federal Congestion Mitigation and Air Quality (CMAQ) program and the Transportation Enhancements Program (TEP) administered by the Federal Highway Administration are principal funding avenues for bicycle/pedestrian projects across the country, as a way of encouraging alternatives to private automobile usage for transportation. Successful as many of these projects have been, both of these funding sources have been limited compared to other transportation funding mechanisms and are highly competitive in nature. For example, four percent (4%) of the 2011-2015 TIP funding is programmed for bicycle and pedestrian projects.

In addition, the SMTC's *Bicycle and Pedestrian Plan for Onondaga County and the City of Syracuse* was completed in 2005. The primary goals of this Plan are to preserve and enhance the bicycling and pedestrian network; and to improve the safety, attractiveness, and overall viability of cycling and walking as legitimate transportation alternatives to the transportation system in the Greater Syracuse area. This study includes the following major sections: (1) evaluating and summarizing existing bicycle and pedestrian plans; (2) data compilation and summary; (3) gathering of existing conditions/creation of a suitability map; (4) identifying known and perceived bicycle and pedestrian issues; and (5) developing recommendations and action items that seek to improve the community's bicycle and pedestrian environment.

Both Onondaga County and the City of Syracuse have bicycle and pedestrian plans and projects underway, several of which are funded through the TIP:

- Onondaga Lake Trail, also known as the "Loop the Lake Trail" – The Onondaga County Department of Parks and Recreation and OCDOT continue to work on completing the planned bicycle/pedestrian trail around Onondaga Lake, which will provide a non-motorized transportation link between Liverpool

Onondaga Lake Trail

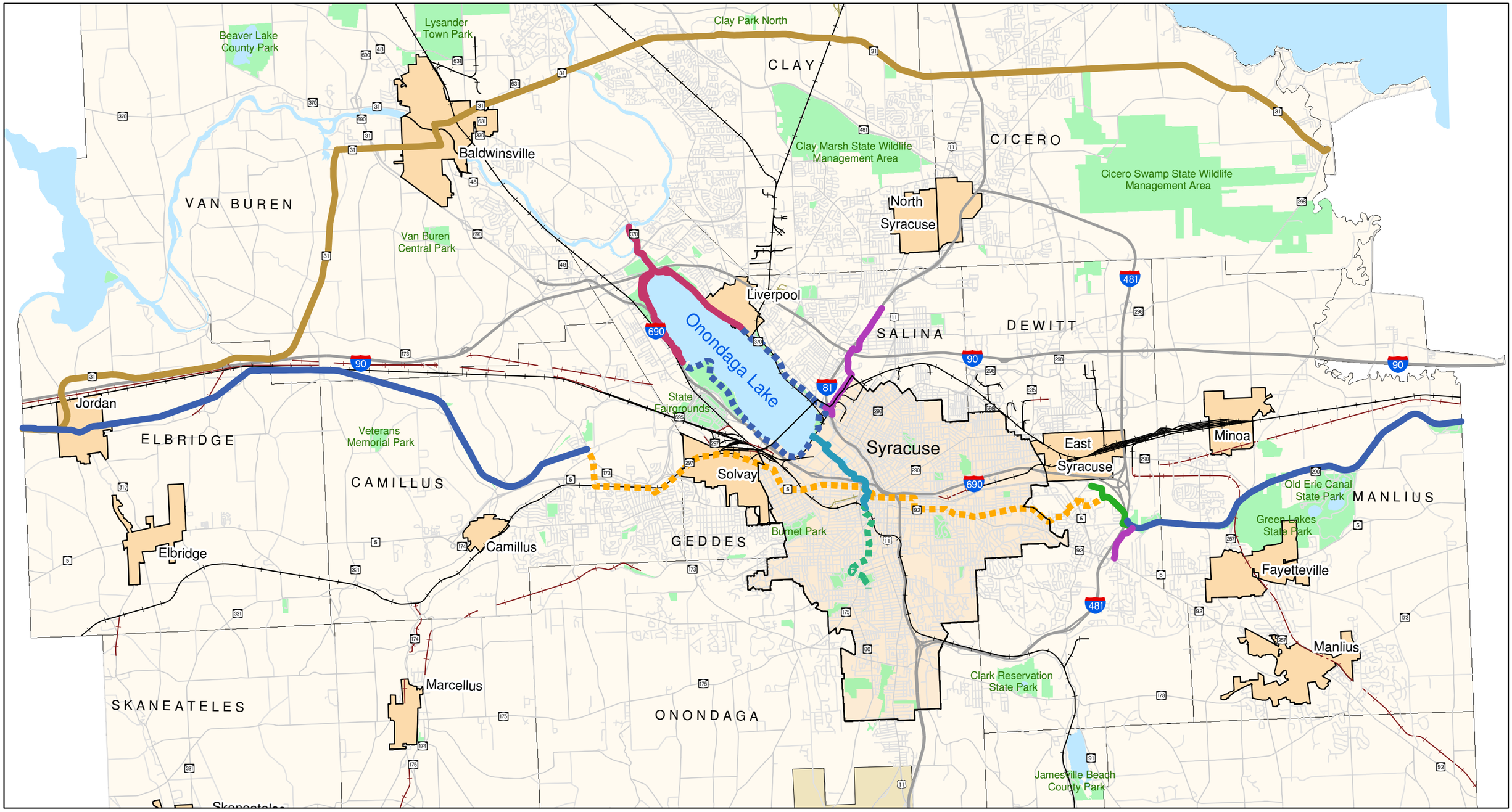
and Solvay. In 2002, the West Shore Trail was completed, representing another leg of the trail planned to encircle the entirety of Onondaga Lake. Two miles of paved, Class 1 trail on the West Shore of Onondaga Lake from the present trail end (at Nine Mile Creek) to the State Fair parking lots near I-690 Exit 7 will be constructed in the near future and are anticipated to be open for operation by 2012. The County continues to work with the U.S. Army Corps of Engineers on the design of a proposed trail opportunity along the eastern shoreline of the lake. The trail may be in the form of a causeway or boardwalk constructed well into the lake itself, creating a trail extension that avoids dangerous roadways and railroad corridors, and also providing for the creation of an expanded wetland habitat for plants and animals. The southwest shore trail segment continues to present obstacles due to environmental conditions, proximity of railroad facilities to the shoreline, and litigation over cleanup responsibilities. See Map 3-4 for the Onondaga Lake Trail, as well as other major existing and proposed trail routes in Onondaga County.

Syracuse Creekwalk – A short section of this bicycle and pedestrian trail has been in existence since the early 1990s, with the first completed portions opened in the Franklin Square and Inner Harbor in Syracuse's Lakefront Area. In 2010 and 2011, the City of Syracuse extended the trail north from the Inner Harbor to the mouth of Onondaga Lake and south from Franklin Square to Armory Square in Downtown. This has allowed the Creekwalk to become a continuous 2.2 mile trail with a nominal width of 13 feet, stretching from Onondaga Lake to Armory Square. Construction is scheduled to be completed by December 2011. Green infrastructure improvements were incorporated into the trail.

A feasibility study for the next section (Phase II) of the Creekwalk, from Armory Square south to Kirk Park, was completed in February 2008. Phase II has not yet received funding for design. Phase III, which is a concept only at this time, would extend the Creekwalk from Kirk Park to the southern border of the City at Dorwin Avenue.

- New York State Erie Canalway Trail – Portions of this planned 350+ mile trail have been completed within Onondaga County that link to the end-to-end statewide Erie Canalway Trail along the Erie Canal Corridor from Buffalo to Albany. This project is ongoing. The Syracuse segment of this trail is considered to be one of the most difficult gaps to complete, primarily due to the fact that the 15-mile segment that will connect Camillus in the west and DeWitt in the east, traverses land that is

Camillus Erie Canal Park - Nine Mile Creek Aqueduct Restoration Project (www.eriecanalcamillus.com/aqueduct.htm)



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0 1 2 4 Miles

Major Existing and Proposed Trail Routes

Onondaga County and the City of Syracuse

Long-Range Transportation Plan 2011 Update

Map 3-4

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Legend

Trails
- NYS Bike Route 5
- Existing Erie Canal Trail
- Existing Creekwalk
- Existing Onondaga Lake Trail
- Existing DeWitt Trail
- Existing Lay/Bear Creek Trail; Existing Wegman's Trail
- Proposed Creekwalk
- Proposed Onondaga Lake Trail
- Proposed-On Road Erie Canal Trail

Railroads

STATUS
- Abandoned; Track Removed
- Active
- Inactive
- Recreation Areas

the most urbanized along the entire state route.

The proposed off-road route exhibits widely differing characteristics and features, as it passes over some public streets, moderately maintained utility roads, seasonal access roads, multi-use trails, and a waste settling bed. In March 2006, the SMTC met with New York State Canal Corporation representatives to discuss alternatives for the routing of the Canalway Trail from Camillus to DeWitt. Because the proposed route may take years to implement due to running through various properties with various property owners, the Canal Corporation wanted to develop a route that could be utilized almost immediately. The Canal Corporation utilized city streets to bring the trail through the City of Syracuse. Although this on-road route is not presently signed, this route is used during the Cycling the Erie Canal Bike Tour held each July along the Erie Canal across New York State.

Through its 2011-2012 UPWP, the SMTC has recently begun work on the Erie Canalway Trail project on behalf of the City of Syracuse to re-establish a working group of interested agencies to continue discussions on how and where to located the Erie Canal Trail through the City of Syracuse. A series of working group meetings to discuss routing of the trail and a document plan for how to achieve implementation through the City of Syracuse are expected to take place over two program years.

In addition, the "Grand Celebration" for the opening of the only navigable, restored aqueduct in New York State on the Erie Canal was held in Camillus on May 22, 2010. The restoration of the Camillus aqueduct, built in 1844, marks a major milestone in the redevelopment of the Erie Canalway trail. Of the 32 original aqueducts on the First Enlargement, only about seven remain intact.

Connective Corridor – The Connective Corridor initiative was kicked-off by Syracuse University in an effort to create a symbolic and functional means of linking Syracuse University to the City of Syracuse. The project consists of developing a vibrant pathway with distinctive landscaping, lighting, and benches to accommodate and enhance pedestrian and bicycle traffic. A public shuttle bus route is currently offered along the corridor and anticipated road and parking improvements to reduce vehicle congestion and provide effective transportation options are planned. Other elements, such as informational kiosks and signage will be installed to assist travelers by providing important information regarding cultural venues, businesses and other destinations.

- F.O.C.U.S. CNY Pathways – During the past year, a group of citizens convened by F.O.C.U.S. Greater Syracuse created a "Citizens Strategic Action Plan" on "CNY Pathways: Connecting Healthy Communities". The plan is a work in progress and provides a road map for action that will continue to be refined by CNY residents. The Plan makes recommendations, identifies strategies for implementation and who to

contact. The study includes a vision, mission, challenges and strategies for improving the quality of life for the people who live in and visit CNY.

A key recommendation is for a dedicated web site with trail maps, bicycling paths, and urban walking trails to be made available to the general public. The F.O.C.U.S. Work Group asked the SMTC to consider hosting this web site, and the SMTC agreed. F.O.C.U.S. offered to convene the Work Group to share their expertise with the SMTC on building a web site. Many maps and other materials are already available at F.O.C.U.S. The SMTC recently purchased the domain name for the web site: **www.walkbikecny.org**.

Bicycle Facilities

Bicycle facilities within the MPA are primarily found within the City of Syracuse in the form of bike lanes, and in various towns in the form of shared roads and wide shoulders.

Through various SMTC studies, the SMTC has been made aware of bicycle issues that exist within the MPA. One of the most often relayed comments to the SMTC by the public is the lack of dedicated bicycle lanes and routes with appropriate signage within the MPA. In the last few years, the City of Syracuse has added bicycle lanes/facilities to the City's road network. The following bike lanes currently exist in the City of Syracuse:

STREET (Blocks)
Meadowbrook Drive (all)
Colvin Street (I-81 onramp to Nottingham Road)
Water Street (Beech Street to Almond Street)
Salina Street (Dorwin Avenue to Seneca Turnpike)
Comstock Avenue (Euclid Avenue to Colvin Street)
Euclid Avenue (Comstock Avenue to Meadowbrook Drive)
East Genesee Street (from east City line to Salt Springs Road)

Bike lanes provide a safe facility for bicyclists to utilize when traveling between common origins and destinations. The City of Syracuse continues to examine possible locations for implementing bicycle related facilities:

- University Hill Bike Network Project – In late 2007, the City of Syracuse requested the SMTC's assistance in developing a plan for a dedicated bicycle network in the heavily traveled and populated University Hill area (the Hill). The *University Hill Transportation Study* recommended the examination of a bicycle network for this area, and the city had created bike lanes and share-the-road corridors on streets leading to the Hill. The city was looking to extend these improvements onto

Existing Water Street bike lane

and throughout University Hill. The University Hill Bike Network Project is the result. The project established a plan for a bike network, including segregated lanes and traffic calming measures that blanketed University Hill. The network is designed to link to the community's greater bike lane and trail system (including the Onondaga Creekwalk and Erie Canalway Trail), improve bicyclist safety, elevate the priority of bicyclists over cars, and encourage alternative modes of transportation.

In addition, the University Hill Bike Network Project laid the groundwork for the expansion of this network into neighborhoods across the city. The project establishes a tool for evaluating city streets for inclusion in the bike network. Further, it offers a menu of treatments for the city to use during design and construction. The City of Syracuse is currently working on its *Bike Lane Plan,* an expansion of the University Hill Bike Network with ultimate plans for bike treatments to traverse the entire City of Syracuse.

Other on-going bicycle-related projects and programs within the MPA include:

Centro Bicycle Racks

- Centro Bicycle Racks – Beginning in 1997, the Central New York Regional Transportation Authority (CNYRTA or Centro) began retrofitting all of its Centro passenger buses with bicycle racks, in an effort to encourage increased Centro usage combined with bicycling. Today, the vast majority of Centro's fleet is equipped with bike racks attached to the front of their buses, and the SMTC has included an informational panel on its *Bicycle Suitability Map* to educate bicyclists in proper usage of the racks.


East Genesee Street Road Diet

- Road Diets – Another initiative underway at the time of the writing of this update includes the James Street Road Diet Project. "Road Diets" are becoming more common around the United States. Essentially, a road diet reduces and/or reconfigures lanes in an effort to incorporate bike lanes and instill traffic calming measures. The James Street Road Diet study is being conducted by the SMTC at the request of the City of Syracuse. The study will investigate the feasibility of reducing the number of travel lanes from two in each direction

down to one in each direction with a center turn lane. The purpose of the study is to calm traffic and increase the use and efficiency of corridor for all users including bicyclists, pedestrians, and transit riders. East Genesee Street within the City of Syracuse underwent a road diet between East Avenue and the eastern City line. The number of travel lanes was reduced from two in each direction to one in each direction with a center turn lane, and bicycle lanes were added. The City of Syracuse has implemented road diets in other locations (West Fayette Street and South Salina Street) and is currently reviewing the ability to adopt road diets in many other suitable corridors.

- Bicycle Suitability Maps – The 2011 bike suitability map is an updated version of the SMTC's 2003 Greater Syracuse Metropolitan Area Bike Map. Two maps were created; one larger fold out map similar to the original 2003 map, and a smaller weatherproof pocket-sized map primarily showing the City of Syracuse, as part of the SMTC's 2008-2010 Unified Planning Work Program Bicycle and Pedestrian Planning Task. Twenty-thousand (20,000) large maps were printed and 10,000 smaller weatherproof maps were printed and delivered to the SMTC in July 2011 for distribution to MPO-wide locations, including bike shops, libraries, malls, colleges and universities to name a few.

  The ratings (ranging from excellent to poor) on the bike suitability maps may be used as a guide for selecting routes to travel between different points. The streets have been color-coded to represent how suitable the conditions for bicycling are on a particular stretch of roadway for a typical commuter bicyclist. The Greater Syracuse Metropolitan Area Bike Maps were designed by SMTC staff, study advisory committee representatives of the SMTC's Policy and Planning Committees, and bicycle commuters with volunteer assistance from local bike clubs BikeCNY! and the Onondaga Cycling Club.

The SMTC has been working to improve bicycle facilities through the addition of amenities such as bike racks at key locations. The SMTC continues to disseminate copies of the Bicycle Suitability Map to the public. In addition, the SMTC also makes ample reference to its bicycle and pedestrian plan to ensure the adequate provision of bicycle facilities when it conducts its various studies.

Pedestrian Facilities

Pedestrian facilities within the MPA are primarily limited to sidewalks located in the City of Syracuse, and within villages in the SMTC planning area.

The SMTC is aware of several pedestrian issues such as poor sidewalk conditions, inadequate clearing and maintenance of sidewalks and non-compliance with the Americans with Disabilities Act (ADA) in some cases. The majority of pedestrian issues relayed to the SMTC consist of a lack of continuity in pedestrian facilities as well as safe places to walk.

Improvements continue to be made throughout the SMTC planning area. Such improvements include the upkeep of sidewalks and roads, the building of pedestrian facilities, and the continued inclusion of

pedestrian planning in all aspects of SMTC's work. As stated above, the SMTC has completed the comprehensive, policy-based Bicycle and Pedestrian Plan. This plan provides the SMTC with a policy tool that can be utilized by any entity in the MPA to further the cause of bicycle and pedestrian planning activities.

Sidewalk Maintenance

Each municipality in the MPO area has a set of ordinances, law, rules, and/or regulations that property owners must adhere to regarding sidewalk maintenance. It is the responsibility of the residents of Onondaga, Oswego, and Madison Counties to know such regulations in the municipality that they reside in. For example, City of Syracuse property owners are responsible for adhering to the following ordinance:

> "Steps, sidewalks and similar areas must be kept in good repair and maintenance to assure safe travel under normal use and weather conditions. The owner, occupant or agent of any property, with a sidewalk parallel to any public street shall clear and keep cleared any snow or ice which has accumulated on the surface. This clearing of the snow and ice shall be completed by 6:00pm on the day following the accumulation. In addition, no person shall shovel, sweep, throw, plow, or otherwise deposit snow or ice into the street, sidewalk, or park located within the City."[5]

City residents can report violations or obtain more information using the City's hotline at 448-CITY (448-2489). When a violation of the sidewalk ordinance is reported, City hotline employees will determine which department to forward the violation to (whether it is to the Department of Public Works, to Code Enforcement, etc.). That City department will then determine how to respond to the violation. Employees of the City's hotline track the number of phone calls and/or complaints by the City Department that the complaint pertains to, however, they do not track the number of phone calls received by specific complaint, such as the lack of snow removal from sidewalks.

This is just one example of a municipal ordinance relative to sidewalks. Ordinances in all other municipalities are similar in nature and have similar requirements.

ADA Compliance

The Americans with Disabilities Act (ADA), a wide-ranging civil rights law that prohibits discrimination based on disability, was signed into law on July 26, 1990. The ADA Act of 1990 "guarantees equal opportunity for individuals with disabilities in public accommodations, employment, transportation, State and local government services, and telecommunications."[6]

The ADA requires that new and altered public sidewalks and street crossings be accessible so that people with disabilities can use the pedestrian routes that connect buildings, facilities, and

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[5] *"Damaged/Snow Covered Sidewalks: Section 27-72D",* What Every City of Syracuse Resident Should Know…, *City of Syracuse Office of Community Services/Print Services, City of Syracuse, Spring 2001.*

[6] *United States Department of Justice,* Americans with Disabilities Act – Questions and Answers, *August 23, 2002,* < ***http://www.usdoj.gov/crt/ada/q&aeng02.htm***> *(February 2003).*

transportation modes. Title II of the ADA covers new sidewalks and streets constructed by or on behalf of a State or local government. Enforced by the Department of Justice (DOJ), Title II regulation specifically requires that curb ramps be provided when sidewalks or streets are newly constructed or altered. Curb ramps should be designed to minimize the grade, cross-slope, and changes in level experienced by users. The transition between the ramp and the street surface should be flush, as any height transition can create difficulties for individuals with disabilities.

The Legislation also addresses existing pedestrian facilities. Within the Legislation, the DOJ recognizes the unique and significant capital expenses involved in the installation of curb ramps where existing pedestrian routes cross curbs[7]. Instead of requiring immediate retrofit of facilities, the Legislation has allowed for a phased approach that takes fiscal restraints of communities into consideration.

Each Town and Village within the MPO should have its own schedule or implementation plan for replacing non-ADA compliant sidewalks and curb ramps.

3.2.6. TRANSIT FACILITIES

Centro operates the public transportation system in Onondaga, Oswego, Oneida and Cayuga Counties. Centro operates fixed-route public transit systems and demand-responsive paratransit service with a total fleet of 254 buses.

In 2005, Centro expanded their transit services into the Cities of Utica and Rome. Therefore, Centro's services now include locations outside of the jurisdiction of the SMTC and into the Herkimer-Oneida County Transportation Study area. Centro operates connecting routes between the cities of Syracuse, Oswego, Fulton and Auburn, as well as city transit services within each of these cities. Within Onondaga County, service frequencies in the rush hours are such that all Common Center bus stops are in continuous and heavy use. In the midday and evening periods and on weekends, up to 18 Centro routes converge simultaneously and "line-up" at Common Center every 35 minutes; four at each nearside corner of the intersection. Suburban routes operate with a seventy-minute level of service (headway) during these time periods.

The CNYRTA has committed to acquire low emission buses as part of the region's effort to comply with the provisions of the Clean Air Act. The majority of CNYRTA's fleet is powered by compressed natural gas. In addition, a limited number of hybrid-electric vehicles have been acquired. No further hybrid-electric vehicles will be purchased as their additional costs, in a severely constrained fiscal environment, has been found to exceed their minor environmental benefit. Where diesel fueled vehicles are employed, a bio-fuels mix is utilized. There are currently 121 compressed natural gas (CNG) buses in Centro's Onondaga County fleet. CNY Centro (the Onondaga County fleet) has a total fleet of 188 buses (25 of which are paratransit vehicles). Smaller,

[7] *Americans with Disabilities Act Home Page,* New or Proposed Regulations – Requirement for Curb Ramps, April 17, 2002, < ***http://www.ada.gov/newregs/curbrule.txt*** *>(February 2003).*

paratransit vehicles will continue to be diesel fueled and Centro will have clean diesel technology for these vehicles, as well.

Bicycle racks can be found on the front of most Centro buses and all future bus purchases will include bike racks and will be clean fuel-technology vehicles.

Centro's routing system in Onondaga County has undergone a series of changes since the economic decline that began in 2007 in response to dwindling State and local operating assistance. Despite significant service reductions since 2007 Centro has been able to retain its core market of urban and suburban riders. Moreover, Centro has proven adept at reacting to large spikes in ridership experienced during periods of high fuel prices. Despite a series of service reductions and fare increases, the Centro routing system continues to provide good service to suburban markets, as many "one-seat" rides as possible for significant origin and destination pairings.

The majority of Centro's routes meet at the central point of the regional hub-and-spoke system at the intersection of Fayette and Salina Streets in the City of Syracuse. It is at this Common Center that nearly two thirds (65%) of the Syracuse metropolitan region's bus riders transfer to other routes. Centro has undertaken a major capital investment that involves the development of a new Common Center located at the intersection of South Salina Street and Adams Street, the location of the former American Red Cross building. The new Common Center will consist of an enclosed seating area for passengers as well as a covered bus loading and unloading area where transfers may be made out of the general flow of traffic. The new Common Center project will be completed in winter 2011/2012.

Centro bus stops, bus shelters, park-and-ride and rideshare locations can be found throughout the MPO area (see Maps 3-5a and 3-5b). Fares to ride Centro vary by type and the multi-zone structure used by the transit authority. For example, a single ride cash fare in the City of Syracuse and zone 1 is $2.00. Senior citizens and persons with disabilities are charged $1.00. Riders have the option of purchasing multi-ride passes at a reduced discount. Centro bus service operates primarily between 5:00 am and 12:00 am, seven days a week. Children under the age of 6 that are accompanied by an adult are free. The fare for children between the age of six and nine is $1.00.

Centro also operates Call-A-Bus service to provide transportation options to the elderly and disabled who meet the criteria of the ADA. Call-A-Bus uses a fleet of 22 smaller transit vehicles to serve the geographic area and span the hours and days mandated by the ADA. Call-A-Bus service will travel up to three-quarters of a mile to either side of every Centro regular bus route. Fares to ride Call-A-Bus are $2.50 under six miles from destination and $3.00 six miles and over from destination within zone 1.

In 1998, the CNYRTA opened the William F. Walsh Regional Transportation Center in the City of Syracuse, located adjacent to Interstate Route 81, the Central New York Regional Market, Alliance Bank Stadium, and Carousel Center. For the first time in the Central New York community, this

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Transit Service (MPA)

Long-Range Transportation Plan 2011 Update

Map 3-5a

0 1 2 4 Miles

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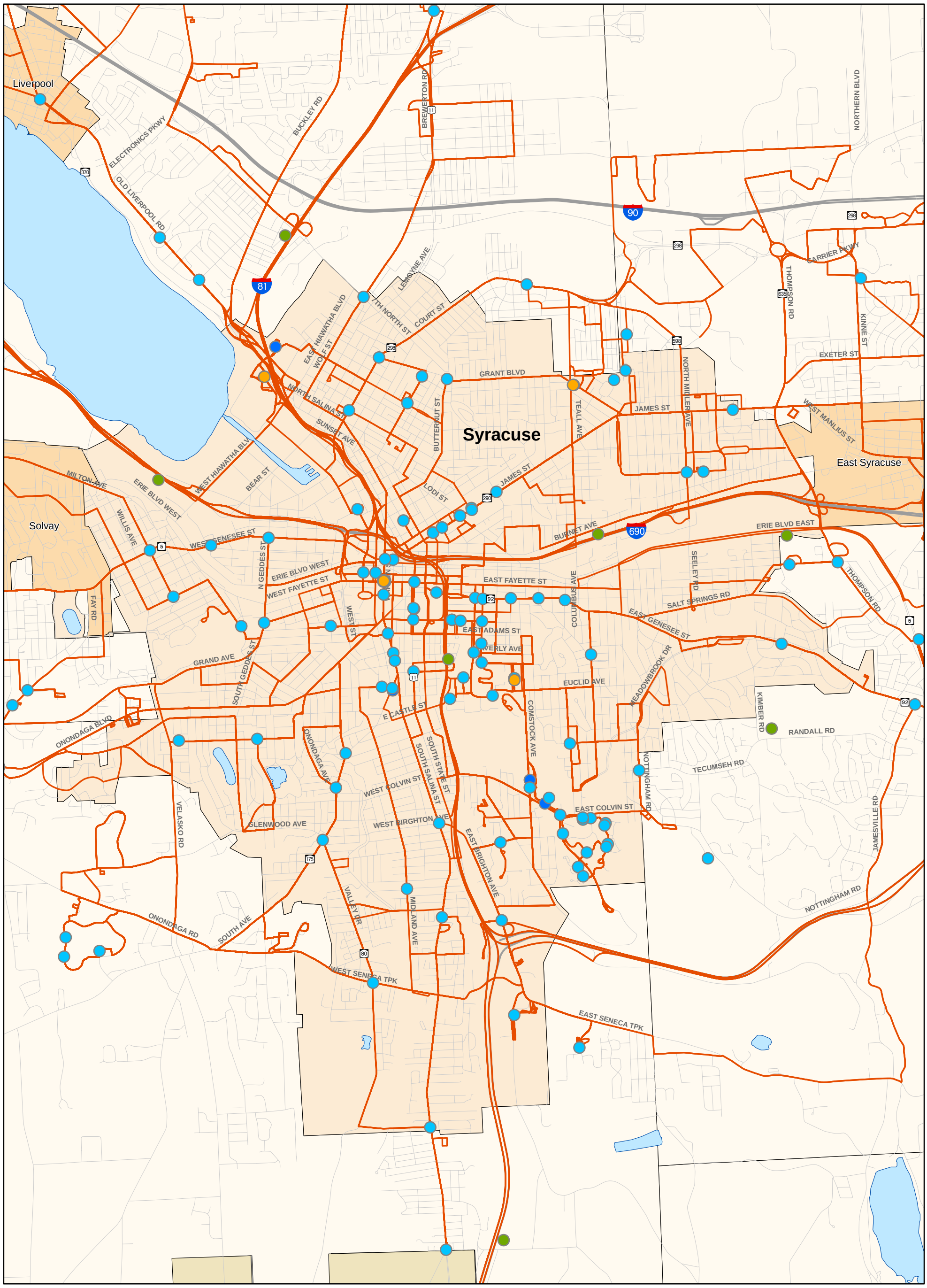
Legend

- Transit Hubs
- Bus Shelters
- Rideshare
- Park and Ride
- Centro Routes
- Interstates
- Roads
- Syracuse
- Village
- Town
- Onondaga Nation



Transit Service (City)

Long-Range Transportation Plan 2011 Update

Map 3-5b

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0 0.25 0.5 1 Miles

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Legend

- Transit Hubs
- Bus Shelters
- Rideshare
- Park and Ride
- Centro Routes
- Interstates
- Roads
- Syracuse
- Village
- Town
- Onondaga Nation

intermodal facility brings together intercity rail, intercity bus lines, local and regional buses and taxi service.

The CNYRTA subsequently restructured a number of its bus routes to maximize direct service to the William F. Walsh Regional Transportation Center from points throughout the region, furthering the ease of intermodal passenger travel. From the William F. Walsh Regional Transportation Center, travelers can access Greyhound and Trailways intercity coach service, shuttle bus service to Hancock International Airport, as well as Amtrak intercity passenger rail along the Empire Corridor and ground transportation services. The Empire Corridor serves all the major upstate New York cities such as Albany, Syracuse, Rochester and Buffalo as well as destinations along the Hudson Valley.

Centro will continue to pursue alternative service concepts. Studies that have been completed regarding transit initiatives (such as the Regional Mobility Action Plan [ReMap] and Job Access Reverse Commute [JARC]) recommended alternative transit options and services. Centro is currently in a period of declining operating revenues. In response, Centro has discontinued service over the past three consecutive years and has been forced to increase fares. The current funding environment precludes implementation of any new services for the foreseeable future. However, Centro is pursuing efforts to improve service on its existing routes. One example is its collaboration with Syracuse University on its Connective Corridor project. This project, if successful, will result in an improved computer aided dispatch system and automated vehicle locator system for Centro. Real-time "next bus" information will be available for customers as well as automated stop announcements on buses, electronic destination signs and other features intended to improve customer service.

3.2.7. AIR/WATER/RAIL FACILITIES

Air Facilities

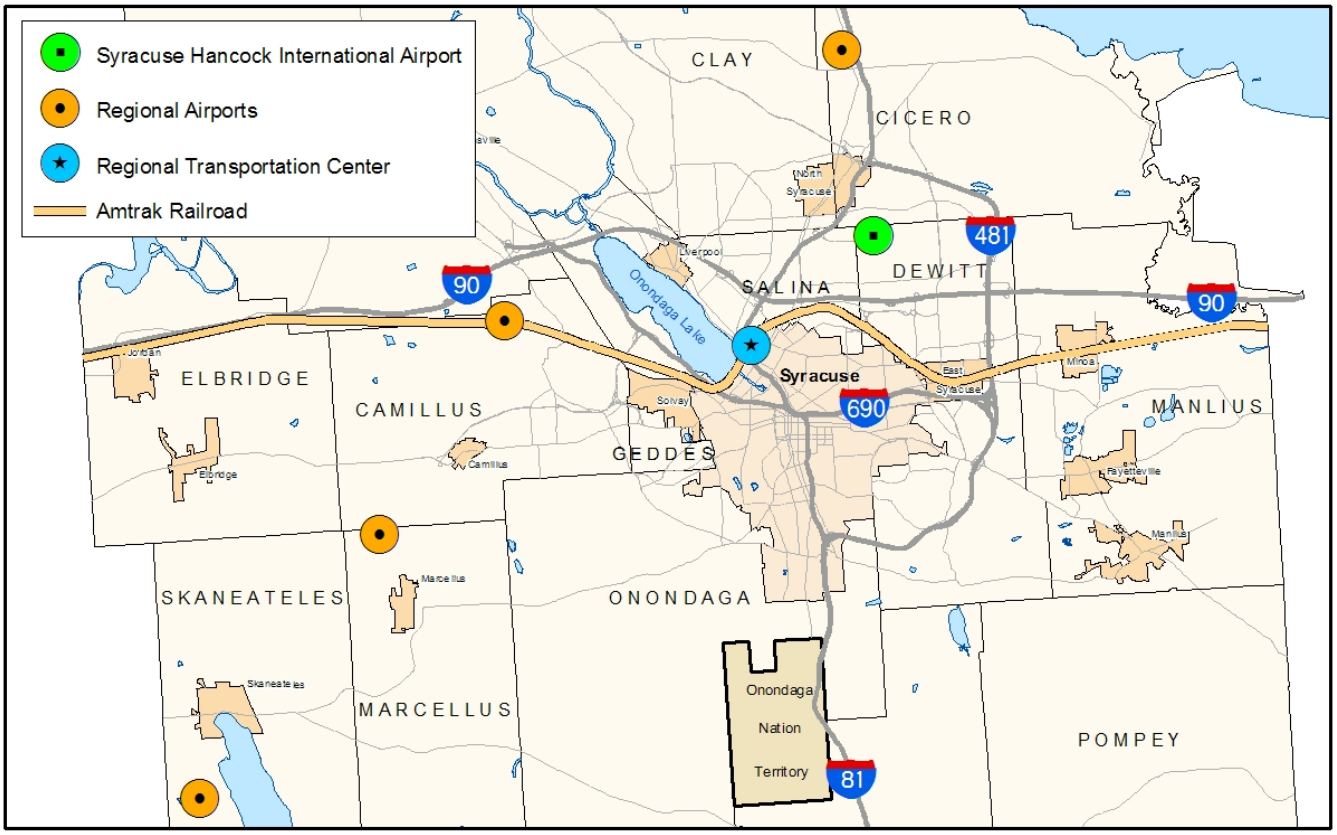
Hancock International Airport is the only airport providing commercial air passenger service in the SMTC area and the four-county Syracuse Metropolitan Statistical Area (MSA). Hancock International Airport is owned and operated by the City of Syracuse. In June 2011, the New York State Assembly approved legislation to create a regional airport authority for the Syracuse Hancock International Airport (the Federal Aviation Administration must approve the plan for the authority).

The airport facilities are modern with space available to expand to meet new opportunities. In addition to commercial passenger service, Hancock provides an extensive air cargo operation, including U.S. Customs inspection service, as well as general aviation services for private pilots and military operations. Syracuse Hancock International Airport has 27 passenger boarding gates and is served by the following carriers: Air Canada, American Eagle, Continental, Delta, JetBlue, United Express, and USAirways. Other airlines that operate at the Airport include Comair (a Delta affiliate), CommutAir (a Continental affiliate), Allegheny, Mesa, Trans States, Colgan Air, Piedmont, Chautauqua, and shuttle America (affiliates of USAirways). Details on enplanements are found in Chapter 4: Mobility.

Hancock Airport, its designate relievers and several other general aviation airports constitute the Central New York portion of the Federal Aviation Administration's *National Plan of Integrated Airport Systems*. The general aviation airports provide alternative sites for privately owned aircraft whose pilots prefer a smaller airport setting. General aviation airports are particularly important to air transportation because of their role in providing private business decision makers and representatives with access to a geographically disbursed array of airfield choices, closer access to destinations and use of private aircraft operating according to the private firm's schedule rather than an airline schedule. There are currently no air freight services available at general aviation airports within the SMTC area or the larger Syracuse MSA. Some of the general aviation airports in Central New York do have the capability in terms of land and runway capacity to provide these services, should a firm be interested in such an opportunity.

As illustrated in Map 3-6, the MPA also contains four local airports: Skaneateles Aerodrome, located in Skaneateles; Michaels Field, located in Cicero; Marcellus Airport, located in Marcellus; and Camillus Airport located in Camillus. All airports are privately owned and are open to the public, except for the Marcellus Airport which is not opened to the public. The number, condition, and type of runways vary by airport.

Map 3-6



Water Facilities

The New York State Canal Corporation is responsible for the overall operation, maintenance and rehabilitation of the 524-mile New York State Canal System. The statewide Canal System is made up of four canals: the Erie Canal, the Champlain Canal, the Oswego Canal and the Cayuga-Seneca Canal. In the Metropolitan Planning Area, the Canal System includes Oneida Lake, the Oneida River, Onondaga Lake, the Oswego River, the Seneca River and Cross Lake (see Map 3-7).

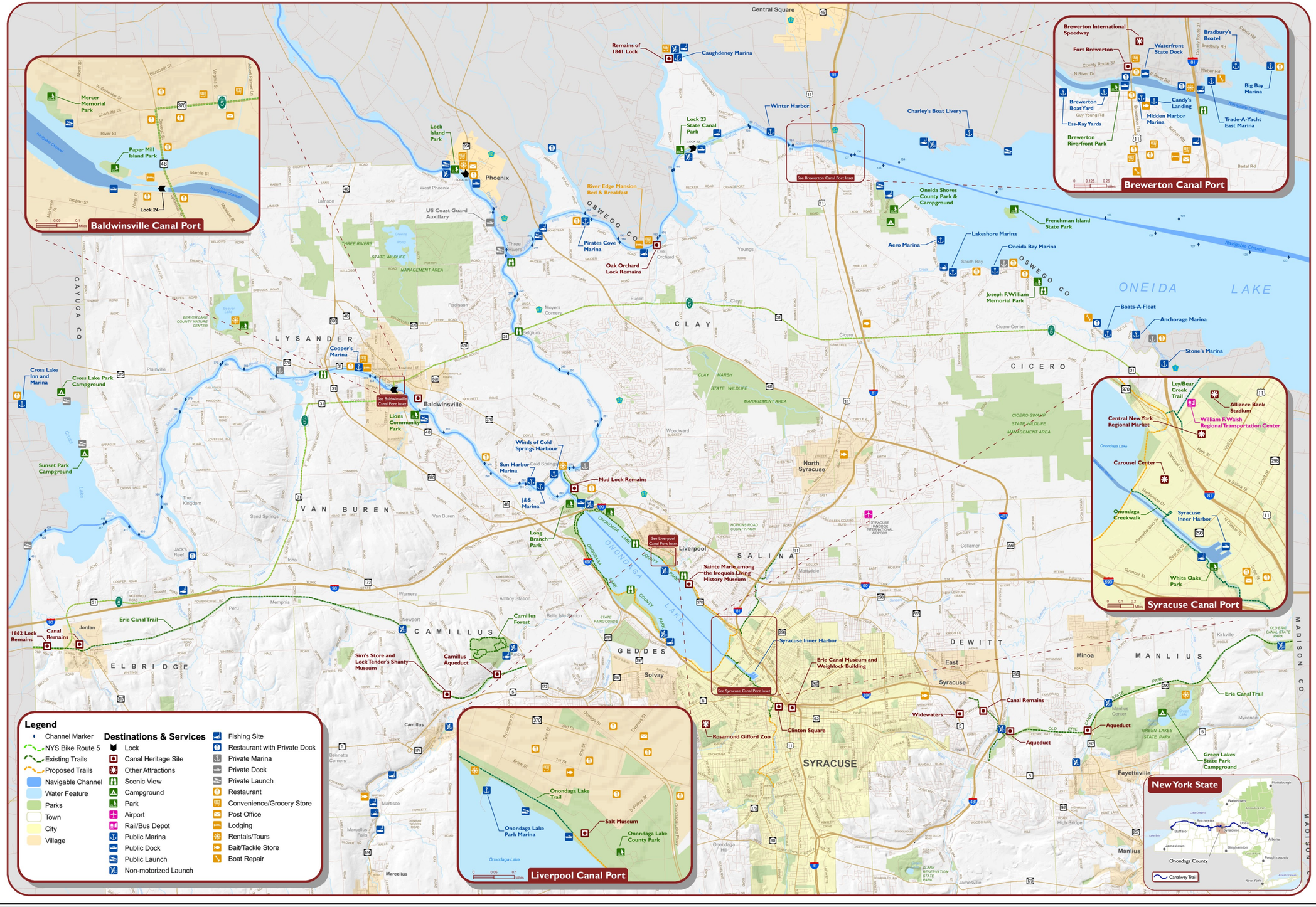
Individual towns, villages and the City of Syracuse are responsible for land use decisions adjacent to the water, in many cases using New York State's Local Waterfront Revitalization Program (LWRP) to plan for these areas. Municipalities also develop and maintain waterfront parks and frequently partner with the Canal Corporation to make improvements to these facilities. Additionally, Onondaga County and the New York State Department of Environmental Conservation (DEC) maintain several parks and public access points, including Onondaga Lake Park Marina and Oneida Shores Park (owned and maintained by the County) and numerous boat launches and fishing sites operated by the DEC.

The statewide Canal Recreationway Plan and the Central New York Canal Plan, both of which were prepared in the early 1990s, outline a program of planned improvements to address gaps in services along the system. The Canal Recreationway Plan includes recommendations for the preservation and restoration of historic sites with the overarching goal of creating an interconnected recreational trail along the Canal. The CNY Canal Plan, prepared by the Central New York Regional Planning and Development Board (CNYRPDB) identifies four Canal Ports in the MPA: Brewerton, Syracuse / Liverpool, Phoenix / Three Rivers and Baldwinsville. Canal Ports are areas with an existing supply of services and attractions accessible to boaters, such as marinas, restaurants and shops. The CNY Canal Plan recommends that "development along the canals should be focused in identified Canal Ports" in order to "preserve and enhance the natural environment and to stimulate economic activity in cities and villages along the Canal System"[8]. Grants from the Canal Corporation have primarily been targeted to these Canal Port communities.

Since 2006, the Canal Corporation has distributed over $8 million to local governments through its Greenway Grant Program. Projects completed in the MPA include:

- Improvements at Henley Park and North and Lock Islands funded by a $45,000 grant from the Erie Canal Greenway Grant Program. This project improved the North Island boat launch, developed a canoe/kayak launch at Henley Park, and included trail improvements and shoreline stabilization on Lock Island.

[8] *Central New York Canal Plan, Central New York Regional Planning & Development Board, 1993, p. 4-3.*



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SMTC

Greater Syracuse Area Canal Map

Long-Range Transportation Plan 2011 Update

Map 3-7

- The Village of Baldwinsville secured $47,880 in Greenway Grant Program funds to install water and power hookups to the dock on the seawall at Lock 24 on the South Shore West Trail.
- In Liverpool, a $225,000 grant was used to add docks and electrical hookups to Onondaga Lake Park Marina.
- In the Town of Camillus, a $225,000 grant funded the restoration of the historic Nine Mile Creek Aqueduct, which carries the Erie Canal over Nine Mile Creek.

Marketing

The SMTC's *Map of Waterway Destinations & Services in the Greater Syracuse Area* will be published in July 2011. This map and brochure is an update to the SMTC's "Public Canal Services and Facilities in Onondaga County", originally published in 2001. The Waterways map identifies the locations of access points and services, such as marinas and restaurants, on the Canal System, as well as on Skaneateles and Otisco Lakes. Additionally, this map provides information specific to non-motorized boating, such as canoe/kayak launch sites and suggestions for paddle trips on waterways in the county. This publication is intended to encourage both residents and visitors to explore the area's lakes, rivers, canals and creeks.

The Canal Corporation conducts an extensive and ongoing marketing campaign to increase awareness of the Canal System's potential for recreation. In 2011, the Canal Corporation, in partnership with Parks and Trails New York, the Environmental Facilities Corporation and numerous community groups, organized the sixth annual Canal Clean Sweep, a three-day clean up event.

Recognizing the many different forms of recreation available on or along the Canal, the Canal Corporation also hosts the annual "Canal Splash!" event: a coordinated series of locally organized events and activities, including nature and history walks, museum and gallery exhibits, rowing regattas, kayak and canoe outings, musical performances, boat tours and more.

The Canal Corporation, in conjunction with Parks and Trails New York and the Erie Canalway National Heritage Corridor, also sponsors an annual Cycling the Erie Canal Bike Tour, an eight day, 400-mile bike trek along the Canal from Buffalo to Albany. About 500 cyclists participated in this event in 2010.

The Canal Corporation encourages local efforts to promote tourism on the Canal System through a bi-annual Tourism Matching Grants Program. In 2010, the Canal Corporation made $30,000 available through this program, which offered grants of up to $2,500.

Planned Improvements

The Canal Corporation's 2005 – 2011 Capital Program calls for the following improvements in the MPA:

- Phoenix: Lock O-1 Southwest Approach Wall – Rehabilitation
- Lysander: Section 5 Office and Shop - Roof and Insulation Repairs
- Jordan to Port Byron: Canalway Trail
    - Completion Date: 10/30/2007
    - Construction Amount: $1,349,078.38.

Several communities in the MPA have undertaken efforts to improve their waterfront areas. The information presented here reflects what was publicly available at the time of writing. They include:

- Town of Clay – LWRP: currently awaiting approval from New York State, this plan proposes redevelopment at Three Rivers, remediation of former industrial sites along Maider Road and development of shoreline access points on land owned by the DEC near the Bayberry subdivision.
- Town of Cicero – Brewerton Revitalization Project: expansion of Riverfront Park in Brewerton.
- City of Syracuse – Inner Harbor Project / Onondaga Creekwalk: The City's long-term plan for the Inner Harbor includes redevelopment of existing historic structures as well as the addition of urban housing, office space and shops. Additionally, the extension of the Onondaga Creekwalk from Onondaga Lake to Armory Square will be complete by December 2011.
- Several municipalities within the MPA, including the Towns of Elbridge, Lysander, Van Buren, Geddes and Salina, Onondaga County and the Villages of Baldwinsville, Liverpool and Solvay are connected by the Seneca River Water Trail, a 46-mile long system of facilities oriented around non-motorized boats (kayaks and canoes) extending from Onondaga Lake to Mud Lock on Cayuga Lake. Proposed improvements include developing more publicly-owned access points to the Seneca River, particularly in the area between Baldwinsville and Cross Lake, expanding parking at access points and improving connections between water-based and land-based recreation.

Data and details on canal traffic can be found in Chapter 4: Mobility.

Rail Facilities - Passenger

There are approximately 285 miles of active rail lines within the MPA with 230 miles categorized as Class 1 lines[9], 31 miles classified as Class 2, 22 miles as Class 3 lines, and about a mile of terminal lines. These lengths include all sidings and railyard tracks and were calculated using GIS software. While this data is 10 years old, it represents the best data available.

According to the NYSDOT bridge inventory, there are approximately 35 railroad bridges (these bridges are not included in the 492 bridges inventoried in the SMTC bridge and pavement report).

[9] *Classifications essentially relate to revenue. Larger rail operators, like CSX are Class 1. They carry the most volume and highest service frequencies.*

Additionally, there are approximately 110 at-grade crossings within the MPA. Railroad stations, rail yards, and other rail facilities are inventoried and categorized by facility owner in the following sections.

Amtrak
Rail passenger service in the SMTC area is provided through the National Railroad Passenger Corporation (Amtrak), which provides intercity rail passenger service on three different routes (Lake Shore Limited, Empire Service, and Maple Leaf) in the Central New York region[10]. The passenger rail system in Onondaga County is shown in Map 3-6.

The William F. Walsh Regional Transportation Center (RTC) opened in 1998, and provides improved interconnectivity between bus and rail transportation modes, as well as a greater presence for Amtrak in the Syracuse Metropolitan Area. The RTC has an enclosed seating area, one boarding platform, a small food court area, and is home to bus services provided by Greyhound and Trailways.

Finger Lakes Railway
Primarily a freight railroad, the Finger Lakes Railway has offered passenger services along the Finger Lakes Railway since 2000 in the form of special excursions sponsored by local organizations[11]. In 2008, over 12,000 passengers boarded the train for a total of 62 days of excursions[12]. The railway can be boarded in a handful of locations within the SMTC MPA.

OnTrack
OnTrack was a regional rail line that operated pedestrian shuttles in Syracuse, New York from 1994 to 2007. Service has since been discontinued, but the infrastructure is still in place.

High Speed Rail (HSR)
A number of initiatives being considered have the potential for improving passenger rail service in Central New York. The State of New York is currently assessing the feasibility of high-speed rail service across Upstate. If this service is implemented, changes will be required in the configuration of the William F. Walsh Regional Transportation Center to accommodate high-speed trains and the resulting increase in the number of rail passengers. The New York State Empire Corridor connects all of New York's largest cities. The vision for the corridor is to increase speeds to 110mph and add daily round trips, with one of the largest investments being the construction of a third track between Albany and Buffalo.[13]

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[10] *Information referenced from the Centro Website : http://www.centro.org/Regional.aspx.*
[11] *Finger Lakes Railway, Passenger Services, http://www.fingerlakesscenicrailway.com/railroad.*
[12] *Finger Lakes Railway, Passenger Services, http://www.fingerlakesscenicrailway.com/railroad.*
[13] *The White House, Office of the Press Secretary, Fact Sheet: High Speed Intercity Passenger Rail Program: Northeast Region, January 28, 2010, http://www.whitehouse.gov/the-press-office/fact-sheet-high-speed-intercity-passenger-rail-program-northeast.*

Rail Facilities - Freight

In the Central New York region, there is one major (Class 1) carrier, CSX Transportation; one regional carrier, New York, Susquehanna & Western Railway; and one shortline railroad, Finger Lakes Railway.

CSX Transportation

Nationally, CSX operates on more than 21,000 miles of track in 23 states, and has access to 70 ports and nationwide transloading and distribution services[14]. In New York State, CSX operates nearly 1,300 miles of railroad, maintaining more than 1,750 public and private grade crossings in the state[15].

CSX operates the Chicago Main line that links Central New York with New York City, New England and the Midwest. The company also operates the Baldwinsville, Fulton, and St. Lawrence Subdivision lines to the north of Syracuse, with the St. Lawrence Subdivision being the gateway to Montreal and Canada. Another significant segment of CSX business is the rail/truck intermodal freight terminal located in the DeWitt rail yard. The DeWitt yard is a major intermodal facility serving the Northeast and is the only terminal of its type between New York City and Buffalo.

New York, Susquehanna & Western Railway (NYS&W) - The NYS&W is a regional railroad company operating on over 400 miles of track in New York, New Jersey, and Pennsylvania and is 286,000 pound gross weight capable on all lines[16]. In the Central New York Region, the railroad operates two lines: the Syracuse to Binghamton, and the Utica to Binghamton. In Syracuse, the NYS&W interchanges with CSX and in Binghamton with the Norfolk Southern Railway and the Canadian Pacific Railway. The Utica traffic is interchanged at Syracuse via Binghamton. The NYS&W has expanded its traffic base in Cortland County and in the Southern Tier. Much of the traffic base is in New Jersey on the railroad's southern branches. The NYS&W serves the Ainsley Superior Warehouse, a 175,000 square foot warehouse/distribution facility located on East Brighton Avenue in Syracuse[17]. Because of its location, the warehouse facility offers easy access to I-81, I-481 and the NYS Thruway.

Finger Lakes Railway - The Finger Lakes Railway, a privately owned Class III railroad, operates the shortline between Solvay and Geneva, and has produced significant results since taking ownership of the former Conrail Geneva Cluster (including the Auburn Branch)[18]. The Finger Lakes Railway has been able to stop the decline of rail traffic in its service area. The Finger Lakes Railway customers see benefits due to the interchange rights with two Class 1 railroads (CSX and Norfolk Southern [NS]) instead of one. Interchange with CSX occurs in Solvay and Lyons, while interchange with the NS occurs in Geneva.

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[14] *Information from the CSX website: http://www.csx.com/.*

[15] *CSX New York State Fact Sheet, March 18, 2010, http://www.csx.com/index.cfm/about-csx/company-overview/state-fact-sheets.*

[16] *New York Susquehanna & Western Railway, www.nysw.com.*

[17] *New York Susquehanna & Western Railway, Syracuse NY, Ainsley Superior Warehouse, www.nysw.com.*

[18] *Finger Lakes Railway, Freight Service, http://www.fglkrail.com/freight.*

Freight data and details can be found in Chapter 4: Mobility.

3.2.8. ASSET MANAGEMENT

As defined by the Federal Highway Administration (FHWA), asset management is a *"systematic process of maintaining, upgrading, and operating physical assets cost effectively. It combines engineering principles with sound business practices and economic theory, and it provides tools to facilitate a more organized, logical approach to decision-making. In the broadest sense, transportation asset management is a strategic approach to managing physical transportation infrastructure. Key functions of a transportation agency's resource allocation and utilization include: policy development, planning and programming, program delivery, operations, and use of information and analytic tools."*

Congestion Management Process

One tool that the member agencies have to assist them in addressing asset management is the SMTC's Congestion Management Process (CMP). The CMP is a process for managing congestion that provides information on the performance of the existing transportation system. The CMP is currently designed to identify and monitor congestion at selected locations throughout the MPO area and is required by federal legislation. This process aids in identifying those locations that may require various improvements to relieve congestion. As of the passing of the SAFETEA-LU legislation in August 2005, Congress removed the requirement for "congestion management system that provides for effective management" and replaced it with a requirement for a "congestion management process (CMP) that provides for effective management and operation".[1]

Prior to the passing of SAFETEA-LU, previous versions of the SMTC's CMP are known as Congestion Management Systems (CMS).

The SMTC's 2004-2005 CMS analyzed approximately 200 road segments and 30 intersections throughout the SMTC region. The locations were chosen by the CMS Study Advisory Committee (SAC). For the existing CMS report, new traffic counts are collected every year for one third of all the locations, as the NYSDOT conducts these counts for the SMTC and this schedule corresponds with their traffic counting program.

Through the CMS, the SMTC offers assistance to its member agencies to establish strategies for addressing congestion at the identified locations. These strategies could be included in various municipal capital programs, the SMTC's TIP or the UPWP. The limited amount of capital resources and the need to maintain the existing infrastructure are major factors to consider when programming projects to relieve congestion.

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[1] *Interim Guidance for Implementing Key SAFETEA-LU Provisions on Planning, Environment, and Air Quality for Joint FHWA/FTA Authorities, September 2, 2005, http://www.fhwa.dot.gov/hep/igslpja.htm (February 1, 2007).*

During the writing of the 2004-2005 CMS report, the SAC agreed that the CMS should be improved so that it functions as a more useful tool for the SMTC and its member agencies. The SMTC also noted that other New York State Metropolitan Planning Organizations (NYSMPOs) were looking to improve upon their CMS reports as well.

To that end, in the fall of 2005, the SMTC hosted a collaborative effort with all of the NYSMPOs to work with a consultant to complete an examination of CMSs/CMPs. For the smaller and medium-sized MPOs, such as the SMTC, the CMS/CMP had not developed a close fit with existing planning practices. Where congestion is a marginal or absent issue, the CMS/CMP appeared to offer limited benefits while consuming staff and member agency time and resources. In addition, a lack of federal guidance on this subject furthered the burden of satisfying the CMS/CMP requirement. Because the NYSMPOs and their member agencies were interested in making the CMS/CMP requirement more useful as a planning tool, the NYSMPOs determined that undertaking a Shared Cost Initiative (SCI) relative to CMS/CMP best practices and products would be beneficial. The purpose of the SCI was to seek out examples from around the country of innovative approaches to satisfying the CMS/CMP requirement in which auxiliary benefits of the tasks and products associated with the CMS/CMP could be capitalized on. This study was contracted, administered, and managed by the SMTC but served the interests of all the NYSMPOs. This effort resulted in the writing of the *Congestion Management Process (CMP) Innovation: A Menu of Options*, which was completed on February 24, 2006.

This Menu provides information on innovative approaches to CMP activities that are relevant for complying with Federal requirements and for increasing the value of CMP activities within the transportation planning process, including support for regional transportation goals that go beyond addressing congestion.

In April 2007, the SMTC and the CMP SAC developed a new approach to the CMP. All of the count information gathered through the CMS/CMP processes would be incorporated into the SMTC's update of its travel demand model. As the model becomes more complete, the SMTC will work towards a model-based CMP to more accurately and completely identify and/or analyze congested locations. Through the completion of the model-based CMP, the SMTC anticipates that the CMP will become a better product and that it will be utilized more by SMTC member agencies.

A few representative samples regarding asset management for SMTC member agencies are included below.

- The SMTC completes a Bridge and Pavement Condition Management System (BPCMS) annually and a CMP as necessary, both of which support the principals and practices of asset management. In addition, the NYSDOT, partnering with the SMTC, completed an Intelligent Transportation System Strategic Plan for Onondaga County. All of these reports are being utilized by member agencies as tools in an effort to address asset management. Detailed below is a description of the role that the CMP report plays in the SMTC's work program.

- The City uses the SMTC CMP and BPCMS when developing their Capital Improvement Program. The City develops, ranks, and schedules the capital improvement projects based on these system reports and funding availability. Also, in order to produce the most cost effective project, the City looks at the project area as a whole and incorporates needed improvements. For example, on a bridge deck replacement, they look at sidewalk improvements adjacent to the bridge and pavement improvements and incorporate the improvements into the project based on budget availability. Similarly, on the interconnect projects on the TIP, any warranted intersection improvements will be incorporated into the design of the project.

- Another use for the CMP report is allowing Centro to incorporate congestion data to fine-tune bus system running times to adjust service as necessary.

- Additionally, NYSDOT uses the SMTC's BPCMS to determine road pavement and bridge repair priorities.

- The OCDOT uses the CMP and BPCMS to develop their Long Range transportation improvement program. In addition, the CMP and BPCMS are used in the development of the SMTC TIP. Information gathered by SMTC during these operations aides Onondaga County in resolving citizen requests for such services as new traffic signals, paving operations and bridge replacements.

Traffic Count Program

The SMTC's Traffic Count Monitoring Program provides traffic counts for studies conducted by the SMTC and its member agencies. This includes both conducting manual counts of vehicles' turning movements at intersections and using automatic traffic recorders (ATR or 'tube' counters) to determine the average annual daily traffic on a segment of roadway. Counts are collected by the SMTC staff (turning movement counts only) and by consultants with an expertise in traffic data collection (both turning movement counts and ATR counts). In 2010, 56 peak-period turning movement counts were collected: 27 by a consulting firm and 29 by SMTC staff. An additional 14 ATR counts were collected by our consultant. These counts contributed to a number of SMTC's other activities, including Travel Demand Modeling, Air Quality Conformity and Signal Optimization. Counts are also conducted at the request of member agencies such as the OCDOT and the City of Syracuse Department of Public Works.

In addition to collecting data, the SMTC utilizes databases and GIS mapping to track and store traffic data received from member agencies.

Bridge and Pavement Report

The SMTC Bridge and Pavement Condition Management System Report (discussed in greater detail above) is updated annually. At the time of this writing, the SMTC completed and referenced its

2010 report. A bridge management system is a method for tracking and addressing bridge conditions. Similarly, a pavement management system is a systematic method of tracking and addressing pavement conditions. A bridge management system exists for New York State, individual pavement management systems currently exist in the City of Syracuse (City), Onondaga County (County), and New York State. The goal of the SMTC report is to combine all of the data from the various jurisdictions into one management system that is linked into a Geographical Information System (GIS). By combining all of the condition ratings into a GIS format, data can be mapped, analyzed, presented and accessed in an efficient manner.

3.3 PLANNING EFFORTS

3.3.1. THE I-81 CHALLENGE

I-81 was built in Onondaga County during the 1950s and 1960s. Now that the road is almost 50 years old, portions are nearing the end of their lifespan. This is particularly true of the 1.4 mile elevated section of I-81 in downtown Syracuse, known as the viaduct. Over the next decade, these portions of the road will need to be replaced, reconstructed, removed, or otherwise changed. The official decision-making process designed to find a solution for the future of I-81 is called *The I-81 Challenge.*

The I-81 Challenge is being led by two entities, the SMTC and the NYSDOT, and is composed of three separate but integrated efforts:

1. *The I-81 Corridor Study* – The Corridor Study, being led by NYSDOT, includes a review of the highway's existing conditions, identification of existing and future issues, and an analysis of potential options (including those suggested by the public) for the future of the corridor.

2. *The I-81 Public Participation Program* – The I-81 public involvement effort, being led by the SMTC, is designed to give residents of the City of Syracuse and Onondaga County a place to learn about I-81 and voice their ideas about future options.

3. *Travel Demand Modeling Effort* – The I-81 travel demand modeling, being led by the STMC, is a technical project in which the SMTC will use computer simulation to see how future options affect the transportation network.

Over the next several years, *The I-81 Challenge* will advance the community discussion that has already started about the future of I-81. Information about the existing conditions of the highway and the regional transportation system has been collected. This information has been shared with the public, and the NYSDOT and the SMTC have involved the public in developing a set of values, goals, and ideas for the future of I-81. All of this information will be used to generate a wide range of options for the future of the highway and a set of criteria for evaluating them. The broad range of options will be narrowed down to a small number of viable alternatives through a combination of technical analysis and continued public involvement. Later, the viable alternatives will be refined and

analyzed in further detail and a formal environmental review process, including official hearings, will begin. That process will ultimately lead to a decision, and to a project or projects that can be implemented.

3.3.2. MEMBER AGENCY ACTION PLANS RELATED TO FACILITIES

The SMTC and its member agencies continue to work towards the achievement of the LRTP's facility goals and objectives. As such, the following action plans have either been implemented or are being implemented by member agencies:

Action Plans Implemented:

1. On-going pedestrian-related projects and programs within the MPA include several projects:

    - Almond Street Corridor Pedestrian Study – The SMTC completed this project on behalf of the City of Syracuse in an effort to examine potential pedestrian improvements along this corridor. It is anticipated that the institutions in the University Hill area will continue to expand in physical size and number of employees. As a result, the frequency and magnitude of pedestrians crossing Almond Street between East Genesee Street and Adams Street (under I-81) will also increase. At the same time, the Almond Street serves as a gateway to the City of Syracuse. As a result, there is a strong desire to improve the pedestrian infrastructure along Almond Street from Adams Street to East Genesee Street.

      Three different potential design scenarios were developed for the Almond Street corridor, each of them emphasizing either safety, mobility, or streetscape. The design scenarios were also designed to build upon each other and be implemented at different timeframes. A fourth scenario was developed that is a combination of the three scenarios. Details on the scenarios, as well as the final document can be found on the SMTC web site at **www.smtcmpo.org**.

    - East Genesee Street Sidewalk Study – the SMTC has agreed to complete the East Genesee Street Sidewalk Study on behalf of the City of Syracuse. This project examines the feasibility and necessity of installing sidewalks along East Genesee Street from East Avenue toward the eastern City line, and along Meadowbrook Drive between Hurlburt Road and Kimber Road in the City of Syracuse. The project will also establish gross order of magnitude cost estimates of said facilities. This project is slated for completion in July/August 2011.

    - Route 257/F-M Road Pedestrian Accommodation Study – The purpose of this project was to determine the feasibility of installing a pedestrian facility or accommodation along Fayetteville-Manlius Road/Route 257 between the Villages of Fayetteville and Manlius. The project also established cost estimates

of said facilities and gauged the local public sentiment on its appropriateness for this corridor. The study area for this project ran along Fayetteville-Manlius Road (Route 257) between the Village line of Fayetteville in the north, and the Village line of Manlius in the south.

The seven alternatives were developed that included:

- *Alternative 0:* No new installation of pedestrian facilities. Keep current conditions.
- *Alternative 1*: Sidewalks on both sides of the road along entire length of study area.
- *Alternative 2A*: Sidewalk on the west side of the road along entire length of study area with increased shoulder space on the east side.
- *Alternative 2B*: Sidewalk on the east side of the road along entire length of study area with increased shoulder space on the west side.
- *Alternative 3*: Shared use path on both or one side of Route 257 along entire length of corridor.
- *Alternative 4*: Stone dust path on both or one side of Route 257 along entire length of corridor.
- *Alternative 5*: Increased shoulder space on both sides of Route 257.

Of the seven alternatives identified, three were recommended to the Town of Manlius for further consideration (1, 2A, and 4 both sides/west side). Although all alternatives are feasible and should remain considerations, a sidewalk on the west side of the roadway (Alternative 2A) represents the preferred recommendation. There is ample space to support the walkway, it provides a necessary transportation option for area residents, and it would be less expensive and have less of an impact on existing objects than a sidewalk on the east side. Also, increased shoulder width on the side opposite the sidewalk is *not* recommended. More details on this project can be found on the SMTC web site at **www.smtcmpo.org**.

2. The city entered into a contract with C&S Companies to begin design of Passenger Terminal Security and Access Improvement Project in March 2009. C&S completed a schematic design study and initiated environmental approvals for the project. The project will take approximately one year to design and two years to construct, with completion estimated for the summer of 2012.

3. The NYSDOT has implemented the Pavement and Bridge Management Systems.

4. The NYSDOT Headquarters (Albany, NY) has recently completed a GIS platform that incorporates all public grade crossings. Additionally, private grade crossings are put in NYSDOT's GIS database as there locations are identified by NYSDOT Regions and transmitted to the Main Office.

5. Facilities projects completed by NYSDOT within the MPA since the 2007 LRTP Update include:
   - The Route 173 & 175 Reconstruction Onondaga Hill project was a $10+ million project completed in January of 2007 which reconstructed Route 173 from East of Onondaga Community College to Broad Road and Route 175 from City View Terrace to the City of Syracuse line.
   - Completed in January 2007, the I-81 over Route 173 Bridge replacement project was a $5.7 million project that replaced the northbound I-81 bridge over Route 173 and rehabilitated the southbound I-81 bridge.
   - This $1.3 million project rehabilitated 3 bridges: 1) Route 370 over the railroad near Baldwinsville, 2) I-690 over Hiawatha Boulevard, and 3) I-690 westbound off ramp to VanVleck Road over the railroad. I-690. The project was completed in August 2007.
   - The Route 5 & Route 695 Resurfacing Project was a $4.8 million project completed in May 2007 that resurfaced Route 695 from Route 5 to Route 695 and Route 5 (Camillus bypass) from Route 695 to West Genesee Street. Also included was minor drainage repair.
   - The Route 11 & Route 49 MBC Village of Central Square project was a $1 million project that included minor drainage repair and roadside appurtenance work in addition to resurfacing the intersection. The project was completed in November 2007.
   - A $0.700 million Bridge Rehabilitation project on 3 bridges included: 1) I-690 over Geddes Street, 2) I-481 northbound over Jamesville Road, and 3) I-481 southbound over Jamesville Road. The project was completed in November 2007.
   - A $20+ million project was completed December 2008 that replaced the eastbound and westbound bridges over the CSX mainline just east of the New York State Fairgrounds. Also included were profile improvements to I-690.
   - I-81 from the Park Street viaduct to Route 11 in Mattydale was resurfaced in July 2008 for $5.3 million.
   - I-690 from Hiawatha Boulevard to the Beech Street Viaduct was resurfaced in December 2008 for $7.8 million.
   - Rehabilitation of 34 bridges in Downtown Syracuse was completed in December 2008. This $24+ million project included substructure rehabilitation work to piers and columns on bridges on I-81 & I-690.
   - In May 2008, the NYSDOT completed a $2.6 million project that reconstructed Route 80 in the Village of Tully. The limits for Route 11 were from Lake Road to Route 281, and for Route 80 from Route 11 to the West Village Line.
   - The Routes 290 & 635 over CSX Bridge Rehabilitation project was completed in July 2008 for $1.5 million. The project rehabilitated the bridge locally referred to as the

intersection of James Street and Thompson Road near the Town of Dewitt/City of Syracuse line.

- A $15 million project reconstructed Route 370 from the Cayuga County Line to NY 690, just west of the Village of Baldwinsville. Also included were changes to the horizontal and vertical alignment of the highway. This project was completed December 2008.
- Route 174 in Marcellus, from the central business district to the northern village line, was reconstructed in December 2008 and included bridge deck replacement, new sidewalks, improved drainage, and guiderail installation for $4.9 million.
- Completed in April 2009, a $1.35 million project combined paving operations on NY 290 in the Village of East Syracuse, paving on Route 930W (Genesee Street) in Camillus, and sight distance improvements on Route 11 at Circle Drive.
- The bridge deck on the Route 370 bridge over I-90 was replaced for $3.1 million in March 2010.
- A project that replaced the Bartell Road bridge over I-81 in Brewerton was completed in March 2010. This $6.7 million project included measures to reduce the skew angle of the I-81 northbound exit ramp for traffic turning right onto Bartell Road. Replacement of the bridge increased safety and capacity.
- A $16.75 million project replaced or rehabilitated the Butternut Street, Spencer Street, and Court Street bridges over I-81 in the City of Syracuse. The project was completed in March 2010.
- The Fineview Place bridge over Renwick Avenue in the City of Syracuse was rehabilitated for $1.2m in November 2008.
- The Dorwin Avenue bridge over Onondaga Creek in the City of Syracuse was rehabilitated in December 2010 for $1.85 million.
- A $3.687 million project replaced the Jamesville Road bridge over Butternut Creek in the Town of DeWitt in July 2008.
- The Plainville Road Bridge over the Seneca River in the Town of Lysander was replaced in December 2008 for $1.637 million.
- A $2.256 million project rehabilitated the Warners Road (Route 173) bridge over the Fingerlakes Railroad near the intersection of Milton Avenue in the Town of Camillus in April 2010.

6. The CNYRTA recently completed a Park-and-Ride Study to determine the potential benefits, costs and feasibility of implementing a new system of park-and-ride lots in suburban Syracuse transit corridors.

7. The CNYRTA has fulfilled its policy to have all transportation facilities comply with the ADA.

8. Centro has secured capital funding to construct a stand-alone transit hub facility where bus operations can be conducted off-street and out of general traffic patterns. The facility will offer a convenient, safe, weather-protected environment for patrons to make transit connections. Centro anticipates opening the new facility in winter 2011/2012.

9. In 2009 CNYRTA completed an expansion of its garage and administrative headquarters in the City of Syracuse. The expansion allows the Authority to house an additional 60 to 70 buses in a weather-protected, enclosed facility.

10. The OCDOT annually dedicates funds, Local and Federal, to the community's bridge program in order to maintain a state of good repair.

11. The OCDOT annually dedicates local funds toward a Pavement Management System. The system allows OCDOT to maintain the highway system in the most cost-effective way. The system is used to prioritize the County's highways to best use the annually dedicated funds, Local and Federal, in paving operations of both primary and secondary highways.

12. Onondaga County annually dedicates local funds toward a Bicycle and Pedestrian System and encourages construction of new facilities to enhance the community as well as to improve mobility and air quality through non-motorized transportation means. For example, OCDOT continues to work on completing the planned bicycle/pedestrian trail around Onondaga Lake.

13. The City of Syracuse has implemented the following community facilities action plans:
    - City Owned Sidewalk Improvements – The City requires that all repair/retrofit of existing pedestrian facilities comply with the provisions of the ADA. The City has also programmed $350,000/year for City owned sidewalk improvements that includes corners in their capital plan. This sidewalk program will include pedestrian improvements and all sidewalks constructed will meet current ADA standards.
    - City Street Reconstruction Program – The City increased its Street Reconstruction Program to $5.5 million/year starting in the City's 2002/03 fiscal year in order to stabilize pavement conditions.
    - The City does consider multimodal needs during all capital improvements where warranted and where right-of-way is available. The City continues to add bike lanes to city streets.
    - The City of Syracuse has implemented road diets in several locations (West Fayette Street, South Salina Street, East Genesee Street) and is currently reviewing the ability to adopt road diets in many other suitable corridors. In

addition, the SMTC is currently working a UPWP project to evaluated James Street for a potential road diet.

- The City annually dedicates funds (Local and Federal) to the community's bridge program in order to improve/maintain the City's bridge ratings. Between 2004 and 2010 the City has completed the following rehabilitation or replacement bridge projects: Walton Street, Temple Street, Fineview over Renwick and Route 173 (Seneca Turnpike). The City is starting design on Midland Avenue, Dickerson Street and West Washington Street bridges over Onondaga Creek and currently initiating design on two other bridge rehabilitation/replacement projects.

- The City is currently constructing the Creekwalk Phase I project which will be complete late summer 2011 connecting the downtown/Armory Square area to Onondaga Lake. This facility will be fully handicapped accessible.

- The City completed a Creekwalk Phase II Feasibility Study which encompasses evaluating the most feasible location of a Creekwalk between Armory Square and Kirk Park.

- The City completed street improvement projects along the 800 and 900 blocks of North Salina Street completing the Little Italy area and is starting the design of street improvements to Hiawatha Boulevard between State Fair Boulevard and Park Street (excluding the area between the Onondaga Creek and I-81 bridges). The City is initiating streetscape design for the South Salina-Valley Plaza Corridor, and the Seneca Turnpike Corridor Improvement - Phase I, Hopper Road to South Salina Street projects. All of these improvements are focused on improving the pedestrian facilities.

- The City completed pedestrian facility improvements on Butternut Street from Park Street to Lodi Street, and on James Street from Hickok Avenue to Collingwood Avenue. All work included new sidewalks, a paver section from curb to sidewalk, new and reset curbing, trees, and handicap ramp corners.

- The City is in design for the East Genesee Street Connective Corridor Project. Phase I will be in construction in 2011 and be completed in 2012 – this section covers University Avenue from Waverly Avenue to East Genesee Street and East Genesee Street from University Avenue to Forman Place. This is a unique streetscape project incorporating a dedicated bicycle lane, pedestrian facilities, green infrastructure and street furnishings and markings. The aim of this project is to create a safe ADA compliant connective pedestrian corridor and transit corridor between downtown and Syracuse University.

4 MOBILITY

4.1 GOAL

To improve the mobility options for people within the Syracuse Metropolitan Planning Area (MPA).

4.1.1 OBJECTIVES

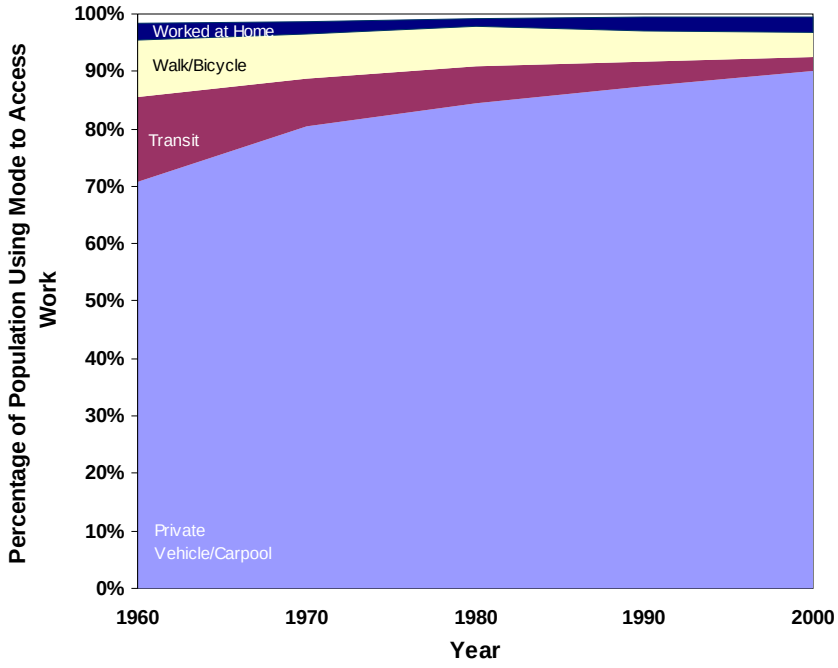
- To provide efficient, effective, fixed-route or demand-responsive transit service to areas with urban population densities (approximately 1,000 or greater per square mile) and to major activity centers. This service should accommodate both work trip and non-work travel (shopping, medical, etc.) for both able-bodied and mobility impaired citizens.
- To improve the level-of-service (LOS) of at least half of the ten most congested sections and intersections between 1990 and 2020.
- To reverse the decline in the share of trips made by modes other than the single occupant vehicle by 2000 and to increase the share of trips made by high occupancy vehicles (including fixed and demand-responsive transit), bicycle, and walking by 25% collectively, by the year 2020.
- Transportation facilities should be accessible to all people. All improvements to the transportation system should comply with the ADA.
- To encourage greater utilization of electronic communication with the workplace and to conduct personal business (shopping, etc.).

4.2 TRENDS

4.2.1 VEHICLES

By far, the most common mode of transportation in Onondaga County is the passenger motor vehicle, and the popularity of this mode of travel continues to increase over time. Between 1960 and 2000, the percentage of the Onondaga County labor force driving to work increased from 71% to 90% (see Table 4-1). Far more workers in Onondaga County currently rely on passenger vehicles than in the state as a whole, where only 65.5% of workers used a car to access work in 2000 (US Census).

Table 4-1
Mode of Trip to Work, Onondaga County, 1960-2000



Source: U.S. Census Bureau

The number of licensed drivers in Onondaga County in 2009 was 322,876 and the total number of all types of vehicles registered in Onondaga County was 349,084. This means that for each licensed driver in Onondaga County in 2009, there were 1.08 vehicles. This rate is higher than that of the state as a whole, where there were 0.94 vehicles per licensed driver in 2009.[1] The census indicated that 87.4% of households in Onondaga County had a vehicle in 2000. This represents a 3.6% increase from 1990.

Of those using vehicles to access work in the MPA, the vast majority are driving alone. According to the 2000 census, 89% of MPA workers who drove to work did so by driving alone. 11% drove in a car with more than one person. In 2000, commuting by driving alone was particularly prevalent in the northern suburbs and in the towns of Onondaga, Manlius, and Camillus, where over 86% of workers drove alone to work. In contrast, only 65.9% of workers from the City of Syracuse drove alone to work in 2000.

Travel Patterns

As with most metropolitan areas, many of the region's major employers and a significant number of the region's jobs are located within the City of Syracuse. The majority of the County's population, in contrast, lives outside of the City of Syracuse in an expanding urbanized area. The result is the typical suburb-to-city commuting pattern. The 2000 Census shows that the highest numbers of people commuting to work in Onondaga County are traveling to the City of Syracuse (87,779).

[1] *http://nysdmv.com/Statistics/statli09.htm, http://nysdmv.com/Statistics/regin09.htm*

There are also significant numbers of Onondaga County residents commuting to the Town of DeWitt (37,837) and the Town of Salina (17,337).[2]

Map 4-1 shows major commuter corridors in the MPA. As is typical, most of the primary commuting corridors connect growing suburbs with the interstate network and the City of Syracuse. Some routes providing inter-suburban connections, including Route 31 in northern Onondaga County and I-481 in the eastern suburbs, are also considered major commuter corridors.

Onondaga County is also where most of the jobs in the broader Central New York region are located. In 2000, only 5.9% of Onondaga County residents worked outside Onondaga County.[3] According to the 2000 Census, more than 38,000 additional workers commuted to Onondaga County from the four adjacent counties.[4]

Vehicle Miles Traveled

In keeping with the increasing reliance on vehicular travel, coupled with increasingly dispersed land use patterns, Vehicle Miles Traveled (VMT) in the Syracuse metropolitan area are increasing. According to the Highway Performance Monitoring System (HPMS) provided by the NYSDOT, the number of Daily Vehicle Miles Traveled (DVMT) in the SMTC Federal Aid Urbanized Area in 2007 was 10,514,000. This represents a 12% increase over miles traveled in 2000, when the DVMT was 9,427,000.

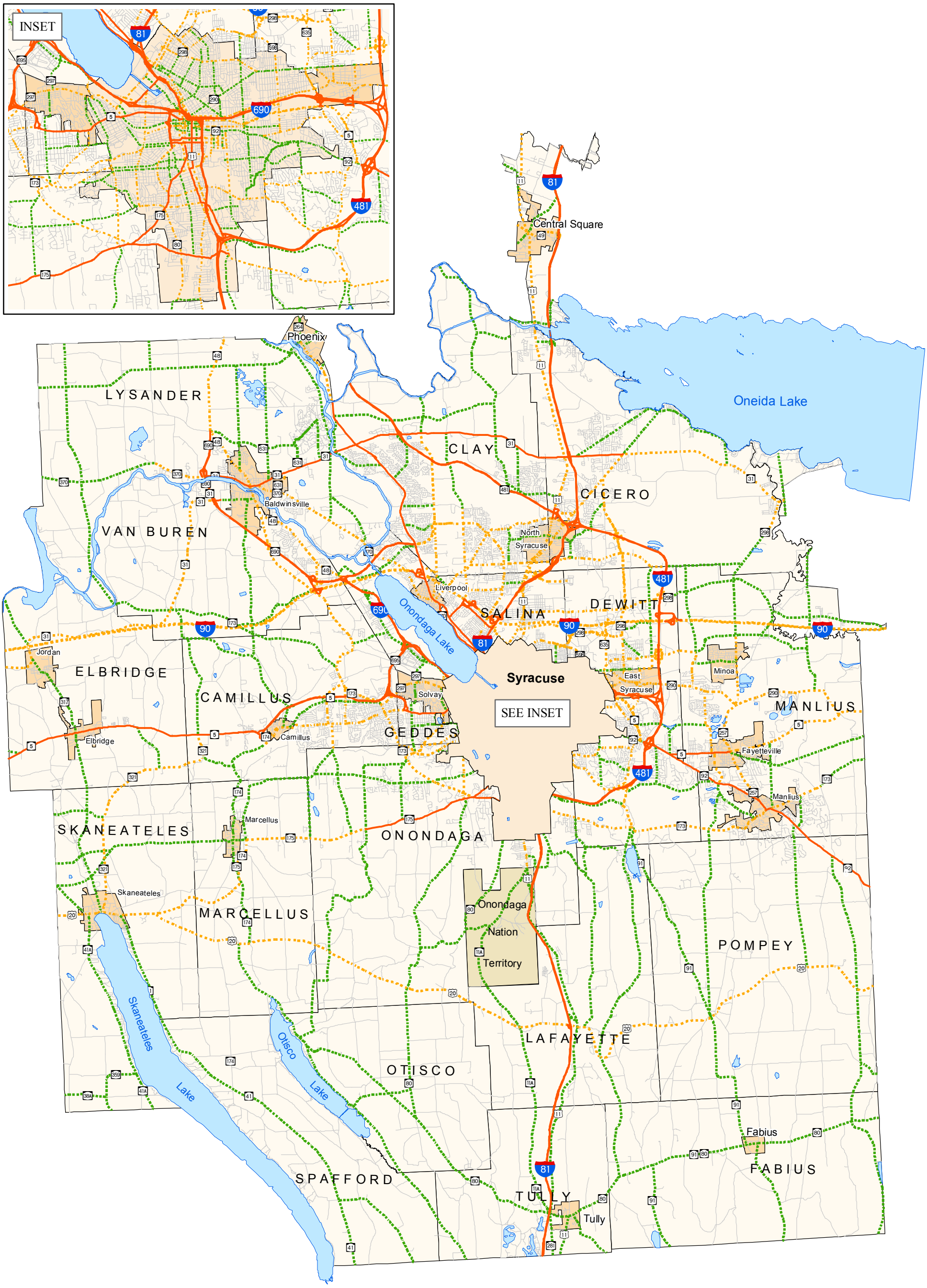
In 2007, the average driver in the Syracuse metropolitan area drove nearly 7.5 more miles per day than that for the state as a whole. Based on data from the HPMS, the 2007 DVMT per capita for the urbanized area was 26.8 miles/day. Statewide, in contrast, the DVMT per capita was 19.4 miles/day.

The following graph (Table 4-2) shows actual HPMS DVMT values for 1981 through 2007 and forecasted travel miles for the years 2008 through 2033. The forecasted DMVT shown in this graph was prepared by the Global Insight, a forecasting consulting firm, for the NYSDOT in 2007.

[2] *Census 2000: Residence MCD to Workplace MCD/County Flows for New York: 2000*

[3] *Census 2000: Residence MCD to Workplace MCD/County Flows for New York: 2000*

[4] *Census 2000: Residence MCD to Workplace MCD/County Flows for New York: 2000*



Note: SMTC staff produced Working Document for NYSDOT Corridor Initiative (2006)

Commuter Corridors

Long-Range Transportation Plan 2011 Update

Map 4-1

0 1 2 4 Miles

SMTC
100 Clinton Square
126 North Salina St, Suite 100
Syracuse, NY 13202
(315) 422-5716
Fax: (315) 422-7753
www.smtcmpo.org

Data Sources: SMTC, NYSDOT, 2010
Prepared by SMTC, 04/2011

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

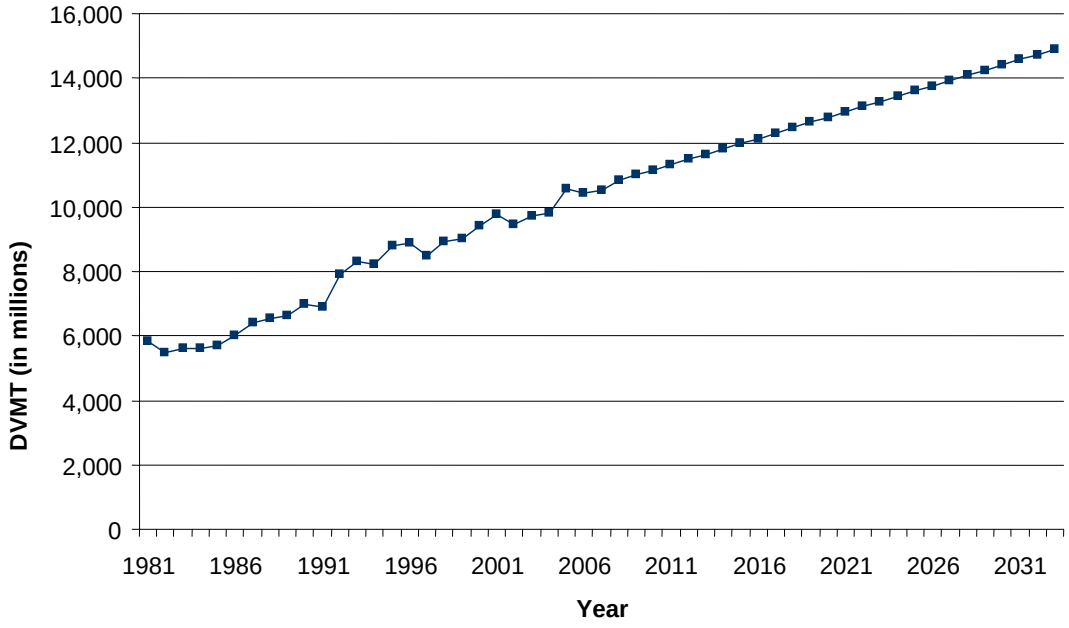
Legend

Commuter Corridor Level

- Primary
- Secondary
- Tertiary
- Local
- Syracuse
- Village
- Town
- Onondaga Nation

Table 4-2

Daily VMT, Syracuse Urbanized Area, 1981-2033



Sources: NYSDOT, Global Insight, 2007.*
**Global Insight: Global Insight, Inc. Advisory Service Division is a forecasting consultant group hired by the NYSDOT.*

Recent research by the Brookings Institution found that Syracuse ranked 88th of the 100 largest U.S. metropolitan areas in terms of VMT per capita.[5] Syracuse per capita VMT was 4,810 in 2006, which represents a 4.6 percent change in per capita VMT from 2002. The Brookings Institution also found that nationally, VMT has plateaued or even declined during recent years.

Data from a 2001 New York National Regional Transportation Survey study (which has been verified to be reflective of current trends by the NYSDOT Planning and Strategy Group) shows that the Syracuse Metropolitan Planning Area (MPA) reported 26.85 daily VMT per driver. This number is lower than it was in 1995. That year, daily VMT per driver was 30.28. The daily VMT for Syracuse in 2001 was also slightly lower in comparison to Albany (at 28.22 daily VMT per driver), the closest other upstate New York MPA of similar population size. Albany's daily VMT actually increased from 26.05 in 1995. As compared to other upstate MPA areas with less than 3 million people, Syracuse MPA's daily VMT is about average.[6]

---

[5] Source: Robert Puentes and Adie Tomer, 'The Road… Less Traveled: An Analysis of Vehicle Miles Traveled Trends in the U.S.' (The Brookings Institution, December 2008). Available at www.blueprintprosperity.org

[6] 2001 New York Household Travel Patterns: A Comparison Analysis, Table 6.6 Daily Vehicle Miles Travel Statistics of New York State MPO Drivers by MSA size, page 6-23, January 2007. Can be found at: https://www.nysdot.gov/divisions/policy-and-strategy/darb/dai-unit/ttss/repository/ComparisonRpt01-95-011107.pdf.

Vehicle Occupancy
According to the census, 9.9% of the working age population in the MPA carpooled to work in 2000. Of these, the vast majority (86%) were in two-person carpools. Carpooling was most popular in Syracuse, where 13.7% of the working-age population carpooled, and West Monroe and Schroeppel, where 13.6% of the working-age population carpooled. It was least popular in Pompey (6.3%) and Manlius (6.5%).

Congestion
There are many issues relating to the high rate of single occupancy passenger vehicles in Onondaga County and the surrounding areas. Local traffic combined with interregional traffic (i.e., truck freight movement and commuters) can create heavier traffic flow, primarily during peak hours, especially on I-81.

Travel Time
According to the data published by the Census Bureau and the Bureau of Transportation Statistics, in addition to the passenger motor vehicle remaining the preferred mode of commuting, the travel time of the commute for the labor force has increased over the past decade. In 1990, the mean travel time to work in Onondaga County was 18.3 minutes, and in 2000 it increased to 19.3 minutes. This was lower than the statewide average of 31.7 minutes. Across the planning area, mean travel times vary by proximity to the center of the region. In 2000, the Town of Spafford had an average commute time of 33 minutes, while the average commute for the Town of DeWitt was 16.3 minutes.[7]

Freight
Central New York benefits from a location at the crossroad of two major interstate highways, interstate rail freight facilities, and from a regional interstate system that provides easy access to local markets. This makes the region desirable for long-distance trucking companies and enables the shipment of freight from origin to destination directly by truck. The region is home to many regional distribution centers serving the Northeast and eastern Canada, as well as major intermodal connectors to rail and freight networks.

4.2.2 BICYCLES AND PEDESTRIANS

According to the Census, 4%, or 8,906, of workers over the age of 16 in the Syracuse MPA walked or bicycled to work in 2000 (see Table 4-3). The region lags behind the rest of the state, where 6.2% of workers walked to work and 0.8% used other means in 2000. Of those who walked or bicycled to work in the MPA, 70.8% lived within the City of Syracuse. The next highest percentage, 4.2%, lived in Salina.

Within the City of Syracuse, most pedestrians and bicycles are found in the vicinity of University Hill. The 2006 *University Hill Transportation Study* estimated a daily total of 89,000 pedestrian trips and

[7] *Caliper Transportation Profile, Census 2000*

12,848 bicycle trips in this area. Most of these were the product of students and employees, and many were discretionary, or non-commute, trips.

Despite the prevalence of pedestrian and bicycle activity in some key locations in the community, Onondaga County has seen a downward trend in terms of pedestrian commuting over the last several decades. In 1960, 9.9% of the county population walked to work. By 2000, the percentage of walking commuters had decreased to 3.8%. Since the census began tracking bike commuters in 1990, the percentage of bike commuters in Onondaga County has remained stable at 0.2%.

Table 4-3

ONONDAGA COUNTY JOURNEY TO WORK STATISTICS, 1990-2000

	Onondaga County			Onondaga Co. - 2000 Census	
	1990 Census	2000 Census	% Change	City	Towns
Workers (Ages 16 and Over)	223,650	211,646	-5.37%	59,041 (28%)	152,605 (72%)
Drove alone	168,206	169,433	0.73%	38,936 (23%)	130,497 (77%)
Carpooled	27,040	20,873	-22.81%	8,114 (39%)	12,759 (61%)
Public Transportation	10,037	5,560	-44.60%	4,148 (75%)	1,412 (25%)
Walked	**11,367**	**8,262**	**-27.32%**	**5,960 (72%)**	**2,302 (28%)**
Bicycled	**390**	**487**	**24.87%**	**348 (71%)**	**139 (29%)**
Worked at Home	5,295	5,977	12.88%	1,205 (20%)	4,772 (80%)
Motorcycled or Other	1,315	1,054	-19.85%	330 (31%)	724 (69%)

Source: U.S. Census Bureau 2000, SF3 Table P30, CTPP 2000

Although the percentage of those bicycling to work has shown an increase of nearly 25%, upon further examination of the census numbers for bicycle commuting, the increase may not be statistically significant, as the number of bicycle commuters increased by only 97 people since 1990. Another important factor in bicycle and pedestrian planning (as well as transit planning) is access to vehicles.

Remaining relatively steady since 1990, the latest 2000 Census indicates that 12.6% of all households in Onondaga County do not have a vehicle, a 3.6% decrease from 1990. It is important that the Metropolitan Planning Organization (MPO) recognizes the needs of those without personal motor vehicle transportation. In addition, there are various citizens' groups that are interested in using non-motorized modes of transportation to travel to work.

4.2.3 PUBLIC TRANSIT

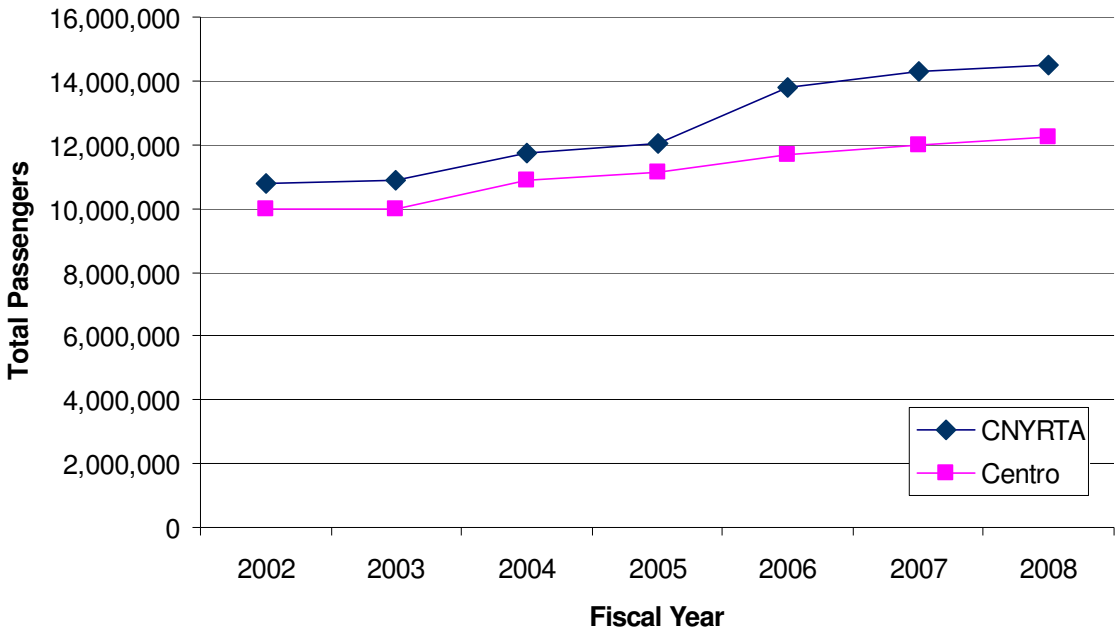
According to the census, 2.5%, or 5,589, of workers over the age of 16 in the MPA used public transit to access work in 2000. Of those who used transit to access work in the MPA, 74.2% lived in the City of Syracuse. The next highest percentages (4.3%) were found in Salina and Clay.

However, considerably more people are using the transit system in the MPA for non-work reasons. Central New York Regional Transportation Authority (CNYRTA), the transit operator in the MPA, transported an average of 33,000 passengers per day in FY 2007-08, the last year for which data is available. The 2009 data based on farebox totals indicates that Centro's most popular route is the James Street/Lamson Street bus, with the South Salina/Brighton Avenue route following closely behind. The Syracuse University/Downtown bus, the South Avenue bus, and the Court Street/Park Street bus also have high ridership.

As shown in Table 4-4, annual ridership at the CNYRTA, the broader transit authority that houses Centro, has grown consistently over the past decade, by 34.2% between 2002 and 2008. Centro's ridership over the same period grew by 22.3%.

Table 4-4

RIDERSHIP, CNYRTA AND CENTRO



Source: CNYRTA

Ridership in Onondaga County fluctuates throughout the year due to school calendars and gas prices. The average ridership numbers based on September 2010 data was 43,417 riders per day on more than 100 transit routes. See Maps 3-5a and 3-5b for transit routes in the MPO area as of June 2010. The majority of Centro's routes meet at the central point of the regional hub-and-spoke system at the intersection of Fayette and Salina Streets in the City of Syracuse. It is at this Common Center that nearly two thirds (65%) of the Syracuse metropolitan region's bus riders transfer to other routes.

Centro has undertaken a major capital investment that involves the development of a new Common Center located at the intersection of South Salina Street and Adams Street, the location of the former American Red Cross building. The new Common Center will consist of an enclosed seating area for passengers as well as a covered bus loading and unloading area where transfers may be made out of the general flow of traffic. The new Common Center project will be completed in winter 2011/2012.

The CNYRTA has reviewed the factors affecting mode choice in the SMTC urbanized area in its continuing efforts to increase transit ridership. Several factors continue to impact the agency's ability to increase ridership including a low density regional development pattern that minimizes opportunities for creating the type of critical mass needed to support transit service; low levels of congestion at peak hours compared to other large urban areas; city and suburban parking policies that result in providing the public with large areas of inexpensive automobile parking space; time and cost differentials that often favor single occupancy commuting; generally improving air quality; and a high capacity roadway network. Service reductions and fare increases were implemented in May 2010 and May 2011. Additional service reductions were implemented in September 2010 and January 2011 largely targeting routes serving suburban and exurban areas where ridership is poor. Locations such as regional shopping centers, the William F. Walsh Regional Transportation Center, and other outlying centers of activity will continue to serve as convergence points for transit routes.

Title VI

As the primary public transportation provider in the Greater Syracuse Metropolitan Area and Oneida County, the Central New York Regional Transportation Authority's transit service area covers four counties in central New York; Cayuga, Oneida, Onondaga and Oswego. According to the 2000 Census, upwards of 900,000 people reside within the four county area. The Federal Transit Administration (FTA) requires that all recipients of Federal Transit funding submit a compliance report to the respective FTA regional office every three years following a variety of processes and requirements outlined in the Federal Transit's May 2007 Circular 4702.1A (Title VI and Title VI-Dependent Guidelines for Federal Transit Administration Recipients). Additionally, this circular contains other requirements for those transit agencies that provide service within urbanized areas with over 200,000 in population, such as the Syracuse area. The *2010 Title VI* report completed by the SMTC on behalf of CNYRTA adheres to the prescriptive Federal processes and requirements for the development of a Title VI Compliance report.

The *2010 Title VI Compliance Report* shows that the Central New York Regional Transportation Authority has an excellent distribution of transit services for the various populations in its service area; it serves a wide range of geographic disparity, as evidenced through the numerous Census Tracts served, including those with higher populations of minorities, elderly, LEP, and low-income populations to ensure that no particular group in the service area be excluded from transit services. This service equity is critical as the Authority is funded in part by the FTA.

Coordinated Public Transit – Human Services Transportation Plan
The requirement of the Coordinated Public Transit – Human Services Transportation Plan (Coordinated Plan) originated with the 2005 passage of the current federal transportation legislation: SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users). This legislation requires that all Metropolitan Planning Organizations (MPO) seek to "identify the transportation needs of individuals with disabilities, older adults, and people with low income, provide strategies for meeting those local needs, and prioritizes transportation services for funding and implementation." As the designated MPO for the Syracuse Metropolitan Area, the SMTC undertook the lead effort of developing such a document for the planning area.

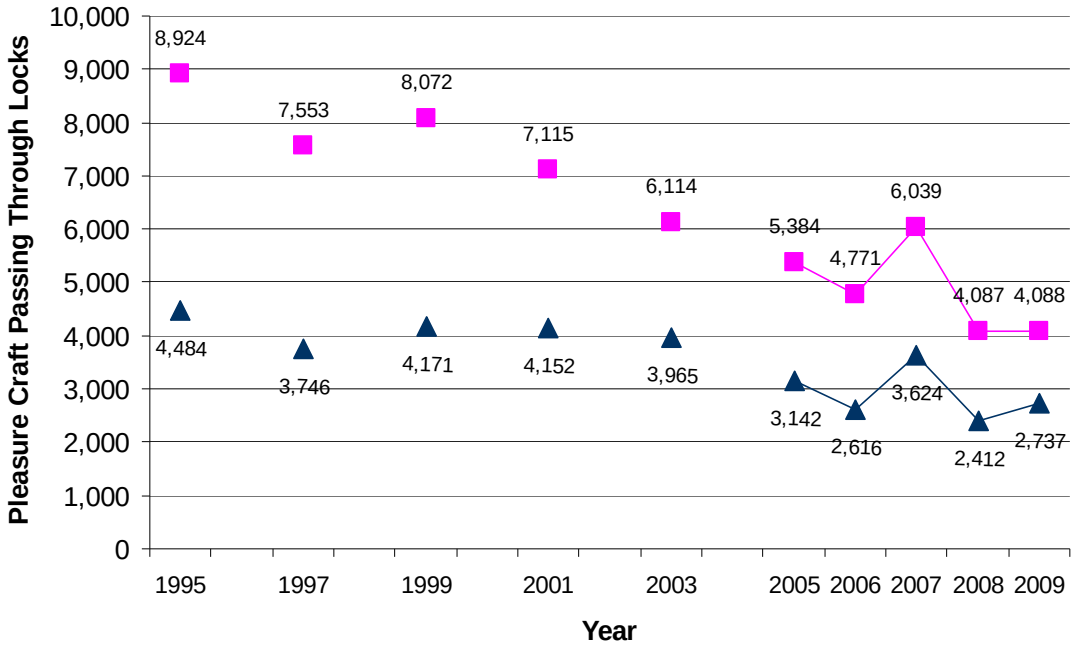
The purpose of the Coordinated Plan is to improve services for underserved populations through (1) identifying gaps and overlaps in service and (2) providing prioritized recommendations for service improvements. Underserved populations, for the purpose of this plan, are defined as people with disabilities, low to moderate income citizens, and the elderly community. The Coordinated Plan can be viewed in its entirety on the SMTC web site at **www.smtcmpo.org**.

4.2.4 WATER TRANSPORTATION

The New York State Canal Corporation is responsible for the overall operation, maintenance, and rehabilitation of the New York State Canal System. Lock E-23 in Brewerton is historically the busiest lock in the entire New York State Canal System. Lock E-24 in Baldwinsville is generally the second or third busiest in the state. Most of the boats passing through these locks are recreational vessels. Data on the number of lockings at Onondaga County's two locks is reflected in Table 4-5.

Table 4-5

Lock Traffic, NYS Canal System



Source: New York State Canal Corporation, New York State Canal System Traffic Reports, 1996 to 2009.

Canal Traffic

Traffic on the Canal System is measured in "vessel lockings" – the number of times vessels use one of the system's 57 locks to move from one elevation to another. In 2010, traffic on the New York State Barge Canal increased to 121,000 lockings, a nearly two percent increase over 2009 and a more than five percent increase over 2008, when a rainy summer and the national economic downturn reduced recreational traffic.

Lock 24 in Baldwinsville

As stated previously, the two busiest locks on the Canal System are located within the MPA: Lock E-23, near Brewerton and Lock E-24, in Baldwinsville. Lock 23 had nearly 7,500 vessel lockings in 2002, and Lock 24 had 4,700. Together, these two locks made up more than ten percent of all vessel lockings on the Erie Canal portion of the Canal System. The MPA also includes Lock O-1 in Phoenix, the busiest lock on the Oswego Canal, with 3,200 vessel lockings in 2002.

Commercial traffic on the canal has decreased steadily since 1951, when freight shipments totaled 3.67 million tons. In recent years, total freight shipments have been on the order of 15,000 tons. However the potential for increased use of the canal system exists, particularly given the relatively low cost fuel costs associated with shipping by barge. A 2008 *New York Times* article noted a small uptick in freight shipped on the canal, possibly the result of diesel fuel costs reaching the $4 per gallon mark. According to this article, a gallon of gas moves a ton of freight 59 miles by truck, 202 miles by train and 514 miles by barge.

The Canal System links the Port of New York, which handles approximately a third of all East Coast cargo, with ports in Albany, Oswego, Rochester and Buffalo.

Freight
Many are unaware that goods are still shipped using the New York State Canal System, with seasonal cargo movement across the state, linking the Port of New York, Port of Albany, Port of Oswego, Port of Rochester, and Port of Buffalo, and connecting throughout the Great Lakes and beyond. Clearly, the tonnage shipped is not at levels rivaling tonnage levels of past decades and most cargo activity has been replaced by recreational boating as well as commercial passenger service.

While the readily available published data is not complete, it appears that the tonnage carried between 1995 and 1999 varied greatly, between 14,000 and 39,000 tons annually.[8] The tonnage carried on the entire canal system has decreased significantly in recent years. The most recent data available shows that in 2007 the total tonnage was 13,195.[9]

4.2.5 AIR TRANSPORTATION

The number of enplaned passengers through an airport typically fluctuates in response to changes in the economy and other local, national, and international conditions. In recent decades, the full use of Hancock International Airport has also been adversely affected by high airfares. This has caused some passenger diversion to other airports and other modes of transportation. The City of Syracuse has continued an attempt to bring lower cost airlines with competitive airfares to the airport.

Over the past decade, enplanements at Hancock Airport have mirrored national trends, dipping in 2001 and generally increasing in the years thereafter. As illustrated in Table 4-6, air traffic forecasts show an increase in passengers. The airport's *Master Plan Update,* completed in September 2006, predicts an increase of over 50% by 2022. Enplanements, Table 4-7, in Syracuse have generally been stable around 1 million annually since 2004.

[8] *New York State Canal Corporation,* Traffic Report, *1999, p. 7.*
[9] *New York State Canal Corporation,* Traffic Report, *2007, p. 9.*

Table 4-6

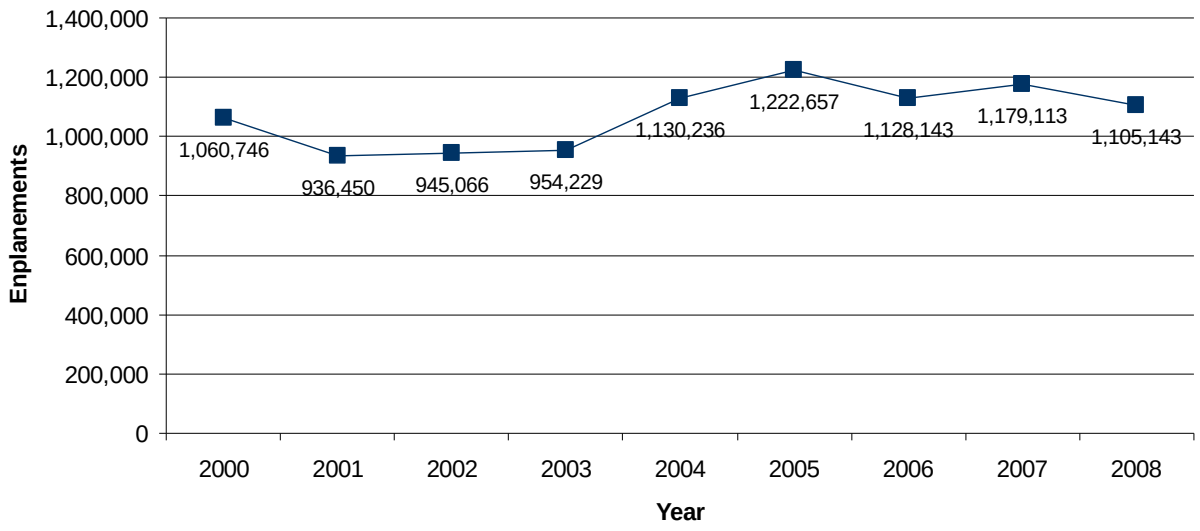
Forecasts of Enplaned Passengers
at Hancock International Airport
~Proposed Preferred Enplanement Forecasts~

2007	2012	2022
1,070,004	1,242,667	1,691,456

Source: City of Syracuse, Department of Aviation; Table 5 data from the draft Airport Master Plan Update, prepared by C&S Engineers, Inc., based on the Proposed Preferred Airport Forecast.

Table 4-7

Enplanements, Syracuse Hancock International Airport



Source: FAA, http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/index.cfm?year=2000

Hancock International Airport, like all airports, continues to be in the midst of changing conditions. From one perspective, the events of September 11, 2001 and the ensuing economic downturn have had an adverse impact on the number of airline passengers. Nationwide, major airlines are faced with significant financial problems and possible restructuring as a consequence of these conditions. As the current national economic situation improves, a positive stimulus is being provided for growth in passenger activity at the airport.

From another perspective, the addition of lower-cost carriers entering the Syracuse market is helping to address a long-standing issue of high airfares at Hancock that have caused much complaint locally and a diversion of some travelers to other airports and modes of travel. The new lower airfares have had a positive impact on the ability to attract passengers and the City of Syracuse continues to support the addition of other low-cost carriers.

Syracuse Hancock International Airport is served by the following carriers: Air Canada, American Eagle, Continental, Delta, JetBlue, United Express, and USAirways. Other airlines that operate at the Airport include Comair (a Delta affiliate), CommutAir (a Continental affiliate), Allegheny, Mesa, Trans States, Colgan Air, Piedmont, Chautauqua, and Shuttle America (affiliates of USAirways). Affiliate airlines operating at the Airport may change on a monthly basis.

Air Cargo

Hancock International Airport is owned and operated by the City of Syracuse and is the only commercial service airport in the SMTC planning area and Central New York region. Hancock has extensive air cargo operations including U.S. Customs inspection service. The airport in recent years has undergone a substantial expansion in the capacity to handle air cargo. A highly successful effort has been made by the private sector and the City of Syracuse to expand and modernize air cargo facilities and services.

Air Cargo companies that operate at Syracuse Hancock International Airport include Airborne Express, Air Now, Federal Express, United Parcel Service, the United States Postal Service, and Wiggins Airways.

According to the Syracuse Hancock International Airport's web site, the Air Cargo Operations are located on 22.5 acres of land. Carriers have ample office, parking, and loading dock space, as well as aircraft apron areas. Air cargo activity includes the handling of air cargo and express and regular mail. The existing air cargo facility is located southwest of the terminal complex. A 100,000 square foot cargo building with a parking apron allows direct aircraft access for quick and efficient cargo handling.

Hancock Airport has the land area capability for substantially expanding ground facilities that will accommodate the growth of air cargo operations to meet future needs. Other New York State airports are reportedly constrained in this respect. In addition, the capability for expanding runway and taxiway facilities serves not only air passenger growth but air cargo carriers as well, offering greater capacity and flexibility to meet changing circumstances.

Table 3-4 summarizes the amount of enplaned freight and mail by year from 2000 to 2010.

Table 3-4

Summary of Cargo, Hancock International Airport

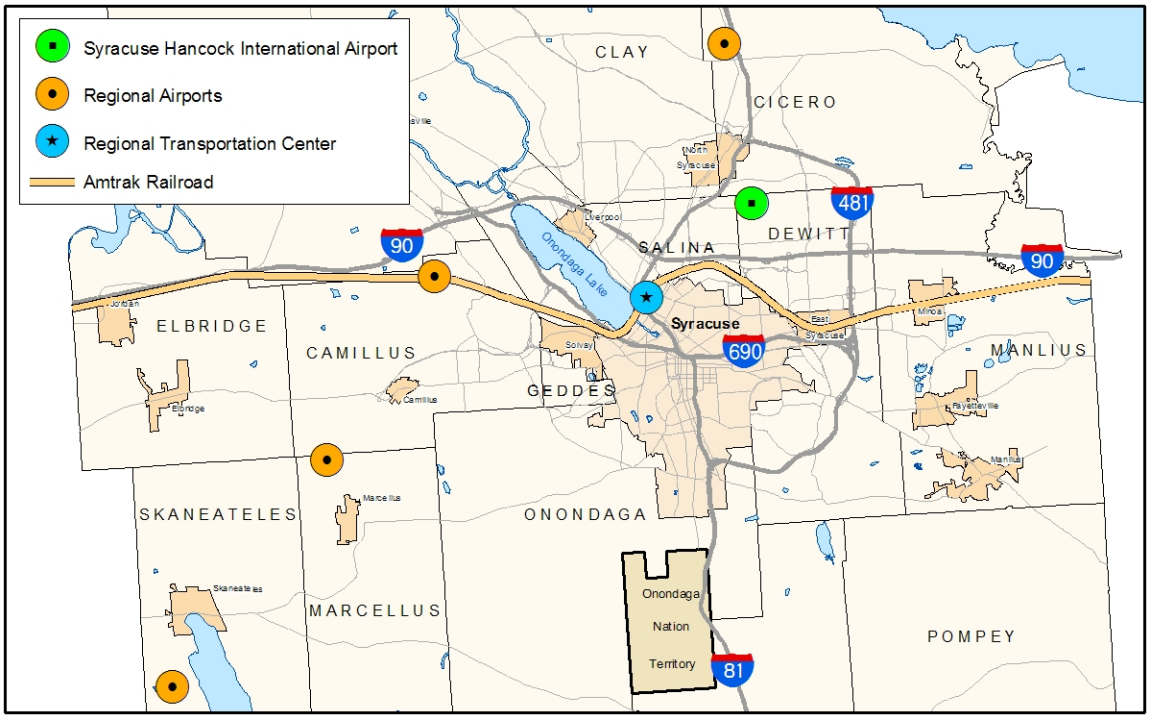
Year	Enplaned Freight	Enplaned Mail	Total tons
2000	18,142	0	18,143
2001	21,300	1,325	22,625
2002	19,505	1,262	20,767
2003	19,186	697	19,883
2004	20,380	355	20,735
2005	20,958	176	21,134
2006	20,974	197	21,171
2007	24,928	44	24,972
2008	22,774	0	22,774
2009	18,142	0	18,142
2010	19,290	0	19,290

Source: Hancock International Airport, 2011

4.2.6 PASSENGER RAIL SERVICE

Rail passenger service in the SMTC area is provided through the National Railroad Passenger Corporation (Amtrak), offering intercity rail passenger service in the Central New York region. The passenger rail system in Onondaga County is shown in Map 4-2, below.

Map 4-2



Syracuse rail passenger traffic on Amtrak is substantial, traditionally ranking third behind New York City and Albany in ridership. The number of passengers initially increased with enhanced accessibility provided by the opening of the William F. Walsh Regional Transportation Center in 1998 (see Table 4-8). The William F. Walsh Regional Transportation Center provides improved interconnectivity between bus and rail transportation modes, as well as a greater presence for Amtrak in the Syracuse Metropolitan Area.

Table 4-8

Total Arriving and Departing Rail Passengers, William F. Walsh Regional Transportation Center: 1980-2010			
1980	**1990**	**2000**	**2010**
120,547	118,147	132,173	139,175

Source: Amtrak

Changing Needs and Impacts

A number of initiatives being considered have the potential for improving passenger rail service in Central New York. The State of New York is currently assessing the feasibility of high-speed rail service across Upstate. If this service is implemented, changes will be required in the configuration of the William F. Walsh Regional Transportation Center to accommodate high-speed trains and the resulting increase in the number of rail passengers.

4.2.7 FREIGHT MOVEMENT (AIR, HIGHWAY, RAIL, AND WATER)

Among the attractions to doing business in Onondaga County and the Central New York region is the crossroads location of the County for air, highway, rail, and water transportation and the variety of freight movement services available. Air cargo service is available at Syracuse Hancock International Airport, which is directly linked to Interstate 81. U.S. Customs inspection services are also available at Hancock Field. Two interstate highways intersect at Syracuse, the New York State Thruway (Interstate 90) and Interstate 81, providing excellent truck access to the SMTC planning area. Rail freight services in Onondaga County are available from three providers. Water transportation is available on the New York State Canal System. Each mode is discussed in greater detail below and the major freight movement modes/routes are shown on Map 4-3 (Air, Water, and Rail Freight Movement Facilities).

Rail Freight

A substantial change over the last several years has benefited the area and strengthened the rail transportation industry. Mergers have created rail mega-carriers (such as Union Pacific/Southern Pacific and Burlington Northern/Santa Fe). There has also been a growth of the regional and shortline railroads as links and feeders to the larger carriers, making the railroad business in the United States a growing industry. In the Central New York region, there is one major (Class 1) carrier, CSX Transportation; one regional carrier, New York, Susquehanna & Western Railway; and one shortline railroad, Finger Lakes Railway.

Line Name (Owner)

- Auburn Line (Finger Lakes)
- Baldwinsville Subdivision (CSXT)
- Fairgrounds Subdivision (CSXT)
- Fulton Subdivision (CSXT)
- Mohawk Subdivision (CSXT)
- Rochester Subdivision (CSXT)
- St Lawrence Subdivision (CSXT)
- Syracuse Main Line (Susquehanna)

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Air, Water and Rail Freight Movement Facilities

Long-Range Transportation Plan 2011 Update

Map 4-3

0 1 2 4 Miles

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Legend

Canal Ports
- Baldwinsville Canal Port
- Liverpool Canal Port
- Syracuse Canal Harbor
- Three Rivers Canal Port

- Interstates
- Roads
- Syracuse Airport
- Village
- Syracuse
- Town
- Onondaga Nation

CSX Transportation - CSX Transportation (CSX) replaced Conrail as the major rail freight service provider in 1999 and operates the Chicago Main line that links Central New York with New York City, New England, and the Midwest. The company also operates the Baldwinsville, Fulton, and St. Lawrence Subdivision lines to the north of Syracuse, with the St. Lawrence Subdivision being the gateway to Montreal and Canada. CSX has experienced an increase in local traffic annually over the last several years. Another significant segment of CSX business is the rail/truck intermodal freight terminal located in the DeWitt rail yard. CSX handles approximately 50,000 containers annually at the DeWitt facility and this number has grown significantly as former Conrail routes are integrated into the CSX Service Lanes. The DeWitt yard is a major intermodal facility serving the Northeast and is the only terminal of its type between New York City and Buffalo.

New York, Susquehanna & Western Railway (NYS&W) - The NYS&W is a regional railroad company serving New York and New Jersey. In the Central New York Region, the railroad operates two lines: the Syracuse to Binghamton, and the Utica to Binghamton. In Syracuse, the NYS&W interchanges with CSX and in Binghamton with the Norfolk Southern Railway and the Canadian Pacific Railway. The Utica traffic is interchanged at Syracuse via Binghamton. The NYS&W has expanded its traffic base in Cortland County and in the Southern Tier. Much of the traffic base is in New Jersey on the railroad's southern branches.

Finger Lakes Railway (FGLK) - The Finger Lakes Railway transported 15,000 carloads in 2009, and over 18,000 in 2008. In addition to freight hauling services, Finger Lakes Railway has 100s of rail cars parked on our lines for storage. Currently operating on 154 miles, FGLK has a customer base of 54 customers. Within the MPA, the rail line runs east to west starting at Solvay, NY through Auburn to Geneva and continuing west to Victor and Canandaigua

Freight Corridors

The NYSDOT requested in the summer of 2006 that all of the MPOs in New York State construct mapping and analysis of Trade and Commuter Corridors as part of a statewide effort for corridor planning and management. This was accomplished involving the staff from both the NYSDOT and SMTC and resulted in a draft Corridor mapping of both commuter and freight corridors. This was accomplished through a process of evaluating facilities, functional classification of the road network, population centers, work centers, and related information. Map 4-1 (Commuter Corridors) and Map 4-4 (Regional Freight Corridors) show the resulting output from this effort.

Map 4-4 shows the major freight facilities (along with a detailed key) as well as the major freight rail lines and primary freight corridors, or roadways. The map shows that in terms of roadways, the primary freight corridors are the principal arterials combined with the lesser roadways that service the facilities more directly. In terms of rail lines, it shows that virtually all rail lines in the SMTC area are used for freight movement.

ID	Facility	Rail User
2	New Process Gear Div., New Venture	
3	Welch Allyn, Inc.	
5	Anheuser-Busch, Inc.	X
37	Prolinks Services, Inc.	
68	McLane Northeast	
16	Gypsum Express LTD.	
42	Coca Cola Bottling Company	
54	FedEx Ground	
55	JB Hunt Transport, Inc.	
41	Sysco Food Services	
61	Southern Containers-Syracuse Inc	
9	Crucible Materials, Inc.	
19	Solvay Paperboard	X
17	Byrne Dairy	
6	Bristol-Myers Squibb Co.	X
51	Yellow Freight System Inc.	
39	UPS	
46	Swift Transportation Co., Inc.	
45	Emery Forwarding Worldwide	
56	US Postal Service	
38	Eckerd Drugs	
58	Packagaing Corporation of America	X
47	Raymour & Flanigan Furniture Co	
36	Dot Foods, Inc. (formerly Drechser)	
21	Lockheed Martin -NESS	
35	Pioneer Warehousing & Dist. Co	X
32	Clintons Ditch Co-op Inc.	
85	Benbow Chemical Packaging, Inc	X
65	Americold Logistics	
100	Aldi	

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Map initially developed with NYSDOT in 2006; updated by SMTC in 2011.

Prepared by SMTC, 04/2011

Regional Freight Corridors

Long-Range Transportation Plan 2011 Update

Map 4-4

0 1 2 4 Miles

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Legend

- Freight Facilities
- Primary Freight Corridors
- Freight Rail Lines
- Roads
- Interstates
- Onondaga Nation
- Village
- Syracuse
- Town

Map 4-4 details, with the exception of the Route 20 and Route 31 Corridors, that the rail freight movement generally parallels the road freight movement. This is consistent with the interconnectivity between our region and external regions as well as the location of freight facilities. Also, it is worth noting that the bulk of freight movement occurs in the northern portion of the SMTC area. This is due to both the topographic constraints in the south as well as the location of the existing infrastructure and facilities in the northern portion of the SMTC area.

Identifying the freight corridor is helpful in understanding the dispersion of freight facilities and their related transportation infrastructure. It should be reiterated that this map is a working document at this time and its sole purpose is to aid the NYSDOT in its efforts at understanding statewide corridors.

Changing Needs and Impacts on Freight Movement
The changing economy has affected all modes of transportation. The impact is not confined to the transportation sector but all modes are sensitive to maintenance issues when a shortfall in public funding occurs for routine maintenance and major repairs. Postponed maintenance generally makes infrastructure maintenance more costly over the long run. Beyond maintenance and repairs, all modes in the Central New York region are in need of funds for infrastructure modernization to improve the intermodal movement of goods and to capture new opportunities for growth.

4.3 PLANNING EFFORTS

4.3.1 MEMBER AGENCY ACTION PLANS RELATED TO MOBILITY

Part of the process for updating the 2020 LRTP during 2001 included the identification of action plans that had been implemented under each of the six goals since 1995, including community economy. This 2011 Update will emulate the 2001, 2004, and 2007 LRTP Updates by addressing and updating the implementation actions associated with the Plan's specific goals and objectives (the 1998 Update did not address implementation actions). The identification of implemented action plans involved discussions with the member agencies responsible for their respective TIP projects. In the section that follows, the implemented community mobility related action plans are presented. The implemented action plans are summaries rather than complete descriptions. In many cases, overlap exists because a particular action plan may apply to multiple goals.

Action Plans Implemented:

1. The SMTC has implemented the Congestion Management Process (CMP) Model. The NYSDOT and SMTC's consultant provides updated traffic counts each year and the SMTC staff runs the model and issues a project report that identifies the congestion concerns in Onondaga County.

2. The CNYRTA has acquired land and is in the design process to move its Common Center in the City of Syracuse to an alternate weather-protected location where buses

can load and transfers may be made out of the general traffic flow. This project will be completed in winter 2011/2012.

3. In May 2009 CNYRTA implemented service changes and a fare increase in response to a budgetary shortfall. In January and April 2011 further major service reductions were implemented in response to ongoing reductions in State aid and shortfalls in Mortgage Recordings Tax fees. These changes are imperative to ensure that the Authority remain fiscally solvent. Federal capital funding support and state and local operating aid change considerably from year to year. Operating aid in particular is highly variable as it is linked to the strength of the state and local economies. In times of economic decline, when the transit-dependent population is most in need of more mobility options, transit authorities must often reduce service and increase fares.

4. The CNYRTA has reviewed the factors affecting mode choice in the SMTC urbanized area in its continuing efforts to increase transit ridership. Several factors continue to impact the agency's ability to increase ridership including a low density regional development pattern that minimizes opportunities for creating the type of critical mass needed to support transit service; low levels of congestion at peak hours compared to other large urban areas; city and suburban parking policies that result in providing the public with large areas of inexpensive automobile parking space; time and cost differentials that often favor single occupancy commuting; generally improving air quality; and a high capacity roadway network. The service reductions scheduled from January and April 2011 largely target routes serving suburban and exurban areas where ridership is poor.

5. In 2009, the CNYRTA initiated a study to determine the potential benefits, costs, and feasibility of implementing a new system of park-and-ride lots in suburban Syracuse transit corridors. This study was completed in January 2011.

6. The CNYRTA has fulfilled its policy to have all transportation facilities comply with the ADA.

7. The CNYRTA policy will continue to promote bicycle use through purchase of buses equipped with bicycle racks.

8. The CNYRTA has used and continues to use Federal Job Access/Reverse Commute and New Freedom funds and State resources to broker and provide enhanced mobility services for low income, elderly, and disabled citizens.

9. The CNYRTA has committed to acquire low emission buses as part of the region's effort to comply with the provisions of the Clean Air Act. The majority of CNYRTA's fleet is powered by compressed natural gas. In addition, a limited number of hybrid-

electric vehicles have been acquired. No further hybrid-electric vehicles will be purchased as their additional cost, in a severely constrained fiscal environment, has been found to exceed their minor environmental benefit.

10. Section 5317 establishes a "New Freedom Program to encourage services and facility improvements to address the transportation needs of persons with disabilities that go beyond those required by the Americans with Disabilities Act". This program provides funding for associated capital and operating costs and requires that projects be included in a locally developed Human Service Transportation Coordination Plan. JARC (Section 5316) and Elderly/Disabled (Section 5310) funding will also be allocated to various projects through the competitive selection process established with the Coordinated Plan.

11. The NYSDOT is exploring the applicability of non-traditional modes for the Routes 5/290 corridor. Project scoping for the Routes 5/92 Demonstration Project was concluded with a Final Expanded Project Proposal in 1999. A variety of traditional and non-traditional alternatives were evaluated and five were recommended for further consideration. A signal interconnect project and a Routes 5/92 Transportation Control Measures (TCM) project are on the Region 3 program and the I-481 interchange modification is on the Long Range program. The fifth project, at Lyndon Corners, was deferred.

12. The NYSDOT has developed a program to enhance pedestrian and bicycling opportunities through roadway design, as set forth in a rewritten chapter of their Highway Design Manual for accommodating bicyclists and pedestrians. The new Chapter 18 is intended to be used as guidance on how the NYSDOT should take into account the needs of bicyclists and pedestrians into highway design plans.

13. The NYSDOT requires that all pedestrian facilities built with federal or state funds comply with the provisions of the ADA.

14. The NYSDOT requires that all repair/retrofit of existing pedestrian facilities comply with the provisions of the ADA.

15. The NYSDOT's $2 million I-81 ITS project included the installation of cameras and variable message signs to establish a freeway incident management system on I-81 in Syracuse. This project was completed in September 2007.

16. The Route 173 & 175 Reconstruction Onondaga Hill project was a $10+ million project completed by the NYSDOT in January of 2007 which reconstructed Route 173 from East of Onondaga Community College to Broad Road and Route 175 from City View Terrace to the City of Syracuse line.

17. In June 2007, the NYSDOT completed its $2.2 million ITS Phase 2 on I-690 project which included the installation of cameras and higher tech features such as dynamic message signs and highway advisory radios (HAR) at key locations.

18. The NYSDOT's $6 million project on Route 92 from the City line to Erie Boulevard included improvements to drainage, pedestrian and multi-modal systems, and access management principles. This project was completed in February 2009.

19. In December 2008, the NYSDOT completed the $4.9 million NY 174 Reconstruction in Marcellus project which reconstructed Route 174 from the central business district to the north village line, including bridge deck replacement, the addition of new sidewalks, improved drainage, and guiderail installation.

20. The OCDOT manages several high volume corridors within their system using time based or closed loop systems to maintain efficient traffic flows. The OCDOT and the NYSDOT work together on timings for signals on County highways that are included in State controlled interconnect systems such as the Route 11/Taft Road/South Bay Road location.

21. The City of Syracuse has implemented the following mobility action plans:

    - City Owned Sidewalk Improvements – The City requires all repair/retrofit of existing pedestrian facilities to comply with the provisions of the ADA. The City has also programmed sidewalk improvements that include corners in their capital plan. This sidewalk program will include pedestrian improvements and all sidewalks constructed will meet current ADA standards.
    - The City is expanding the Traffic Interconnect System.
    - As part of its annual street reconstruction program, the City is improving all handicapped accessible ramps to meet current ADA standards on each street included in the program.

5 LAND USE

5.1 GOAL

- To promote the development of an efficient urban area and a sense of community through transportation planning.

5.1.1 LAND USE OBJECTIVES

- To protect/enhance the visual and functional condition of streets and highways by encouraging well-planned residential, and industrial development.
- To educate and encourage municipalities to develop land use, zoning regulations and circulation plans which are supportive of transportation planning objectives including mobility protection.
- To ensure that funding decisions, particularly projects that improve street capacity for highway improvements, are related to municipal land use regulations that are supportive of mobility protection.
- To support development patterns, densities and design options that are conducive to transit service, pedestrian and bicycle travel.

5.2 LAND USE TRENDS

The 1995 SMTC LRTP and subsequent updates identified five general types of land use prevalent in the SMTC Study Area, including a moderately dense urban core; suburban towns, villages and hamlets; farmland; shoreline; and scattered development. These types remain indicative of present conditions, though the trend towards suburbanization and outward growth of the metropolitan area is beginning to affect the distinction between urban and rural landscapes and are creating new patterns of development in the County. Several economic development projects both planned and underway may have impacts on future development patterns as well.

Suburban Development ("Suburbanization")
Not unlike other municipal areas across the United States and the northeast, the SMTC MPA has experienced an increase in suburban development while overall MPA population numbers remain relatively constant. Suburbanization typically occurs in rural fringe areas with development patterns often consisting of segregated, low density uses. Land use planners refer to unmanaged, low density development patterns that lack a sustainable environmental, economic, and social balance as "suburban sprawl". The term "suburban sprawl" may consist of residential and nonresidential development patterns.

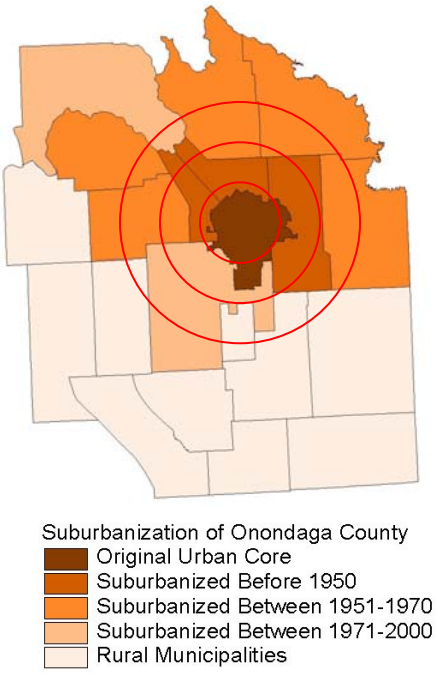
Transportation and land use planners acknowledge the need to manage (not prohibit) suburban development patterns to prevent sprawl from occurring to ensure sustainable use of environmental, land, and transportation resources. Suburban sprawl involves building on undeveloped land that may have formerly been used as farmland or functioned as wildlife habitat. Associated impacts include loss of agricultural production and natural habitat loss. Managing land use to support sustainable development patterns also means that the associated development can afford service and

infrastructure maintenance costs, which include, among other things, roads, bridges, air, rail, and waterway facilities.

Many factors contribute to suburban sprawl development patterns – and many of these factors are not within the control of local governmental agencies. For example, the interstate highway system opened speedy access to rural fringe areas. Home mortgage insurance policies also made the "American Dream" of owning your own home within reach of millions of Americans. Other factors also contribute to suburban development patterns including consumer preferences for low density single family homes over higher density multiple family properties. Examples of factors that are in the control of the local municipality include having a well established comprehensive plan or administering an updated zoning ordinance.

Effects of Suburbanization in Onondaga County

By 1970, Onondaga County had seen decades of population growth, and projected continued growth into the future. Accordingly, transportation, water and sewer infrastructure was expanded into the suburbs with significant capacities to accommodate a need for new housing for an expanding population. However, population since 1970 has instead remained relatively stable and the population growth anticipated has not materialized. The infrastructure, which was upgraded to accommodate new population, is serving a similar number of total county residents. Those residents have relocated from the inner core in favor of newer housing in towns surrounding Syracuse, and taking advantage of these available resources.

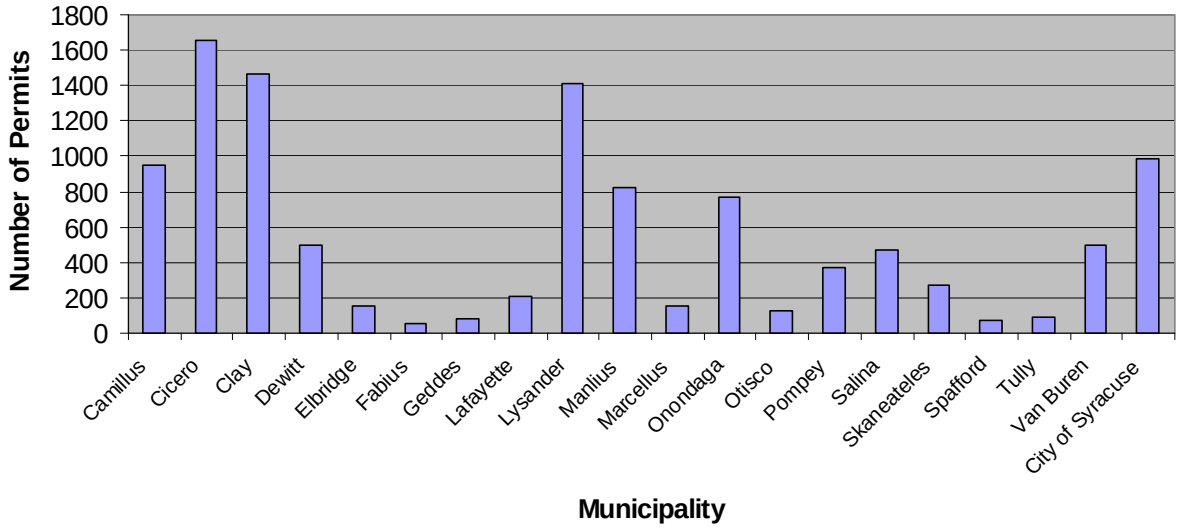


While the Onondaga County population has remained largely unchanged in recent years, changes in the geographic distribution of the County signify internal population shifts (see Chapter 2: Table 2-1, Onondaga County Population Trends 1950 – 2010; and Map 2-1, Regional Population Density. and Map 8 for County population). Population changes in recent history depict a population that is slowly migrating away from the urban core, first to an inner ring of older closer suburbs, and now even further to a new second and third ring of suburbs.

The trend toward suburbanization is shown graphically in the *Suburbanization of Onondaga County* map and in Tables 5-1 and 5-2. Residential construction in Onondaga County since 2000 has occurred largely in this outer ring – most notably in the towns of Camillus, Cicero, Clay, Lysander, Manlius, and Onondaga. Areas within the inner ring of suburbs, such as the towns of DeWitt, Salina and Geddes have seen a slowing of growth since 1980. And while building permits in the City of Syracuse are on the rise, between 2000 and 2010, the City of Syracuse has seen 2,772 residential demolitions. In this same time period, the number of demolitions in all of Onondaga County's towns totals 381. The aging urban housing stock, available undeveloped land, affordable housing, water and sewer costs, access to transportation infrastructure and increased personal mobility have encouraged the expansion of housing into areas long vacant or farmed.

Table 5-1

Building Permits by Municipality
Onondaga County
2000-2010



Source: SOCPA

The expansion of SMTC's MPA and Urban Area Boundary is indicative of these changing land use patterns. The gradual geographic expansion of residential and commercial development patterns has significant implications on community travel patterns and infrastructure costs.

Taking a closer look at Table 5-1, the numbers of households over the last several decades have continued to increase in the same outer ring towns where residential construction in Onondaga County occurred in the 1990s. From the travel demand modeling discussion included in Chapter 2, looking at the number of households forecasted to the year 2035, this trend continues – showing nearly all of the Towns with forecasted growth. The Town of Salina (part of the inner ring of suburbs) shows a decrease in the number of households for the year 2035. The City of Syracuse is also expected to continue to lose population into the future.

Table 5-2

City and Town Households, 1960 – 2010 and Households Forecasted to 2035 (from SMTC's Travel Demand Model)*							
	1960	**1970**	**1980**	**1990**	**2000**	**2010**	**Forecasted to 2035**
City of Syracuse	67,830	67,671	66,961	64,945	59,482	55,945***	50,565
Camillus	4,702	7,182	7,992	8,917	9,315	10,113	10,220
Cicero	4,028	5,960	7,401	9,014	10,538	12,399	12,838
Clay	4,641	10,162	17,299	21,095	22,294	23,202	24,476
DeWitt	6,375	8,422	9,211	9,729	10,068	10,318	10,527
Elbridge	1,328	1,642	2,011	2,228	2,322	2,341	2,627
Fabius	401	446	591	612	686	728	838
Geddes	5,647	6,389	6,669	6,889	7,262	7,269	7,469
LaFayette	876	1,186	1,476	1,724	1,826	1,997	2,472
Lysander	2,745	3,282	4,497	5,839	7,139	8,416	9,782
Manlius	5,242	7,242	9,633	11,481	12,553	13,373	14,865
Marcellus	1,268	1,664	2,061	2,311	2,378	2,465	2,725
Onondaga	3,513	4,513	5,961	6,557	7,679	8,498	10,009
Otisco	319	405	667	780	922	963	1,045
Pompey	904	1,178	1,370	1,827	2,154	2,509	2,605
Salina	9,006	11,352	13,370	14,166	14,401	14,999	14,163
Skaneateles	1,951	2,393	2,705	2,871	2,881	2,939	3,253
Spafford	257	313	510	572	631	669	808
Tully	488	563	802	886	1,030	1,071	1,209
Van Buren	2,375	3,157	4,322	5,234	5,288	5,737	5,746
Onondaga Nation Territory**	194	200	168	221	304	6***	(included in Towns of Lafayette and Onondaga)
Total Households	**124,090**	**145,322**	**165,677**	**177,898**	**181,153**	**185,957**	**188,242**

*Figures include respective villages
**Separate Native American Territory
Sources: US Census1960, 1970, 1980, 1990, 2000, and 2010; SMTC Travel Demand Model (to 2035)
*** (2010 Census data not yet available for these areas - data are from the 2005-2009 American Community Survey 5-year estimate)

Land Use and Transportation

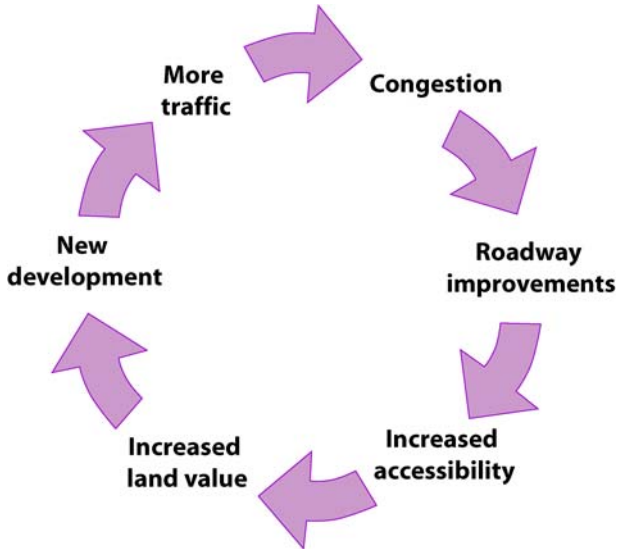
Land use planning and transportation planning are directly correlated and interdependent. Roadways, railroad corridors, airport locations, and waterways influence land development patterns, while the distribution and types of land uses affect transportation systems.

Many suburban town settlement patterns involve low density development with dispersed land uses often separated from each other. As such, people must rely extensively on personal vehicles to get them to various destinations. Often there are few alternative choices such as walking, biking, or taking a local shuttle service.

Traditional development patterns, such as those found in villages and urban centers, involve higher density development with mixed land uses located close to each other. Thus, in addition to using an automobile, people are afforded additional transportation choices such as walking, biking, and transit.

Suburban and traditional development patterns are both vital and serve important roles to help meet a community's needs. However, it is important to maintain a balance of transportation and development patterns to ensure that the land uses can support the cost of infrastructure and that traffic patterns as well as the natural and social environment are not adversely affected. When the transportation-land use balance is not maintained traffic worsens; congestion increases; air and water pollution increases; more costly roads are built or widened; the young, the elderly, people with disabilities, and the lower income population segments often become immobilized and isolated; and opportunities for social interaction and the local economy falters.

A reactive trend referred to as the "transportation-land use cycle" occurs when the transportation-land use balance is not maintained. In developing communities, traffic congestion often leads people to ask for added highway capacity, which in turn will attract more development, which in turn creates more congestion, which in turn leads people to ask for added highway capacity, and so on and so on. As such, transportation planners contest that in many cases you cannot build your way out of congestion by adding additional travel lanes. Instead, transportation planners advocate for integrating land use planning and community design principles with transportation planning principles to effectively



The Transportation-Land Use Cycle

Acknowledging the important effects of land use on transportation, and vice-versa, the SMTC created an interactive CD entitled *Connecting Transportation and Land Use.* The CD includes information on how to strike a transportation-land use balance (please see Appendix C for a copy).

The SMTC has been involved in several activities and studies that examine land use alternatives as well as transportation system alternatives in its transportation planning activities. For example, the current University Hill Transportation Study prepared by the SMTC focused heavily on land use and transportation strategies to address the congestion and parking issues faced by students, residents and employees within the University Hill area.

In addition, the NYSDOT is also continuing to recognize the important linkage between land use and transportation. Introduced by the NYSDOT in 2000, and supported by the FHWA, *Context Sensitive Solutions* (CSS) is "a philosophy wherein safe transportation solutions are designed in harmony with the community. CSS strives to balance environmental, scenic, aesthetic, historic,

cultural, natural resources, community and transportation service needs."[1] The CSS approach seeks to incorporate smart, aesthetic and accessible solutions into all phases of the transportation planning process. The process realizes the importance of quality of life and seeks to minimize the effects of major transportation infrastructure on the communities in which they are built, through creative and context-sensitive solutions.

Another initiative being undertaken by New York State is the Smart Growth Initiative, which has a mission to work with 'localities to use smart, sensible planning to create livable communities, protect our natural resources and promote economic growth.'[2] New York State recently enacted the New York State Smart Growth Public Infrastructure Policy Act. As such, several State agencies including the NYSDOT are required to align construction of new or expanded infrastructure projects or the reconstruction of existing projects, to the extent practicable, with Smart Growth criteria. The overall approach of the NYSDOT is to build upon existing programs in the NYSDOT and integrate Smart Growth principles in existing federal and state mandated planning and project development processes.

The New York State Smart Growth Public Infrastructure Policy Act defines the purpose as follows:

> *"…to augment the state's environmental policy by declaring a fiscally prudent state policy of maximizing the social, economic and environmental benefits from public infrastructure development through minimizing unnecessary costs of sprawl development including environmental degradation, disinvestment in urban and suburban communities and loss of open space induced by the funding or development of new or expanded transportation, sewer and waste water treatment, water, education, housing and other publicly supported infrastructure inconsistent with smart growth infrastructure criteria."*

The SMTC is currently participating in various Smart Growth working groups with the NYSDOT and other NYS MPOs in an effort to assist with determining how smart growth requirements (as outlined in the new NYS law) should be addressed within MPO LRTPs, the NYSDOT Master Plan, planning studies and TIP project selection processes. As the Smart Growth law directly applies to State Infrastructure Agencies, the NYSDOT formed these working groups to address the requirements of this law.

5.3 PLANNING EFFORTS

Several efforts are being undertaken to combat the environmental, fiscal and social implications of sprawl in Onondaga County. New land use patterns, focusing on mixed use, higher densities, infill and clustered development have been encouraged by Onondaga County, through its *2010 Development Guide: A Framework For Growth* (currently being updated as the *Onondaga County Sustainable Development Plan)*, and the *Onondaga County Settlement Plan*, which outlines strategies to encourage New Urbanism development practices within Onondaga County.

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[1] *Source: NYSDOT web site: Power Pt. Presentation on Context Sensitive Solutions.*

[2] *Source: http://smartgrowthny.org/index.asp.*

5.3.1 REGION-WIDE EFFORTS

2010 Development Guide for Onondaga County

The vision, goals and policies of SOCPA's *2010 Development Guide for Onondaga County* are intended to guide future individual government decisions on land use, transportation and infrastructure development, utilizing balanced goals that include economic growth, creating an attractive community, encouraging diversity and choice, and enhanced fiscal strength (SOCPA is in the process of developing the Onondaga County Sustainable Development Plan, which will serve as an update to the *2010 Development Guide for Onondaga County).*

In furthering those goals, Onondaga County's *Policies for Investment and Land Use*, as defined in the 2010 Plan, call for investment in existing communities, preservation of existing infrastructure and transportation assets, sustainable urban and suburban settlement patterns, and protection of the rural economy, agricultural land, and access to natural resources. The 2010 Plan encourages the public and private sector to make funding, permitting, and planning decisions utilizing these guiding principles, and to be cognizant of individual projects' effects on the quality of life of all residents.

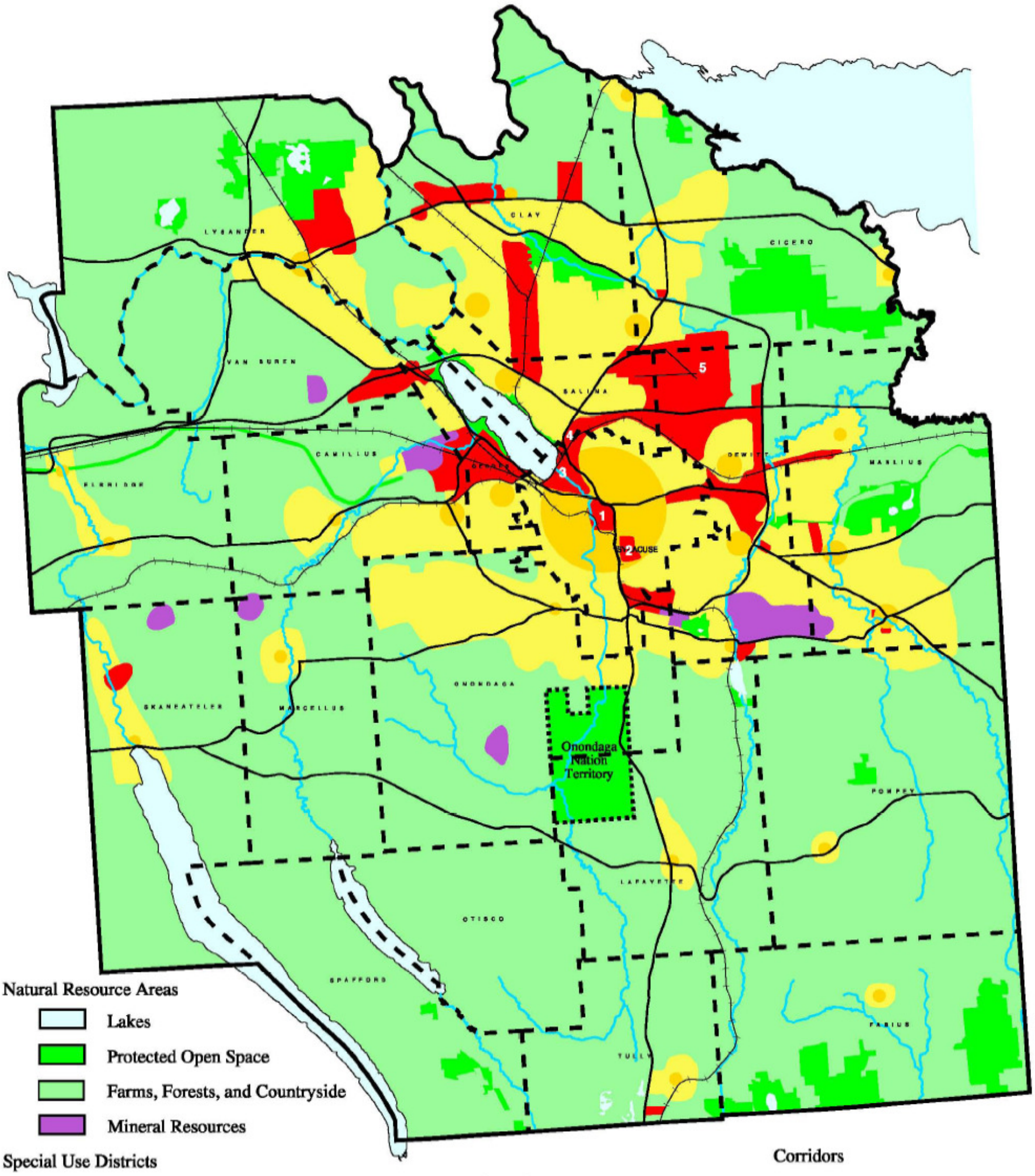
The *Land Use Vision* map (Map 5-1) graphically summarizes the goals, strategies and policies outlined in the 2010 Plan, with a Land Use Vision identifying areas designated for both protection or expansion, areas for industry versus neighborhoods, and areas for dense development or open spaces. Established corridors are already largely in place to provide mobility within the county, connect centers of activity and help define the urban and rural landscape between communities.

The Land Use Vision does not replace planning by the City, towns and villages, but encompasses local plans within a countywide vision, and encourages coordinated implementation of programs and projects.

Growth is encouraged in areas currently served by infrastructure, especially transportation infrastructure. According to the Plan, premature extension of linear infrastructure creates a surplus of urban land that devalues public and private investments in existing communities and developments that have not been completed. Surplus urban land leads directly to the abandonment of the oldest community centers and neighborhoods and permanently destroys access to farmland and natural resources. City and suburban demographics analyzed in previous sections of this report illustrate these trends over the past several decades.

One action identified by the 2010 Plan that is necessary to facilitate the concepts identified in the plan is the modification of land use regulations within the respective city, towns and villages to allow for and encourage a renewed emphasis on mixed-use neighborhoods, higher-density developments, and preservation of open space. Existing zoning regulations tend to encourage strict separation of land uses, thus resulting in dependence on the automobile and de-densification of urban areas.

Land Use Vision



Natural Resource Areas

- Lakes
- Protected Open Space
- Farms, Forests, and Countryside
- Mineral Resources

Special Use Districts

1. Downtown
2. University Hill
3. Lakefront
4. Stadium/Market/Transportation Center
5. Airport

- Industrial and Commercial Districts
- Neighborhoods
- Community Centers

Corridors

- Major Highways
- Streams
- Railroads

Onondaga County
2010 Development Guide
Syracuse-Onondaga County Planning Agency

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Land Use Vision

Long-Range Transportation Plan 2011 Update

Map 5-1

0 1 2 4 Miles

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Data Sources: SMTC, NYSDOT, 2001
Prepared by SMTC, 03/2011

Onondaga County Settlement Plan

To facilitate this change, the Syracuse-Onondaga County Planning Agency enlisted the services of the firm Duany Plater-Zyberk & Associates (DPZ) in 1999 to prepare the *Onondaga County Settlement Plan*. Andres Duany of the DPZ firm is known to many in urban planning as one of the founders of the *New Urbanism* movement in planning, which celebrates traditional neighborhood development patterns from a century ago for their efficiency of land use, transportation opportunities, social interaction and mix of incomes.

The Settlement Plan for Onondaga County was designed to present a comprehensive "toolbox" of strategies to encourage the traditional neighborhood development patterns outlined by New Urbanism, as an alternative to conventional zoning and suburban development patterns which many deem an inefficient use of land and a burden on transportation facilities. The DPZ firm completed the Settlement Plan in four parts:

- Transect Based Zoning: The "Transect", as coined by the DPZ firm, describes a style of zoning – not by use alone as in conventional zoning, but on the scaling, configuration and mass of buildings within its environment. The seven general Transect zoning districts range from gradations of rural to urban. Within each transect zone, a specific set of building specifications are detailed to foster desired patterns of growth, such as preservation of rural landscapes, or a dense, walkable urban center, and gradients in between. A model Transect Code was presented for Onondaga County's towns and villages to utilize in changing their municipal zoning regulations.

- Traditional Neighborhood Design (TND) Guidelines: The TND Guidelines take the "transect" zoning to the next level of detail, providing a more descriptive illustration of TND concepts, as they relate to more fine-grained development specifications such as landscaping, architectural details, streetscaping, and parking lot design.

- Regional Plan/Transportation Policies: One of the most important concepts of the New Urbanism design philosophy is the creation of dense neighborhood centers that foster alternative transportation modes, such as walking or mass transit. The Settlement Plan presents a set of recommended municipal policies that would foster these concepts, especially creating walkable neighborhoods. Proposed policies include the restriction of high-speed roadways through neighborhoods, provision of intermodal opportunities in neighborhood centers, avoidance of cul-de-sacs to avoid overburdening collector roadways, and maximum block perimeters for increased walkability.

- Pilot Studies: To illustrate the concepts of the Settlement Plan and encourage usage of the new regulations, the study identified several "Pilot" study areas, where different elements of the plan were hypothetically put into action. For example, the largely abandoned Fayetteville Mall site was turned into a mixed-use village center, incorporating several design concepts to encourage transit usage, walkability and neighborhood scale facilities.

The first private residential development project based on the principles of New Urbanism, *Annesgrove*, began construction in 2000 in the Town of Camillus. Led by Onondaga County's *2010 Development Guide*, efforts are being made to discourage unnecessary creation of new infrastructure into un-urbanized areas until existing built infrastructure nears capacity. This policy is intended to assist in providing cost effective infrastructure investments and curbing suburban sprawl by focusing capital investments on maintaining existing urbanized areas rather than creating new ones. These efforts will be further refined within the *Onondaga County Sustainable Development Plan.*

Annesgrove, in the Town of Camillus

Preservation of Farmland and Open Space

Efforts are also being focused on preserving prime farmland and open space throughout the rural areas of Onondaga County. As discussed prior, new infrastructure, residential and commercial development is slowly entering traditionally farm-based communities. In order to preserve the unique soils important to farming, and to preserve large farm parcels and farm communities, new programs for farmland protection are being implemented. Most notably, the Town of Lysander received seed money to begin a *Transfer of Development Rights* program within the town, whereby building density allowable by zoning on one parcel is transferred to another parcel. Developers can buy the right through zoning to develop a piece of rural land, and 'transfer' those zoning rights to provide for higher densities to develop a different property in a more appropriate location. The costs of purchasing the easements are recovered from the developers who receive the building bonus. In developing this program, the Town of Lysander has developed maps of specific 'sending' and 'receiving' areas for these transactions to occur, in order to properly locate lands for both development and farmland. As such, the TDR program is a process by which the Town can direct residential development in certain areas while protecting specific viable farmland and the Town's rural character in others, thus reducing urban/rural conflicts in the town. Another similar program, entitled the *Purchase of Development Rights*, has also been utilized by the State to purchase the development rights on approximately 3,000 acres in Onondaga County, to date, in return for the owners keeping their farms free from residential or commercial development which would compromise the agricultural viability of the land.

The situation Onondaga County faces is not unique to this county, and is common to almost every urban area in the United States. Significant attention across the nation is now being centered on the "costs of sprawl," and the economic and social benefits of reinvesting in existing city centers,

villages and hamlets. With current government fiscal constraints across New York State, out-migration, and limited economic growth projected in Central New York over the next several years, the costs of sprawl become more important. However, in this same economic climate, municipalities find it difficult to discourage new private development on the basis of sprawl, especially given the relatively large amount of undeveloped land within Onondaga County.

City of Syracuse Comprehensive Plan

As a basis for evaluating the City's assets and trends, and in an effort to prepare a collective vision for the future of the City's economy, community facilities, and services, in 2005 the City of Syracuse developed its Comprehensive Plan 2025.

The City wanted a plan that identified current needs and values of residents, businesses, and institutions as well as an evaluation of its heritage and cultural background. The implementation of the plan, starting with its adoption and proceeding with recommendations such as preparing a future land use plan and amending the City's zoning ordinance, will provide the legal authority to direct development in a prescribed manner. The City of Syracuse Comprehensive Plan 2025 should be viewed as a guiding document. Because it had been so long since the City had a comprehensive plan to guide its future, it is important to view the plan as a starting point to modern day planning. Many issues and recommendations will warrant further study and more input from the public to provide the necessary detail to move forward. The plan provides the framework for the City to make reasonable, informed decisions on how to address the issues and concerns that presently face public officials. Like many communities, the City of Syracuse does not have the necessary resources, financial or otherwise, to accomplish all of the actions recommended that address all of the problems. However, with a plan in place, a proactive mindset, and community consensus on the issues and actions, the City can begin to realize beneficial change and progress towards the future in a well thought out and orderly fashion.

The Plan included a public participation process, and an Advisory Committee was selected to oversee the process and to insure that appropriate conclusions were drawn from previous planning efforts. The advisory committee was comprised of representatives from City neighborhood groups, businesses, institutions and government agencies. The committee met periodically throughout the planning process to guide and review the preparation of this plan. Working Committees were also created to provide another level of community representation. Committees were formed to summarize the issues relative to topics of Work, People, Visitors, Play, Place, and Government. In addition, these committees assisted in drafting the Vision for the Future, and the policies, goals, and recommended actions. The general public was invited to meetings conducted during the planning process to provide additional input and to review the final draft of this plan. [3]

The City has since begun compiling information for the Land Use Plan which is anticipated to be adopted as a component of the Comprehensive Plan. Research for the plan began in 2006 and 2007. The land use plan is anticipated to be created is stages, using the Tomorrow's Neighborhoods Today boundaries for each stage. Not only will this land use plan propose new land uses throughout the city, but it will also recommend zoning revisions and neighborhood design

[3] *http://www.syracuse.ny.us/Syracuse_Comprehensive_Plan__2025.aspx.*

guidelines. This land use planning process will likely take two years. After this is completed, the City intends to revise the zoning ordinance based upon these recommendations. The City also plans to incorporate portions of the SMTC's University Hill Transportation Study land use section into portions of their Plan.

Consistent with the principles outlined in the *Onondaga County Settlement Plan*, the City of Syracuse adopted a change to its zoning code within its Lakefront Development area to encourage new high-density, mixed-use development. This zoning code may serve as a model for future revisions to antiquated zoning regulations throughout the City and County. Towns and villages are also revising ordinances and comprehensive plans to focus more attention on mixed-use development, form-based regulations, access management and corridor protection.

New York State's Transportation Master Plan

Strategies for a New Age: New York State's Transportation Master Plan for 2030 is the State's comprehensive statewide transportation master plan and serves as the federally recognized, long range transportation plan for the State of New York pursuant to Federal law and in accordance with State Transportation Law. Federal regulations require each State to prepare and periodically update a statewide, intermodal transportation plan that addresses specified factors, is developed involving extensive public outreach and covers a period of at least 20 years as a condition of receiving Federal transportation funds. The long range comprehensive statewide transportation master plan covers the period through 2030 and updates the State's 1996 Plan.

The NYSDOT's Transportation Master Plan articulates a long-term, intermodal vision of the State's future transportation system and provides policy level guidance to achieve that vision. The Plan presents key transportation issues that must be addressed in the coming decades and identifies transportation strategies to efficiently serve the mobility needs of people and for the movement of freight. The Plan will serve as a framework for preparing future more project-specific transportation plans and programs including the federally required State Transportation Improvement Program (STIP). In addition, the Plan will guide the State's coordination of transportation plans, programs, and planning activities with related planning activities being undertaken within and outside of the 13 designated metropolitan planning areas within New York. The Plan is centered on New York State's transportation customers' expectations of the transportation system. These expectations are summarized in five distinct but interrelated priority result areas: Mobility and Reliability, Safety, Security, Environmental Sustainability and Economic Competitiveness. Performance will be measured with respect to each of the five priority result areas in order to effectively manage performance of the statewide transportation system.

As the Plan states, transportation is paramount to the quality of life and economic well being of New York. The Plan focuses on the ability of New York's transportation system to safely and efficiently meet the current and future mobility needs of residents, visitors, and businesses. The changing global economy, travel demands, and the needs of customers require new and innovative ways to provide transportation to its users. The New York State Department of Transportation is committed to meeting such challenges by implementing the strategies and recommendations of this

Plan in partnership with local governments, Metropolitan Planning Organizations, and other transportation operators statewide.[4]

5.3.2 PLANNING TOOLS

In an effort to better understand potential land use and transportation trends, the SMTC conducted a review of available community comprehensive plans and local waterfront redevelopment programs to better understand future land and transportation development opportunities. Following an initial discussion that outlines the importance of having a plan and what the plan should contain, a brief summary is presented of each available plan at the time of LRTP writing.

Local Waterfront Revitalization Program

Local Waterfront Revitalization Programs (LWRP) are developed by municipalities in partnership with New York State Department of State (NYSDOS) to address a variety of planning issues confronting their waterfront. Many communities within the MPA contain waterfront properties that provide transportation or recreational opportunities. The following excerpts describe LWRPs and are paraphrased from the New York Division of Coastal Resources web site (**http://www.nyswaterfronts.com/aboutus_LWRP.asp**).

> *Local Waterfront Revitalization Program is both a plan and a program. The term refers to both a planning document prepared by a community, as well as the program established to implement the plan. The Program may be comprehensive and address all issues that affect a community's entire waterfront or it may address the most critical issues facing a significant portion of its waterfront.*
> *As a planning document, a LWRP is a locally prepared land and water use plan and strategy for a community's natural, public, working, or developed waterfront through which critical issues are addressed. In partnership with the Division of Coastal Resources, a municipality develops community consensus regarding the future of its waterfront and refines State waterfront policies to reflect local conditions and circumstances. Once approved by the New York Secretary of State, the local program serves to coordinate State and federal actions needed to assist the community achieve its vision. As a program, a LWRP is the organizational structure, local laws, projects, and on-going partnerships that implement the planning document.*
> *The LWRP may be comprehensive and address all issues that affect a waterfront community or it may address the most critical issues facing a significant portion of its waterfront. Communities with shared interests or resources are encouraged to cooperate or to prepare a common program.*

A LWRP provides numerous benefits to communities who choose to become involved with the process. The LWRP reflects community consensus, establishes a clear vision, and can attract desired development opportunities. The process involves technical assistance from the state, which also helps to establish long term partnerships. The state and federal government is also required to consider LWRP recommendations when they make decisions to permit, fund, and undertake direct actions affecting the local community. Finally, an LWRP increases a community's chances to obtain public and private funding for projects. Communities within the MPA that have LWRPs as of the writing of this document include the City of Syracuse, Town of Clay, and Town of Geddes. Please see Appendix D for summaries of the LWRPs.

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[4] *Strategies for a New Age: New York State's Transportation Master Plan for 2030.*

Comprehensive Plan

According to the New York State Law[5], *"A comprehensive plan consists of the materials written and/or graphic, including but not limited to maps, charts, studies, resolutions, reports, and other descriptive material that identify the goals, objectives, principles, guidelines, policies, standards, devices and instruments for the immediate and long-range protection, enhancement, growth and development of a municipality."*

Generally speaking, a comprehensive plan is created using an extensive public engagement process that involves discussions among residents, business merchants, other community stakeholders, developers, political representatives, planners, engineers, architects, landscape architects, and any other interested group to develop a clear vision for the future growth and/or preservation of a community. As the planning process evolves, issues and opportunities are explored which ultimately lead to the establishment of focused goals and recommended actions designed to achieve the community's vision for the future.

The term "comprehensive plan" is the officially recognized legal reference for plans adopted by a municipality. Although comprehensive plans are officially acknowledged by NYS legislation, a comprehensive plan itself is not a law or regulation, and therefore does not regulate land use or development. The comprehensive plan is simply a document that reflects a community's vision for the future and identifies goals and recommendations that suggest ways of achieving the community's future vision. Local laws such as ordinances (e.g., noise, lighting, signage, etc.) and a community's zoning ordinance and map are laws that regulate land use or development. According to New York State law, zoning and land use regulations must be in accordance with a comprehensive plan. Thus, the comprehensive plan serves as a legal defense for a community's land use regulations because it reflects a public consensus building process where issues are studied and recommendations are made.

Communities with recently adopted comprehensive plans are typically better positioned to achieve a higher quality of life for its residents, businesses, and visitors; ensure an efficient and sustainable use of its limited resources (financial, natural, etc.); maintain a stimulated, robust economy; protect the environment, and increase societal interaction. Because comprehensive plans involve a process of identifying issues and opportunities, communities typically make more informed decisions about development and preservation, resulting in secondary benefits such as lower taxes and more public engagement in the decision making process. A comprehensive plan also reflects the community's consensus about its vision for the future and outlines strategies for community representatives, developers, politicians, etc. to work together to achieve that vision.

Communities with comprehensive plans are more likely to be awarded public and private grants, funding, and other sources of financial assistance to make their projects a reality. SMTC encourages municipalities within its MPA to create or maintain current comprehensive plans. Communities and entities within the MPA that have comprehensive plans as of the writing of this document include (summaries of the documents can be found in Appendix D):

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[5] *NYS Chapter 418 of the Laws of 1995 amending General City Law Section 28-1, Town Law Section 272-a, Village Law Section7-722, and General Municipal Law Section 119-u)*

- City of Syracuse
- Onondaga County
- New York State Department of Transportation
- Towns of Camillus, Cicero, Clay, DeWitt, Hastings, Lysander, Skaneateles, and Van Buren.
- Villages of Central Square, Fayetteville, Liverpool, Manlius, Marcellus, North Syracuse, Phoenix, and Skaneateles.

Recommended Content for Comprehensive Plans & LWRPs

There is one incorporated city - the City of Syracuse, 22 incorporated towns, and 18 incorporated villages within the MPA. Not all of communities within the MPA have comprehensive plans or LWRPs. Moreover, communities that do have these documents often went through different planning processes, identified different issues, and created customized documents that addressed their specific needs. Thus, planning documents come in a variety of forms and address a variety of issues. In some cases, these documents contain specific transportation and land use recommendations, while others do not.

The SMTC encourages municipalities to develop planning documents that contain land use and transportation elements and can offer technical assistance when completing a plan review. When developing a transportation element, the SMTC offers the following considerations to municipalities looking to develop or update their comprehensive plan or LWRP:

- Provide an inventory of:
  - state, county, and local roads and bridges
  - railroad corridors, water routes, and airports
  - bike routes, pedestrian routes, and trails
  - ATV and snowmobile trails
  - parking conditions and needs
- Identify any significant issues and opportunities for existing transportation assets
- Identify future transportation needs based on anticipated development patterns
- Identify a vision for transportation elements and support with policies, goals and objectives
- Develop recommendations for infrastructure studies and improvements.

5.3.3 MEMBER AGENCY ACTION PLANS FOR LAND USE

The SMTC and its member agencies continue to work towards the achievement of the LRTP's land use goals and objectives. As such, the following action plans have either been implemented or are being implemented by member agencies:

Action Plans Implemented:

1. Onondaga County has prepared transportation plans, land use/site design recommendations and/or development suggestions, for the villages, towns and the City of Syracuse. The plans encourage municipalities to utilize techniques and concepts that are supportive of the SMTC 2020 LRTP and Onondaga County's 2010 Plan.

2. The Onondaga County Settlement Plan exists as a development guideline for local municipalities.

3. The Syracuse-Onondaga County Planning Agency is creating a Sustainable Development Plan, which will include public education, land use visioning, and policies and projects intended to foster smart growth practices and land development patterns, including protecting natural resources, transit- and pedestrian friendly development, investment in existing built communities and ensuring sustainable, cost-efficient infrastructure investments, including the transportation network.

4. The Onondaga County Planning Federation is a not-for profit organization with a focus on educating its members on a variety of local and regional planning topics and promoting community and inter-municipal planning within Onondaga County. Well-trained Planning and Zoning Boards help ensure that informed local land use decisions are being made, which leads to more livable and attractive communities for residents. The SMTC facilitated a session on it's Transportation-Land Use Connection CD at the January 2009 symposium, and conducted a session on *The I-81 Challenge* in March 2009. (annual, ongoing project)

5. The SMTC is implementing the guidelines contained in the brochure, *Best Practices In Arterial Management*, prepared by the NYSDOT in cooperation with the New York State Association of Metropolitan Planning Organizations (NYSAMPO) and others.

6. While Centro recently updated its routing system to better serve emerging markets, the dispersal of population to less densely developed suburban and exurban areas makes provision of efficient, effective mass transportation a continual challenge. Centro must continually react to changing land use and demographic conditions with a budget that has not grown commensurately over the years.

7. The Lakefront Zoning plan was adopted in January 2004.

8. The City of Syracuse Comprehensive Land Use Plan and other local municipal plans are being completed.

9. The City of Syracuse has implemented the following community land use action plans:

- City of Syracuse Comprehensive Plan 2025 – This plan, completed in January 2005, includes an analysis of the physical place which includes transportation networks; public spaces; parks; schools; libraries; historic preservation; urban design; natural and cultural resources; land use; and neighborhood plans.
- Lakefront Area Planning Study – The Lakefront Area Planning Study was undertaken to focus on all modes of transportation to determine the overall needs of the greater Syracuse area over a 20-year planning horizon. All modes of transportation including highway and local roadways, rail freight (CSX, New York Susquehanna & Western, and Finger Lakes Railway), transit (OnTrack, Amtrak, bus traffic, Centro), pedestrian, bicycle, water transportation (the Canal and Onondaga Lake/Creek corridor), airport access and truck freight, needed to be evaluated on a local and regional basis. A Task Force was established consisting of many agencies within the region and Phase I of the study has been completed. Phase I on this project evaluated the transportation system, identified regional deficiencies, and a selected and prioritized list of desired projects.

6 ECONOMY

6.1 GOAL

To enhance the area's economic competitiveness, thereby increasing opportunities for employment.

6.1.1 OBJECTIVES

- To place particular emphasis in allocating funding resources and supporting access to economic development projects, which will encourage job creation/retention including the utilization of an industrial access program.
- To place particular emphasis on maintaining an adequate condition and operation standard (maximizing predictability and reliability) on principal arterials, the facilities most heavily used by both freight and passenger vehicles.
- To increase the amount of employer-centered coordination of employee travel by 50%, including coordination of car/vanpooling, employer transit subsidy and guaranteed ride home.

6.2 TRENDS

Local, regional, and national economic trends are summarized below. Emphasis is placed on the MPA's unique attributes that contribute to the success of the local and regional economy. These trends and attributes provide guidance into transportation planning decisions and serve as helpful insight into where future investments in transportation infrastructure could be made.

6.2.1 TRANSPORTATION CROSSROADS OF CENTRAL NEW YORK

Syracuse and Onondaga County benefit from their location at the center of New York State. The establishment of the Erie Canal and the subsequent development of prominent railroad corridors as well as the interstate highway system across Onondaga County ensured Central New York's rise to prominence through continual access to major transportation routes for nearly two centuries.

Today, Onondaga County continues to benefit economically as the transportation crossroads of Central New York. Interstate 81 serves as a significant north-south corridor reaching from Canada to Tennessee. It also intersects the NYS Thruway just north of the City of Syracuse in the center of Onondaga County. The NYS Thruway runs east-west across all of New York State linking with major interstate corridors in neighboring states.

NYS Route 481 also plays a role in the regional transportation network, stretching from I-81 north of the City of Syracuse to the City of Oswego (Interstate 481 runs from I-81 south of the city to I-81 north of the City). Other significant east-west corridors that span across the state include NYS Route 20 and NYS Route 5. Additionally, NYS Route 31 serves as the northern Onondaga County connector.

In addition, the MPA is served by extensive multi-modal transportation hubs, which include: the Syracuse Hancock International Airport, the deep water Port of Oswego, a CSX intermodal freight rail center, and the Regional Transportation Center that offers Amtrak passenger rail service and commercial bus services.

This network is critical in terms of carrying freight which in turn supports the economy. For example, according to the I-81 Corridor Coalition, I-81 is estimated to carry 12% of the United States Gross Domestic Product (GDP). The network is also critical in terms of providing access for commuters to Downtown Syracuse and the University Hill area, where many Central New Yorkers are employed.

6.2.2 CURRENT ECONOMIC CONDITIONS

National Economy
The *Woods & Poole Economics 2010 Data Pamphlet* developed for Oswego, Onondaga, Cayuga, Cortland, & Madison Counties, identifies 30-year forecasts for national economic trends. The 2010 Data Pamphlet looks at items such as GDP, unemployment rates, oil prices, total residential population, and total employment population.

According to the 2010 Data Pamphlet:
"The long-term outlook for the United States economy is one of steady and modest growth through the year 2040. Although periodic business cycles, such as the 2008-09 recession, will interrupt and change the growth trajectory, the nation's employment and income are expected to rise every year from 2010 to 2040."

The report also forecasts that by 2040, population is anticipated to increase 27.4% to nearly 407 million residents, while total employment is anticipated to increase 32.0% to nearly 256 million people employed in the workforce. Employment nationwide is anticipated to grow at 1.06% each year to 2040, while the northeast region is expected to grow at a rate of 0.88% per year. GDP is anticipated to grow at an average annual rate of 2.1% by 2040, and the unemployment rate is expected to be steady at 6.1 percent by the same period. Oil prices are also expected to stabilize but will still lead to inflationary pressures.

Regional Economy
As defined by the New York State Department of Labor, the Central New York Labor Market Region consists of five counties – Cayuga, Cortland, Madison, Onondaga and Oswego. While broader than the SMTC planning area, it is important to understand the regional economy and its impact on the transportation system.

The CNY region covers an area of approximately 3,600 square miles and has an estimated population of approximately 782,000[1]. The region generally forms an area of interdependent

[1] *Empire State Development, Central New York Regional Office, Inside Central New York, http://www.esd.ny.gov/RegionalOverviews/CentralNY/InsideRegion.html.*

economic activity, with Onondaga County at its core. Table 6-1 summarizes some key economic indicators for each of the counties in the Central New York region.

Table 6-1
Civilian Labor Force, Employed, and Rate of Unemployment
By Place of Residence
March 2009-2011

	Labor Force			Employed			Unemployment Rate		
County	March 2011	March 2010	March 2009	March 2011	March 2010	March 2009	March 2011	March 2010	March 2009
Cayuga	40,000	40,600	40,900	36,600	36,600	37,100	8.4%	9.8%	9.5%
Cortland	23,800	24,300	24,500	21,600	21,800	21,900	9.4%	10.3%	10.7%
Onondaga	226,800	229,500	232,700	210,000	210,100	214,700	7.4%	8.5%	7.7%
Oswego	59,200	59,600	60,300	52,700	52,700	53,900	11.0%	11.6%	10.6%
Madison	35,500	35,700	36,300	32,300	32,300	33,000	9.2%	9.4%	9.1%
Central NY Region	385,400	389,700	394,700	353,100	353,500	360,500	8.4%	9.3%	8.7%
City of Syracuse	61,300	62,100	63,000	55,900	55,900	57,100	8.9%	10%	9.4%

Source: New York State Department of Labor Local Area Unemployment Statistics Program, 2009-2011, http://www.labor.ny.gov/stats/lslaus.shtm. Data not seasonally adjusted.

As shown, the Central New York labor force consists of approximately 385,000 employees as of March 2011. Onondaga County accounts for nearly 60% of Central New York's total labor force. The City of Syracuse accounts for nearly 16% of the total Central New York labor force, and approximately 27% of Onondaga County's labor force.

Local Economy

Within Central New York, many of the region's largest employers are located in Onondaga County. These companies and institutions include the State University of New York Health Science Center, Syracuse University, Wegmans Food Markets, Inc., St. Joseph's Hospital Health Center, Crouse Hospital, Lockheed Martin, National Grid, and Loretto to name a few[2].

According to the New York State Department of Labor, the industry sectors with the biggest job gains in the Syracuse metro area over 2009 include:

- Leisure and hospitality (+1,300)
- Educational and health services (+600)
- Professional and business services (+600)
- Other services (+400)
- Natural resources, mining and construction (+300.)

[2] *Greater Syracuse Economic Growth Council Resource Center, Major Employers, http://www.syracusecentral.com/market_data/major_employers/top25.htm.*

Conversely, the largest job losses were in:

- Trade, transportation and utilities (-1,000)
- Manufacturing (-600). [3]

The strongest economic sectors in Onondaga County continue to be in health care and education. The largest concentration of these sectors is located within the City of Syracuse. Educational and health services were the only major sectors to add jobs in the Syracuse area in the 12 month period ending October 2009. Manufacturing, trade, transportation and utilities experienced the greatest decline of employment during this same period.

Although some major businesses have left downtown Syracuse over the last few years (Excellus Blue Cross/Blue Shield), others have relocated to the City, including O'Brien & Gere, which employs approximately 300 people. The Armory Square area continues to draw unique and significant retail development into downtown Syracuse. Significant retail centers have also developed in several suburban locations including the Route 31 corridor in the Town of Clay; Route 5 in the towns of Fayetteville and Camillus; and Route 11 in the Town of Cicero. Business parks and industrial parks also exist sporadically throughout the county, but are primarily located in the northern and western portions of the MPA.

Size of Companies

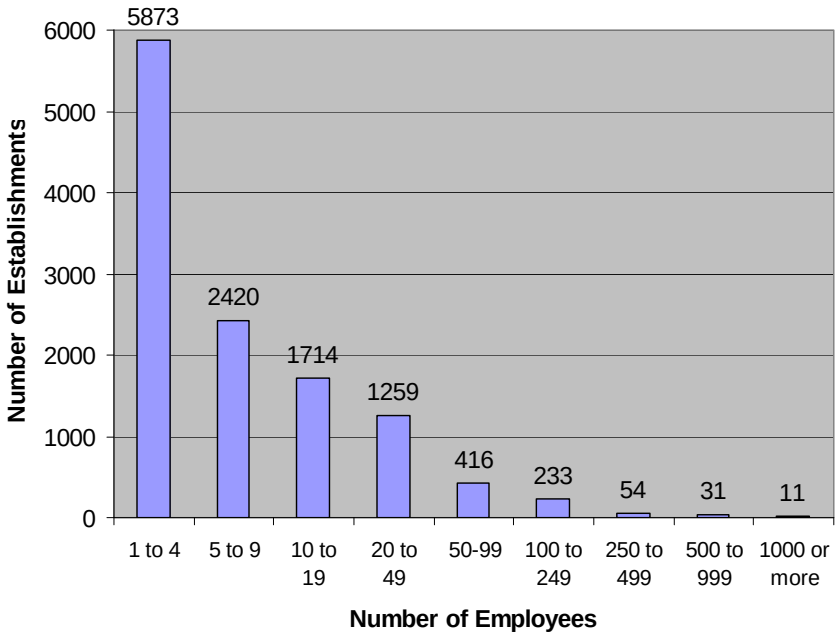
According to the U.S. Census Bureau, more than 83% of establishments in Onondaga County employed fewer than 20 people in 2008; only 11 establishments in Onondaga County employed over 1,000 people in 2008.[4] This represents a 35% drop from a total of 17 companies that existed in 2004. Table 6-2 shows the breakdown of size of establishments in Onondaga County based on the number of employed workers.

Job growth in Onondaga County generally comes from smaller businesses, while employment by large firms continues to decline. This trend towards smaller businesses is becoming more common. Smaller commercial and manufacturing firms have also become more prevalent in Onondaga County. Suburban multi-tenant campuses, consolidating a number of smaller businesses, are also becoming more common than large scale, single tenant campuses.

[3] *New York State Department of Labor, Employment in New York State, October 2010, p 2. http://www.labor.ny.gov/stats/cen/cnyindex.asp.*

[4] *U.S. Census Bureau, County Business Patterns 2008, http://censtats.census.gov/cgi-bin/cbpnaic/cbpsect.pl.*

Table 6-2
Business Size in Onondaga County by Number of Employees (2008)



Source: U.S. Census Bureau, County Business Patterns 2008.
http://censtats.census.gov/cgi-bin/cbpnaic/cbpsect.pl

Estimated Employment by Sector by Municipality

One of the variables utilized in the SMTC's Travel Demand Model included an examination of employment by sector within each municipality in the MPA. The SMTC used the Business Location Analysis Tool (BLAT), provided by NYSDOT, to geocode business locations. These data included a range of employees by employment sector. These figures then provided a framework for the SMTC's projection of the employment data to the horizon year. The SMTC met with various member agencies and local municipalities to further refine base year employment data (more information on how base and future year employment data were derived can be found in the SMTC Travel Demand Model Validation Report prepared by RSG (December 2010)).

Map 6-1 shows the change in employment density between 2007 and 2035, respectively. Most employment growth occurs (in absolute terms) in the City of Syracuse and towns such as DeWitt, Clay and Cicero. The growth rates of employment are lower than incorporated in the previous model, which forecasted 26% growth in employment in 24 years (2003 to 2027), which conforms to the input received from local SMTC member agencies, municipalities, and representatives.

Map 6-1: Change in Employment Density between 2007 and 2035

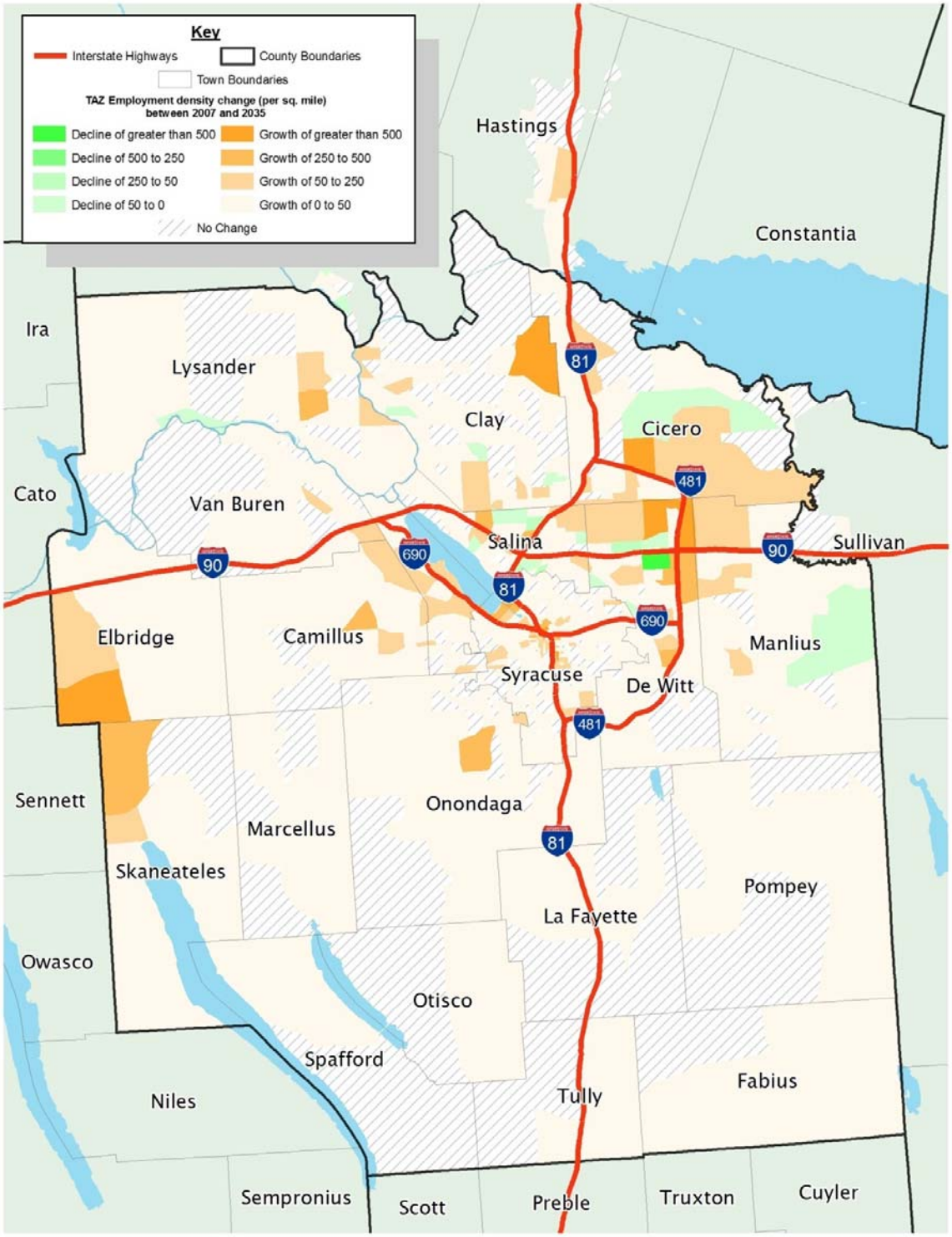


Table 6-3 summarizes the estimated number of employees by sector by municipality for the base year 2007, and future year 2035. It is important to note that employees may work more than one job.

According to Table 6-3, the business sectors with the highest estimated number of employees in the MPA currently are education, retail/trade industries and health. The City of Syracuse is the municipality with the highest number of employees both the education and health industries at 14,376 and 20,730 respectively. Several institutions of higher learning are located in the University Hill area. In addition, most health sector jobs are located at hospitals and medical office buildings on University Hill or at St. Joseph's Hospital. Syracuse also has the majority of retail and trade employees at 8,358, followed by Clay and DeWitt.

The next largest number of employees works in the fields of manufacturing, financial and real estate, and business and professional. The Town of DeWitt has the highest number of employees working in the manufacturing field, followed by the City of Syracuse and the Town of Salina. The City of Syracuse is the municipality with the largest number of employees in the financial and real estate and business and professional sectors.

The job sectors with the least number of employees include mining and agriculture. Only the Towns of Cicero, Clay, DeWitt, Geddes and the City of Syracuse report employees working in the mining industry. The Towns of DeWitt, Onondaga, Salina and the City of Syracuse show the most number of employees (around 66 in each municipality) working in the agriculture sector.

The number of jobs in the MPA region is projected to grow by 12% from 252,753 in 2007 to 282,753 in 2035.

Table 6-3
Employees by Sector by Municipality
SMTC MPA

SMTC Travel Demand Model 2007 - 2035 Employment					AGRICULTURE		BUSINESS, LEGAL, PROFESSIONAL		COMMUNICATIONS		CONSTRUCTION		EATING AND DRINKING		EDUCATION		FINANCIAL, INSURANCE, REAL ESTATE		GOVERNMENT		HEALTH		HOTELS & LODGING		MANUFACTURING		MINING		NON-CLASSIFIABLE		RETAIL TRADE		SERVICE		SOCIAL SERVICE		TRANSPORTATION		UTILITIES		WHOLESALE TRADE	
	Municipality	2007	2035	Change	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035	2007	2035
Total	MPA	**252753**	**282753**	**30000**	526	535	24585	27860	5205	5812	10414	10742	15027	15806	29679	31026	20005	22794	11773	12408	28689	32946	2021	2378	26258	30748	198	231	1516	1544	29165	34041	15389	17291	5538	6263	11949	15258	1575	1679	13241	13391
City	Syracuse	103197	116443	**13246**	64	67	10406	11367	3223	3454	2646	2798	5010	5199	14376	15061	9815	11269	6915	7353	20730	24230	648	894	4963	5108	1	1	255	272	8358	11910	6301	6976	3189	3623	2416	2758	823	863	3058	3240
County	Onondaga	250277	279844	**29567**	511	522	24526	27775	5205	5812	10236	10527	14911	15671	28979	30285	19960	22744	11603	12229	28612	32847	2021	2378	26183	30596	198	231	1486	1512	28375	33120	15283	17132	5528	6251	11881	15180	1575	1679	13204	13353
	Madison	25	174	**149**	0	0	6	22	0	0	3	6	1	2	0	0	0	0	0	0	1	2	0	0	0	86	0	0	0	0	1	9	11	42	0	0	2	5	0	0	0	0
	Oswego	2451	2735	**284**	15	13	53	63	0	0	175	209	115	133	700	741	45	50	170	179	76	97	0	0	75	66	0	0	30	32	789	912	95	117	10	12	66	73	0	0	37	38
Municipality	Camillus	5394	6433	**1039**	22	22	393	561	27	54	47	48	767	830	609	623	392	528	259	267	428	489	64	73	194	386	0	0	0	0	1546	1688	196	288	134	178	156	230	102	110	58	58
	Cicero	11318	13198	**1880**	15	14	1010	1048	31	32	767	762	1201	1236	1182	1194	551	553	180	182	320	326	88	89	1164	1574	1	1	31	34	1887	1927	1318	1509	147	151	1062	2200	5	5	358	361
	Clay	21039	23821	**2782**	18	20	1209	1359	234	255	539	550	1572	1619	2022	2125	1948	2136	632	647	1649	1726	34	35	1561	3111	59	59	112	111	5005	5340	1286	1421	421	459	1121	1178	36	40	1581	1630
	Dewitt	45091	49499	**4408**	76	74	5263	6742	988	1236	3016	3053	1719	1789	2109	2201	3777	4151	469	494	1231	1484	409	416	9413	9115	85	120	866	869	4701	4856	2326	2750	604	635	4417	5858	79	80	3543	3576
	Elbridge	1595	2453	**858**	14	17	126	177	0	0	73	93	90	100	504	664	52	60	56	66	18	18	1	2	403	942	0	0	11	12	131	144	37	47	4	4	31	47	1	2	43	58
	Fabius	450	474	**24**	14	14	12	13	0	0	18	19	4	5	223	234	1	1	20	21	10	11	85	88	18	19	0	0	0	0	4	4	37	40	3	4	1	1	0	0	0	0
	Geddes	8171	9017	**846**	12	12	581	612	56	58	448	465	599	619	938	967	294	310	209	221	729	849	92	105	1554	2059	52	50	147	148	523	540	324	350	27	30	152	165	145	157	1289	1300
	Hastings	1565	1795	**230**	10	8	20	27	0	0	90	107	85	99	440	468	10	13	10	11	55	75	0	0	20	20	0	0	30	32	710	828	60	79	5	6	5	6	0	0	15	16
	Lafayette	779	833	**54**	1	1	54	55	0	0	56	57	63	65	100	106	22	23	130	147	36	38	0	0	7	7	0	0	14	16	34	38	81	86	26	29	130	140	0	0	25	25
	Lysander	5694	6419	**725**	36	35	300	329	65	70	158	165	272	285	482	503	160	176	161	173	154	172	57	64	1436	1720	0	0	0	0	491	613	205	247	37	41	786	892	19	21	875	913
	Manlius	9244	9924	**680**	21	19	624	738	42	44	357	368	607	660	1429	1461	482	596	366	387	405	413	27	27	1083	1111	0	0	20	20	2481	2551	629	744	294	373	192	216	8	8	177	188
	Marcellus	1312	1434	**122**	15	18	16	18	1	1	72	78	99	108	131	139	21	24	537	567	50	69	0	0	38	38	0	0	4	4	153	164	83	98	25	31	30	36	3	5	34	36
	Onondaga	6447	7045	**598**	68	70	267	275	228	275	122	125	203	211	2217	2277	97	101	548	563	1845	1983	1	1	181	186	0	0	0	0	198	416	306	337	72	127	43	46	1	1	50	51
	Otisco	145	152	**7**	4	5	7	7	0	0	9	9	9	9	0	0	0	0	28	28	0	0	0	0	0	0	0	0	0	0	10	10	34	34	0	0	21	24	4	4	19	22
	Pompey	470	505	**35**	20	20	56	62	0	0	45	47	31	33	11	12	4	5	82	85	15	16	0	0	0	0	0	0	8	8	14	15	130	141	0	0	12	13	11	13	31	35
	Salina	20815	22056	**1241**	65	67	2471	2661	249	261	1540	1544	2045	2104	1651	1693	1752	2186	699	704	737	756	376	435	3243	3753	0	0	5	5	1939	1957	1359	1391	224	233	885	913	300	326	1275	1067
	Schroeppel	886	940	**54**	5	5	33	36	0	0	85	102	30	34	260	273	35	37	160	168	21	22	0	0	55	46	0	0	0	0	79	84	35	38	5	6	61	67	0	0	22	22
	Skaneateles	4533	5014	**481**	10	11	1373	1385	37	40	102	106	302	323	216	223	502	529	211	220	84	89	121	131	753	1073	0	0	0	0	302	323	199	215	131	144	120	127	24	26	46	49
	Spafford	37	52	**15**	0	0	0	0	0	0	5	8	13	20	0	0	2	3	0	0	0	0	0	0	8	12	0	0	0	0	6	6	3	3	0	0	0	0	0	0	0	0
	Sullivan	25	174	**149**	0	0	6	22	0	0	3	6	1	2	0	0	0	0	0	0	1	2	0	0	0	86	0	0	0	0	1	9	11	42	0	0	2	5	0	0	0	0
	Syracuse	103197	116443	**13246**	64	67	10406	11367	3223	3454	2646	2798	5010	5199	14376	15061	9815	11269	6915	7353	20730	24230	648	894	4963	5108	1	1	255	272	8358	11910	6301	6976	3189	3623	2416	2758	823	863	3058	3240
	Tully	1293	1305	**12**	2	2	110	109	0	0	78	79	122	125	474	486	17	17	0	0	21	20	15	15	0	0	0	0	8	8	73	75	119	117	154	151	68	67	0	0	32	34
	Van Buren	3253	3767	**514**	34	34	248	257	24	32	138	153	183	331	305	316	71	76	101	104	150	158	3	3	164	382	0	0	5	5	519	543	310	338	36	38	238	269	14	18	710	710
	West Monroe	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Targeted Commercial/Industrial Sites

In an effort to encourage new business and expansion within the Upstate New York Region, New York State created its *Empire Zone* Program in 1987. This program was created to stimulate economic growth through a variety of tax incentives and utility reductions to facilitate business growth in selected target areas in New York State. This program closed to new entrants in June 2010. Businesses already certified in the program (prior to June 30, 2010) will continue to receive all Empire Zone benefits for rest of their 10-year benefit period as long as they remain in compliance with the law and Empire Zone regulations.

In September 2010, New York State announced the launch of the new Excelsior Jobs Program that will take the place of Empire Zone tax credits. Excelsior Jobs will provide tax credits to businesses to address payroll, facility investments, R&D work and property taxes, only after a company has actually made those investments. [5] Benefits will be limited to specific sectors, and companies will need to create and maintain a minimum number of new jobs. Companies will be able to receive the new credits for five years.[6] Investment Zones in Central New York include Syracuse, Auburn, Oswego, Fulton and Cortland.

An added business development incentive for the City of Syracuse was announced in 2002, with the designation of the City as a *Federal Empowerment Zone* by the Department of Housing and Urban Development (HUD) shown in Map 9. The designation entitles eligible business owners in targeted areas to receive regulatory relief and tax breaks to promote job growth and economic opportunity in order stimulate community revitalization. The Syracuse Empowerment Zone[7] includes census tracts within the City of Syracuse and three "developable sites" outside the city. Census tracts include the Lakefront and former Oil City, the North Salina Street corridor, the near West Side to Geddes Street, part of the South Side to Brighton Avenue and an area south from I-690 which includes most of the University Hill. Development sites include Hancock Air Park, Electronics Park and the former GM Fisher Guide site. This program remains intact.

The following are some of the significant sites that Onondaga County has marketed for industrial and commercial development in Onondaga County and shown in Map 6-2:

- Salina Power Park
- Hancock Air Park
- Route 298 Corridor
- Clay Business Park
- Radisson Industrial Park

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[5] Sichko, Adam: The Business Review, Details of Paterson's Excelsior Jobs plan released, June 18, 2010, http://www.bizjournals.com/albany/stories/2010/06/14/daily52.html (accessed 11/12/10).

[6] New York State's Empire State Development, Excelsior Jobs Program Overview, http://www.empire.state.ny.us/BusinessPrograms/Data/Excelsior/Excelsior_ProgramOverviewedit.pdf (accessed 11/12/10).

[7] Greater Syracuse Economic Growth Council Resource Center, Business Resources – Empowerment Zones, http://www.syracusecentral.com/business_resources/empowerment_zones.htm, accessed August 2010.

- Route 481 Corridor
- Syracuse University Research Park
- Woodard Industrial Park.

Proposed Economic Development Projects

In addition to the abovementioned commercial corridors and sites, intended for large scale industrial and commercial tenants, several projects are also underway or proposed which are intended to serve as economic development stimulants and anchors for their respective communities and the region. The following is a brief synopsis of projects either recently built or under proposal in a public forum, keyed to Map 6-2.

A. Lakefront Development District:
The project involves the ongoing redevelopment of a former industrial district to include retail/entertainment and mixed-use development of the Inner Harbor, historic Franklin Square, and on additional available land within the Lakefront area.

B. Downtown Syracuse / University Hill Redevelopment:
Several economic development initiatives are being pursued to maintain occupancy of existing office structures, encourage new residential conversion of buildings, and create an inviting urban core. Downtown Syracuse has seen a variety of activity, centering around new green office space and downtown housing options. Two new buildings representing approximately $50 million in investment were constructed in recent years at the edges of the Armory Square District, while the upper floors of several existing downtown buildings have been converted into hundreds of new market rate housing units, and the Landmark Theater is undergoing a $16 million expansion.

On University Hill, Syracuse University, SUNY-ESF, and SUNY Upstate Medical University are all investing in several ventures, including new academic buildings, student housing; research facilities and associated office and support services. Syracuse University is spearheading a West Campus multi-building initiative and the creation of a 'Connective Corridor', physically and conceptually linking cultural institutions between Downtown, and the University area. Area hospitals also continue to reinvest in their facilities, with several expansion/upgrade projects, including the newly opened Children's Hospital and plans for a Cancer Center addition to the SUNY Upstate Medical Center. More than $700 million of new capital projects are planned on University Hill, of which $380 million is already underway

C. St. Joseph's Hospital/Prospect Hill
Prospect Hill refers to the immediate neighborhood surrounding St. Joseph's Hospital (SJH), one of the largest employers in Syracuse and the economic anchor of Syracuse's Northside. The Prospect Hill Development Initiative is a collaborative effort to expand existing businesses, attract new business, stabilize housing, and make significant upgrades to the hospital facility.

LEGEND

Developable Commercial/Industrial Sites

1. Salina Power Park
2. Hancock Air Park
3. Route 298 Corridor
4. Clay Business Park
5. Radisson Industrial Park
6. Route 481 Corridor
7. Syracuse University Research Park
8. Woodard Industrial Park

Proposed Economic Development Projects

A. Lakefront Development District
B. Downtown Syracuse / University Hill
C. St. Joseph's Hospital / Prospect Hill
D. Near Westside Initiative
E. Baldwinsville Waterfront
F. Three Rivers Waterfront
G. Van Buren Action Sports Complex
H. Township 5 Mixed Use
I. Camillus Cutlery Redevelopment
J. Village of Liverpool Lakeside Business District Redevelopment
K. Brewerton Hamlet Redevelopment
L. Madison Row Mixed Use

Retail Corridors

Recent Residential Subdivision Activity

Data Sources: NYSDOT, NYSOCS, SMTC, and SOCPA
Prepared by SOCPA, 4/2011.

Map Area

SMTC
100 Clinton Square
126 North Salina Street Suite 100
Syracuse, New York 13202
(315) 422-5716
Fax: (315) 422-7753
www.smtcmpo.org

Onondaga County Economic Development Areas

Long-Range Transportation Plan 2011 Update

Map 6-2

0 1 2 Miles

D. Near Westside Initiative
The Near Westside neighborhood in Syracuse is the focus of a comprehensive redevelopment strategy aimed at improving the quality of the housing stock and rehab of older buildings, as well as incorporating focused social programming for residents in this concentrated area near Downtown Syracuse. Significant reinvestment in the area has already occurred and is expected to continue.

E. Baldwinsville Waterfront
For the last several years, the Village of Baldwinsville has been aggressively developing a master plan for the riverfront and canal areas around the Seneca River and Lock 24 of the New York State Canal System, including new retail, parks and trails and a public amphitheater.

F. Three Rivers Redevelopment
The Town of Clay is working to reclaim brownfield sites, and encourage the transformation of the Three Rivers Point in the northern portion of the town into a mixed-use hamlet, consisting of waterfront shops, office buildings, and a mix of housing types.

G. Van Buren Action Sports Complex
Owners have received approvals to rezone 48-acres to allow for the creation of a $70 million Sports Complex to host 2 hotels, a water park, restaurants and retail, and various indoor and outdoor sports activities. The site is adjacent to the NYS Thruway and Interstate 690, and is anticipated to attract up to 350,000 people annually when fully developed.

H. Township 5
Township 5 is being proposed as a mixed use 'lifestyle' development with up to 150 residential units, 70,000 square feet of office, hotel, retail and entertainment with significant frontage along Route 5 in the Town of Camillus.

I. Camillus Cutlery Redevelopment
The Village of Camillus is working to revitalize and repopulate the former Camillus Cutlery building, which anchors the village at its centerpoint. A proposal is being pursued to redevelop the site into a mixed use project including senior housing and related medical and community support facilities on site.

J. Village of Liverpool Lakeside Business District Redevelopment
A number of vacant and underutilized properties in the Village's lakeside business district are the focus of planning and redevelopment activity, capitalizing on the historic village character, pedestrian scale and proximity to Onondaga lake Park users. New and proposed uses include retail, restaurant and apartments.

K. Brewerton Redevelopment
The Town of Cicero recently undertook a significant planning effort to establish a redevelopment strategy for the hamlet of Brewerton in Northern Cicero, along the Oneida River at the gateway to

Oneida Lake. The plan and associated zoning is aimed at making strategic public investments to improve access to the waterfront and revitalize its existing traditional building stock to serve residents and visitors and provide community services to the surrounding community.

L. Madison Row Mixed Use Redevelopment
Work has recently begun to transform a block of land along Route 92 in the Village of Manlius into a $16 million retail and residential mixed use development, designed in context to the traditional village setting and to encourage pedestrian traffic.

Map 6-2 also indicates the approximate extent of major retail corridors and significant residential subdivision activity in the Syracuse metropolitan area.

The Central New York Regional Planning and Development Board's (CNYRPDB) *Central New York Initiative: A Comprehensive Economic Development Strategy for Central New York (CEDS),* a document prepared annually to recommend short-term projects that will support economic growth in CNY, contains more detail on several of the projects noted above. The document's project priority list includes projects in Cayuga, Cortland, Madison, Onondaga and Oswego Counties.

6.3 PLANNING EFFORTS

6.3.1 MEMBER AGENCY ACTION PLANS RELATED TO ECONOMY

Part of the process for updating the 2020 LRTP during 2001 included the identification of action plans that had been implemented under each of the six goals since 1995, including community economy. This 2011 Update will emulate the 2001, 2004, and 2007 LRTP Updates by addressing and updating the implementation actions associated with the Plan's specific goals and objectives (the 1998 Update did not address implementation actions). The identification of implemented action plans involved discussions with the member agencies responsible for their respective TIP projects. In the section that follows, the implemented community economy related action plans are presented. The implemented action plans are summaries rather than complete descriptions. In many cases, overlap exists because a particular action plan may apply to multiple goals.

Action Plans Implemented:

1. A regionally significant economic development organization, the CenterState Corporation for Economic Opportunity (CEO) was recently formed to combine the Greater Syracuse Chamber of Commerce and the Metropolitan Development Association (MDA), along with various partners across the Central New York area. The CenterState CEO is a twelve-county business leadership and economic development organization, based in Syracuse, New York that serves as the region's primary economic, community and business development catalyst[8]. CenterState CEO was formed as a

[8] *CenterState CEO, Home Page http://www.centerstateceo.com.*

result of the *Essential New York Initiative* (published in 2004), a major work effort of the MDA to "transform Central Upstate to a Knowledge-Based Economy"[9].

2. Potential TIP projects must meet a variety of transportation and economic criteria. For example, a project related to capacity/mobility that displays characteristics beneficial to the community may be ranked higher, based on its potential to improve the quality of life for the community. These projects may demonstrate characteristics such as industrial corridor access or improvements, and strategic or planned economic development.

3. The NYSDOT has expended significant resources on economic development-related projects through the Industrial Access Program (IAP). Funding received through the IAP for $950,000 plus $300,000 in multimodal funds allowed for the construction of improved truck access to the Anheuser-Busch Brewery in Baldwinsville. The project supported the Brewery's $100 million upgrade that secured over 1,000 jobs for Central New York. The construction project, coupled with the designation of Willet Parkway, West Entry Road and Hencle Boulevard as State Touring Route 631, has virtually removed truck traffic from the center of the Village of Baldwinsville. Additionally, several new parcels were opened in the Radisson Corporate Park and have since been developed (i.e. Ainsley Warehouse, Nathan Spec-250 Warehouse). Several other economic development projects were recently completed, which had a related transportation element. The Whitacre Engineering Company of Liverpool invested $1.5 million and added 37 jobs after the NYSDOT awarded a $200,000 grant/loan to construct a rail siding into their facility on Wetzel Road. Handheld products in the Town of Skaneateles received $750,000 IAP for construction of 3,500 feet of new roadway to provide truck and employee access to their office and manufacturing facilities. The IAP commitment triggered $10.5 million investment and the creation/retention of 400 jobs in the community.

   In the Town of DeWitt is the recently completed $14 million Sensis Corporation facility at Collamer Business Park, with the promise of 200 jobs. The industrial access program has delivered $1 million for construction of 4,200 feet of interior roadways and will require intersection improvements at State Route 298.

4. The SMTC undertook a City of Syracuse Truck Route Study and published a plan for truck routes and freight movement. The SMTC member agencies participated in the study, which was presented to the City of Syracuse transportation officials to implement recommended improvements.

5. The SMTC has adopted TIP selection criteria that give appropriate weight to intermodal connectivity for freight. Regional capacity and mobility shall also be improved by increased transit, bicycle and pedestrian travel and enhanced by promoting the

[9] *Metropolitan Development Association, Essential New York Initiative, 2004.*

connectivity of the National Highway System routes to the non-highway transportation modes. These criteria must be met in order for a potential federal aid candidate project to become an SMTC TIP project.

6. The OCDOT oversaw the Kirkville Road / Fly Road Intersection Project (2002 Completion) that added dedicated turn lanes on all approaches, channelization improvements, signing improvements and upgraded signalization to improve an intersection with an accident rate well above the State Mean Accident Rate. Additional left turn lanes southbound and a right turn lane westbound were added to improve mobility through the intersection during New Venture Gear rush hours. The project was initiated due to requests from New Venture Gear on behalf of their employees.

7. The CNYRTA has acquired land and is in the construction process to move its Common Center in the City of Syracuse to an alternate weather-protected location where buses can load and transfers may be made out of the general traffic flow. This project will be completed in winter 2011/2012.

8. In May 2009 CNYRTA implemented service changes and a fare increase in response to a budgetary shortfall. In January and April 2011 further major service reductions were implemented in response to ongoing reductions in State aid and shortfalls in Mortgage Recordings Tax fees. These changes are imperative to ensure that the Authority remain fiscally solvent.

9. The CNYRTA has reviewed the factors affecting mode choice in the SMTC urbanized area in its continuing efforts to increase transit ridership. Several factors continue to impact the agency's ability to increase ridership including a low density regional development pattern that minimizes opportunities for creating the type of critical mass needed to support transit service; low levels of congestion at peak hours compared to other large urban areas; city and suburban parking policies that result in providing the public with large areas of inexpensive automobile parking space; time and cost differentials that often favor single occupancy commuting; generally improving air quality; and a high capacity roadway network. The January and April 2011 service reductions largely target routes serving suburban and exurban areas where ridership is poor.

10. In 2009, the CNYRTA initiated a study to determine the potential benefits, costs and feasibility of implementing a new system of park-and-ride lots in suburban Syracuse transit corridors. This study was completed in fall 2010.

11. The CNYRTA has committed to acquiring low emission buses as part of the region's effort to comply with the provisions of the Clean Air Act. The majority of the CNYRTA's fleet is powered by compressed natural gas. In addition, a limited number of

hybrid-electric vehicles have been acquired. No further hybrid-electric vehicles will be purchased as their additional cost, in a severely constrained fiscal environment, has been found to exceed their minor environmental benefit. In addition, where diesel fueled vehicles are employed a bio-fuels mix is utilized.

12. In 2009, in response to recommendations developed in its University Hill Transportation Study, the CNYRTA has suggested that the SMTC conduct a transit study to determine the potential benefits, costs and feasibility of implementing a BRT or LRT system to serve the Syracuse region. The initial work efforts will be examined through *The I-81 Challenge*.

13. The CNYRTA efforts such as the Employer Fare Deal and Welfare-to-Work Transportation Programs contribute to making the region economically competitive as business served are able to recruit employees from a wide range of socio-economic groups, including the disabled population. These groups are able to be income productive due to the mobility afforded them by the CNYRTA system.

7 ENVIRONMENT

7.1 GOAL

To provide a clean and environmentally sound transportation system for current and future residents.

7.1.1 OBJECTIVES:

- To implement programs that lead to improvement in the region's air and environmental quality.
- To reduce the total daily carbon monoxide (CO) emissions from mobile sources by at least 60% from 1991-2003.
- To reduce the overall use of road salt through more efficient application on roadways by 2020.

7.2 TRENDS

Global trends such as declining oil supplies have the potential to impact the way MPOs plan for transportation infrastructure investments during the next twenty to twenty-five years. Fuel costs have the potential to increase exponentially as the global demand for oil exceeds peak oil production. The SMTC acknowledges these trends and their potential to influence transportation policies and land use decisions, specifically as they relate to developing a socially, financially, economically, and environmentally sustainable transportation infrastructure.

The SMTC recognizes that an effective way to protect the environment is to promote sound infrastructure investments that encourage multimodal and walkable communities. As such, the SMTC strives to balance the transportation and land use cycle through sound design of infrastructure and land use patterns. To strike a balance between transportation and land use, the SMTC works with its member agencies to plan for and implement Smart Growth planning principles.

Smart Growth planning principles discourage the development of transportation infrastructure and land use patterns that cater solely to single occupancy vehicle designs. In addition to accommodating automobiles, Smart Growth encourages additional mobility options through sound growth patterns and infrastructure design. An example of an environmentally sound growth pattern includes developing walkable communities where people don't need their car to access multiple destinations. Promoting mobility choice (i.e., cars, buses, bikes, motorcycles, mass transit, etc.), walkability, and multi-modal community development patterns is an effective way to protect the environment by reducing vehicle miles traveled (VMT). Reducing VMT helps preserve the environment by reducing oil consumption, which results in less air and water pollution, fewer cars on the road (i.e., less congestion), and less noise pollution.

7.3 ENVIRONMENTAL MITIGATION ACTIVITIES

Environmental mitigation is the process of consistency of transportation planning with applicable federal, state and local energy conservation programs, environmental goals, and objectives. Environmental mitigation is incorporated into the current LRTP's goals for establishing project priorities. As required through SAFETEA-LU, the LRTP should include a discussion about environmental mitigation as follows:

> *The metropolitan transportation plan shall… include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. The discussion may focus on policies, programs, or strategies, rather than at the project level. The discussion shall be developed in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies. The MPO may establish reasonable timeframes for performing this consultation.*

The SMTC member agencies are already engaged in environmental mitigation activities at the planning and project level through the implementation of (a) National Environmental Policy Act (NEPA) and State Environmental Quality Review Act (SEQRA) regulations and (b) Context Sensitive Solutions (CSS) which ensure that projects are in harmony with the community, and that they preserve environmental, scenic, aesthetic, historic, and natural resource values of the area in which they are located.

The SMTC's LRTP is essentially a policy level document that does not specifically contain many significant projects in the out-years for which potential mitigation activities would be appropriate. Specific mitigation measures will be examined at the project phase via the SEQR/NEPA process and are therefore beyond the scope of this document. However, environmental mitigation is a major consideration in local major investment studies, planning studies, and other planning efforts.

In addition, the SMTC works with various agencies in regards to air quality and conformity. Air quality, as it pertains to the operations of the SMTC and its member agencies includes the state and federal requirements for transportation conformity[1], project level analysis for Congestion Mitigation/Air Quality (CMAQ) funding, and requirements for the State Energy Plan (SEP) and Greenhouse Gas analysis. The Interagency Consultation Group (ICG) is federally mandated to exist as part of the conformity rule. The ICG operates on a consensus basis and is required to approve

[1] Transportation conformity ("conformity") is a way to ensure that Federal funding and approval is applied to those transportation activities that are consistent with air quality goals. Conformity applies to transportation plans (such as the SMTC Long Range Transportation Plan [LRTP]), Transportation Improvement Programs [TIPs], and projects funded or approved by the Federal Highway Administration [FHWA] or the Federal Transit Administration [FTA]) in areas that do not meet or previously have not met air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide. These areas are known as "non-attainment areas" or "maintenance areas," respectively. Transportation projects must demonstrate conformity in order to be funded.

the SMTC's conformity analysis. This group consists of the following agencies: the SMTC, Federal Highway Administration (FHWA), Federal Transit Administration (FTA), the New York State Department of Transportation Environmental Science Bureau (NYSDOT ESB), the New York State Department of Environmental Conservation (NYSDEC), and the Environmental Protection Agency (EPA). The SMTC is in constant communication with the ICG to ensure that conformity is met. Also, the NYSDOT ESB is responsible for making sure that the SMTC adheres to the State Energy Plan and related Greenhouse Gas analysis requirements, as these are State mandated activities. The SMTC through consultation with its various member agencies and the previously outlined consortium of interested parties actively solicits input into this policy level plan. Detailed mitigation efforts are beyond the scope of this plan as no project details exist.

The SMTC also currently works with several regulatory agencies through the SMTC committee structure, including the Central New York Regional Planning and Development Board and New York State Department of Environmental Conservation (both of which are voting members represented through this committee structure). In addition, the SMTC has continually sought participation from the Onondaga Nation. Also, SAFETEA-LU includes an additional consultation section requiring the MPO to consult "with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The consultation shall involve, as appropriate: (1) Comparison of transportation plans with State conservation plans or maps, if available; or (2) Comparison of transportation plans to inventories of natural or historic resources, if available." This effectively requires involvement of these agencies in the long range planning process for the same reasons they are involved in project development (Environmental Impact Statement) work. As part of the public outreach for the LRTP 2011 Update, the SMTC has also completed outreach to the agencies noted below (contact information for these agencies can be found in Appendix E) to appropriately address this consultation requirement. Outreach efforts included a letter sent to all agencies soliciting written comments, as well as an invitation to the LRTP 2011 Update Public Meeting to address any concerns relevant to the mitigation efforts as outlined in SAFETEA-LU. Outreach was completed to the following agencies (some of these agencies are SMTC Member Agencies):

- NYS Office of Parks, Recreation and Historic Preservation
- Central New York Regional Planning and Development Board*
- Onondaga Nation
- NYS Department of Environmental Conservation*
- Army Corps of Engineers
- Cornell Cooperative Extension – Onondaga County
- Cornell Cooperative Extension – Madison County
- Cornell Cooperative Extension – Oswego County
- Onondaga County Office of the Environment
- Onondaga County Health Department
- Onondaga County Council on Environmental Health

- Madison County Health Department
- Oswego County Health Department
- Onondaga County Department of Water Environment Protection (WEP)
- NYS Canal Corporation
- NYS Department of Agriculture
- NYS Department of State
- NYSDOT Environmental Unit*
- United States Environmental Protection Agency, Region 2
- NYS Soil and Water Conservation Committee (SWCC)
- Onondaga County Soil and Water Conservation District
- Madison County Soil and Water Conservation District
- Oswego County Soil and Water Conservation District
- Central New York Land Trust
- New York Water Environmental Association (NYWEA)
- NYS Emergency Management Office, Region 4
- Onondaga County Emergency Management Office
- US Fish and Wildlife Service
- National Park Service
- Federal Aviation Administration
- National Marine Fisheries Service
- Finger Lakes – Lake Ontario Watershed Protection Alliance (FL-LOWPA)
- USDA Natural Resources Conservation Service
- Syracuse Department of Water
- Syracuse-Onondaga County Planning Agency (SOCPA)*
- NY Forest Owners Association (NYFOA)
- North East Foresters Association (NEFA)

*SMTC Member Agency

The LRTP takes into account potential environmental impacts when adopting the Plan. If impacts are found, then consideration is given to how such impacts might be mitigated. The SMTC's plans identify as best as possible the impact of proposed transportation projects on environmental factors such as wetlands, watercourses, historic districts, etc. Most environmental mitigation is detailed in the project design phase, and the SMTC member agencies encourage and support this activity. Air and noise analysis are issues evaluated both at the regional planning level and at a project's design stage.

Consultation as necessary will be undertaken with environmental protection agencies (including the NYSDEC), wildlife management authorities, and land management and historic preservation

interests. The SMTC maintains a GIS that supports its transportation planning by having readily available data layers including watersheds, wetlands, aquifers, and rare and endangered species.

Mitigation is normally evaluated during the design of a project and the selection of project alternatives. However, mitigation actions can also be stand-alone projects intended to offset or replace a certain environmental function(s) that was lost as a result of construction of the transportation project. Examples include storm water management facilities, wetland replacement projects, stream restoration projects, reforestation projects, construction of sound walls, replacement of parklands, and wildlife crossing structures. A typical highway runoff mitigation situation occurs when the runoff from a section of roadway is causing erosion and sedimentation problems that are impacting a wetland and/or a lake. Possible mitigation would be to rebuild and/or repair drainage ditches. If it is discovered that the time of year of a roadway's construction may impact some endangered species, the project's construction schedule is adjusted to minimize its impact on the nesting habits of the species. Archeologists are called in during the construction phase of a project in the event that a potential historic site, previously unknown, is uncovered.

The SMTC also recognizes that, in order for the environmental mitigation projects to continue to provide the long term functionality that was intended when they were first constructed, they must be properly maintained, and when necessary rehabilitated or reconstructed. Some examples of the NYSDOT projects that include environmental mitigation are the Baldwinsville Bypass Project-Phase I (completed), I-690 over CSX Railroad (completed), Rt. 370 Parkway Project (in planning stages), Rt. 31 Widening Project/Mud Creek Bridge (completed), I-81 Bridge over Oneida River/Fishing Access (completed). These environmental mitigation efforts are considered to be assets, just as more traditional highway elements such as pavements, bridges, and drainage structures are considered assets, and as such their maintenance and long term preservation lend themselves to an asset management approach.

A wider, safer highway for motorists can create a problem for native animals. Temporary and permanent fencing is employed where appropriate to divert animals to safer areas away from construction and from the roadway itself. Wildlife crossings are also designed into the new highways to provide alternatives for animals wanting to cross the roadway. In addition to the mitigation measures associated with fauna, mitigation can also apply to the protection of flora, such as the preservation of the unique landscape. If such a situation is encountered, the mitigation will be considered during the design of the highway project.

Environmental mitigation measures can be funded with federal, state, and local monies. From the federal standpoint, such activities can be a part of the actual construction activity (normal federal-aid monies) or can be with FHWA Transportation Enhancement Program (TEP) funding for stand-alone projects. In both cases, the types of actions eligible for funding are generally the same, although TEP projects have more latitude in eligibility as long as the site can relate to a transportation facility.

Congress included the language on TEP projects as a means of stimulating additional efforts to create an improved transportation environment and system, while making a contribution to the surrounding community. This is done through implementation of the specific activities listed in the legislation. Enhancement measures in the activities listed, which go beyond what is customarily provided as environmental mitigation, are considered as transportation enhancements.

The types of projects that could be considered as environmental mitigation projects include eligible activities that can be funded under the Transportation Enhancement Program [23 U.S.C. 101(a)(35)] such as:

- Acquisition of scenic easements and scenic or historic sites,
- Scenic or historic highway programs (including the provision of tourist and welcome center facilities),
- Landscaping and other scenic beautification,
- Historic preservation,
- Rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals),
- Preservation of abandoned railway corridors (including the conversion and use of the corridors for pedestrian or bicycle trails),
- Archaeological planning and research,
- Establishment of transportation museums, and
- Environmental mitigation
  - to address water pollution due to highway runoff; or
  - reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.

All of the environmental mitigation considerations can philosophically fit into the SMTC's environmental justice concerns, since the organization is an integral part of the environment and the condition of the environment impacts us. Specific measures dealing with the mitigation of the transportation system impacts on the human environment are noise abatement, air quality, and using alternative power systems (solar) for providing on-going electricity for transportation infrastructure.

7.3.1 ENVIRONMENTALLY SENSITIVE AREAS

As part of the 2011 LRTP Update, the SMTC has identified areas within the MPO boundary that may be environmentally sensitive. State and Federal Wetland areas within the SMTC MPO boundary are shown on Map 7-1. Map 7-2 shows Flood Zones and Other Environmentally Sensitive Areas, including historic sites, recreation areas, schools, and cemeteries.

Map 1-3 from Chapter 1 shows the locations of major transportation planning projects carried out under the SMTC's UPWP since the 2007 LRTP Update. Maps 1.4a and 1.4b, also from Chapter 1, show Transportation Improvement Program capital project locations. The environmentally sensitive areas shown on Maps 7-1 and 7-2 can be compared to the locations of the major

transportation planning projects, as well as to TIP project locations. The SMTC is aware of these areas and will take special precautions if and when projects are taking place in these locations.

One of the most significant local environmental projects at this time is the cleanup of Onondaga Lake. Many pollution abatement and cleanup efforts are focused on this lake to enhance its role as an important aesthetic and recreation resource for Central New York.[2] The Onondaga Lake Improvement Project is engaged in a series of projects to improve water quality. Project details can be found at **http://www.lake.onondaga.ny.us**.

[2] *Onondaga Lake Improvement Project, Onondaga County Department of Water Environment Protection, <http://www.lake.onondaga.ny.us/ol1.htm> (accessed April 6, 2007).*

State and Federal Wetlands

Long-Range Transportation Plan 2011 Update

Map 7-1

SMTC

100 Clinton Square
126 North Salina St, Suite 100
Syracuse, NY 13202
(315) 422-5716
Fax: (315) 422-7753
www.smtcmpo.org

Data Sources: SMTC, NYSDOT, 2010
Prepared by SMTC, 04/2011

0 1 2 4 Miles

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Legend

- Roads
- Interstates
- Federal Wetlands
- State Wetlands
- Syracuse
- Village
- Town
- Onondaga Nation

INSET

Q3 Flood Data Specifications*

A	Area Inundated by 100 Year Flood (without Base Flood Elevation (BFEs))
AE	Area Inundated by 100 Year Flood (Determined BFEs)
AH	Area Inundated by 100 Year Flood with Ponding of 1 to 3 Feet (Determined BFEs)
AO	Area Inundated by 100 Year Flood with Sheet Flow on Sloping Terrain and Flood Depths of 1 to 3 Feet
X500	Area Inundated by 100 Year Flood and 500 Year Flood

Central Square
Phoenix
LYSANDER
CLAY
CICERO
Oneida Lake
Baldwinsville
VAN BUREN
North Syracuse
Liverpool
Onondaga Lake
SALINA
DEWITT
Jordan
ELBRIDGE
CAMILLUS
Syracuse
East Syracuse
Minoa
Solvay
MANLIUS
Elbridge
Camillus
GEDDES
SEE INSET
Fayetteville
Manlius
Marcellus
SKANEATELES
ONONDAGA
Skaneateles
MARCELLUS
Onondaga Nation Territory
POMPEY
Skaneateles Lake
Otisco Lake
LAFAYETTE
OTISCO
Fabius
FABIUS
SPAFFORD
TULLY
Tully

*A digital FIRM product developed and districubted by FEMA. Q3 Flood Data are developed by scanning and vectorizing the existing hardcopy FIRM to create a raster product suitable for viewing or printing, as well as a thematic vector overlay of flood risks. Q3 Flood Data capture all FIRM data in the raster file, but vectorize only certain features.

Flood Zones and Other Environmentally Sensitive Areas

Long-Range Transportation Plan 2011 Update

Map 7-2

SMTC
100 Clinton Square
126 North Salina St, Suite 100
Syracuse, NY 13202
(315) 422-5716
Fax: (315) 422-7753
www.smtcmpo.org

Data Sources: SMTC, NYSDOT, 2010
Prepared by SMTC, 04/2011

0 1 2 4 Miles

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Legend
- Interstates
- Streams
- Schools
- Cemetery
- Historic Site
- Recreation Areas
- Syracuse
- Onondaga Nation
- Village
- Town

7.3.2 EMISSIONS (CARBON MONOXIDE, OZONE)

Transportation Conformity

Transportation conformity ("conformity") is a way to ensure that Federal funding and approval is applied to those transportation activities that are consistent with air quality goals. Conformity applies to transportation plans, such as the SMTC Long Range Transportation Plan, the Transportation Improvement Program (TIP), and projects funded or approved by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA) in areas that do not meet or previously have not met air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide. These areas are known as "non-attainment areas" or "maintenance areas," respectively.

Transportation projects must demonstrate conformity in order to be funded. A conformity determination demonstrates that the total emissions projected for a plan or program are within the emissions limits ("budgets") established by the State Implementation Plan (SIP), and that transportation control measures (TCMs) are implemented in a timely fashion. TCMs are specific programs designed to reduce emissions from transportation sources by reducing vehicle use, changing traffic flow or congestion conditions. Examples include programs for improving public transit, developing high occupancy vehicle (HOV) facilities, and ordinances to promote non-motor vehicle travel. Please see Appendix B for the SMTC's Conformity Analysis.

The SMTC LRTP is a blueprint that guides investment in the surface transportation system in our metropolitan area, and is therefore required to be in conformity with the regional air quality plan or SIP. This is due to Onondaga County being designated a "maintenance" area for Carbon Monoxide (CO). Regarding ozone emissions, in 2010 the EPA proposed to strengthen the national air quality standard from its current 0.075 parts per million (ppm) to a range within 0.060-0.070 ppm. According to the EPA, "the proposed revisions are based on scientific evidence about ozone and its effects on people and sensitive trees and plants."[3] The EPA intends to issue a final decision in July 2011 as to the new standard. To date, Onondaga County is presently in conformance with all applicable standards relative to ozone. Should the federal government officially strengthen this threshold, it is probable that Onondaga County, based on prior emissions data, would eventually be reclassified as a non-attainment area. This reclassification would then require the monitoring and analysis of said emissions as per the federal transportation conformity regulations.

The SIP places limits on emissions of each pollutant for each source type (mobile, stationary, and area sources). Projected emissions from highway and transit usage must be less than or equal to the emissions limits for on-road mobile vehicles that are established by the SIP. These emissions limits for motor vehicle emissions sources are called "budgets."

[3] *http://www.epa.gov/glo/actions.html*

Budgets are developed as part of the air quality planning process by the NYSDEC and approved by the EPA. The FHWA, FTA, and the NYSDOT ESB participate with NYSDEC and EPA as members of the Interagency Consultation Group that approves the budgets.

Carbon Monoxide Non-Attainment Background

In the late 1970s, a CO monitor was placed in downtown Syracuse by the NYSDEC. The location of the monitor, at the intersection of East Adams Street and Almond Street, indicated that there were CO concentrations in excess of the EPA standards. Subsequently, parts of Syracuse were designated non-attainment for CO. In 1990 the Clean Air Act was amended to include a CO non-attainment classification scheme, which included a classification for low to moderate non-attainment. At that time, the nonattainment classification was expanded by NYSDEC to include all of Onondaga County. In 1992, the SMTC non-attainment area was re-designated to attainment of the CO National Ambient Air Quality Standards (NAAQS). As part of the re-designation process a maintenance plan was developed for 1993 through 2003. A new 10-year maintenance plan was initiated in 2004.

Under Section 175A of the Clean Air Act of 1990, the individual states are required to provide for the maintenance of the NAAQS once an area is re-designated to attainment. The maintenance plan includes an attainment inventory, demonstration of continued attainment, and budgets for years leading to the end of this plan (in 2013). A 1990 base year is included for comparison for emission reductions as provided by the conformity regulation. The emission budgets are also provided by the transportation conformity regulation. The SMTC created a new travel demand model with 2003 as the base year and 2027 as the horizon year to more accurately reflect trends for the previous 2007 LRTP Update. For this current 2011 LRTP Update, the SMTC again underwent a model recalibration process to further refine and enhance the original model. This new model structure utilizes 2007 as the base year and 2035 as the horizon year.

The first Maintenance Plan expired in September 2003, and the NYSDEC released a new 10-year maintenance plan in December 2003, and subsequently revised it in February 2004. The conformity analysis performed by the SMTC as part of the 2011 LRTP Update indicates that the SMTC area will continue to attain emission levels in conformance with requirements. As indicated previously, the conformity test for the SMTC maintenance area must demonstrate that, once a project is built, the cumulative emissions impacts of a proposed project on a regional basis:

1.) Will remain below budgets established for selected future years as determined by the Onondaga SIP and the Interagency Consultation Group (specifically 2013), and
2.) That TCMs are being implemented in a timely manner.

All of the SMTC TCMs have been implemented and no new TCMs have been included in the Onondaga County SIP. The conformity analysis for this LRTP 2011 Update (see Appendix B) shows that SMTC is well below the budgets, as well as below for all future years analyzed.

The SIP and the conformity determination, while integrated, both have separate time frames as far as each year is examined. The current 10-year SIP addresses the time frame up to the end of the maintenance period in 2013, while conformity must look out at least 20 years, which is 2035 for this LRTP 2011 Update. As the SMTC LRTP is a policy or "visioning" document, it does not contain specific projects.

The projects included in the TIP, all of which are consistent with the goals and objectives of the original LRTP and subsequent updates are considered to be the project list for the LRTP. The policies contained in this LRTP 2011 Update support the intentions of the Clean Air Act Amendments (CAAA) in maintaining the NAAQS. The LRTP goals, directives, recommendations and policies are in conformance with the SIP requirements.

7.3.3 Oil and Alternative Energy

According to the 2009 NYS Energy Plan, the Middle East produced about 67 percent (i.e., 910 billion barrels) of the total world reserve for crude oil in 2007. The United States, in comparison, produced only 1.6 percent (i.e., 21 billion barrels) of the worldwide total. Numerous global events such as ongoing tensions in the Middle East, military action in Iraq, and increased world demand have contributed to rising petroleum costs, U.S. national security concerns, and global economic instability. New York State is doing its part to help reduce U.S. dependency on foreign oil sources.

The 2009 NYS Energy Plan identifies New York State as the fifth largest petroleum fuel market in the United States with the state's transportation sector consuming about 75 percent of all petroleum fuels consumed within the state. In 2007, New Yorkers consumed approximately 5.8 billion gallons of gasoline, which was 4.1 percent of total U.S. consumption. It is the State's desire to reduce dependency on petroleum products through strategic transportation infrastructure investments.

The New York State 2009 Energy Plan establishes an Energy Policy that identifies clean energy strategies, which include investing in energy and transportation infrastructure. The 2009 Energy Plan states that "ongoing investments in transportation infrastructure are necessary to maintain the system in good working order, and additional investments can be used strategically to reduce vehicle congestion, expand mass transit and encourage more efficient transportation systems."

New York State also considers the use of electricity as a transportation energy source as one method to reduce Greenhouse Gas (GHG) emissions. According to the 2009 Energy Plan, "Expanding electrification of the transportation sector will help achieve GHG reduction goals by transitioning demand from high carbon-intensity liquid fuels, such as gasoline, to electricity generated from low-carbon-intensity energy sources such as hydro, wind, solar-PV or nuclear power. Electricity produced from low carbon energy sources can power vehicle batteries or light rail."

The 2009 Energy Plan promotes this transition by supporting research and development for hybrid electric battery technology and energy storage technologies. The 2009 Energy Plan also recommends that the State "Develop a Climate Action Plan in accordance with Executive Order 24. The Climate

Action Plan will identify additional strategies and actions, including likely major infrastructure investments, as well as the benefits and costs of each, consistent with a long-term GHG reduction goal of 80 percent below 1990 levels by 2050. It should also identify appropriate mid-term targets."

Metropolitan Planning Organization Roles & Responsibilities

Metropolitan Planning Organizations (MPOs) are positioned to play a role in protecting and enhancing environmental quality and standards. According to the 2009 NYS Energy Plan:

> *The effect of sprawling development patterns on driving rates in this country is well-documented. Since 1980, VMT nationwide have increased three times as fast as population, and twice as fast as vehicle registrations; between 1970 and 1998, VMT increased 132 percent. Between 1983 and 2001, VMT increased 226 percent, 64 percent of which are attributable to land use, while the population increased only 22 percent. The 1980s saw an increase in VMT four times faster than the driving population; in just seven years between 1983 and 1990, VMT increased 40 percent. Between 1983 and 1995, the average commute increased 37 percent, from 8.6 miles to 12.6 miles. Without changes in land use and transit, driving will increase 59 percent between 2005 and 2030, far outpacing a 23 percent population increase and causing a 41 percent increase in transportation-based GHGs.*
>
> *Compact development patterns can reduce VMT by up to 40 percent. By reducing VMT, Smart Growth also reduces transportation-based GHG emissions, which directly helps mitigate climate change. Smart Growth alone can reduce GHG emissions from current trends 7 to 10 percent by 2050; with both land use changes and stringent fuel-efficiency standards, GHG emissions could be reduced to 1990 levels by 2030. Smart Growth also reduces petroleum use. If just 10 percent of new housing were built in Smart Growth communities, it would save 4.95 billion gallons of gasoline, 59.5 million metric tons (66.6 million long, or U.S. tons) of carbon dioxide emissions and $220 billion in household expenses over 10 years.*
>
> *Transit Oriented Development (TOD) is compact, walkable/bikable, mixed-use communities planned on a traditional village scale and built around a transit station. This development reduces VMT and transportation-based greenhouse emissions by reducing car travel and offering alternative mobility choices such as walking, biking, and public transit. One study found that residents of TODs drive 45 percent less than residents of conventional car-dominated neighborhoods, and save approximately 512 gallons of fuel and $1,400 in fuel cost annually.*

A MPO has the ability to work with its member agencies and promote sound land use and transportation policies. A good example is the MPO located in the Albany region, Capital District Transportation Committee (CDTC). The CDTC conducted the "Linkages" program, which is entirely devoted to integrating transportation policy and land use planning at the regional level. According to the 2009 NYS Energy Plan, the "DOT already works hand-in-glove with MPOs in regions in which they exist. This collaboration provides the foundation for further infrastructure-based land use planning, and land use-based infrastructure planning. Federal, State, regional and

local entities can support regional land use and transportation planning by working closely with regional planning councils and, where applicable, county planning boards. Such collaboration is particularly useful in regions of the State not represented by an MPO."

The SMTC's 2011 Greenhouse Gas and Energy Analysis are found in Appendix F.

7.3.4 CLEAN COMMUNITIES

The Clean Cities Program (locally known as Clean Communities of Central New York) is sponsored by the U.S. Department of Energy. The program strives to advance the nation's economic, environmental, and energy security by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption. The Central New York Clean Cities Coalition (CCCNY) is one of 90 local coalitions that develops public/private partnerships to promote alternative fuels and vehicles, fuel blends, fuel economy, hybrid vehicles, and idle reduction awareness. The CCCNY focuses its efforts on five main technology areas:

- *Alternative Fuels & Vehicles:* According to the Energy Policy Act (EP Act) of 1992, natural gas, biodiesel, ethanol, hydrogen, electricity, propane, and methanol are the clean, domestically-found alternative fuels. By converting to alternative fuels, we are contributing to oil independence, cleaner air quality, and combating climate change.
- *Fuel Blends:* Blending alternative fuels with conventional fuels allows unmodified vehicles to reduce petroleum consumption and emissions.
- *Fuel Economy:* Fuel economy refers to the amount of fuel needed to move a vehicle a given distance. Better fuel economy can save money, reduce emissions that advance global warming, reduce oil dependence, and increase energy sustainability.
- *Hybrid Electric Vehicles:* HEVs combine the electrical benefits of high fuel economy and low emissions with the power, range, and convenience of conventional vehicles, while generally emitting fewer pollutants and greenhouse gases.
- *Idle Reduction:* Idling vehicles wastes several billion gallons of fuels and emits large amounts of air pollution and greenhouse gases each year. Thirty seconds of idling can use more fuel than turning off and restarting the engine, so if you are stopping for more than thirty seconds, turn off the engine.

CCCNY has recently been awarded funding through the US DOE's Clean Cities/Economic Stimulus Program, bringing over $5 million of investment in clean fueled vehicles, infrastructure, and jobs to Central NY. This funding supports programs such as CuseCar, a not-for-profit community car sharing program; solar charging stations; and electric vehicle charging stations.

7.4 PLANNING EFFORTS

7.4.1 MEMBER AGENCY ACTION PLANS RELATED TO THE ENVIRONMENT GOAL

Part of the process for updating the 2020 LRTP during 2001 included the identification of action plans that had been implemented under each of the six goals since 1995, including community economy. This 2011 Update emulates the 2001, 2004, and 2007 LRTP Updates by addressing and updating the implementation actions associated with the Plan's specific goals and objectives (the 1998 Update did not address implementation actions). The identification of implemented action plans involved discussions with the member agencies responsible for their respective TIP projects. In the section that follows, the implemented community environment related action plans are presented. The implemented action plans are summaries rather than complete descriptions. In many cases, overlap exists because a particular action plan may apply to multiple goals.

Action Plans Implemented:

- The CNYRTA now has 120 of the 188 buses (64%) in operation in the urbanized area during its "peak of the peak" period (i.e., the morning rush hour) powered by low-emission compressed natural gas (CNG). CNYRTA will acquire 133 hybrid diesel-electric replacement buses by 2010. When these buses operate in diesel mode they will run on ultra low sulfur fuel and will meet all future EPA environmental goals. The Clean Communities of CNY (part of the national Clean Cities Program) has a program that encourages other fleets to pursue alternative fuel electric or natural gas vehicles, including the State, Onondaga County, City of Syracuse, school districts, municipal governments, and the local business community. The NYSDOT has begun converting its motor pool fleet to CNG.

- The CNYRTA has acquired land and is in the construction process to move its Common Center in the City of Syracuse to an alternate weather-protected location where buses can load and transfers may be made out of the general traffic flow. This project will be completed in winter 2011/2012.

- In May 2009, the CNYRTA implemented service changes and a fare increase in response to a budgetary shortfall. In the January and April 2011, further service reductions are planned in response to ongoing reductions in State aid and shortfalls in Mortgage Recording Tax fees. These changes are imperative to ensure that the Authority remain fiscally solvent.

- The CNYRTA has reviewed the factors affecting mode choice in the SMTC urbanized area in its continuing efforts to increase transit ridership. Several factors continue to impact the agency's ability to increase ridership including a low density regional development pattern that minimizes opportunities for creating the type of critical mass needed to support transit service; low levels of congestion at peak hours compared to other large urban areas; city and suburban parking policies that result in providing the public with large areas of inexpensive automobile parking space; time and cost

differentials that often favor single occupancy commuting; generally improving air quality; and a high capacity roadway network. Service reductions scheduled for implementation in January and April 2011 will largely target routes serving suburban & exurban areas where ridership is poor.

- In 2009, the CNYRTA initiated a study to determine the potential benefits, costs, and feasibility of implementing a new system of park-and-ride lots in suburban Syracuse transit corridors. This study will be completed in early 2011.
- The CNYRTA has committed to acquire low emission buses as part of the region's effort to comply with the provisions of the Clean Air Act. The majority of the CNYRTA's fleet is powered by compressed natural gas. In addition, a limited number of hybrid-electric vehicles have been acquired. No further hybrid-electric vehicles will be purchased as their additional cost, in a severely constrained fiscal environment, has been found to exceed their minor environmental benefit. In addition, where diesel fueled vehicles are employed, a bio-fuels mix is utilized.
- The CNYRTA is committed to ensuring that no person is excluded from participation in, or denied the benefits of its services on the basis of race, color, or national origin as protected by Title VI of the Civil Rights Act of 1964, as amended. The CNYRTA's plan to distribute its resources in full compliance with Title VI has been approved by the Federal government.
- The CNYRTA policy will continue to promote bicycle use through purchase of buses equipped with bicycle racks.
- In response to the provisions of the Federal Clean Air Act, the CNYRTA provides enhanced mass transit service to the Carrier Dome as part of the region's Traffic Mitigation and Air Quality Plans for that facility.
- The Clean Communities of CNY is supporting National Grid's Electric Car Joint Venture project promote electric car use in Syracuse and New York State.
- The SMTC is promoting strategies in the Clean Communities of CNY Plan through the participation of its member agencies.
- As indicated previously, the SMTC and its member agencies are promoting multimodalism in their transportation projects by planning and implementing enhanced transit, carpooling, bicycling, and walking opportunities.
- The SMTC member agencies are implementing measures contained in the New York State Implementation Plan Resignation Request for Onondaga County as an Attainment area for Carbon Monoxide. The City of Syracuse continues to strengthen the operation of the coordinated signal system through additional staffing and personnel training to operate the system. Improved management of special events traffic has improved traffic flow and safety, especially for Carrier Dome events at Syracuse University. Also, the

Onondaga County Department of Transportation has engaged the SMTC to analyze all of the county owned traffic signals for the purpose of improving traffic signal timing and associated traffic operations.

- Between 1990 and 2005, the total daily carbon monoxide (CO) emissions from mobile sources have been reduced by 54% (Source: April 2004 Conformity Emissions Analysis).
- New Intelligent Transportation Systems (ITS) technologies for snow and ice conditions have been implemented, such as the NYSDOT project installing variable message signs for travel weather conditions monitoring. As of January 2011, there are sixteen such signs in Onondaga County that advises motorists of lake effect snow conditions.
- The New York State Thruway Authority also has four signs within Onondaga County. Two are eastbound and two are westbound along the Thruway. The City of Syracuse and Onondaga County have instituted improved inter-municipal coordination and cooperation for snow and ice removal on arterial highways within the City of Syracuse.
- The NYSDOT is putting greater emphasis on the calibration of its salt spreading equipment to ensure better control of the rate at which the material is applied. In addition, the field supervisors have temperature sensors in their vehicles to measure road surface temperature. These actions provide for a more efficient application and reduce the overall amount of road salt and sand used on the roadways.
- The NYSDOT Region 3's *Regional Strategy* outlines ongoing and future efforts relating to environmental practices and policies that Region 3 is involved in.
- The NYSDOT Region 3 promotes and implements many environmental practices in an effort to create a more sustainable transportation system. There are many ongoing efforts being implemented by Region 3. These include the use of biological methods for invasive plant material controls, wetland monitoring, use of vegetation as a snow drifting barrier, planting native plants and grasses, implementation of an annual vegetation management project, ongoing staff training efforts, reusing and recycling of project materials, making the best use of existing resources including time and energy, improving coordination efforts with other agencies, promoting community partnerships, and continued organizational efforts.
- The NYSDOT recognizes transportation project designs, operations and maintenance practices that incorporate a high level of environmental sustainability, through its GreenLITES (Green Leadership In Transportation Environmental Sustainability) transportation environmental sustainability rating program. The NYSDOT developed the GreenLITES certification program to:
    - recognize and increase the awareness of the sustainable methods and practices in project designs and daily operations, and
    - to expand the use innovative alternatives which contribute to improving transportation sustainability.

GreenLITES is a self-certification program that distinguishes transportation projects and operations based on the extent to which they incorporate sustainable choices. This is primarily an internal management program for the NYSDOT to measure performance, recognize good practices, and identify improvements. It also provides the Department with a way to demonstrate to the public how we are advancing sustainable practices.

The NYSDOT project designs and operations are evaluated for sustainable practices and based on the total credits received; an appropriate certification level is assigned. The rating system recognizes varying certification levels, with the highest level going to designs and operational groups that clearly advance the state of sustainable transportation solutions.

In Region 3, the following certified projects have been completed:

- Currently, 397 out of the 426 Traffic Signal Controllers (94%) have been converted over to the 2070 Controller.
- All Traffic signal's red and green indications have been converted from incandescent bulbs to LEDs.
- There are a total of 28 closed loop systems that display real time traffic conditions that enable traffic engineers to monitor current conditions and make real signal timing changes, check time clock functions, observe traffic operations, and be notified of maintenance alerts. A minimum of two new closed loop systems are being installed annually.
- Optimized signal timings at various locations in the region to improve traffic flow progression, delay and fuel emissions.
- The regional signal shop has implemented a combination of energy efficient light fixtures.
- Energy Conservation Awareness Training for employees has also been conducted focusing on how to reduce energy consumption in the department.

- Solar Charging Stations/Electric Vehicle Charging Stations: The SMTC must anticipate infrastructure needs as auto manufacturers continue to retool and produce vehicles that require new energy refueling stations designed to recharge batteries.

- CuseCar: CuseCar is a not-for-profit, community car-sharing program that provides its members access to a fleet of alternative fuel vehicles on an hourly basis – without the worry and expense of car ownership. The SMTC and its member agencies will continue to support innovative transportation alternatives.

- Clean Communities of CNY is also supporting National Grid's Electric Car Joint Venture project to manufacture and promote electric car use in Syracuse and New York State. The SMTC is promoting strategies in the Clean Communities of CNY Plan through the participation of its member agencies

- Onondaga County has launched an aggressive stormwater management initiative, the *Save the Rain* campaign, aimed at utilizing green infrastructure solutions to reduce stormwater flows in locations vulnerable to combined sewer overflow occurrences, as well as throughout communities in Onondaga County. The program encourages the use of natural and engineered solutions such as, but not limited to, vegetated rooftops and swales, rain gardens, pervious pavements, and other green infrastructure elements.

- Onondaga County, through its Office of the Environment, is currently completing a Climate Action Plan for County operations. The plan will include a baseline greenhouse gas emissions inventory, and identification of measures the County can take to reduce its carbon footprint, including an analysis of the County's vehicle fleet and travel.

- Onondaga County is in the process of creating a new County sustainability plan with a focus on settlement patterns that will foster sustainability and provide a region of opportunity for future generations. The plan will guide decision making for County government and will serve as a decision making tool for individuals, businesses and municipalities.

  This plan will be closely linked with several other very significant and important efforts that are intertwined with the County's settlement patterns, including the creation of the County's Climate Change Action Plan and the update of the Syracuse Metropolitan Transportation Council's Long Range Transportation Plan. The plan will also be integrated with rapidly shifting Federal and State policies, which have a substantial impact on settlement patterns.

- The City of Syracuse has plans to develop a Climate Action Plan that will look at specific actions that the City can take to minimize its contributions to green house gas emissions.

- The City of Syracuse is currently refining its Land Use Plan that will serve as a guide for decision makers as future projects and development proposals are brought to the City's attention.

- The NYSDOT Region 3 is working towards enhanced future environmental practices in an effort to create a more sustainable transportation system. Future efforts include tracking and maintaining stormwater pollution control devices and wetland facilities, maintaining corridor management plans, environmental regulation training for staff, considering future land uses within projects, exploring innovative recycling opportunities, evaluating the use of salt brine from wells, explore implementing private and public partnerships in the form of a highway work permit for vegetation management, and expanded use of the E-track database to track environmental progress on projects.

8 SAFETY AND SECURITY

8.1 GOAL

To enhance the safety of the people using the transportation system.

8.1.1 OBJECTIVES

- To annually identify the ten highest accident locations in the SMTC area and recommend remediation measures that, within five years, will reduce the accident rate at these locations by an average of 25%.
- To identify the five highest intermodal accident locations (vehicle/pedestrian, transit/pedestrian, rail/vehicle, bicycle/vehicle, etc.) periodically, and to encourage remediation measures that will reduce intermodal conflict.
- To assist local planning officials and developers in accommodating travel between different areas when planning new developments.

8.2 TRENDS

8.2.1 SAFETY

This goal is rooted in ensuring a safe transportation system for all users as well as instilling a sense of security for all users. Safety projects continue to be a priority in the SMTC MPA. Safety projects not only look at automobile safety, but also address pedestrian and bicyclist safety.

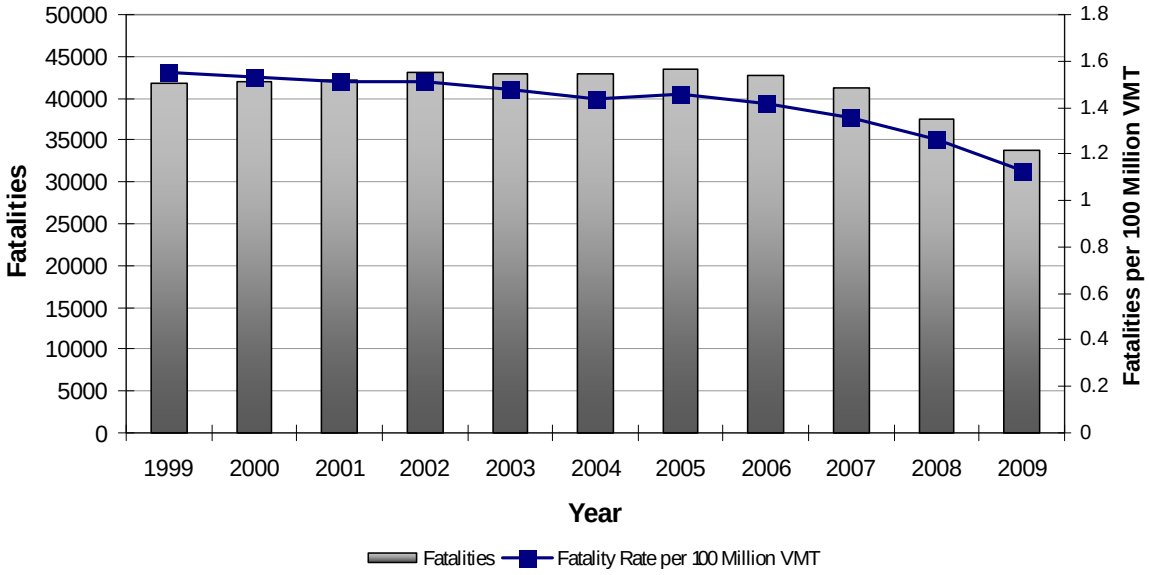
Accident Analysis – Motor Vehicle Collisions

In 2009, the number of motor vehicle collision-related fatalities in the U.S. reached its lowest level since 1954, when the total number of miles driven by Americans was one-fifth what it is today. Collision-related fatalities have been gradually declining since the early 1980s, when the number of fatal accidents was on the order of 50,000 annually. In 2007, there were 41,259 recorded U.S. fatalities, but this number fell by 10% to 37,261 in 2008 and to just under 34,000 in 2009. A number of factors have been at work in the long-term decline, including increased safety standards for vehicles, the spread of seat belt and child restraint laws, safety awareness and education programs, and roadway improvements. The downturn in the national economy is likely the biggest factor in the dramatic drop from 2007 to 2009 (see *An Analysis of the Significant Decline in Motor Vehicle Traffic Fatalities in 2008* prepared by the National Highway Traffic Safety Administration in June 2010).

For ease of comparison from one year to another and one geography to another, accident data are frequently adjusted to show the number of accidents per 100 million vehicle miles traveled (VMT), or per 100,000 population. Adjusting the number of fatalities at the national level, there were 1.13 fatalities per million VMT in 2009, down from 1.55 in 1999 (see Table 8-1).

Table 8-1

Motor Vehicle Collision Fatalities Nationwide, 1999-2009

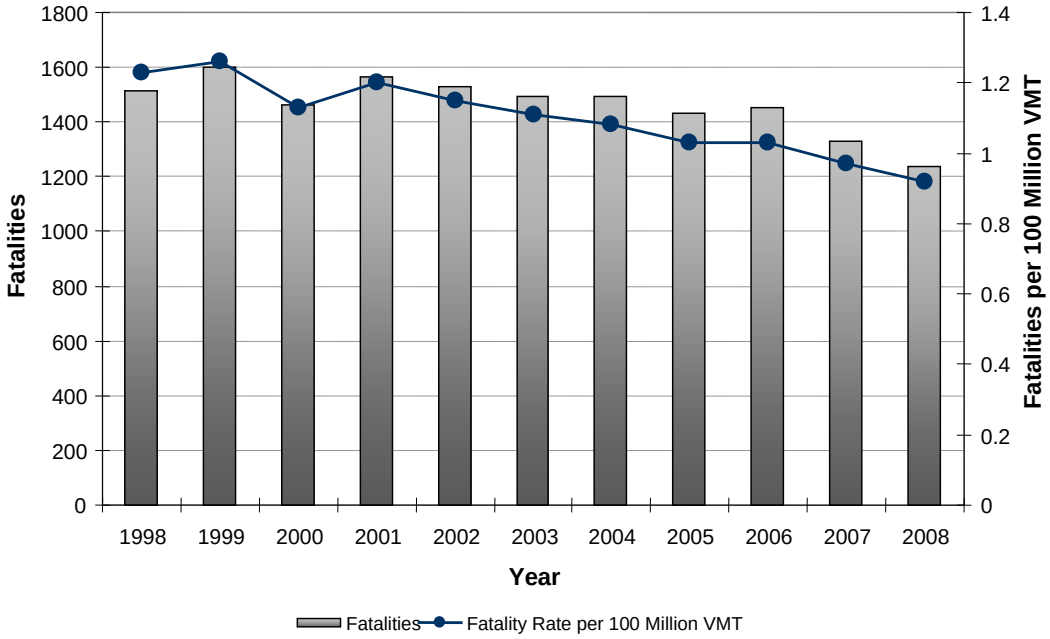


*Source: National Highway Traffic Safety Administration, Fatality Analysis Reporting System Encyclopedia (**http://www-fars.nhtsa.dot.gov/Main/index.aspx**), 1999-2009.*

Motor vehicle fatalities have also declined in New York State since the late 1990s (see Table 8-2). The total number of collision-related fatalities was 1,238 in 2008, compared to 1,514 in 1998. Fatalities per 100 million VMT declined through the 2000s, from a high of 1.26 in 1999 to a low of 0.92 in 2008. While the state statistics show more variability than the national data, the trend in the last ten years has been toward fewer collision-related fatalities.

Table 8-2

MOTOR VEHICLE COLLISION FATALITIES IN NEW YORK STATE
1998-2008



Source: National Highway Traffic Safety Administration, Fatality Analysis Reporting System Encyclopedia (http://www-fars.nhtsa.dot.gov/Main/index.aspx), 1998-2008.

Adjusted for population, at the national level there were 12.3 collision-related fatalities per 100,000 people in 2008. This number fell to 11.01 in 2009. In New York State, the number of fatalities per 100,000 people has fallen steadily from a high of 7.5 in 2006 to its current low of 5.9. In Onondaga County, this number fell from 8.4 in 2007 to 7.5 in 2009. There were 31 fatalities in Onondaga County in 2006, 38 in 2007, 31 in 2008, and 34 in 2009 (see Table 8-3).

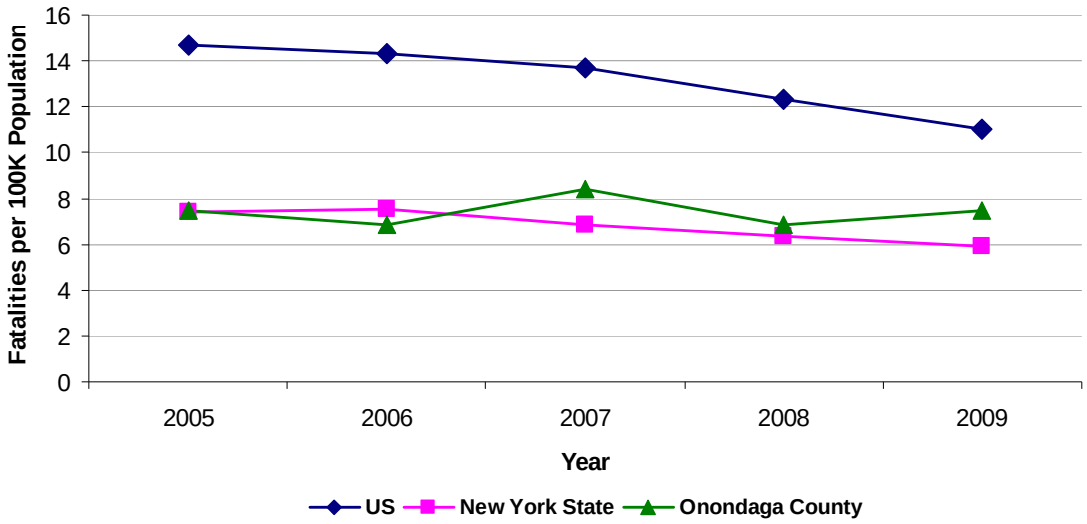
According to data from the National Highway Traffic Safety Administration (NHTSA), nearly 30% of Onondaga County's collision-related fatalities in 2009 involved alcohol-impaired driving. Twenty-one percent involved speeding, 24% involved a motorcyclist, 38% involved a roadway departure and 21% occurred at an intersection.

Total reportable accidents increased in Onondaga County from 8,208 in 2006 to 10,279 in 2009, or 3.3% of the statewide total. According to information from the New York State Department of Motor Vehicles (NYSMDV), the single greatest factor contributing to collisions in Onondaga County was driver inattention; in 2008, driver distraction was an element in nearly a quarter of all

collisions. Other major factors included failure to yield the right of way (17 percent), following too closely (16.4 percent) and unsafe speed (15 percent).

Table 8-3

Motor Vehicle Collision Fatalities 2005-2009



Source: National Highway Traffic Safety Administration, Fatality Analysis Reporting System Encyclopedia (http://www-fars.nhtsa.dot.gov/Main/index.aspx), 2005-2009.

Accident Analysis - Pedestrian Collisions

At the national level, the number of fatal motor vehicle collisions involving pedestrians has declined in recent years, in step with the decline in all collision-related fatalities. In 2009, there were 4,092 pedestrian fatalities, a 22 percent decline from 1998 when there were over 5,200 fatalities. This is a continuation of a long-term national trend: pedestrian fatalities have been declining since 1979, when there were nearly 8,100. (This long-term trend may be linked to the overall decline in walking as a means to get to work; the number of people walking to work fell from 6.4 million in 1960 to 3.8 million in 2000.) From 2005 to 2009, pedestrian fatalities consistently made up about 11.5 percent of all collision-related fatalities at the national level.

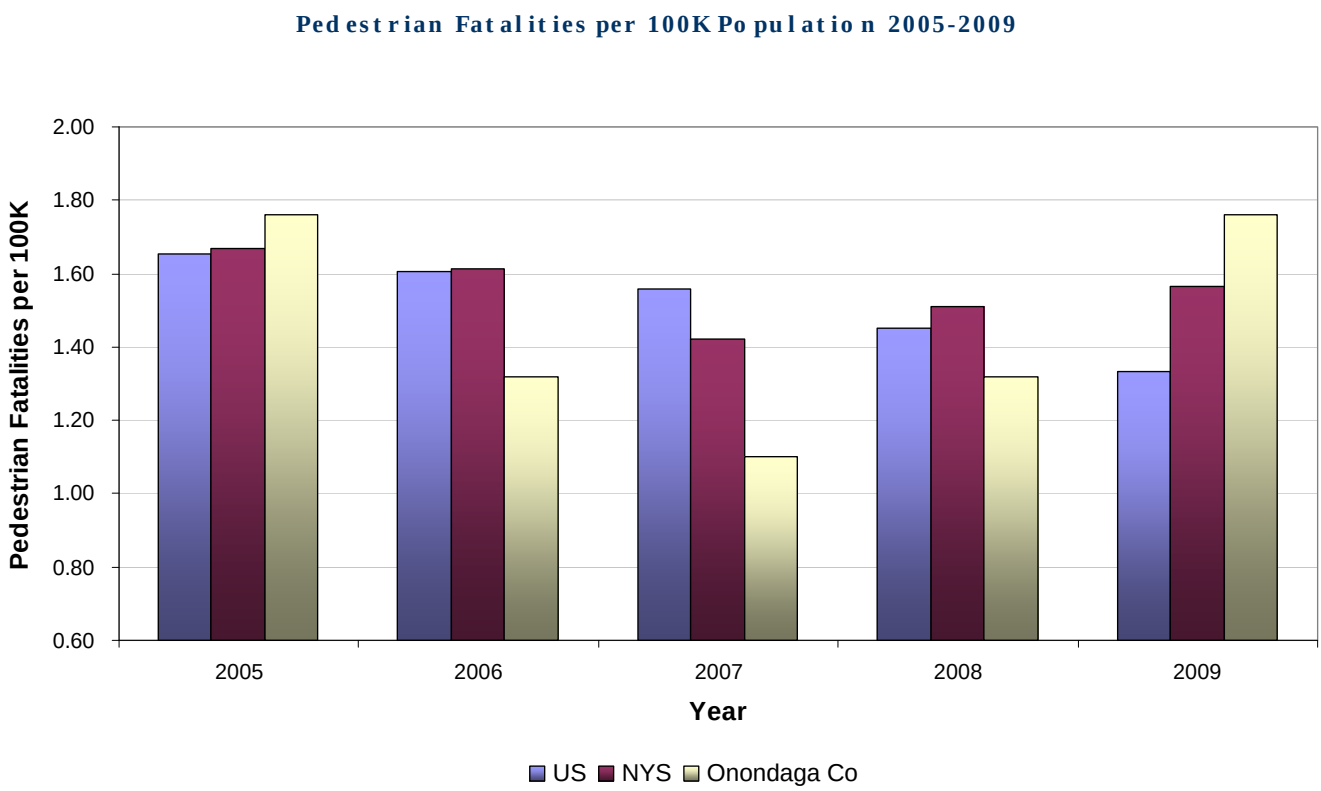
In New York State, pedestrian fatalities made up 26 percent of all collision-related fatalities in 2009. There were 306 pedestrian fatalities, a 16 percent decrease from 1998. Statewide, the total number of motor vehicle accidents involving a pedestrian fell from 15,700 in 2007 to 15,680 in 2009.

With 2.3 percent of New York's total population, Onondaga County had 1.3 percent of the state's total number of collisions involving pedestrians in 2009. Countywide, the number of collisions

involving a pedestrian fell from 229 in 2007 to 196 in 2009. In 2009 there were 8 pedestrian fatalities, representing 24 percent of all collision-related fatalities.

Adjusted for population, the number of pedestrian fatalities per 100,000 residents fell nationwide between 2005 and 2009, from 1.65 to 1.33 (see Table 8-4). In New York State, there were 1.67 pedestrian fatalities per 100,000 residents in 2005, falling to 1.57 in 2009. In Onondaga County, there were 1.76 pedestrian fatalities per 100,000 residents in 2005 and in 2009, with a low of 1.1 in 2007.

Table 8-4



Source: National Highway Traffic Safety Administration, Fatality Analysis Reporting System Encyclopedia (http://www-fars.nhtsa.dot.gov/Main/index.aspx), 2005-2009, NYSDMV.

According to national data, alcohol involvement, either by the pedestrian or the driver, was reported in 48 percent of collision-related pedestrian fatalities. Thirty-six percent of pedestrians involved in fatal collisions, compared with 13 percent of drivers, had a high blood alcohol concentration. Data for Onondaga County indicate that alcohol was involved in one of the fatal pedestrian collisions each year in 2006, 2007, and 2008.

At the national level, senior citizens (age 65 and over) made up 18 percent of all pedestrian fatalities. In New York State, this age group made up 24.4 percent of all pedestrian fatalities.

The New York State Department of Motor Vehicles' (NYS DMV) 2009 data on pedestrian/motor vehicle accidents indicates that a slim majority (51.9 percent) of collisions involving pedestrians occurred at intersections and that 26.6 percent of all pedestrian-motor vehicle collisions involved pedestrians crossing with a signal. Forty-three percent of collisions involving a pedestrian occurred between 3 p.m. and 9 p.m.

Accident Analysis - Bicycle Collisions

Nationally, fatalities from bicycle/motor vehicle collisions are much less common than pedestrian/motor vehicle collisions. Pedestrian fatalities make up about 11 percent of all collision-related fatalities, while cyclist fatalities make up less than two percent annually. Trips by bike are not as common as pedestrian trips: according to the *National Bicycling and Walking Study – 15 Year Update*, pedestrian trips in the U.S. grew from 18 billion in 1990 to more than 40 billion in 2009, while bicycling trips grew from 1.7 billion to 4 billion in this period.

Though cycling trips have increased nationally, the total number of cycling fatalities due to motor vehicle collisions has been falling in recent years. There was a 20 percent decline in bicyclist fatalities nationally between 2005 and 2009, dropping from 786 to 630.

In New York State there was a slight rise in total bicycle/motor vehicle accidents from 2005 to 2009, increasing from 5,535 to 5,620. At the same time, fatal bicycle/motor vehicle collisions fell from 49 to 29 in this period. According to NYS DMV data for 2009, 27 percent of bicycle/motor vehicle accidents were the result of bicyclist error or confusion. Other contributing factors included driver inattention (20 percent of accidents), failure to yield the right of way (19 percent of accidents) and disregarding traffic controls (six percent of accidents).

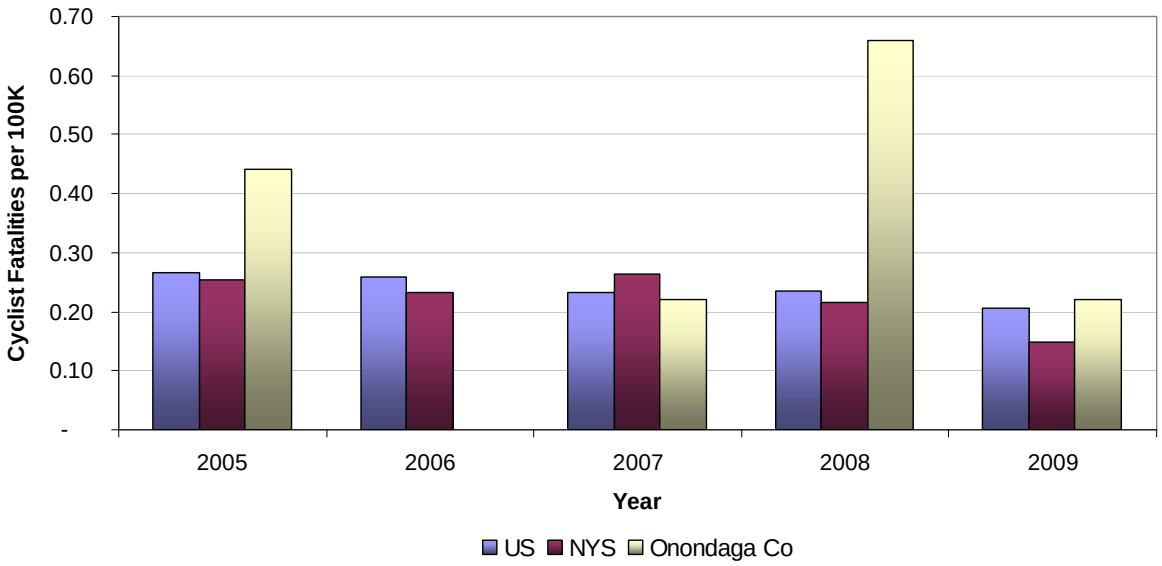
National data also indicate a high proportion of collisions involving alcohol. According to the National Highway Traffic Safety Administration (NHTSA), either the driver or the cyclist was found to have a high blood alcohol content level in 31 percent of bicycle/motor vehicle collisions.

According to the DMV's statistics, 47 percent of cyclists involved in collisions in 2009 were not wearing helmets. Of the 29 collision-related bicycling fatalities in this year, 48 percent of cyclists were not wearing helmets.

Between 2005 and 2009, collision-related cyclist deaths made up four percent of all collision-related deaths in Onondaga County. Fatal motor vehicle/bike collisions are relatively rare in Onondaga County, varying from zero to three a year over the last four years. Adjusted for population, there were 0.22 fatalities from bike-vehicle collisions per 100,000 residents countywide in 2009, compared to 0.15 fatalities per 100,000 residents statewide and 0.21 fatalities per 100,000 residents nationally (see Table 8-5).

Table 8-5

Cyclist Fatalities per 100K Population 2005-2009



Source: National Highway Traffic Safety Administration, Fatality Analysis Reporting System Encyclopedia (http://www-fars.nhtsa.dot.gov/Main/index.aspx), 2005-2009, NYSDMV

Total reported bicycle/motor vehicle collisions increased in Onondaga County between 2005 and 2009, from 113 to 143. Adjusted for population, there were 31.5 bike-vehicle collisions per 100,000 residents countywide in 2009, compared to 28.8 per 100,000 residents statewide.

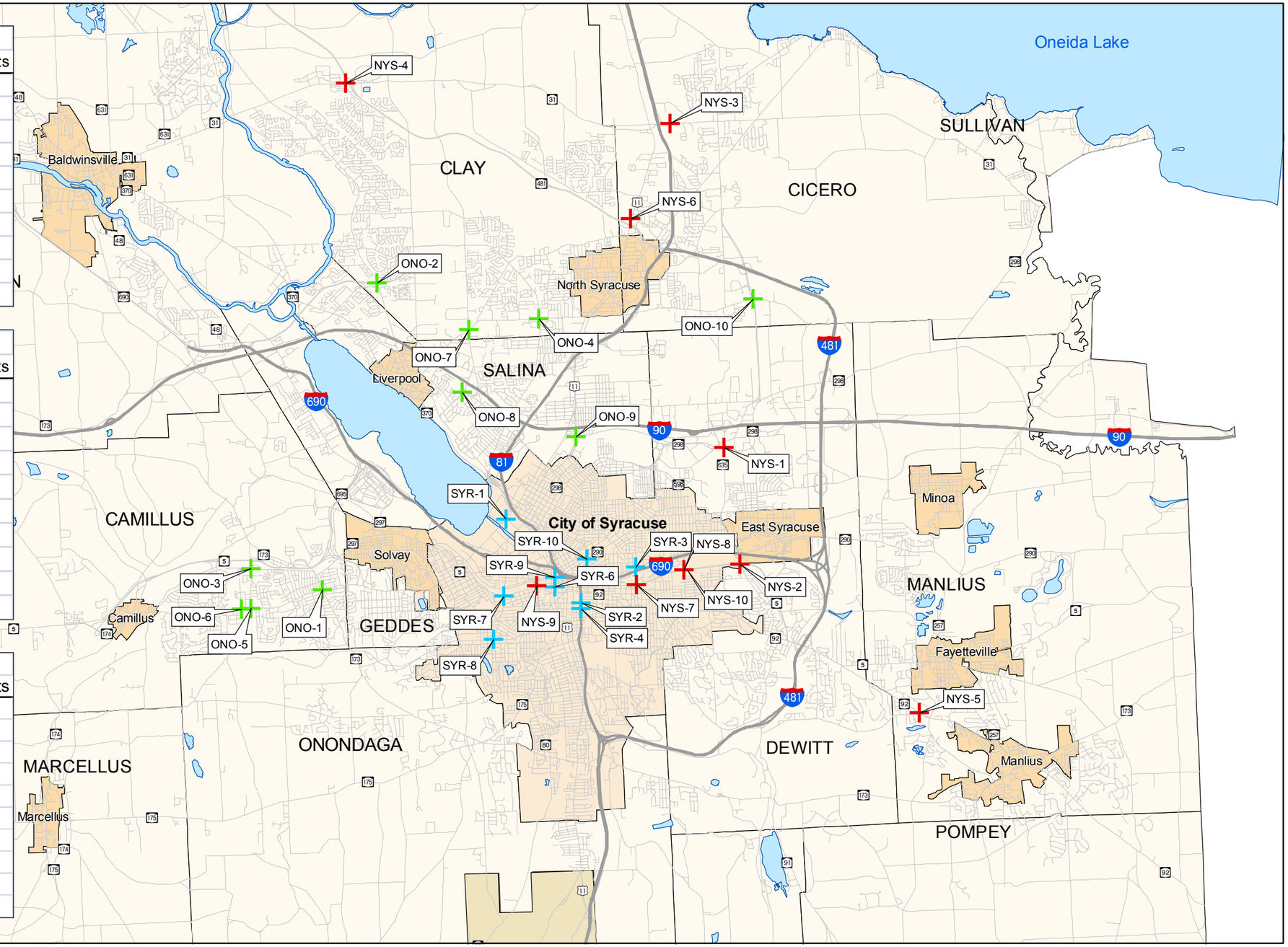
High Accident Locations

The SMTC member agencies play a key role in reducing the number and severity of accidents, with much of the local effort directed at engineering improvements to the highway system itself. Map 8-1 and the accompanying tables shows the ten highest motor vehicle collision locations in the MPA by jurisdiction (New York State, Onondaga County, and City of Syracuse). The accident data for this map cover the three-year period of 2006 through 2009 and were obtained from the NYSDOT Accident Location Information System (ALIS). The presence of a high number of accidents does not always indicate a problem with a particular location. A road with a large number of accidents may actually have a relatively low accident rate due to high traffic volumes. Other locations that have a low number of accidents may have a relatively high accident rate due to low traffic volumes. The highest accident locations between June 2006 and June 2009 are Thompson Road/Carrier Parkway (New York State), Onondaga Road/Old Route 5 (Onondaga County), and West Hiawatha Boulevard/Solar Street (City of Syracuse).

New York State		
Map ID	Location	Total Accidents
NYS-1	Thompson Rd & Carrier Pkwy	146
NYS-2	Thompson Rd & Erie Blvd East	78
NYS-3	Lakseshore Rd & NY31	43
NYS-4	Belgium Rd & Ramp I481 to NY31	43
NYS-5	High Bridge Rd and Woodchuck Hill Rd	40
NYS-6	Brewerton Rd & East Circle Dr	40
NYS-7	Teall Ave & Erie Blvd East	40
NYS-8	South Midler Ave & Erie Blvd East	36
NYS-9	West St Arterial & West Fayette St	35
NYS-10	Erie Blvd East corridor, near Midler Ave	34

Onondaga County		
Map ID	Location	Total Accidents
ONO-1	Onondaga Rd & Old Route 5	37
ONO-2	Old Route 57 & John Glenn Blvd	35
ONO-3	Milton Ave & Hinsdale Rd	34
ONO-4	Buckley Rd & West Taft Rd	29
ONO-5	Hinsdale Rd & Old Route 5	25
ONO-6	Old Route 5 & Vanida Dr	25
ONO-7	Vine St & Henry Clay Blvd	24
ONO-8	7th North St & Electronics Pkwy	24
ONO-9	Lemoyne Ave & Factory Ave	20
ONO-10	East Taft Rd & Northern Blvd	19

City of Syracuse		
Map ID	Location	Total Accidents
SYR-1	West Hiawatha Blvd & Solar St	79
SYR-2	Harrison St & Almond St	66
SYR-3	Teall Ave & Burnet Ave	57
SYR-4	Almond St & East Adams St	47
SYR-5	Teall Ave & Grant Blvd	54
SYR-6	East Fayette St & South Salina St	52
SYR-7	South Geddes St & West Fayette St	47
SYR-8	South Geddes St & West Onondaga	46
SYR-9	North Salina St & West Genesee St	44
SYR-10	James St & Lodi St	42



SMTC

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www.smtcmpo.org

0 0.5 1 2 Miles

Data Sources: SMTC, NYSDOT, 2010
Accident data is from June 2006 - June 2009
Prepared by SMTC, 4/2011

10 Highest Accident Locations in the MPA by Jurisdiction

Long-Range Transportation Plan 2011 Update

Map 8-1

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Legend

Jurisdiction
- NYSDOT
- Onondaga County
- City of Syracuse

- Interstates
- Roads
- Village
- Syracuse
- Onondaga Nation
- Town

Map 8-2 shows bicycle and pedestrian accidents that occurred within the SMTC MPA and the City of Syracuse between June 2006 and June 2009. The locations with the most bike and pedestrian accidents during this three year time-frame are as follows:

Pedestrian Accidents
Location (# accidents)
South Salina/East Fayette Streets (9)
South Clinton /West Fayette Streets (5)
Lodi/Butternut Streets (4)
Midland/West Ostrander Avenues (4)
NY 175/Valley Drive (4)

Bicycle Accidents
Location (# accidents)
South Geddes/Seymour Streets (4)
Brewerton Road/Ramp I-81 to US 11 (3)
South Salina/East Fayette Streets (3)

The majority of pedestrian accidents occurred in downtown Syracuse, near Centro's current transit hub, where numerous pedestrians wait for buses on a daily basis.

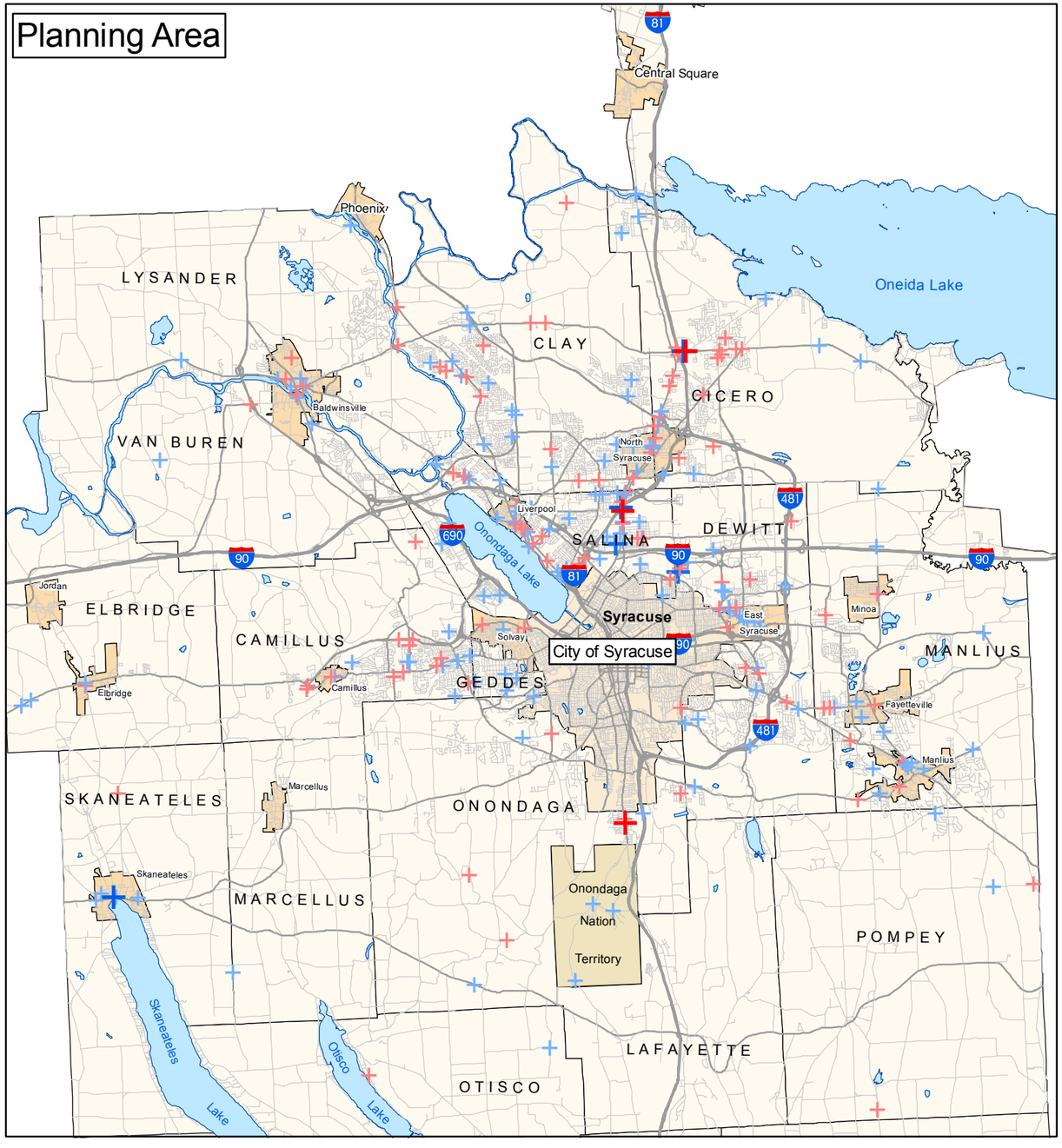
New York State DOT locations

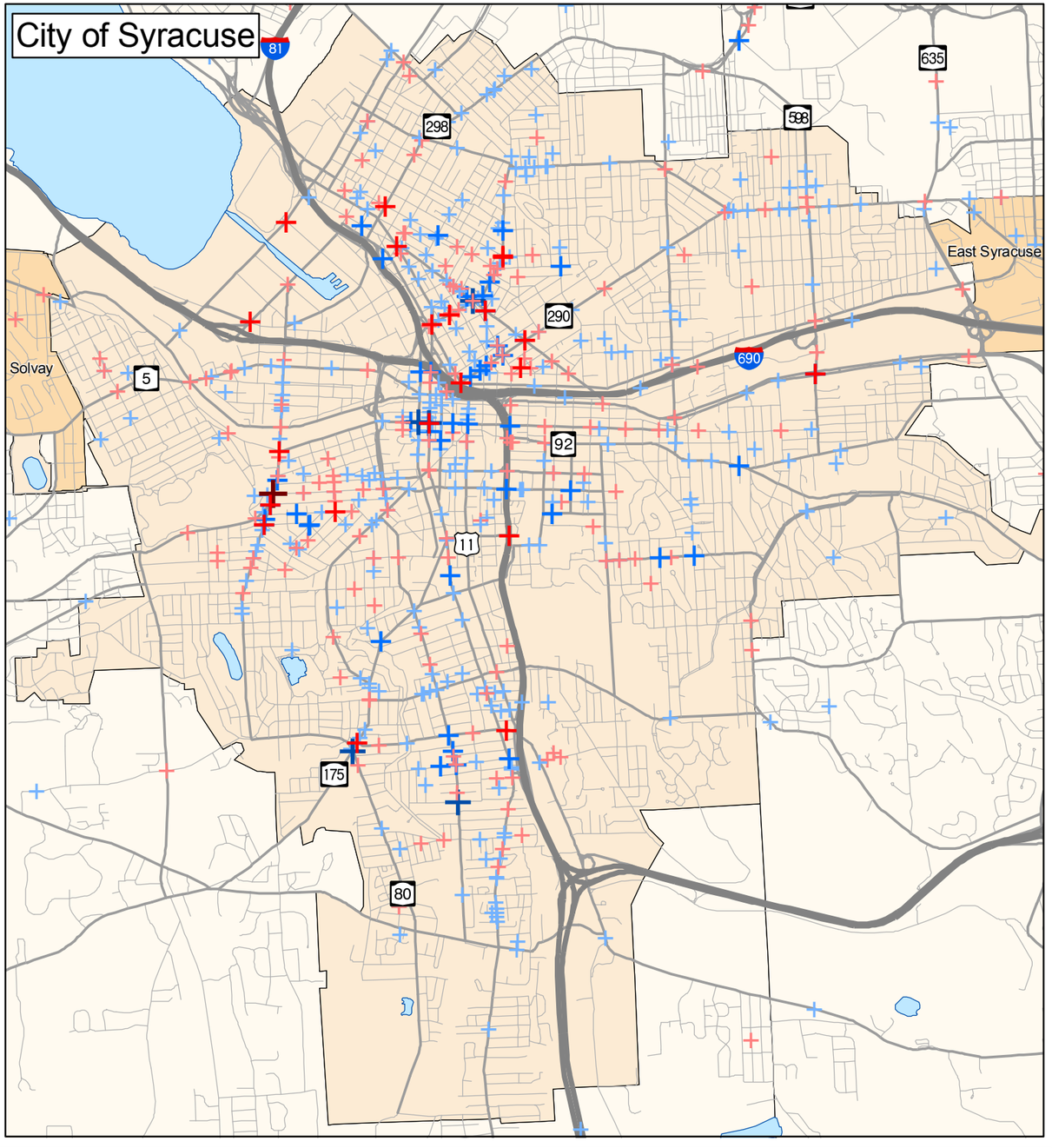
In accordance with Title 23 of the *United States Code*, each state is federally required to describe at least five percent of its locations that currently exhibit the most severe highway safety needs. The report includes potential remedies to the hazardous locations identified, estimated costs of the remedies, and impediments to implementing the remedies (other than cost).[1] To that end, New York State prepared the *2010 Annual Evaluation Report Highway Safety Improvement Program Five Percent Report* in August 2010, with the report period of 7-1-09 through 3-31-10. NYSDOT Region 3's highway segments/intersections exhibiting the most severe safety needs in 2010 include:

- Northern Concourse/South Bay Road Spur/Route 11 to Bailey Road
- East Crabtree – Pardee Road/I-81
- Route 298 at Carrier Circle, Onondaga County, Town of DeWitt
- Adams Street Arterial (930C) at Almond Street/I-81.

Potential remedies, estimated costs, impediments to implementation and additional information on each of these locations can be found on the "Five Percent Report" Requirement page of the FHWA web site at: **http://safety.fhwa.dot.gov/hsip/fivepercent/2010/index.cfm?state=ny**.

[1] *New York State Department of Transportation, Office of Modal Safety and Security, 2010 Evaluation Report Highway Safety Improvement Program Five Percent Report, August 2010, http://safety.fhwa.dot.gov/hsip/fivepercent/2010/index.cfm?state=ny*





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0 1 2 4 Miles

Data Sources: SMTC, NYSDOT, 2010
Accident data is from June 2006 - June 2009
Prepared by SMTC, 4/2011

Bicyclist and Pedestrian Accident Locations

Long-Range Transportation Plan 2011 Update

Map 8-2

This map is for presentation purposes only.
The SMTC does not guarantee the accuracy or completeness of this map.

Legend

Bicycle Accidents	Pedestrian Accidents
1	1
2 - 3	2 - 3
4 +	4 +

Safety Improvement Analysis

The SMTC also conducts an annual Safety Improvement Analysis (SIA) (formerly known as the Accident Surveillance Program) as part of the SMTC's UPWP. The program, which is intended to identify and analyze priority vehicular collision locations, is offered to both the OCDOT and the City of Syracuse DPW. The SIA completed during the 2010-2011 UPWP program year addressed ten priority collision locations as determined by the OCDOT. The objective of the SIA report is to provide the member agency with an assessment of their ten priority vehicular collision locations. To accomplish this, data collection is completed and a detailed analysis of each accident location is prepared.

The SMTC utilized the NYSDOT's ALIS to determine the number and location of all collisions on roads within Onondaga County for the three year period, from January 1, 2006 to January 1, 2009. The OCDOT identified a preliminary list of 24 locations under their jurisdiction to be queried in ALIS. Based on factors such as number of collisions and number of injuries, OCDOT selected the following ten locations to be analyzed:

1. Bear Road at Allen Road
2. West Taft Road at Bear Road
3. Electronics Parkway at Old Liverpool Road
4. Kirkville Road at Fremont Road
5. Kirkville Road at Minoa Schepps Road
6. Milton Avenue at Bennett Road
7. Milton Avenue at Warners Road
8. Northern Boulevard (northbound) at Northern Boulevard (southbound)
9. North Burdick Street at Cedar Bay Road
10. West Genesee Road at Whedon Road.

Collision summary reports and collision diagrams were prepared for all ten locations based upon the data contained in the ALIS records. In conjunction with the summary reports and collision diagrams, various traffic data were collected at each location. This data included morning and evening peak hour turning movement counts, intersection geometry, pavement markings, traffic signage, and signal timing and phasing data. Analysis of these data sets completed the problem identification phase of the project. Intersection diagrams were also prepared based on the actual conditions of the intersection. Highway Capacity Software and Synchro were used to determine the Level of Service and delay for each intersection.

The completed 2010-2011 SIA is intended to provide the OCDOT with a multi-dimensional analysis of 10 priority intersections, based on collision rates. Although the SIA does not provide recommendations, it lays the groundwork for the OCDOT to complete its own analysis of the intersections so that the agency can determine which locations warrant safety improvements.

Safe Routes to School

The SMTC has also played a role locally in the Safe Routes to School Program (SRTS), a Federal-Aid program of the U.S. Department of Transportation Federal Highway Administration (FHWA). The Program was created by Section 1404 of SAFETEA-LU. The SRTS Program was funded at $612 million over five Federal fiscal years (FY 2005-2009) and was administered by State Departments of Transportation (DOTs).

The Program provided funds to the States to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The purposes of the program are:

1) to enable and encourage children, including those with disabilities, to walk and bicycle to school,

2) to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age, and

3) to facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grades K-8).[2]

New York State received approximately $32 million over the multi-year period for SRTS projects. This $32 million was further allocated throughout each of the eleven NYSDOT Regions as necessary based on individual project needs. In New York State, the SRTS program consisted of both infrastructure and non-infrastructure project types. Infrastructure projects could range from sidewalks, crosswalk installation, and shared use paths, among others. Non-infrastructure projects relate to educational opportunities and enforcement.

Within the SMTC MPA, three municipalities were awarded funding as part of the State's project solicitation:

1. City of Syracuse;

2. Town of Manlius; and

3. Village of Fayetteville.

The City of Syracuse project was developed to focus resources in proximity of two elementary schools for dedicated infrastructure improvement and enhancement. Funds awarded to the Town of Manlius were utilized for enforcement purposes within the required two-mile radius of primary and middle schools, while the Village of Fayetteville project connects and completes the sidewalk network throughout the village.

[2] *Federal Highway Administration, Safe Routes to School Overview, [http://safety.fhwa.dot.gov/saferoutes/overview.htm] (8/2006).*

Although SAFETEA-LU has been extended several times since September 2009, without a full reauthorization, at this time it is difficult to predict if the USDOT SRTS program will continue.

Onondaga County Traffic Safety Advisory Board

Lights On Caravan

Another safety-related effort of the MPO includes being an active participant as a member of the Onondaga County Traffic Safety Advisory Board (OCTSAB) over the years. SMTC staff members have served as Chairperson and Secretary to the OCTSAB. The mission of the OCTSAB is "to foster cooperation and partnerships between all involved agencies, including law enforcement and community members, who have a vested interest in the education and enforcement of traffic safety within Onondaga County."[1] To that end, staff has served as the chair of the annual *Lights On Caravan*, held yearly to remember the victims of impaired driving incidents in Onondaga County. The Caravan begins at the CNYRTA headquarters and travels throughout Onondaga County to raise awareness in the month of December. Additionally, the OCTSAB recognizes the traffic safety efforts of area law enforcement professionals and other transportation professionals at their annual Recognition Ceremony. The OCTSAB also has sub-committees that address such issues as Aggressive Driving and Bicycle and Pedestrian Safety. Since the inception of the annual Share the Road Expo (formerly known as the Traffic Safety Fair), the SMTC has participated by promoting various aspects of the annual work program.

Bridge and Road Safety Conditions

Highway and bridge infrastructure are significant aspects of the transportation system in Onondaga County. The safety of the traveling public is of great importance, and it has improved during the past decades. Maintaining the current infrastructure is an important long range transportation goal of the SMTC MPA, and the majority of financial resources are allocated to the maintenance of existing highways and bridges. Detailed updated information on road and bridge conditions in the MPA is contained in the Facilities Chapter (Chapter 3) of this document.

NYSDOT Strategic Highway Safety Plan

The purpose of the 2010 New York State Strategic Highway Safety Plan (SHSP) is to promote best practices and strategies that, if implemented, could have a substantial impact on reducing fatal and injury crashes[3]. The 2010 SHSP identifies seven emphasis areas including driver behavior, pedestrians, large trucks, motorcycles, highways, emergency medical services, and traffic safety information systems. The SHSP addresses infrastructure based improvements to highway safety. SMTC programs and activities are intended to advance the SHSP through complimentary

[1] *Onondaga County Traffic Safety Advisory Board By-Laws, adopted November 12, 2002.*

[3] *New York State Strategic Highway Safety Plan*, Introduction, 2010, p.2.

infrastructure- and program-based countermeasures, including the previously noted Safety Improvement Analysis, and the agency's participation in the state-wide Safety Working Group.

Safety Working Group

As safety is a primary planning activity contained in federal transportation policy, the SMTC advocates and advances various safety planning activities through a variety of measures. In particular, staff participates on the NYSMPO Safety Working Group (SWG).

"The SWG is a coalition MPOs, state, and federal agencies working to advance safety initiatives intended to preserve, maintain, and improve safety for all users in New York State. The SWG discusses safety-related issues in an effort to advance safety planning in New York State among local, state, and federal partners. The SWG holds teleconferences on a monthly basis and biannual in-person Safety Roundtable meetings to discuss SWG goals and related action items."[4]

This involvement and other safety activities previously noted in earlier sections adhere to the intent of CFR 450.322 (h).

8.2.2 SECURITY

SAFETEA-LU Legislation

Within the SAFETEA-LU legislation, an additional planning factor was added to address security as its own entity (see Chapter 1 for the planning factors). Furthermore, according to the Federal Register Final rule for Metropolitan Transportation Planning, *"the metropolitan transportation plan should include a safety element that incorporates… emergency relief and disaster preparedness plans and strategies and policies that support homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users."*

The FHWA/FTA's 2009 review of the SMTC called out the importance of security considerations in the SMTC Planning Process. Security issues include significant disruptions to the transportation system, either long or short term, intentional or not. Previously, the issue of security had not yet become a significant part of the MPO planning processes. However, the issue of security is now a part of the MPO planning process, notably via the SAFETEA-LU legislation through the separation of the safety and security planning factor, and the requirements for addressing security within the metropolitan transportation plan (noted above).

Since September 11, 2001, security has affected all levels of government in a substantial manner. Transportation is no exception. The SMTC recognizes the importance of safeguarding the personal security of users of the transportation network. The current role of the SMTC is essentially "traditional" as the MPO is not directly involved in security operations per se, but it does have direct communication and interaction with key security agencies, incorporating them into the regional

[4] *New York State Metropolitan Planning Organizations, Safety Working Group brochure, http://www.nysmpos.org/directors/pdf/NYSMPO%20Brochure%2001.09.pdf.*

planning process (NYSDOT, Onondaga County, CNYRTA, NYSTA).[5] The SMTC's role in addressing security concerns has been primarily supportive in nature, as most issues related to security and transportation are outside the purview of the MPO. However, the SMTC can and does act as a conduit to facilitate interagency cooperation to that end.

In support of security planning, the SMTC had begun working on a project titled "Emergency Travel Routes."[6] The project was to be a multi-year task that entailed the preparation and wide dissemination of information necessary for management of travel demands related communications during emergency events. This project was planned to be a collaborative effort, not only by SMTC member agencies, but also including the NY State Emergency Management Office, as well as carefully targeted participation for those public, private, and non-profit departments and agencies with responsibilities for traffic management and public health and safety during emergencies in Onondaga County. Work products were to include GIS databases of the transportation system and transit resources and routes tailored to needs of first responders and emergency management and communications authorities, as well as plans and implementation strategies and necessary capital improvements.[7] The SMTC member agencies requested that the SMTC place the "Emergency Travel Routes" project on hold, as Onondaga County had recently begun the process of creating a new all county Hazard Plan. The SMTC will pursue the Emergency Travel Routes study when member agencies determine the most appropriate timing for this project.

Onondaga County All-Hazard Plan

Through a grant from the Federal Emergency Management Agency (FEMA), SOCPA is in the process of developing a multi-jurisdictional Hazard Mitigation Plan (HMP) for Onondaga County. The mission of the Onondaga County Multi-Jurisdictional Hazard Mitigation Plan is to: "*protect the health, safety, property, environment and economy of the communities within Onondaga County by partnering to identify and reduce our vulnerability to natural hazards in a proactive and efficient manner."*[8]

The plan will allow Onondaga County and participating municipalities to be eligible for future mitigation funding from the FEMA. Sections of the Interim Draft Plan are available on SOCPA's website (**http://www.ongov.net/planning/haz/docs.html**) as they are prepared. The SMTC and various SMTC agencies have participated in the development of the County HMP as Steering Committee members since September 2008.

As noted on SOCPA's website:

> *"The goal of the plan is to identify projects that can reduce damages from future natural hazards. The plan will include a risk assessment and a hazard-mitigation strategy. The primary hazard in Onondaga County is*

[5] *Federal Transit Authority & Federal Highway Administration, Syracuse Metropolitan Transportation Council FHWA/FTA Certification Review 2010, Security, p.75.*

[6] *Federal Transit Authority & Federal Highway Administration, Syracuse Metropolitan Transportation Council FHWA/FTA Certification Review 2010, Security, p.78-9.*

[7] *SMTC's 2006-2008 UPWP, Methodology, p. 50, http://web.smtcmpo.org/extranet/smtc/reports/UPWP_2006-08.pdf*

[8] *Syracuse-Onondaga County Planning Agency, Hazard Mitigation, http://www.ongov.net/planning/haz.html*

flooding, but other potential hazards to be analyzed include severe storms, severe winter storms, landslides, and wildfire.

The study will focus on existing and future buildings, and infrastructure and critical facilities that might be impacted. Infrastructure includes power-generation facilities, water utilities, roadways, railroads and communication systems. Critical facilities include shelters and hospitals. A series of public meetings have been part of the plan development process, both to solicit public comment and to present the draft plan to residents and local officials."[9]

NYSDOT and Centro

The NYSDOT has included a section in their Master Plan regarding transportation security. Chapter 7 (Security) in the NYSDOT Master Plan states the following:

In the wake of the September 11, 2001 terrorist attack, security concerns have moved to the forefront of transportation planning in New York State. The State Office of Homeland Security, created in response to the attack, is by law responsible for overseeing State resources applied to detection, prevention and, if necessary, response to a future attack. The New York State Emergency Management Office (SEMO) plans and coordinates the response of the State in times of emergency or disaster. Transportation operators have a significant role to play in the larger State efforts directed at Homeland Security. Transportation facilities such as airports, ports, and border crossings serve as critical gateways into the State but could also be portals for potential terrorist actions. Other large transportation assets, including the State's major tunnels and bridges, subway systems and major rail and subway stations unfortunately are targets. Because the State's transportation system plays an essential role in emergency response, operators must also be prepared to respond in the event of a major incident. The State's transportation customers as well as the public at large expect transportation operators to take every reasonable measure to ensure the safety of travelers and cargoes. Further, they expect that transportation will function effectively if there is an emergency. At the very least, they expect that transportation services and facilities, disrupted by an attack, will be restored quickly and that other alternative transportation services and facilities will operate during a time of emergency.

One issue that the Master Plan addresses is how NYSDOT conducts emergency preparedness and develops response plans. NYSDOT's Strategy to address this is to Coordinate Emergency Preparedness and Response. Specifically, examples include: operating agencies developing vulnerability and risk assessments for transportation facilities based upon the potential cost of an event in consultation with State and Federal homeland security agencies; identification of specific facilities which are most essential or critical to the functioning of transportation or to other crucial infrastructure sectors; undertaking mitigation efforts among and between all transportation operators to implement strategies to minimize the risk of damage to their at-risk facilities and vehicles; Federal and State agencies with security responsibility will ensure that all transportation operators and local governments coordinate in planning for the response to an event; transportation operators will coordinate and collaboratively work with the New York State Office of Cyber Security and Critical Infrastructure Coordination (CSCIC) to ensure cyber readiness, resilience, and response efforts. They will work closely to establish partnerships and ensure that there is facilitated communication and

[9] *Syracuse-Onondaga County Planning Agency, Hazard Mitigation, http://www.ongov.net/planning/haz.html*

information sharing between both public and private sector transportation operators; real-time information exchange and collaboration will be promoted between and among transportation operators and the public sector, including CSCIC for geographical information technologies and information on critical infrastructure assets, to quickly assess the situation, identify available assets, and effectively coordinate efforts both during and after an event; NYSDOT will continue to work with the Office of Homeland Security, Metropolitan Transportation Authority, Port Authority of New York and New Jersey, and New York City Department of Transportation through Bi-weekly Agency Heads Meetings and their Transportation Security Subcommittee to collaborate on best security practices across all modes of transportation; emergency management and evacuation planning will be lead by the county, municipal and local governments who are responsible for preparing evacuation plans for their respective areas in the case of natural and man-made disasters.

Another issue addressed in the security section of the Plan is how the protection of facilities identified as vulnerable be accomplished cost effectively so that other transportation goals can continue to be advanced. Additionally, the Plan reviews how efforts to protect against attack can be implemented without unduly undermining the goals for improved mobility and reliability and economic vitality. NYSDOT's strategy is to balance security with reliability conclusion. This can be accomplished by additional security measures when official security threat levels or intelligence necessitate them; specific programs to protect high risk facilities will be implemented, continuously monitored for their effectiveness, and improved as necessary; ensuring that all transportation operators adopt appropriate security measures for each of their vulnerable facilities; paying special attention to border crossings with Canada, ports and waterways, and airports.

While much of the leadership and funding to promote secure transportation for these strategies will be provided by the Federal Government, New York State is committed to working in partnership with Federal and local authorities to carry out the necessary security planning and to implement coordinated and prudent actions by all transportation operators. Because transportation is vital to the Nation's and the State's well being, it is essential that all transportation operators support these efforts while continuing to promote improved transportation services for all customers. Security will remain at the forefront of transportation management during the life of the Plan.[10]

New York State's official traffic and travel information source that includes travel information from the NYSDOT Region 3 is called 511NY.[11] Traffic and transit conditions as well as a transit trip planner and ride share information can be found on the 511NY website, **http://www.511ny.org/**, along with construction alerts and weather updates. All of this information can also be accessed via phone and/or mobile application through a cellular phone. The NYSDOT and NYSTA provide the highway information for Region 3 to the 511 service.

Locally, the NYSDOT Region 3 established a Traffic Management Center (TMC) in the State Office Building which has been operational since October 2004. The facility is staffed with NYSDOT employees and is operated around the clock. The TMC dispatches snow and ice operations for Onondaga County and operates the permanent and portable Dynamic Message Signs (DMS) in the

[10] *Strategies for a New Age: New York State's Transportation Master Plan for 2030, Summer 2006.*
[11] *511NY – Traffic, Travel and Transit Info, Welcome to 511NY, http://www.511ny.org/*

Syracuse area.[12] The Traffic Operations Working Group (also established by NYSDOT Region 3) supports the TMC. Several local public safety agencies and personnel participate in the working group which focuses on detour routes and incident management. The SMTC provides GIS assistance to the working group as requested.[13]

Centro is also implementing new security measures to be proactive regarding security concerns. In 2010 they incorporated more fencing around the CNYRTA property. Other security measures have been added to the inside of the building.

Hancock International Airport

According to the Syracuse Hancock Airport's web site, the *Passenger Terminal Security and Access Improvement Project* creates a single central passenger screening location on a new second level in what is now the center lobby. This security checkpoint will be accessible from a new vertical circulation structure in the center of the building. [14]

According to the Passenger Terminal Security and Access Improvement Project newsletter, project features include:

- A 147,000-square-foot addition that will connect the two separate wings of the terminal on the second level, both pre- and post- passenger security screening points.
- Green design and construction techniques that will significantly reduce operating costs for the building and reduce the building's carbon footprint. Proposed techniques include solar panels to produce electricity and hot water; construction techniques that minimize waste and encourage recycling; extensive use of natural daylighting; enhanced indoor environmental quality; and the use of sustainable construction materials. The use of green technology combined with the installation of more energy-efficient HVAC equipment is estimated to reduce terminal operating and maintenance costs by as much as $1.00 per square foot per year.
- The addition creates a single central passenger screening location on a new second level in what is now the center lobby. This security checkpoint will be accessible from either wing or a new vertical circulation structure in the center of the building. Deplaning passengers will still be permitted to exit each wing directly to the parking garage or the center of the building via escalator or elevator.

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[12] *Federal Transit Authority & Federal Highway Administration, Syracuse Metropolitan Transportation Council FHWA/FTA Certification Review 2010, Security, p.77.*

[13] *Federal Transit Authority & Federal Highway Administration, Syracuse Metropolitan Transportation Council FHWA/FTA Certification Review 2010, Security, p.78.*

[14] *Terminal Security Upgrade, Hancock International Airport website: http://www.syrairport.org/about/projects/termsec.cfm.*

- Approximately 30,000 square feet of the new addition will accommodate the relocation of TSA baggage screening equipment and personnel behind existing airline ticket counters. This new baggage screening space also accommodates installation of an automated inline baggage screening and sort system in the future[15].

Intelligent Transportation Systems (ITS)

One of the most significant components of security in the MPO area is the Intelligent Transportation Systems (ITS) initiative. ITS refers to the application of electronics, communications, hardware, and software that support various services and products to address transportation challenges. When deployed in an integrated fashion, ITS allows the surface transportation system to be managed as an intermodal, multi-jurisdictional entity, appearing to the public as a seamless system. The United States Department of Transportation has been advancing the development and deployment of ITS through various programs.

The NYSDOT in conjunction with the SMTC and its member agencies developed the Intelligent Transportation System Strategic Plan (2003) for deployment of ITS for the Syracuse Metropolitan Area (principally Onondaga County). In addition to providing recommendations for the NYSDOT, the study also included recommendations for the City of Syracuse Department of Public Works, the Onondaga County Department of Transportation (OCDOT), the New York State Thruway Authority (NYSTA) and the Central New York Regional Transit Authority (CNYRTA). The study was primarily concerned with traditional traffic flow; hence a detailed analysis of emergency service provider's overall ITS needs were not part of this study.

The study's regional ITS architecture framework also included recommendations, intended to be advisory, for key regional transportation agencies in the spirit of developing integrated ITS in the region. Please refer to the complete study for reference; this LRTP update includes only select excerpts and summarizations. Further information can be found at the SMTC's web site at: **www.smtcmpo.org/finalreps.asp?fy=2003&ShowAll=0**.

The ITS study created three key components: Technical Memorandum # 1 - ITS Concept Plan; Technical Memorandum # 2 - ITS Regional Architecture; and Technical Memorandum # 3 - ITS Implementation Plan.

[15] *Terminal Security Upgrade, Hancock International Airport website: http://www.syrairport.org/about/projects/termsec.cfm.*

ITS Implementation Plan
The final product of the ITS study is an overall ITS implementation plan in the form of proposed individual projects to be deployed over a period of time. The implementation plan provides recommendations for the NYSDOT Region 3, the City of Syracuse Department of Public Works, NYSTA, OCDOT, and CNYRTA.

The following is a list of ITS Projects by agency that have been completed as of April 2011:

- **City of Syracuse**: There are 24 projects put forth via the ITS Strategic Plan as of December 2006. The City of Syracuse has completed the following ITS projects:
    - Expansion of the City's Traffic Signal Communications Network,
    - Design and Construction of an Inter Connect Expansion Project on Geddes and West Genesee Streets,
    - Design and Construction of the North Salina and Lodi Streets Interconnect Expansion.

- **Onondaga County**: There are 21 projects put forth via the ITS Strategic Plan for Onondaga County as of December 2006. Onondaga County has completed the following ITS projects:
    - Purchase of 2 portable Variable Message Signs (VMS),
    - Signal System Expansion Phase I (Route 57),
    - Signal System Expansion Phase II (South Bay Road, and West and East Taft Road),
    - Vehicle Fleet Administration Project – Phase I (Automated Vehicle Locators, AVLs, added to 50 County vehicles),
    - Snow Removal Vehicle Fleet Administration Pilot Project Phase II (Automated Vehicle Locators added to snow removal vehicles),
    - Vehicle Fleet Administration (AVL project) – Phase 3 (AVLs added to 30 County vehicles),
    - Signal System Expansion Phase 4 (Electronics Parkway, Henry Clay Boulevard, Hopkins Road, Buckley Road and Seventh North Street) is on the TIP for 2013.

- **NYSDOT Region 3**: There are 34 projects put forth via the ITS Strategic Plan for NYSDOT Region 3 as of December 2006. NYSDOT has completed the following ITS projects:
    - Various phases of the ITS Regional Freeway Management System (Phases V, VI, VII, and VIII are on the program for completion),
    - The NYSDOT Regional Transportation Management Center (along with continued/yearly maintenance and operation of the center),
    - The statewide 511 Travel Information System (completed by Main Office DOT),
    - The ITS Systematic Performance Monitoring Project (within the statewide Advanced Transportation Management System),

  - Location expansion and software upgrade of the Road Weather Information System (RWIS),
  - Conversion of 233 intersections to 2070 traffic controllers.

- **New York State Thruway Authority**: There are eleven projects put forth via the ITS Strategic Plan for the Thruway Authority as of December 2006. The NYSTA has completed the following ITS projects:
  - Regional Transportation Management Center (with on-going annual maintenance by Thruway forces),
  - ITS Implementation System – Phases I & II,
  - Road Weather Information System (RWIS) station,
  - Full Coverage of CCTV surveillance, 3 Cameras and 2 more VMS project is nearing completion.

- **CNYRTA:** There are 32 Projects put forth via the ITS Strategic Plan for Centro as of December 2006. The CNYRTA has completed, or will complete in the near future the following ITS projects:
  - Automated Transit Itinerary agency-based planning,
  - Web-based itinerary planning,
  - Automated Vehicle Locator (AVL) System (with expansion planned for 2014),
  - Radio System Upgrade,
  - Automatic Passenger Counters (with expansion planned for 2014),
  - On-board Traveler Information System,
  - Surveillance System,
  - Automated Fare Collection Machine (planned for January 2012 at the new Syracuse transit hub),
  - Display Monitor System planned for January 2012,
  - Interactive Kiosks planned for January 2012.

For comprehensive information relating to the ITS Strategic Plan please refer to either the "Syracuse Metropolitan Area Intelligent Transportation Systems Strategic Plan" or the complete Executive Summary. Further information can be found at the SMTC's web site (**http://www.smtcmpo.org/finalreps.asp?fy=2003&ShowAll=0**).

Transportation security will continue to be a topic of interest for the SMTC. As the SMTC Planning Certification Review notes, prevention of potential security issues is very important, but due to the nature of our transportation system, it is also important to focus on the response and recovery measures. The SMTC's role during the future years will be to continue to facilitate discussion as well as aid in emergency planning exercises.

8.3 PLANNING EFFORTS

8.3.1 MEMBER AGENCY ACTION PLANS RELATED TO SAFETY

The SMTC and its member agencies continue to work towards the achievement of the LRTP's safety and security goals and objectives. As such, the following action plans have either been implemented or are being implemented by member agencies since the 2007 LRTP Update:

1. The New York State Department of Transportation (NYSDOT) has instituted an annual program to identify high accident locations and develop accident countermeasures to reduce the number and severity of these crashes, including the following:

- A project on Route 5 at Route 635 to be let in spring 2011 will resurface both Route 5 approaches to address an identified Priority Incident Location (PIL) and will re-align the westbound right turn slip ramp to bring movement into the signal.

- A project that replaced the Bartell Road bridge over I-81 in Brewerton was completed in March 2010. This $6.7 million project included measures to reduce the skew angle of the I-81 northbound exit ramp for traffic turning right onto Bartell Road. Replacement of the bridge increased safety and capacity.

- A safety project along Route 11 at Route 49 intersection to address capacity related issues involving patterns of right angle crashes associated with County Route 12 (Mallory Street) has been completed.

- A Maintenance by Contract (MBC) project will resurface the Bear Road extension Route 930J from Route 11 to South Bay Road and widen narrow shoulders. A summer 2011 letting is anticipated.

- A project on Route 31 from Route 11 to Lakeshore Road in Cicero (to be let 2015/2016) will include measures to address left turn/head-on accidents at the I-81 interchange and left turn/head-on and right angle accidents at adjacent commercial driveways. This project will likely be combined at Plans, Specifications, and Estimates (PS & E) with a comprehensive safety project to replace the interchange with either a diverging diamond (DDI) or a single point urban interchange (SPUI) to address operational/capacity related issues.

- A project on I-81 between Church Street and South Bay Road in Cicero installed continuous median barrier or guide railing to address crossover accidents. This project has been completed.

- A project on I-81 from the Northern Lights bridge to just north of the Route 31 overpass - 1R resurfacing will add Milled in Audible Roadway Delineators (MIARDS) in shoulder,

replace damaged signs and guiderail, and address roadside clear zone issues. This project is in design.

- A project on Route 11 at East Circle Drive in Cicero (6/08) included measures to reduce the skew angle of the westbound right turn ramp to Route 11. This project has been completed.

- A project on I-690 westbound at the Thruway Interchange (let 6/07) in Van Buren installed high-tech LED pavement markings. This project has been completed.

- A project on Bridge Street (Route 930P) at the I-690 interchange in East Syracuse will install a double left turn lane on Bridge Street for traffic turning left onto I-690 westbound, and will reduce the skew angle of the ramp for traffic turning right onto I-690 westbound. It will provide signalized control of the 930P southbound double right turn lanes to I690 westbound to address both capacity and rear end type accidents. This project is anticipated to be let in 2011.

- A project in the Village of East Syracuse (let 2/07) realigned the right turn ramps at the Bridge Street (Routes 290 and 930P) intersection with Manlius Center Road (Route 290) to reduce the skew angles and bring the ramps under signalized control. This project has been completed.

- The Route 173/175 Onondaga Hill Project realigned the Makyes Road and Velasko Road intersections into one signalized intersection, improved channelization and operations along the 173/175 overlap section, and provided a new driveway for Van Duyn Hospital.

- The Route 31/Mud Creek bridge project widened Route 31 to a five-lane section from the Great Northern Mall east driveway through Morgan Road.

- The I-81 Interchange at Route 49 project is needed to address capacity related issues associated with both the northbound I-81 off ramp to Route 49 and Route 49 westbound on ramp to I-81 southbound.

- At Route 298, Court Street/New Venture Drive, a new signal installation under 2007-08 Signal Requirements project was completed that added protected/permissive phasing for the northbound left turn lane onto Court Street to coincide with the existing southbound left to New Venture Drive.

2. The NYSDOT has completed safety projects at the following locations:

   - A $20+ million project was completed December 2008 that replaced the eastbound and westbound bridges over the CSX mainline just east of the New York State Fairgrounds.

Also included were profile improvements to I-690.

- The Route 92 from the City line to Erie Boulevard $6 million project included improvements to drainage, pedestrian and multimodal systems, and access management principles. This project was completed February 2009.

- A $15 million project reconstructed Route 370 from the Cayuga County Line to NY 690, just west of the Village of Baldwinsville. Also included were changes to the horizontal and vertical alignment of the highway. This project was completed December 2008.

- Route 174 in Marcellus, from the central business district to the northern village line, was reconstructed in December 2008 and included bridge deck replacement, new sidewalks, improved drainage, and guiderail installation for $4.9 million.

- Completed in April 2009, a $1.35 million project combined paving operations on NY 290 in the Village of East Syracuse, paving on Route 930W (Genesee Street) in Camillus, and sight distance improvements on Route 11 at Circle Drive.

3. Recent or upcoming NYSDOT improvements for the ten highest vehicular accident locations on State-owned roads include:

- Route 11, Northern Concourse/South Bay Road Spur/Route 11 to Bailey Road project. HSI completed in 2010 recommending signal re-timing/coordination to provide protected only left turn phasing at 11 NB at Bailey Road. A project (completed in 1999) Sand Road to South Bay Road included channelization and lane reallocation improvements at the I-81 northbound exit at Route 11 northbound/Northern Lights Plaza; Route 11 northbound and South Bay Road northbound split; Route 11 northbound at South Bay Road southbound; Route 11 southbound at South Bay Road southbound and Northern Concourse.

- Route 298 at Carrier Circle - The Route 298 3R project (completed in 1993) channelized and reduced the approach/merge skew angle of the Route 298 eastbound approach to Carrier Circle. The Route 298 eastbound approach to Carrier Circle was realigned and channelized (in 2003) to reduce rear end and sideswipe type crashes. Additionally realignment of the T-way approach and North Thompson Road approach/merges are needed to steepen the skew angle to address patterns of rear end crashes along both approaches under a future capital project.

- Route 930C Adams Street Arterial (South Clinton Street to Almond Street) signal replacement/re-timing at South Salina Street (Centro Permit) and Almond Street with new mast arm signal.

- Route 11, Bear Road to East Circle Drive - Signal requirements project (2006) Bear

Road/930J - placed a new three-colored signal at the Route 481/930J ramps with a signal coordination closed loop system with Route11/Bear Road signal to address heavy peak hour left turn movements. This project has been completed.

- Route 11, Bear Road to East Circle Drive - A protected-only left turn phase was installed for Route 11 southbound traffic turning onto East Circle Drive. A project on Route 11 at East Circle Drive in Cicero (let 6/08) included measures to reduce the skew angle of the westbound right turn ramp to Route 11. This project has been completed.

- Route 31, Crabtree Drive to Lakeshore Road - A project on Route 31 from Route 11 to Lakeshore Road in Cicero (to be let in 2016) will include measures to address left turn/head-on accidents at the I-81 interchange and left turn/head-on and right angle accidents at adjacent commercial driveways. Comprehensive, long-term alternatives to reduce accidents and heavy congestion along the corridor are also being explored with consideration given to full replacement of the interchange using a diverging diamond or single point urban interchange. This project is currently in design.

- I-81, I-690/Salina Street to Park Street - 1R resurfacing addressed pavement, sign, guiderail, and roadside clear zone issues along I-81 from the I-690 interchange to Park Street Bridge. This project has been completed.

4. The NYSDOT funds safety improvements through the capital program update process. Qualifying improvements (those which can achieve a benefit/cost ratio of 5.0 or higher) are suggested for addition to the capital program through the following methods:

- Safety Capital Projects, which are stand-alone projects, are programmed for the purpose of eliminating a safety deficiency and/or reducing accident frequency and severity.

- Safety Enhancements, which are safety improvement components, are added to a paving or infrastructure improvement project to reduce accidents and severity at high accident locations and cluster locations.

5. The NYSDOT has developed a Safety Information Management System (SIMS) that provides accident record information on State and local highways and streets.

6. The NYSDOT is currently pursuing a program to produce a comprehensive statistical and Geographic Information Systems (GIS) - based report on pedestrian and bicycle crash data.

7. The NYSDOT has eliminated a rail grade crossing at Poolsbrook Road in the Town of Manlius.

8. The NYSDOT has developed a community outreach program presentation that is used during development of the capital program for obtaining local government and citizen input during the planning process. The outreach program is used to identify and address accident problems, as well as current and anticipated safety needs.

9. The NYSDOT is implementing the guidelines contained in the brochures *Best Practices in Arterial Management* and *An Information Guide to the Highway Work Permit Process* in order to enhance safety.

10. The NYSDOT, through the Highway Work Permit process, requires developers of major commercial and residential developments to include any necessary mitigating measures, such as turning lanes and traffic signals to the state highway system, to maintain safe operating conditions.

11. The NYSDOT, in conjunction with the New York State Police, establishes locations on the state highway system to be used in the annual Targeted Enforcement campaign. The campaign is aimed at addressing the problem of aggressive motorist behavior.

12. The NYSDOT conducts annual Safety Appurtenance (SAFETAP) reviews of sections of state highways scheduled for preventative maintenance paving projects. The program consists of roadside safety audits that identify and will ultimately address roadside clear zone issues.

13. The NYSDOT continues to stress safety in highway work zones. This is accomplished through the Department's ongoing Work Zone Safety Initiative, by advocating Work Zone Legislation, and through the use of driver information and enforcement techniques.

14. The NYSDOT upgrades safety appurtenances through the capital program. Signing improvements, pavement marking modifications, guide rail upgrades, and signal system improvements are undertaken annually to meet the safety needs of drivers, pedestrians, and bicyclists.

15. The NYSDOT has developed a Strategic Highway Safety Plan (SHSP) to identify the State's key safety needs and guide investment decisions to achieve significant reductions in highway fatalities and serious injuries on all public roads. This statewide document was developed in a cooperative process and includes input from public and private safety stakeholders.

16. The Region 3 Traffic Management Center (TMC) opened in October 2004. The TMC is open 24/7, 365 days a year and is a central resource for traffic operation needs for NYSDOT Region 3. Intelligent Transportation Systems (ITS) such as the Freeway Incident Management System projects continue to be designed and constructed on the interstate systems within the Syracuse urban area. These projects consist of roadside cameras, dynamic message signs, and vehicle speed detectors, and allow the real time operation of the interstate system from the TMC. Currently, 19 cameras, 12 permanent dynamic message signs and 14 vehicle detector stations are installed or under construction along I-81 and I-690. Additionally, design is underway to implement similar equipment on I-481, enhancing the overall ability to manage traffic and incidents.

17. The Central New York Regional Transportation Authority (CNYRTA) has a System Safety Plan that is updated every 24 months covering internal and external operations.

18. The CNYRTA uses a system for tracking and categorizing transit accidents using the NYS Public Transportation Safety Board process as a template.

19. The CNYRTA has an extensive training program for all new transit operators and periodically does refresher training for existing personnel. In addition, CNYRTA has acquired a computerized training simulator, which is expected to significantly enhance the Authority's training program.

20. The CNYRTA has acquired land and is in the design process to move its Transit Hub in the City of Syracuse to an alternate weather-protected location where buses can load and transfers may be made out of the general traffic flow. This project will be completed in winter 2011/2012.

21. Centro has completed several ITS projects; including Automated Vehicle Locator (AVL), Automated Passenger Counter (APC) systems and a modern, more efficient radio communications system. These technologies enable Centro to complete its mission with greater efficiency. Centro has committed to completion of a number of other ITS technologies and replacement of aging equipment for those in place will be an issue in the near future.

22. The Onondaga County Department of Transportation (OCDOT) has implemented the following safety action plans:

- The Kirkville Road / Fremont Road Intersection Project (1998 completion) added dedicated turn lanes on all approaches, channelization improvements, signing improvements and upgraded signalization to improve an intersection with a accident rate well above the State Mean Accident Rate.

- The Kirkville Road / Fly Road Intersection Project (2002 completion) added dedicated turn lanes on all approaches, channelization improvements, signing improvements, and upgraded signalization to improve an intersection with an accident rate well above the State Mean Accident Rate. Additional left turn lanes southbound and a right turn lane westbound were added to improve mobility through the intersection during New Venture Gear rush hours.

- The Northern Blvd. / Taft Road Intersection Project (2003 Completion) added dedicated turn lanes on all approaches, channelization improvements, signing improvements, and upgraded signalization to improve an intersection with a accident rate well above the State Mean Accident Rate. Slip ramps from Northern Blvd southbound onto Taft Road westbound and Taft Road eastbound onto Northern Blvd southbound were replaced with 90-degree turn lanes at the signal to eliminate an unusually high rear end accident problem.

- The Taft Road / Allen Road Intersection Project (2003 completion) added a dedicated turn lane on the eastbound approach, channelization improvements, signing improvements and upgraded signalization to improve an intersection with a accident rate well above the State Mean Accident Rate.

- The Salt Springs Road / North Eagle Village Road Intersection Project (2004 completion) realigned Salt Springs Road to intersect North Eagle Village Road at a desirable angle and signing improvements to improve an intersection with an accident rate well above the State Mean Accident Rate.

- The Intersections of Henry Clay Blvd. at Buckley Road and Wetzel Road (2005 completion) added dedicated turn lanes on all approaches of both intersections, channelization improvements, signing improvements, and upgraded signalization to improve a corridor with an accident rate well above the State Mean Accident Rate. Additional lanes between the intersections were added to improve mobility through the area during peak hours.

- The Soule Road / North Pinegate Road Intersection Project (2006 construction) added a new actuated three-color traffic signal, dedicated left turn lanes on Soule Road, and signing improvements to improve an intersection with an accident rate well above the State Mean Accident Rate.

- The Grand Avenue (Fay Road) Phase I Reconstruction Project (2005 completion) reconfigured the Fay Road/Onondaga Boulevard/Terry Road Intersection. Dedicated left turn lanes were added on Fay Road and additional turn lanes were added on Onondaga Boulevard to improve safety and capacity.

- The Grand Avenue (Fay Road) Phase II Reconstruction Project (2006 letting) will reconfigure the Fay Road/Grand Avenue Intersection. Fay Road will be realigned to meet Sheraton Road. Left turn lanes will be added both on Fay Road and Grand Avenue to improve safety and capacity.

- Taft Settlement Road Part II (East Taft Road), South Bay Road to Northern Boulevard Project (2007 letting) will address a deteriorating pavement and an accident rate which exceeds the statewide average for this type of facility. The preliminary scope of the project includes a two-course asphalt overlay through the entire project area and the addition of a two-way left turn lane from South Bay Road to the Church Road Intersection. A new actuated three-color traffic signal, dedicated left turn lanes on East Taft Road and signing improvements will be installed to improve an intersection with an accident rate well above the State Mean Accident Rate.

- The Velasko Road project (2007 letting) was initiated to address a deteriorating pavement and an accident rate which exceeds the statewide average for this type of facility. The project included a two-course asphalt overlay through the entire project area and the enclosure of existing deep open ditches. Further studies will be done to determine the need to propose possible improvements at the McDonald Road intersection.

- Factory Avenue, C.R. No. 93 at Salina - DeWitt Townline Road, C.R. No. 70 (Townline Road) intersection project replaced the existing slip ramp from Factory Avenue to Southbound Townline Road with a dedicated right turn lane to improve signal efficiency and to improve an intersection with an accident rate well above the State Mean Accident Rate.

23. The City of Syracuse has implemented the following safety action plans:

- Traffic Signal Light Emitting Diode (LED) Lighting Initiative – The City replaced all of their traffic signal lights with LEDs including yellow lights. This will increase pedestrian and vehicular safety. The LEDs emit a brighter light, have a longer life span, and save energy.

- Adams Street/Comstock Avenue Signal Improvements – Signals were added at Adams/Comstock and at Adams/Walnut. These signals are interconnected so that a vehicle starting up the hill will make it through the intersection on the hill without having to stop on the hill. The traffic signal at Adams/Comstock replaces stop signs on Comstock, making the intersection safer.

- Upgraded Signal Indication Study – The City is completing a study of all signal indications to determine what signals are warranted. Signals that are not warranted will be eliminated. If signals are warranted, the signals will be upgraded to dual indication. The study should be completed by the end of 2007. All unwarranted signals will be deactivated after the study is completed and signal upgrades will be initiated.

24. The SMTC participated in the National Highway Institute Safety Conscious Planning Course, as well as in a statewide Shared Cost Initiative that will include the development of a standardized safety audit priority list, and development of statewide accident rates for non-state highways.

9 EMERGING INITIATIVES/PROJECTS, LONG TERM OUTLOOK & FINANCIAL PLAN

9.1 EMERGING INITIATIVES/PROJECTS

9.1.1 SMART GROWTH

New York State recently enacted the New York State Smart Growth Public Infrastructure Policy Act. As such, several State agencies including the NYSDOT are required to align construction of new or expanded infrastructure projects or the reconstruction of existing projects, to the extent practicable, with Smart Growth criteria. The overall approach of the NYSDOT is to build upon existing programs in the NYSDOT and integrate Smart Growth principles in existing federal and state mandated planning and project development processes.

The New York State Smart Growth Public Infrastructure Policy Act defines the purpose as follows:

> *"…to augment the state's environmental policy by declaring a fiscally prudent state policy of maximizing the social, economic and environmental benefits from public infrastructure development through minimizing unnecessary costs of sprawl development including environmental degradation, disinvestment in urban and suburban communities and loss of open space induced by the funding or development of new or expanded transportation, sewer and waste water treatment, water, education, housing and other publicly supported infrastructure inconsistent with smart growth infrastructure criteria."*

The SMTC is currently participating in various Smart Growth working groups with the NYSDOT and other NYS MPOs in an effort to assist with determining how smart growth requirements (as outlined in the new NYS law) should be addressed within MPO LRTPs, the NYSDOT Master Plan, planning studies and TIP project selection processes. As the Smart Growth law directly applies to State Infrastructure Agencies, the NYSDOT formed these working groups to address the requirements of this law.

During the I-81 Challenge Public Workshops conducted in May 2011 at the Syracuse Oncenter, the SMTC and NYSDOT used the opportunity to educate the public on Smart Growth concepts in the Transportation-Land Use section. A board (shown on the next page) outlining what Smart Growth "is" and "is not" along with the benefits of smart growth was developed and shared at the public meeting further illustrate this concept.

Smart Growth board from 'The I-81 Challenge' Public Workshops, May 2011

In addition, as noted in the Introduction to this LRTP Update, the *Community Planning & Transportation Resident Survey*, developed by the SMTC and SOCPA showed public support for smart growth concepts – for planning that focuses on existing infrastructure and community assets, protection of natural and scenic areas, and focused growth in existing centers. The survey also illustrates a need for improvements to existing transportation assets and the exploration of alternative modes of transportation. The SMTC and SOCPA will continue to utilize this information in the development of Onondaga County's Sustainable Development Plan, and to inform the rewrite of the next LRTP.

9.1.2 COMPLETE STREETS

Complete Streets are those designed for everyone – regardless of age and ability. "A complete street may include: sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more."[1]

[1] Complete Streets, *Complete Streets FAQ, http://www.completestreets.org/complete-streets-fundamentals/complete-streets-faq.*

Recently there has been a national push for Complete Streets and the development of Complete Streets policies, which has also been gaining momentum locally. Legislation for Complete Streets at both the state and national levels is presently under consideration.

Recently the Onondaga County Health Department was awarded the "Creating Healthy Places to Live, Work, and Play" grant by the New York State Department of Health. The goal of the grant is to prevent obesity, type 2 diabetes, and other chronic diseases in Onondaga County by implementing sustainable policies, systems, and environmental changes in communities where people live, work and play. One of Onondaga County's objectives through this grant is to work on Complete Streets policies and/or legislation, and to promote bicycling and walking within Onondaga County. The SMTC and the City of Syracuse have recently begun to work with the Health Department as they strive for environmental and policy change in the County. One of the most recent efforts conducted is the Cycle in the City project.

Cycle in the City Project
The SMTC has participated in the first two annual Cycle in the City events organized by the Onondaga County Health Department (through their Creating Healthy Places grant). Key partners included Onondaga County Parks, the Museum of Science and Technology (MOST), City of Syracuse Parks Recreation and Youth Programs, SMTC, Onondaga County Traffic Safety Advisory Board, B.I.K.E. Syracuse, and Syracuse Police Department, among others. The purpose of the event has been to draw attention to the bikeability of the City of Syracuse by promoting the use of paved surfaces to ride a bicycle. Cycle in the City targeted amateur cyclists from downtown Syracuse and the surrounding neighborhoods to show support for streets that provide safe, convenient, and comfortable travel for drivers, transit users, pedestrians, bicyclists, older people, children, and people with disabilities (a complete streets model).

The Cycle in the City events have had great success. In May 2010, an estimated 213 participants gathered at MOST for guided 5 and 10-mile rides through the city, a bike-safety rodeo, free helmet giveaway, farmer's market, bike safety check, health fair, and a complete streets advocacy project in May 2010. In May 2011, an estimated 150 participants gathered a the MOST for guided 3- and 10-mile rides through the city, a bike-safety rodeo, free helmet giveaway, complete streets advocacy petition, and healthy snack station.

9.1.3 I-81 CHALLENGE

As noted both in Chapter 1 and Chapter 3 of this document, *The I-81 Challenge*, is one of the largest planning projects undertaken in the Syracuse Metropolitan Planning Area in decades. In 2009, on behalf of the NYSDOT, the SMTC began working on the I-81 Public Participation Project. The goal of this project is to facilitate the public participation effort in conjunction with NYSDOT's study of the I-81 Corridor. Together, the Public Participation Project, the NYSDOT's I-81 Corridor Study and the I-81 Travel Demand Modeling Project (another project undertaken by the SMTC to assist NYSDOT in evaluating existing and future traffic conditions along I-81 in the MPA), form *The I-81 Challenge*.

Over the next several years, *The I-81 Challenge* will advance the community discussion that has already started about the future of I-81. Information about the existing conditions of the highway and the regional transportation system has been collected. This information has been shared with the public, and the NYSDOT and the SMTC have involved the public in developing a set of values, goals, and ideas for the future of I-81. All of this information will be used to generate a wide range of options for the future of the highway and a set of criteria for evaluating them. The broad range of options will be narrowed down to a small number of viable alternatives through a combination of technical analysis and continued public involvement. Later, the viable alternatives will be refined and analyzed in further detail and a formal environmental review process, including official hearings, will begin. That process will ultimately lead to a decision - and to a project or projects that can be implemented (please see Chapters 1 and 3 for more information on *The I-81 Challenge*).

9.1.4 UNIVERSITY HILL AREA

University Hill is a thriving educational and institutional center. The Hill is home to more than 16,000 residents, three educational institutions, four major hospitals and healthcare facilities and the 50,000-seat Carrier Dome located on the Syracuse University Campus. [2]

University Hill is poised for continued development and growth. The SMTC completed the University Hill Transportation Study in 2007 to create a multi-modal transportation plan that supports the existing and future land uses and guides transportation decisions on the Hill. The goal of the study was to keep the institutions viable by identifying creative land use policies and innovative transportation alternatives, and reduce the need for more cars and parking. Collectively, more than 4 million square feet of development is forecast by the institutions over the next two decades. This growth can contribute significantly to the Central New York economy.

The forward-thinking vision for University Hill represents a shift from the traditional approach to improving transportation systems to a more comprehensive and coordinated approach to moving people, goods, and minds. Thus, a series of innovative concepts are recommended to meet current and future transportation needs of University Hill, including:

- Implementation of a joint, mixed-use development program,
- Creation of a prioritized transit network,
- Reconfiguration of Almond Street Corridor,
- Restoration of two-way streets,
- Establishment of a bike boulevard network, and
- Adoption of an integrated parking strategy.

Connective Corridor

The Connective Corridor initiative was kicked-off by Syracuse University Chancellor Nancy Cantor who wanted to create a symbolic and functional means of linking Syracuse University to the City of Syracuse.

[2] *Home to Syracuse University, Crouse Hospital, State University of New York (SUNY) Upstate Medical Center, SUNY College of Environmental Science and Forestry, the Veterans Administration Hospital and other important institutions and businesses, this area attracts a significant number of people each day for employment, learning, research and living.*

Over time, various geographic barriers and other obstacles have prevented safe and efficient movement of people among the different entities that make up the Connective Corridor. This has constrained development and the ways students, residents, and businesses engage with each other. The project involves streetscape improvements and will improve travel and access to various modes of transportation to better link its neighborhoods, institutions, and businesses. The corridor will also reflect and promote the different historical and cultural attractions to the city, to make downtown Syracuse a destination for people and business development. The project consists of developing a vibrant pathway with distinctive landscaping, lighting, and benches to accommodate and enhance pedestrian and bicycle traffic. A public shuttle bus route will be offered, along with road and parking improvements to reduce vehicle congestion and provide effective transportation options. Other elements, such as informational kiosks and signage will assist travelers in providing important information regarding cultural venues, businesses and other destinations.

9.1.5 TRANSPORTATION ENHANCEMENT PROGRAM

The Transportation Enhancement Programs (TEP) was first established in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), then carried over in the Transportation Equity Act for the 21st Century and (TEA-21) and most recently continued in the latest transportation legislation, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). It is not yet known if the TEP will continue as a piece in the next transportation bill.

Through the TEP there are innovative opportunities to improve the transportation system through the implementation of a specific list of activities intended to benefit the traveling public, increase transportation choices and access, enhance the built and natural environment, and provide a sense of place. Transportation enhancement activities offer communities funding opportunities to help expand transportation choices such as safe bicycle and pedestrian facilities, scenic routes, beautification and other investment that increase recreation, accessibility, and safety for everyone beyond traditional highway programs.[3]

9.1.6 LAKEFRONT DEVELOPMENT

Lakefront Development District

Over the past 20 years, the City of Syracuse and several public and private partners have been working to redevelop a long vacant and underutilized area in the northern part of the city. Sometimes referred to as *Oil City* due to the large concentration of oil storage facilities and industrial businesses, the area is undergoing a continued transformation into what is now known as the *Syracuse Lakefront*. The project involves the ongoing redevelopment of a former

Syracuse Lakefront

[3] *Transportation Enhancements Program Guidebook for Applicants and Sponsors, New York State Department of Transportation, Rev 4/2006, pg.1.*

industrial district to include retail/entertainment and mixed-use development of the Inner Harbor, historic Franklin Square, and on additional available land within the Lakefront area.

Carousel Center Expansion/DestiNY USA
Undoubtedly the most significant development project in the Syracuse Lakefront is the DestiNY USA Initiative (formerly referred to as the Carousel Center Expansion). This initiative proposes a major expansion of the regional shopping center at the base of Onondaga Lake into a first-class destination.

Originally constructed as a catalyst for continued redevelopment of the Syracuse Lakefront, the developer has presented plans to transform the Carousel Center into a major shopping and entertainment destination through a large expansion of its facility, mainly to the south on former oil terminal land condemned by the Syracuse Industrial Development Agency in the 1990s. In 1998, owners of the facility presented an environmental impact statement detailing construction of an expansion adding up to 3.25 million square feet to the existing 1.5 million square foot mall. A Payment in Lieu of Tax Agreement (PILOT) between DestiNY USA, City of Syracuse and County of Onondaga was authorized in 2002 to facilitate the project.

The First Phase of the expansion totaled approximately $330 million. The expansion makes the facility the fourth largest of its kind in the country.

On a parallel path, DestiNY USA has introduced a new look, a new scale, and a new focus to its mall expansion that includes plans to redevelop much of the surrounding lands in the area with complimentary uses. Though changes to the originally adopted environmental impact statements have not yet been formally presented to the City of Syracuse, the DestiNY USA initiative has been presented in public forums.

If built to its advertised potential, these plans could significantly impact the MPO area. Depending on the next steps of this project, the next Long Range Transportation Plan (LRTP) will take transportation changes and requirements into account. Similarly, any new major employment center (that is not currently being planned or envisioned) that should arise in the MPO region would also require modification to the LRTP to account for its needs. If the Lakefront development (including DestiNY USA) occurs to its full potential, new financial resources will have to be obtained and factored accordingly for the transportation system.

Lakefront Planning Study
In order to facilitate the redevelopment of the lakefront area for large-scale tourism uses such as DestiNY USA, the City of Syracuse recently approved a Tourism Zoning District over much of the Lakefront area and a small portion of the city's north side. The optional overlay sets design and other standards outside traditional zoning to regulate development projects over 30 acres, to ensure compliance with area goals and compatibility with adjacent land uses.

No matter what scale of development accompanies the growth from the expansion to the Carousel Center and surrounding Lakefront properties, major transportation impacts are anticipated. In an effort to understand the transportation needs and opportunities associated with the development and the implications of the full buildout of the Syracuse Lakefront Area, in 2002 the City of Syracuse commenced the Lakefront Transportation Planning Study, funded through the federal Transportation/Community Systems Preservation Pilot Program (TCSPP). According to the Phase I report, the goal of the project is to "analyze the existing transportation network in the Lakefront Development area and identify the needed improvements to accommodate alternative modes and users."

The study has been divided into two distinct phases. The Phase I document represents a conceptual analysis of the existing and future transportation issues that can be expected over a 20-year planning horizon based on the anticipated development in the Syracuse Lakefront and general development in Onondaga County. Phase II is a more detailed analysis of the corridor level issues identified in the first phase.

Work completed to date on the study identifies a wide variety of system constraints and a variety of potential multimodal solutions. The SMTC has participated in the study on its Advisory Committee and has provided information and technical assistance to the planning effort. The SMTC realizes the large impact that a full buildout of the Lakefront Area may have on the transportation system on a local as well as regional level and continues to play an active role in transportation planning for this dynamic area.

9.1.7 Context Sensitive Design & Community Aesthetics

Aesthetically pleasing civic infrastructure is an important element that enhances projects undertaken utilizing federal transportation funds. Beautification strategies should be considered as member agencies plan for and implement enhancements of their infrastructure and facilities. The design, condition, and maintenance of civic infrastructure, (e.g., roadways, vegetated greenspaces, public right of way, common areas such as those found along sidewalks, etc.) play an important role in achieving and maintaining community civic pride. Therefore, transportation planning efforts, design, and implementation should consider beautification strategies and context-sensitive designs.

Recent examples of civic infrastructure projects that enhance aesthetics and community pride include the two new bridge structures that span I-81 at Butternut Street and Court Street within the City of Syracuse. These structures incorporate ornamental railings and lighting and greatly increase the roadway's aesthetic character. Other examples of enhanced infrastructure include the restored

NYS&W railroad bridges that serve as gateways into the Salt District in Syracuse's Near West Side neighborhood.

9.2 LONG TERM OUTLOOK

When examining the long-term outlook for transportation planning and programming over the foreseeable future, there are several summary conclusions that can be drawn.

9.2.1 ASSET MANAGEMENT AND INFRASTRUCTURE MAINTENANCE

First and foremost, as shown in the previous sections of this plan, the vast majority of financial resources (72% of the 2011-2015 TIP) relating to transportation for the Syracuse Metropolitan Transportation Council (SMTC) area are committed to maintaining the extensive, diverse, and aging infrastructure that already exists in the community. This infrastructure maintenance includes, but is not limited to the following major activities discussed briefly below.

Pavement Maintenance/Road Reconstruction

Most member agencies have programs for preserving infrastructure maintenance, including pavement and bridges. The City of Syracuse, the Onondaga County Department of Transportation (OCDOT), the New York State Department of Transportation (NYSDOT) and the New York State Thruway Authority (NYSTA) all have active pavement management systems (PMS) that include routine scoring of pavements and repaving a pre-determined number of centerline miles of roadway each year. The repaving program consists of in-house work for routine pavement maintenance and minor repairs, and contractual work for major overhauls and maintenance paving. By following a periodic treatment cycle (for example, every eight to ten years) for the pavement maintenance program, the initial pavement investment is preserved, with the possibility of avoiding a future total pavement overhaul for quite some time. Additionally, the SMTC includes the Bridge and Pavement Condition Management System (BPCMS) annually on its Unified Planning Work Program (UPWP). The goal of this effort and corresponding report is to publish the conditions of the bridges and pavement in the MPO area for each member agency that is responsible for infrastructure maintenance. This tool is an additional aid that can be utilized by member agencies in setting their road maintenance priorities.

Bridge Repairs/Improvements

The NYSDOT inspects all bridges with a span of 20' or greater in the Metropolitan Planning Organization (MPO) area and determines goals for the condition of both state and local (non-state) bridges. The bridge condition ratings and the goals are also included in the annual SMTC BPCMS report. A common existing programming challenge with bridges in the MPO area is that many of the bridges are of similar age, and therefore are due to be repaired at relatively the same time (i.e., interstate bridges, canal bridges) as discussed in the preceding Facilities chapter. This presents a challenge because only a limited amount of money is available for bridge repairs in any given year, yet many bridges may be "due" for improvements. It is more difficult to stagger bridge

rehabilitation schedules than pavement life cycles. This challenge is met via a priority system given to the bridges so that the safety of the traveling public is never compromised.

Other Safety Improvements
Safety is a high priority for the implementing agencies in the MPO area. Most member agencies regularly schedule safety improvements for corridors, roadways and intersections. Common safety improvements to minimize incident severity include minor widening of roadways, minor horizontal and vertical changes in a roadway, geometric adjustments such as the straightening of a curve and various traffic calming techniques. There are various mechanisms in place to monitor safety conditions on highways. One such NYSDOT safety monitoring mechanism is the creation of annual accident/incident location lists.

Transit Maintenance and Improvements
Centro is leading the way in Central New York in the use of alternative fuel, low emissions vehicles. Currently, Centro has 261 total buses in its fleet including 121 compressed natural gas (CNG) buses. Centro has constructed a CNG fueling facility to service its CNG fleet and has a CNG fueling station that is open to the public. However, this facility is currently being used only by companies with fleet vehicles. In addition, Centro led a New York State consortium of transit properties to purchase hybrid diesel electric buses. The consortium included seven transit agencies interested in buying the same model of hybrid buses. Through purchasing a larger quantity using the consortium, the buses were purchased at a reduced rate. This included Centro purchasing nine hybrid electric buses at approximately $500,000 each. The balance of Centro's fleet is comprised of clean diesel fueled buses. In looking toward future improvements, hydrogen fuel cell buses (currently approximately $1 million each) may be available to improve air quality further. If the cost of hydrogen fueled buses declines and the fueling technology can be proven safe, Centro will consider such buses in future procurements.

Currently, Centro's bus lines serving the City of Syracuse converge at "Common Center" in downtown at the intersection of Fayette and Salina Streets. During weekday, midday and evening periods and also on weekends, buses are scheduled to meet at Common Center to facilitate passenger transfers. Currently, the number of bus lines that can make connections at these "pulses" or "line-ups" is constrained due to space limitations. Buses entering the City are routed to specific stops; however, bus queuing within each stop can be inconsistent, which can lead to customer confusion. Moreover, Fayette and Salina Streets are major arterials in downtown Syracuse, carrying significant traffic volumes. While the intersection is fully signalized, the volume of vehicular traffic often conflicts with crossing pedestrian movements creating safety concerns. Finally, while bus shelters are provided at Common Center, its location at a major central business district (CBD) intersection precludes significant improvement to the facility due to lack of right-of-way and surrounding land use considerations.

In response, Centro has secured capital funding to construct a stand-alone transit hub facility where bus operations can be conducted off-street and out of general traffic patterns. This facility will offer

a convenient, safe, weather-protected environment for passengers to make transit connections. Centro has acquired property for the facility and is in design. Centro anticipates opening the new facility in winter 2011/2012.

9.2.2 NOTABLE EXCEPTIONS

It is expected that the majority of the resources that will be expended in the near future relate to maintenance via the activities previously discussed and other required actions. However, there are some notable exceptions that should be called out.

Adding Capacity

While not a major activity in the MPO area, adding capacity is an occasional activity that is required due to economic and residential expansion into outlying areas. While there are no current major capacity building efforts on the programmed TIP, it is possible that in the near future some additional capacity will be needed in select and isolated portions of the transportation system in response to growth. An example of a project that added capacity improvements is on NYS Route 31 in response to the large influx of development in the area. While this is an example of additional capacity building that may be needed at select locations in the future, it would be incorrect to say that no capacity improvements will be necessary in the twenty-year planning horizon. Rather, it is more likely that minor capacity building projects may be required in response to select areas of growth.

Other projects look to reduce the number of travel lanes – including the Comstock Avenue and Waverly Avenue Lane Reduction Projects, both scheduled for construction in FFY 2013/14. Both projects look to remove one lane in direction (the current configuration is 2 lanes in each direction) with left turn bays at appropriate intersections. Also planned for construction this year is the conversion of University Avenue between Waverly Avenue and East Genesee Street from one-way to two-way (East Genesee Street will be reduced to 1 lane in each direction between Forman Park and University Avenue but will remain 2 lanes in each direction around Forman Park.)

Transit

Like many public transit properties throughout the nation, Centro originally inherited a fleet past due for replacement from its private sector predecessor. Federal funds, which comprise 80% of capital acquisitions, can be used to replace buses every 12 years. As a result, Centro's need to replace large numbers of buses simultaneously has ratcheted thru the decades since the original replacement cycle was initiated. As buses require maintenance and eventual replacement, there is a need for continuous funds to be available to upgrade and keep Centro's fleet in a state of good repair. Currently Centro is faced with the need to replace 70 buses in the near future at a cost of nearly $32 million. Funding resources are currently short of the required amount.

Centro will continue to pursue alternative service concepts. Studies that have been completed regarding transit initiatives by the SMTC and others recommended alternative transit options and

services. Centro is currently in a period of declining operating revenues. In response, Centro has discontinued service over the past four consecutive years and has been forced to increase fares. The current funding environment precludes implementation of any new services for the foreseeable future. However, Centro is pursuing efforts to improve service on its existing routes. One example is its collaboration with Syracuse University on its Connective Corridor project. This project, if successful, will result in an improved computer aided dispatch system and automated vehicle locator system for Centro. Real-time "next bus" information will be available for customers as well as automated stop announcements on buses, electronic destination signs and other features intended to improve customer service.

Additions and improvements to the Non-Motorized System (Bicycle & Pedestrian System)
Since the Intermodal Transportation Efficiency Act (ISTEA) of 1991 legislation, bicycle and pedestrian planning activities continue to be addressed through the UPWP. Bicycle and pedestrian capital projects have also become a growing element of the Transportation Improvement Plan (TIP). This trend will continue to be a consistent element when dealing with transportation issues within the SMTC members' transportation systems. As a result, the completion and connection of existing trails, sidewalks, and bicycle facilities may be further emphasized in the future, thus improving the non-motorized transportation system. Four percent of 2011-2015 TIP funding is allocated to bicycle and pedestrian projects.

Intelligent Transportation Systems (ITS)
As noted within this document, ITS are becoming more of an active methodology to assist in traffic and incident management. The member agencies of the SMTC expect the role of ITS to continue to grow significantly and that the various ITS technologies will require planning and financial assistance via the SMTC. Please refer to the earlier sections of this document or the ITS Strategic Plan Executive Summary (located at **www.smtcmpo.org**) for more details on the various strategies under consideration.

Specific Identified Improvements
As part of the SMTC's long range planning process, the following projects are identified as essential to the transportation system, but not currently programmed on the TIP. These projects service anticipated development and are viewed as essential to the region's success. In terms of fiscal constraint, two of these projects are privately funded, and the remaining would likely be federally funded. The projects should be introduced into the agency's travel demand model in the year noted. The SMTC realizes that some of these projects cannot be represented in the horizon year model network due to model constraints or lack of project details at this time. The details of these projects are:

1) Bear Street Extension: The current four lane configuration of Bear Street will be extended along a course turning generally northward after crossing Interstate 81 in an eastbound direction. The roadway will curve to the north, overtaking Lodi Street near Lemoyne Avenue, and will depart Lodi Street near Wolf Street. The roadway will bisect a property north of Lodi and Wolf Streets as it

curves to connect to Hiawatha Boulevard at its current intersection with North Salina Street and Access Interstate 81 northbound. Lodi and North Salina Streets will be realigned to allow for 90-degree intersections between these streets and the new Bear Street. Lodi Street west of Wolf Street, Wolf Street between North Salina and Lodi, and Bear Street between the realigned Bear Street and Lodi Street will be closed. This project should cost in the range of $2-3 million, and is expected to be privately funded. The project is anticipated to be modeled in 2030 and all subsequent years.

2) Third Lane of Frontage Road: Beginning at Exit 23B, the on ramp from Carousel Center Drive to the Interstate 81 Southbound Frontage Road (SR 936F), a third lane will be constructed southward to Bear Street. Traffic from the ramp will default into this lane upon reaching the service road (the ramp is currently controlled by a Yield sign and has no acceleration lane). The intersection with Bear Street will be reconfigured by virtue of the elimination of the existing slip ramp from the Frontage Road southbound to Bear Street westbound. This project should cost in the range of $5 – 6 million and is expected to be privately funded. The project is anticipated to be modeled in 2020 and all subsequent years.

3) Genant Street: Genant Street will be upgraded to be federal aid eligible, and the I-81 SB exit to Franklin St will be closed off. Genant Street will be rebuilt so that it accesses the Franklin Street ramp. This project should cost in the range of $1.5 - $2 million. It is anticipated to be modeled in 2030 and all subsequent years.

4) Third lane on NY 31: NY 31 from Lakeshore Road to Thompson Road in the Town of Cicero will feature a continuous center turn lane for left turns at intersections that do not feature separate turn lanes and for legal left turns allowed to driveways off the highway. This project should cost in the range of $3-4 million. The project is anticipated to be completed by 2020, however, it is not modelable.

5) Girden Road Extension: Girden Road, running along the DeWitt-Manlius town line, will be extended southward beyond its current terminus at a dead end to the access road for the CSX Rail Yard. This road will act as the primary access to the facility for truck traffic from Interstate 481, generally replacing the current truck access off North Central Avenue near Fremont Road. The intersection of Girden Road and Kirkville Road will feature a traffic signal. This project should cost in the range of $2-3 million and is anticipated to be modeled in 2030 and all subsequent years.

6) Onondaga Lake Parkway: The speed on Onondaga Lake Parkway will be reduced to 45 MPH all year. Currently the parkway is posted at 55 MPH during the most of the year and 45 MPH from November 1 – March 31. This project should cost in the range of <$0.200 Million and is anticipated to be modeled in 2013 and all subsequent years.

7) Routes 31/81 Interchange Improvements: To improve capacity issues there will be a complete interchange replacement. The interchange will be upgraded from the current configuration to a

cloverleaf interchange. This project should cost in the range of $20+ Million and is anticipated to be modeled in 2020 and all subsequent years.

8) Soule Road and Route 31/Route 481 Interchange: Carling Road extension to Soule Road and reconfiguration of the Route 481 southbound on-ramp. Access to Route 481 will be from Route 31 only. Soule Road will end prior to reaching the NY Route 481 on-ramp and Carling Road will be extended to connect Route 31 with Soule Road. This project should cost in the range of $2 million, and is anticipated to be modeled in 2020 and all subsequent years.

9) Access NY 481 Southbound at Exit 12: Soule Road will be expanded from two lanes (one lane each direction) to three lanes (one lane each direction and a shared two-way left turn lane) for the section of this road under OCDOT jurisdiction. The bounds of this project are from Old Route 57 to Access NY 481 southbound at Exit 12. The project is anticipated to be completed by 2020, however, it is not modelable. The project should cost in the range of $10 million.

10) Verplank Road: This project involves the expansion of shoulders and lane widths with a shared third lane along Verplank Road. This is a combined/shared project with NYSDOT and the Town of Clay (this project is at the request of Town of Clay and NYSDOT; OCDOT owns the road). This project will be completed in two phases: Phase I is Route 57 to Henry Clay Boulevard (which is anticipated to be completed by 2020, however, it is not modelable), and Phase II covers Henry Clay to Caughdenoy Road (which is anticipated to be completed by 2030, however, it is not modelable). The project should cost in the range of $30 million.

11) Buckley Road: This project involves the addition of a shared turn lane along the entire length of Buckley Road (from Old Liverpool Road to Morgan Road). The intersection of Buckley/Bear will be expanded with the addition of EB left, EB thru and NB left turn lanes. The project is anticipated to be completed by 2030 however, it is not modelable. The project should cost in the range of $40 million.

12) Seventh North: The intersection of Seventh North/Buckley will be upgraded with the addition of SB and EB lefts, and NB and SB thrus. This project is anticipated to be modeled by 2020 and all subsequent years. The project should cost in the range of $7.5 million.

9.2.3 Operating Agencies Practices and Inter-Municipal Collaboration

Individually, the NYSDOT, the NYSTA, the OCDOT, the City of Syracuse Department of Public Works, the CNYRTA and the various towns and villages within the MPA must operate effectively in order to allow for the safe and efficient movement of people, goods and services within their respective jurisdictions. Collectively, these agencies must all work together to provide a seamless transportation network that allows for the safe and efficient movement across and through the entire MPO area. The following section details both the operating agencies practices, as well as the collaborative efforts taking place with the SMTC MPA.

Operating Agencies Practices

Through the SAFETEA-LU legislation, the LRTP is required to contain "operational and management strategies to improve the performance of the existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods." Individual transportation agencies within the SMTC MPO have their own practices and/or policies for addressing areas such as corridor management, access management, Intelligent Transportation Systems (ITS), multimodal needs, and asset management. These strategies are used to preserve, improve and enhance the existing multi-modal transportation system. Each of these is described in more detail below.

Corridor Management

The definition of corridor management is "the coordinated application of multiple strategies to achieve specific land development and transportation objectives along segments of a transportation corridor."[4] There should be adopted uniform practices in New York State and across the United States in order to have consistency on the principal arterials so transportation users can anticipate what is ahead. To achieve the goal of consistency along a corridor also requires a significant increase in inter-agency cooperation. New York State and Onondaga County have made an effort to accomplish corridor management by utilizing these principals in similar types of landscapes. This continual process is currently being further developed for application in New York State.

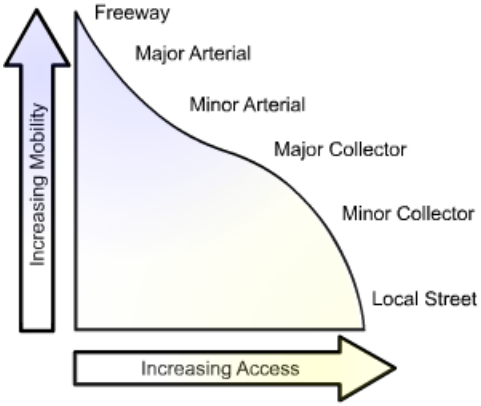
A few examples of corridor management practices/policies of SMTC member agencies include:

- The Onondaga County Settlement Plan, which gives examples of transportation policies for facilities in urban and rural areas.
- The City of Syracuse and NYSDOT work together for all signal timings for State controlled intersections within the interconnect system. The City also has an arterial agreement with NYSDOT to maintain State arterials within the City.
- As part of NYSDOT's restructuring, corridor management has become the foundation of the core work that the agency produces. It is the basis for transportation planning and program development and management focusing on information systems and travel time expectations.
- Onondaga County manages several high volume corridors within their system using time based or closed loop systems to maintain efficient traffic flows. The OCDOT and the NYSDOT work together on timings for signals on County highways that are included in State controlled interconnect systems such as the Route 11/Taft Road/South Bay Road location. As new County projects are identified New York State is kept informed, and where a joint improvement can be made, all efforts are made to accomplish this.

[4] *Access Management Manual, Transportation Research Board of the National Academies, 2003.*

Access Management

The concept of access management is significant in determining practices for operating agencies. Access management includes regulating access to transportation facilities with an emphasis on safety and efficiency requirements. Access management is defined as "the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway. It also involves roadway design applications, such as median treatments and auxiliary lanes, and the appropriate spacing of traffic signals."[5] The successful practice of access management includes an examination of each parcel and a determination of "whether or not the remaining vehicular access is reasonable or if there are fewer intrusive ways to accomplish the same traffic objectives."[6] Access management is an important issue to the SMTC area due to the job and retail center growth previously discussed in this document.



A few representative samples regarding access management for SMTC member agencies are included below.

- As part of the street reconstruction program (curb replacement), the City reviews existing driveway openings and tries to eliminate unnecessary driveways/drop curbs, as well as combining driveways in situations where it will be acceptable with the property owners. Also, during the City's review of new developments, a review of proposed driveways is completed and an attempt is made to combine driveway openings onto City streets where it will be satisfactory to both property owners. The City also reviews the size of the driveway openings and requires that traffic studies be completed when a proposed driveway may cause a traffic problem on a City street. Traffic studies may warrant limited driveway access (for example: only right in or right out).
- The NYSDOT endeavors to incorporate the principles of access management into its review of development proposals as an involved agency in the State Environmental Quality Review (SEQR) process, as well as early in the development stage of its capital project process.
- The OCDOT, through their highway permit system, incorporates access management improvements into new developments and subdivisions. Access management principles are included in the scoping and design of all Capital Program projects both locally funded and federally assisted.

[5] *Access Management Manual, Transportation Research Board of the National Academies, 2003.*
[6] *Transportation Planning Handbook, 2nd Edition, Institute of Transportation Engineers.*

ITS Strategies

Intelligent Transportation Systems (ITS) refers to the application of electronics, communications, hardware, and software that support various services and products to address transportation challenges. When deployed in an integrated fashion, ITS allows the surface transportation system to be managed as an intermodal, multi-jurisdictional entity, appearing to the public as a seamless system. Implementation or expansion of ITS strategies/elements can improve the overall safety and mobility of the entire region. For a detailed discussion on ITS plans and initiatives by SMTC member agencies please refer to the ITS section in Chapter 8 of this document.

Multimodal Needs

Each SMTC member agency incorporates multimodal needs within their planning process. The following is a sampling of descriptions depicting how the member agencies are incorporating the transition from mode specific transportation planning and directing that focus into facilities and projects.

- The Thruway Authority has studied the possible relocation of its tandem lots in the area for the purpose of enhancing traffic flow, and thus increasing the speed of toll collection. Specific attention was given to Interchange 34A (Rt. 481) and Interchange 39 (Rt. 690). The Thruway Authority is also moving ahead with a Thruway Toll Systems Study, the results of which may contain recommendations that would completely modernize the Authority's toll collection process within the planning horizon of this study.
- The CNYRTA is in the process of constructing its new "Common Center" transfer facility in the downtown area of the City of Syracuse. This weather-enclosed facility will facilitate passenger transfers between local and regional bus lines and improve traffic flow downtown.
- The NYSDOT continues to examine how bicycle and pedestrian facilities may or may not fit into every road construction project that is being progressed. In addition, the NYSDOT reviews possible generators of pedestrian and bicycle traffic, notes bus stop locations, examines where the grass is worn (herd paths), and possible and/or necessary connections (i.e., if there is a sidewalk on either side of a NYSDOT project, NYSDOT will aim to connect this sidewalk). All of this is taken into account in determining if bicycle and pedestrian facilities are warranted and/or safe in the project area. The NYSDOT will begin work with the SMTC this summer 2011 on a Bicycle Corridor Study to examine where commuter cyclists are currently riding, as well as desired destinations.
- The NYSDOT also works with Centro during the early stages of its capital project development process to identify any transit needs that may be met as part of the project. NYSDOT is also an involved agency in the SEQR process and works to promote transit friendly developments.
- When reconstructing a road, the OCDOT attempts to design for six to eight-foot wide shoulders on every project. A four-foot wide shoulder is the least desirable but

sometimes occurs because of a lack of right-of-way or difficult terrain. The county can install a sidewalk, providing there is a need and the design can accommodate it; however, it is the responsibility of the individual town or village to maintain the sidewalk once it has been built. In many cases, the sidewalk does not get constructed because the town, village and/or property owners do not want to take responsibility for maintenance. In rural areas, wide shoulders are typically acceptable for both bicyclists and pedestrians. As many major routes cross jurisdictions between the NYSDOT and the OCDOT, costs and responsibilities are sometimes shared or traded between the two agencies.

- Onondaga County manages several high volume corridors within their system using time based or closed loop systems to maintain efficient traffic flows. The OCDOT and the NYSDOT work together on timings for signals on County highways that are included in State controlled interconnect systems such as the Route 11/Taft Road/South Bay Road location. As new County projects are identified New York State is kept informed, and where a joint improvement can be made, all efforts are made to accomplish this.
- Approximately 95-97% of the parcels within the City of Syracuse have sidewalks on at least one side of the roadway. Title II regulation of the Americans with Disabilities Act (ADA) specifically requires that curb ramps be provided when sidewalks or streets are newly constructed or altered. The City of Syracuse Department of Public Works has a program in place to bring existing sidewalks and ramps into ADA compliance. In areas where sidewalks do not exist, yet there is a desire among the residents to have them installed, the City will consider the installation providing there is adequate right-of-way, funding, and/or that the property owner agrees to have the sidewalk assessed on their taxes.
- The City considers multimodal needs during all capital improvement projects and also considers requests from residents. Several bike lanes have been added throughout the City over the last three years. In addition, the City is in the process of applying the SMTC's Bike Network Project matrix to City streets in an effort to develop a proposed network utilizing existing urban roadways to provide a hybrid of bicycle lanes, shared roadways and traffic calming to create a grid of streets that encourage daily use of bicycles for urban transportation.
- The OCDOT, through its highway permit system and scoping and design process, reviews road geometry to insure safe and efficient tractor-trailer and truck freight movement. The Department has cooperated with Rail owners such as CSX and the Finger Lakes Railroad to permit the upgrade of highway rail crossings. The County has provided services such as traffic control and paving operations to aid in these upgrades.
- Within each SMTC planning study that is completed, the multimodal needs of a study area are examined to determine if the existing conditions and use of the study area are appropriately accommodating bicyclists, pedestrians and transit users. In addition, the SMTC assists the MPO's towns and villages by answering questions and concerns they may have relative to bicycle and pedestrian planning.

Asset Management

As defined by the Federal Highway Administration (FHWA), "in the broadest sense, transportation asset management is a strategic approach to managing physical transportation infrastructure." The Congestion Management Process, Bridge and Pavement Condition Management Report, and the Traffic Count Program are the key tools utilized by SMTC member agencies in managing transportation assets. These tools are described in further detail in Chapter 3, Facilities.

Inter-municipal Collaborations

A safe and efficient transportation system is necessary to provide for a multiplicity of services and needs, thus inter-municipal cooperation is key to its success. This section will briefly examine how the entities in the SMTC area are working together for the common goals of the transportation network. There are certain key areas discussed below where improvements to the current collaborative effort are vital.

While communications between the agencies are improving, there are many opportunities for future improvements. The SMTC has a unique opportunity as an MPO to facilitate the diverse viewpoints of the various member agencies. By virtue of the role that an MPO plays, the SMTC functions as a facilitator for agencies and municipalities in many areas. The SMTC can work toward bridging the gaps in communication and inter-municipal cooperation for many transportation planning and land use projects. Utilizing the SMTC as a foundation for this facilitation in this process allows for making well informed and cost saving decisions on future projects. A few representative samples regarding inter-municipal collaborations with SMTC member agencies are included below.

- The City tries to coordinate capital improvement projects on corridors that abut the jurisdiction of another agency.
- The Onondaga County Planning Board (OCPB) 239/NYS General Municipal Law 239 outlines the duties of County Planning Boards. The "239 Review" requires county planning boards to review certain proposed municipal zoning and subdivision actions to assess intercommunity or county-wide impacts. This includes potential impacts on the highway network. All efforts are made by the OCPB to increase collaboration and cooperation between municipalities and state and county DOTs. This law also applies to transportation planning concepts such as corridor and access management.
- The OCDOT, the NYSDOT, the City of Syracuse and the towns within Onondaga County have cooperated in snow and ice operations for many years. As resources decline this operation becomes more important to all of the agencies involved. Onondaga County partners with the other agencies within the County to insure that dollars spent on maintenance operations mesh well where jurisdictions overlap. Examples of this could include the County paving a County/State intersection and the State determines if a traffic loop system could be replaced during the design phase, or if a paving operation can be extended across boundary lines, with shared funding, to achieve a homogenous and cost efficient project.

Corridor Management

There is a need for the member agencies and municipalities in the MPO area to provide a level of "uniformity" in the character and function of the differing types of roadways as they pass through and between jurisdictions. For example, a roadway that functions as a principal arterial should have certain elements that are consistent throughout its length. Intersection spacing, lane width, transit stop location, bicycle and pedestrian accommodations, to name a few, should be substantially similar as it passes from a rural setting to suburban to urban and back again. This allows the agency with jurisdiction over the roadway to better manage the resources needed to maintain that roadway, and it allows the entity with the adjacent land use authority to more accurately identify the potential impacts of land use decisions. In the future, the availability of transportation funding may depend upon the success of this type of collaboration.

A few selected examples regarding corridor management and inter-municipal collaborations with SMTC member agencies are included below.

- Although Centro does not implement corridor management decisions, the effects of corridor management have a tremendous impact on Centro's ability to serve its customers. For example, it is difficult to serve the community's transit needs along the Route 31 corridor given the pattern of land development and lack of a straightforward interconnected street system.
- The SMTC provides a forum for the various agencies to discuss a variety of transportation and land use related issues.
- OCDOT manages several high volume corridors within their system using time based or closed loop systems to maintain efficient traffic flows. The OCDOT and the NYSDOT work together on timings for signals on County highways that are included in State controlled interconnect systems such as the Route 11/Taft Road/South Bay Road location. As new County projects are identified New York State is kept informed, and where a joint improvement can be made, all efforts are made to accomplish this.

Access Management

A major tool in the corridor management toolbox is access management. The MPO member agencies would benefit from having an established communication process to better inform each other of transportation needs throughout the community. The SMTC member agencies have expressed dissatisfaction with the current methods of communicating on issues relating to development and access management. For example, economic development initiatives and industrial access programs sometimes begin without transportation agencies being aware of the related transportation needs. Currently, the public process by which this occurs is the State Environmental Quality Review (SEQR) process, which is currently not applied consistently by the area's municipalities. In addition, NYSDOT considers zoning changes to be a significant event in terms of its impact on transportation. A thorough application of the SEQR process to zoning changes, including traffic studies, is important to transportation implications.

ITS Implementation

Recently, there has been a strong local effort to have municipalities work together to utilize ITS for improving the transportation system. For a detailed discussion on ITS plans and initiatives in the SMTC area please refer to the ITS section in Chapter 8 of this document.

9.3 FINANCIAL PLAN

As discussed above, the maintenance of the existing systems is a top priority in the SMTC area with some exceptions. The following section details the financial resources anticipated to be expended in the near future.

9.3.1 RESOURCES AVAILABLE

The 2020 LRTP, when first published in 1995, anticipated a total of $3.050 billion in funding over the 25-year planning period. This LRTP 2011 Update anticipates a total of $5.363 billion in funding over the remaining term of the planning period. The major sources of funding, shown in Table 9-1 and 9-3, respectively, include the federal government at 38.0% ($2,026 million) of the total, the State Dedicated Fund at 27% ($1,435 million), Onondaga County at 6% ($342 million) and the City of Syracuse at 1 % ($76 million). The balance is comprised of other State and local sources at 20% ($1060 million)[7] and Centro operating revenue at 8% ($433 million). It is anticipated that all traditional funding mechanisms will be exhausted with the implementation of this LRTP 2011 Update.

As indicated in the financial tables, the majority of anticipated resources are projected to come from the US Department of Transportation (i.e., Federal Highway and Federal Transit Administrations). The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the most recent federal transportation legislation expired in September 2009 and included approximately $245 billion for infrastructure investments between fiscal year 2005 and 2009 drawn from the Highway Trust Fund. Although SAFETEA-LU has been extended several times since September 2009, no new multi-year funding authorization has been provided.

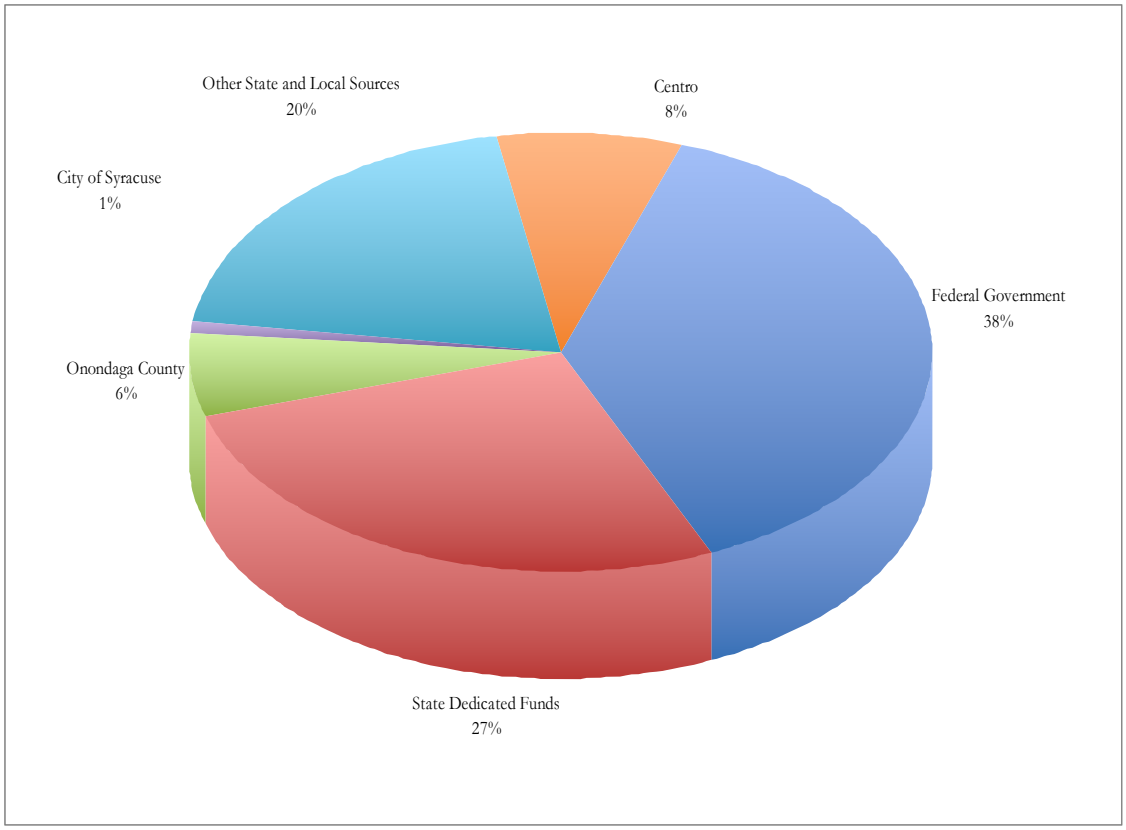
Revenues in the Highway Trust Fund are reliant on a motor-fuel tax that includes but is not limited to, 18.4 cents per gallon of gasoline and 24.4 cents per gallon of diesel. While the Highway Trust Fund is reliant on motor-fuel taxes, fuel efficiency enhancements that have occurred in the past few years are projected to actually decrease funding going to the highway account. To maintain the solvency of the fund, various measures have been discussed such as increasing the gasoline/diesel fuel tax that was last increased in 1993, and instituting a vehicle miles tax where drivers would pay a fee according to the number of miles driven in a year.

[7] *The number does not match the number for "Other State and Local Funds" on Table 9-1 because it includes some non-transit funding that cannot be broken out from that number.*

Reauthorization of federal transportation legislation will have a direct impact on the federal aid allocations available to this region. As such, the presumed federal figures noted below have been prepared utilizing an examination of historical allocations and trends. The resources on Table 9-1 are based on adjustments to the original allocations from the original 1995 LRTP. It can be assumed that total allocations will be spent down because of the fact that the need for transportation projects far outweighs the resources to implement them. Therefore, by proportionally spending down the total allocation from the beginning in 1995, the Federal Highway Administration allocation percentages by funding category have not been changed. It is because of this lack of resources to fund all of the needs that projects have been prioritized and thus, the Project Financial Tracking System.

Highway and transit data as originally provided for this LRTP Update equated to approximately $3.883 billion in total funding. This figure was established based on an extrapolation of historical trends and then inflated by a 2.4% per year adjustment (i.e., $5.363 billion). According to 23CFR450.322(f)(10)(iv), revenue and cost estimates that support the LRTP must use inflation rates to reflect year of expenditure (YOE) dollars. To account for the YOE requirement, the 2.4% per year adjustment was developed cooperatively with the CNYRTA, NYSDOT and SMTC staff as required by 23CFR450 to show reasonable costs/resources that are projected to be available over a twenty-year period. This adjustment is based on the average of five years of inflation rates provided by the NYSDOT as part of prior capital program update.

Table 9-1
Resources Available – Major Sources of Funding



9.3.2 COSTS

The largest share of the total resources available will be expended to maintain the existing transportation system. The percentage allocation of anticipated resources through 2035 has not been changed from the original LRTP of 1995.

For this 2011 Update, the 2001 cost of each objective has been pro-rated using the new 20-year resource base of $3.883 billion and then inflated by 2.4% as mentioned above. The results show that maintenance of existing bridges and pavement (Facilities 1-3 in Table 9-4, as well as Table 9-2) will absorb 59% of the budget ($3.160 billion). An additional 24% ($1.276 billion) will be allocated to support the area transit system; 11% ($572.86 million) will be used to improve congested locations, reduce single occupancy vehicles (SOVs) and the Americans with Disabilities Act (ADA) compliance; and 4% ($194.26 million) will be spent for efforts to increase safety at high incident locations. The remaining 3% ($159.19 million) of the budget will support transportation projects that enhance economic development, environmental quality and efforts to coordinate land use and

transportation planning decisions in the study area. The 2011 Update also continues support for a number of innovative initiatives. Examples of the latter include funds that have been allocated to encourage the application of ITS technology in the Syracuse region.

Table 9-2

Resources Available – Sources of Funding by Project Activity

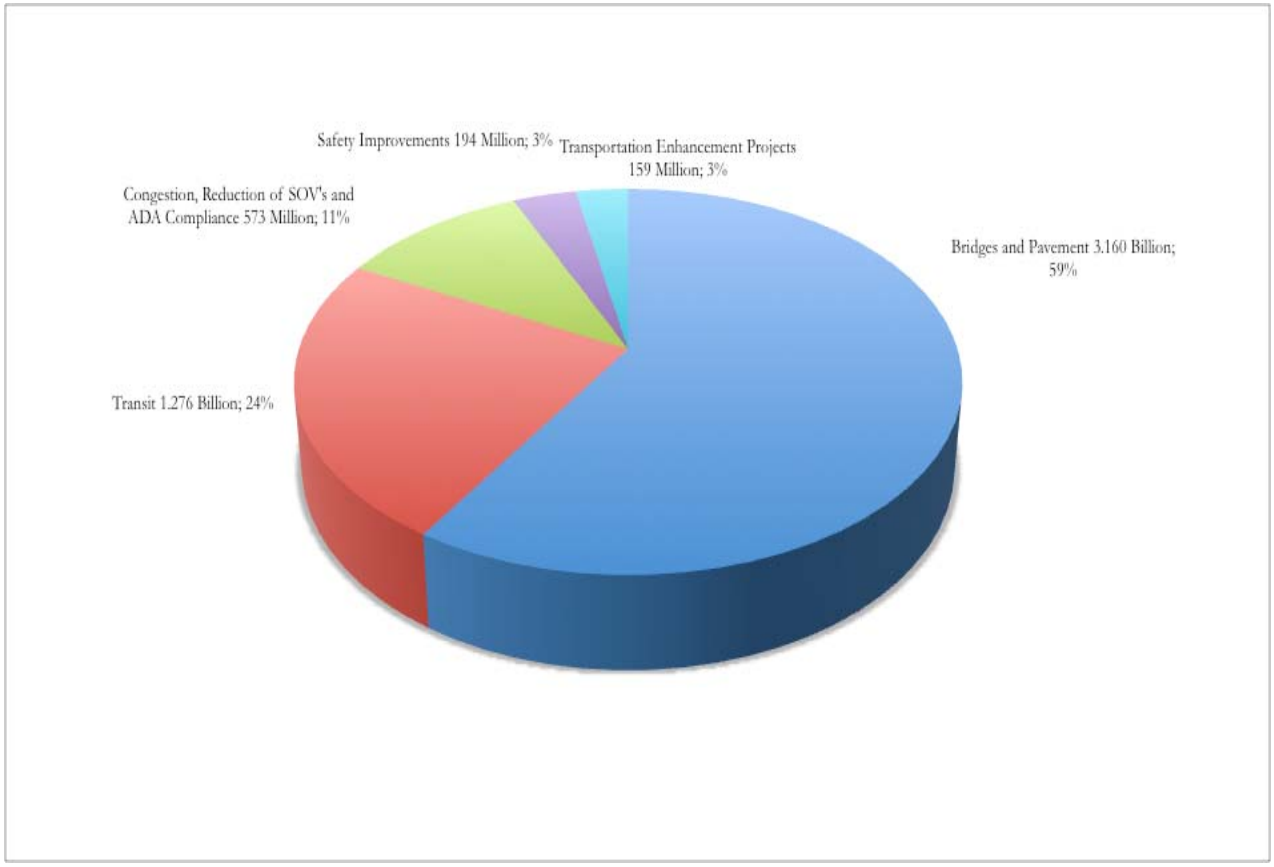


Table 9-3

Established Resources Available for Transit Operations Capital Funding and Highway Capital Funding

	1995-2020 (Millions of Dollars)	1998-2020 (Millions of Dollars)	2001-2020 (Millions of Dollars)	2004-2025 (Millions of Dollars)	2007-2027 (Millions of Dollars)	2011-2035 (Millions of Dollars)	2011-2035 (Millions of Dollars) 2.4% inflation
	The estimates below were calculated as planning estimates for the corresponding planning periods and are not to be interpreted as actual budgets.						
Transit Funding Sources							
Federal-FTA	$180 M	$99 M	$91 M	$105 M	$216.6 M	$262.475 M	$362.518 M
State Dedicated Funds	$30 M	$16 M	$15 M	$17 M	$20 M	$12 M	$16.574 M
Other State and Local Funds	$290 M	$327 M	$301 M	$557 M	$611.6 M	$767.742 M	$1060.370 M
Operating Revenue	$170 M	$167 M	$154 M	$177 M	$205.6 M	$306.967 M	$432.969 M
Total Transit Funding	$670 Million	$609 Million	$561 Million	$856 Million	$1053.8 Million	$1349.2 Million	$1863.431 Million
Highway Funding Sources							
Federal-FHWA	$1095 M	$1087 M	$1000 M	$920 M	$941.4 M* (see note)	$1204.3 M	$1663.324 M
State Dedicated Funds	$1010 M	$801 M	$738 M	$784 M	$802.2 M	$1027 M	$1418.445 M
Onondaga County-Capital Program	$225 M	$242 M	$233 M	$189 M	$193.4 M	$247.5 M	$341.836 M
City of Syracuse- Capital Program	$50 M	$70 M	$64 M	$42 M	$43.0 M	$55.0 M	$75.963 M
Other Municipalities in the SMTC Area	Not Included	Not Included	Not Included	Not Included	Not Included	not included	
Private Funding	Not Included	Not Included	Not Included	Not Included	$7.5 M (to be used for Bear Sreet Extension and Frontage Road)	not included	
Total Highway Funding	$2.380 Billion	$2.200 Billion	$2.025 Billion	$1.935 Billion	$1.98 Billion	$2.54 Billion	$3.50 Billion
Total Highway and Transit Capital Funding	$3.050 Billion	$2.809 Billion	$2.586 Billion	$2.791 Billion	$3.034 Billion	$3.883 Billion	$5.363 Billion

Source: NYSDOT and CNYTRA

Federal-FTA- Assume continuation of current 5307 program and other federal capital programs at SAFETEA-LU like levels for the next act and all renewals beyond. Nominal annual increases (1-2%) are assumed. This program is subject to reauthorization approxi

State Dedicated Funds- This capital program is subject to renewal by New York State approximately every five years. Specific funding is determined by NYSDOT annually based on relative need. CNYRTA estimates it will receive and average of about $500,000 an

Other State and Local Funds- Components include: local mortgage recording fees, Statewide Transit Operating Assistance (STOA), local match for portions of the STOA amount, and state 10% match.

Mortgage recording fees are expected to nominally increase over this period compared to previous estimates.

The STOA program is continued at current levels with nominal annual increases. This assumes a flat 2011/12 and then nominal increases each year after that.

Local match for STOA held constant at current levels, plus some small non-required subsidies.

FHWA- The total FTA and FHWA funding is based on an extrapolation of historical trends. The final $3.883B figure was then increased by 2.4% per year adjustment to account for inflation over the multi-year period.

Operating Revenue-Projected at approximately current levels, with nominal increases.

Table 9-4
Allocation of Resources by Long Range Transportation Plan Objective

OBJECTIVE	1995 – 2020	1998 – 2020	2001-2020	2004-2025	2007-2027	2011-2035
Mobility 1 – Transit service	$520 M	$479 M	$441 M	$664 M	$721.8 M	$1276.405M
Mobility 2 – Improve LOS at congested locations	$300 M	$276 M	$254 M	$252 M	$273.9 M	$484.330 M
Mobility 3 – Decrease the number of SOVs	$25 M	$23 M	$21 M	$21 M	$22.8 M	$40.480M
Mobility 4 – Comply with ADA	$30 M	$28 M	$26 M	$25 M	$27.2 M	$48.046 M
Mobility 5 – Greater utilization of electronic communication	$0	$0	$0	$0	$0	$0
Land Use 1-4 – Assist local communities in planning	$1 M	$0.9 M	$0.8 M	$0.8 M	$0.87 M	$1.519 M
Environment 1 – Implement programs that improve air quality	$15 M	$14 M	$13 M	$13 M	$14.1 M	$24.990 M
Environment 2 – Implement carbon monoxide SIP	$14 M	$13 M	$12 M	$12 M	$13.0 M	$23.057 M
Environment 3 – Decrease use of road salt	$5 M	$5 M	$4 M	$4 M	$4.3 M	$7.594M
Economy 1 – Support access to economic development	$50 M	$46 M	$42 M	$42 M	$45.7 M	$80.768 M
Economy 2 – Maintain operation/condition standard on principal arterials	$0	$0	$0	$0	$0	$0
Economy 3 – Employer coordination of employee travel	$12 M	$11 M	$10 M	$11 M	$12.0 M	$21.262 M
Facilities 1 – Bridge maintenance	$776 M	$715 M	$659 M	$652 M	$708.8 M	$1253.349 M
Facilities 2 – Pavement maintenance	$1172 M	$1079 M	$994 M	$984 M	$1069.7 M	$1891.620 M
Facilities 3 – Maintain sidewalks & other pedestrian/bike facilities	$10 M	$9 M	$8 M	$8 M	$8.7 M	$15.325 M
Safety 1 – Reduce accident rates at highest accident locations	$95 M	$87 M	$80 M	$80 M	$87 M	$153.804 M
Safety 2 – Reduce the highest intermodal accident locations	$25 M	$23 M	$21 M	$21 M	$22.9 M	$40.453M
Safety 3 – Assist planning officials and developers in accommodating travel in new developments	$0	$0	$0	$0	$0	$0
Total	$3.050 Billion	$2.809 Billion	$2.586 Billion	$2.791 Billion	$3.034 Billion	$5.363 Billion

Source: New York State Department of Transportation and the Central New York Regional Transportation Authority

9.3.3 EVALUATION OF THE PROJECT FINANCIAL TRACKING PROCESS

A review of the LRTP Action Plans contained throughout early chapters of this document indicates that there is an opportunity to strengthen the current system for tracking and evaluating projects in relation to LRTP goals. Specifically, it is sometimes difficult to link a project to one or more goals. Consequently, it is difficult to document what has been accomplished toward reaching a goal or to demonstrate how far along the SMTC is toward attainment of any given goal.

In order to strengthen the existing process, the SMTC intends to restructure project tracking in order to make documentation of goal progress more effective. Essentially, this will occur by linking each project with one or more specific goals, or also performance measures. Additional information could be provided, such as project sponsor, or forecasted versus actual cost. This will permit a more systematic documentation and evaluation of progress achieved toward goal attainment.