



L RTP

Long Range Transportation Plan 2007 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
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List of Acronyms

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
Amtrak	Passenger railroad company
APC	Auto 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
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
FOCUS	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
L RTP	Long Range Transportation Plan
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 21 st 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.

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RESOLUTION

**SYRACUSE METROPOLITAN TRANSPORTATION COUNCIL
POLICY COMMITTEE**

June 12, 2007

- 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 2007 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-Rang Transportation Plan and the subsequent Updates of 1998, 2001 and 2004; 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 Long-Range Transportation Plan 2007 Update and the 2007-2012 Transportation Improvement Program meet all applicable requirements in 40 CFR Part 93 and conform to the purpose of the State Implementation Plan for air qulaity; and
- WHEREAS,** the Long-Range Transportation Plan 2007 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

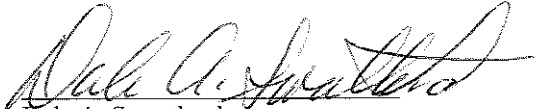
**Adoption of the
Long-Range Transportation Plan 2007 Update**

SMTC Policy Resolution No. 2007- 07

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

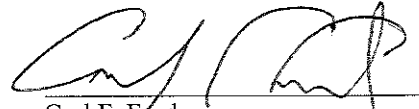
WHEREAS, the SMTC Policy Committee is the policy making body of the MPO having the authority to adopt the Long-Range Transportation Plan 2007 Update.

NOW THEREFORE BE IT RESOLVED, that the SMTC Policy Committee hereby adopts the Long-Range Transportation Plan 2007 Update and the conformity determination for the Long-Range Transportation Plan 2007 Update and the 2007-2012 Transportation Improvement Program.



Dale A. Sweetland
Chairperson
SMTC Policy Committee

Date: June 12, 2007



Carl F. Ford
Secretary
SMTC Policy Committee

Date: June 12, 2007

Syracuse Metropolitan Transportation Council

Long Range Transportation Plan 2007 Update

Executive Summary

Chapter I: Introduction

- **Define SMTC and MPO area**

As the Metropolitan Planning Organization (MPO) designated by the Governor of the State of New York, the Syracuse Metropolitan Transportation Council (SMTC) was created in 1966 to carry out the continuous, comprehensive and cooperative transportation planning process for the Syracuse Metropolitan Area, which includes all of Onondaga County and small parts of Oswego and Madison Counties. The SMTC area is centered in the City of Syracuse, the transportation hub and economic center for Central New York (see Map 1).

The SMTC is composed of officials representing local, State and Federal governments or agencies having interest or responsibility in comprehensive transportation planning. 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, Planning and Executive Committee. Served by the SMTC central staff, these committees serve as the hierarchy to the transportation planning activities of the SMTC.

The SMTC develops three key documents that are the components to transportation planning and programming in the Syracuse Metropolitan Area: the Long Range Transportation Plan (LRTP), the Unified Planning Work Program (UPWP), and the Transportation Improvement Program (TIP). Together, these three documents represent the beginning, middle and end to an effective transportation planning process.

- **Purpose of LRTP**

The LRTP is a blueprint to guide the Syracuse Metropolitan Area's transportation development over a 20-year period. Updated every three years to reflect changing conditions and new planning principals, the LRTP is based on projections of growth and travel demand coupled with financial assumptions. The LRTP specifically looks at major urban transportation planning concerns such as environmental/air quality issues; comprehensive access to transportation; alternative transportation modes (especially transit and bicycle and pedestrian); the impact of land development on the transportation system; highway traffic congestion; and maintenance of the existing infrastructure.

The LRTP presents a vision of the transportation system and the projects that will bring that vision to reality over time. Central to that vision is the protection of the value of investments already made in developing the transportation system while providing resources to pursue innovative solutions to mobility constraints and enhancing travel choices available. Also central to the LRTP is the need to adjust the land development patterns and transportation system investments, where practical, to conform to existing development guidelines (i.e., Onondaga County's 2010 Development Guide, the Onondaga County Settlement Plan, and the City of Syracuse's Comprehensive Plan).

In January 1995, the SMTC published the 2020 LRTP. This was followed three years later with the 1998 LRTP Update, then the 2001 LRTP Update, and the 2004 Update. All documents were prepared in compliance with CFR 450.332, 49 CFR 613.100 which also is the basis for this document to fulfill triennial review and update requirements. Since this document is an update, some information and data may not be balanced due to modifying/adding data to the original 1995 information. The original 1995 Long Range Transportation Plan is the base document and this 2007 Update represents modifications to that plan and its subsequent updates. The 2007 Update is fashioned after the 2004 Update in form and content with updates reflecting only changing conditions and new legislation, the balance of the document remains the same.

On August 10, 2005, the most recent transportation legislation bill, *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) was signed into law. SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the five-year period of 2005 to 2009.¹ Through SAFETEA-LU, a total of \$244.1 billion in funding is guaranteed for highways, highway safety and transit. This represents the largest surface transportation investment in United States history. It is important to note that in all of its transportation planning activities, the SMTC is required to adhere to rules and regulations put forth in the new SAFETEA-LU transportation legislation. Thus, there were many additions to the 2007 Update to meet the SAFETEA-LU requirements.

- **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. Such legislation underscores the need for public involvement, calling 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.

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. Such a proactive and dynamic PIP development process ensures the continual review of meaningful public involvement objectives and concepts, as opposed to one stagnant PIP that the SMTC must follow in all its transportation planning activities. The varying PIPs also consider the differing characteristics and impacts of different geographical areas on the focus of the study. Thus, the majority of the time, the SMTC creates individual project-specific PIPs in which differing methods allow the public to better participate in the study. The PIPs also pinpoint when in the project the public involvement meetings will be held that allow for the exchange of information and input.

For a majority of SMTC studies, a Study Advisory Committee (SAC) is formed to provide input and guidance to the SMTC Project Manager, the study process, study documents, and public meetings. The SAC typically consists of representatives from affected organizations, local governments, and community representatives that meet several times throughout a project's

¹ U.S. Department of Transportation Federal Highway Administration, *SAFETEA-LU*, 2/22/06, <<http://www.fhwa.dot.gov/safetealu/>>.

development. In addition to the SAC, a list of interested “stakeholders” (a broader group of interested individuals with significant relations and interest in a particular planning study or activity) is maintained by the SMTC. The SMTC recognizes that the active involvement of the entire community, in addition to the SMTC Policy and Planning Committee members, is paramount to good transportation planning. Public comments are valued because they can shape the direction of a particular transportation study or planning activity, and may help to identify new transportation projects that are important to citizens of the area.

- **Process**

The UPWP identifies the federally funded transportation planning activities that are to be undertaken in the SMTC study area in support of the goals, objectives and actions established in the 2020 LRTP. The SMTC Central Staff, working with the Planning Committee and the NYSDOT, bi-annually (with updates in the off-years) initiates the process of developing the UPWP and prepares a final draft for the consideration of both the Planning and Policy Committees.

The SMTC is responsible for the maintenance of the area’s TIP, a three-year program that funds capital projects related to transit, local roadways and interstates, bicycle and pedestrian amenities, and more. The pieces of federal legislation significantly affect the TIP and the planning and programming of transportation projects. These include the SAFTEA-LU, TEA-21, ISTEA, ADA, and CAAA.

The TIP for the SMTC area is comprised of a staged five-year program of transportation capital projects together with a five-year estimate of transit capital and maintenance requirements.

Chapter 2 - Goals and Objectives

- **Goals**

Part of the process for updating the 2020 LRTP during 2001, 2004, and 2007 included the identification of action plans that had been implemented under each of the LRTP’s six goals since 1995. The six goals include (1) Community Safety: To enhance the safety of the people using the transportation system, (2) Community Mobility: To improve the mobility options for people within the Syracuse Metropolitan Planning Area (MPA), (3) Community Environment: To provide a clean and environmentally sound transportation system for current and future residents, (4) Community Economy: To enhance the area’s economic competitiveness, thereby increasing opportunities for employment, (5) Community Land Use: To promote the development of an efficient urban area and a sense of community through transportation planning, and (6) Community Facilities: To provide safe, clean, well maintained and efficient transportation infrastructure. The identification of implemented action plans involved discussions with the member agencies responsible for their respective TIP projects.

In this 2007 LRTP Update, the implemented action plans are presented, together with their respective goals and objectives. 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. Please note that the 2007 Update includes new SAFETEA-LU requirements, especially regarding environmental mitigation.

- **Changing Program Focus**

Since the publication of the 2020 LRTP, a shift in emphasis has occurred creating a larger emphasis on bicycle and pedestrian facilities planning than previously existed. Examples of this include the Onondaga Lake Canalway Trail, the Erie Canalway Trail, and the Syracuse University (SU) Connective Corridor Project. The increase in facilities for non-motorized travel creates a stronger multimodal orientation to the work of the SMTC, which may not be reflected adequately in the original LRTP. Other issues that are currently receiving more attention, although not significantly noted in the original Plan, include roadside maintenance and periodic clean-up in order to improve the visual attractiveness of the area, as well as enhancements that make transportation facilities accessible under the Americans with Disabilities Act of 1990 (ADA).

In the future, better measures of effectiveness will be needed for assessing the quality of non-motorized transportation facilities, as well as general quality of life issues that are becoming increasingly important in the MPO area. Other issues needing future attention are the roads originally designed for home to market use. There is a need to coordinate local land use and development planning with planning for a fully developed highway network ranging from local streets to a larger network. Many agencies and government entities will need to cooperate to make this process work.

Chapter 3 - MPA Updated Data and Trends

- **Updated MPA, UAB, and Functional Classification**

The Metropolitan Planning Area (MPA) is defined as the area in which the MPO is responsible for transportation planning defined by the most current Census as being urbanized, plus the area anticipated to be urbanized by the year 2020.

In Spring 2003, the MPO area boundary was revised based on the 2000 Census. The former boundary included all of Onondaga County and a small portion of Oswego County (Town of Schroepfel including the entire Village of Phoenix). The revised boundary includes the entire former portion as well as some additional areas of Oswego County and Madison County. The new areas of Oswego County extend north along Interstate 81 and New York State Route 11. The Madison County portion includes the Bridgeport area along Oneida Lake as well as a portion along I-90.

Along with the revisions of the new MPO Area Boundary, the Urban Area Boundary was also revised. The former Urban Area Boundary surrounded the City of Syracuse metropolitan area and remained within Onondaga County. The revised Urban Area Boundary expanded to additional metropolitan areas within Onondaga County, and now includes the urbanized portions of Oswego County and Madison County that are contiguous to Onondaga County. The portions of the Urban Area Boundary and the MPO Boundary that are outside of Onondaga County coincide (e.g., the only portions of the MPO that are outside of Onondaga County are the expanded urban areas.). See Map 6 for the updated Urban Area Boundary based on the 2000 Census.

Functional classification is the process by which streets and highways are grouped into classes or systems according to the character of service they are intended 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 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. The functional classification system has been revised to take the 2000 Census and revised MPO boundaries into consideration.

- **Planning Area Trends**

This 2007 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 has seen notable changes since 1990 in population, economic transition and land use shifts. The trends are typical to most Northeast communities, including:

- 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 towards 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.

Included in the LRTP are descriptions of demographic trends (population, local economy, land use), and how they relate to transportation planning in the SMTC area.

- **Travel Demand Modeling**

The SMTC recently undertook a transition to a new Travel Demand Model Software for the SMTC in an effort to improve on the quality and usability of the MPO’s model. The transition was completed in late 2006. 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 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, etc.); 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, etc.). 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. In addition to simulating vehicular traffic, the model will be able to adjust for transit vehicles, bicycles and pedestrians.

The new 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. The new model will utilize TransCAD software and include a Geographical Information Systems (GIS) interface. The model will soon be utilized by the SMTC staff to perform a wide range of transportation planning activities.

Chapter 4 - Changing Transportation Needs and Impacts

• Travel Modes

Passenger vehicles: By far, the most common mode of transportation utilized in Onondaga County is the passenger motor vehicle, and the popularity of this mode of commuting continues to increase over time. The 2000 commuting data shows that most people commute in single occupant vehicles. Correspondingly, there has been a 43% increase in vehicle miles traveled (VMT) since 1990. Overall, a small percentage of work trips are made via public transportation. However, in certain zones in the urbanized area, transit is utilized more and is regarded as an indispensable mode of travel for many people. In no instance did bicycling reach even one-half of one percent of work trips made. Carpooling remains an alternative for many.

Bicycle and Pedestrian Travel: Since 1990, Onondaga County has seen a decrease in pedestrian travel, potentially attributable to a decrease in city population over the past decade. Other factors such as the condition of pedestrian facilities, perceived safety, and alternative mode choices may also be attributable to the decrease. With the majority of bicycle and pedestrian trips covering short distances, land use patterns play a critical role in the current and future development and use of bicycle and pedestrian facilities. Both Onondaga County and the City of Syracuse have bikeway plans and projects underway, several of which are funded through the MPO's Transportation Improvement Program (TIP). Several examples are listed in the LRTP.

Public Transit: Centro operates the public transportation system in Onondaga, Oswego and Cortland Counties. Centro transports 28,000 people per day in Onondaga County on over 100 transit routes. Centro operates connecting routes between the Cities of Syracuse, Oswego, Fulton and Auburn, as well as city transit services within each of these cities. In 2005, Centro expanded their transit services into the Cities of Utica and Rome. Within Onondaga County, service frequencies in the rush hours are such that all Common Center bus stops are in continuous and heavy use. Centro has reported increases in ridership in the last few years as new services have been implemented. Centro has actively been involved in choosing the location of a new "Common Center" central location where a new facility will be built. The public meeting that reviewed the new location was held in December 2006.

Water Transportation: The New York State Canal System is operated by the New York State Canal Corporation. In order to address issues and capture the potential economic development benefits associated with increased tourism, the Canal Corporation is working with canal communities along the system to improve facilities and support the efforts of private entrepreneurs to improve the number, quality and spacing of privately sponsored facilities. Many of these improvements have become reality through programs at the federal, state, and local level including the NYS Canal Revitalization Program which provided over \$35 million for canalside harbors, ports and trails. The Canal Corporation has also introduced several new marketing initiatives as part of the Erie Canal Greenway program. Although there are gaps in water transportation services and facilities in the MPO area, there is potential for increasing future use of the water features in the area.

Air Passenger 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. The full utilization of Hancock International Airport also has been adversely affected

by high airfares. The City of Syracuse has attempted to bring in lower cost airlines to the airport that offer more competitive airfares.

Passenger Rail Service: Rail passenger service in the SMTC area is provided through two companies. The National Railroad Passenger Corporation (Amtrak) provides intercity rail passenger service in the Central New York region. The OnTrack shuttle trains operate over track operated by the Syracuse, Binghamton & New York Railway, a subsidiary of New York, Susquehanna & Western Railway (NYS&W). 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. In the Central New York region, there is a need for improved service for passenger rail transportation.

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.

- **Emerging Initiatives**

There are several emerging initiatives relating to transportation planning that currently have a direct impact on the planning activities in the MPO area and they are discussed below.

First is a series of planning documents impacting the SMTC area such as the Onondaga County 2010 Development Guide, the Onondaga County Settlement Plan, the City of Syracuse Comprehensive Plan, and New York State's Master Transportation Plan. The *2010 Plan's* vision, goals and policies 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. The Syracuse-Onondaga County Planning Agency also enlisted the services of the firm Duany Plater-Zyberk & Associates (DPZ) in 1999 to prepare the *Onondaga County Settlement Plan*. 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 City of Syracuse Comprehensive 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. The NYS Master Transportation Plan articulates a long-term, intermodal vision of the State's future transportation system and provides policy level guidance to achieve that vision.

A second emerging initiative relating to planning in the MPO area is Environmental Justice. 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 because 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. Based upon the primary assessment done by SMTC in 2004, the Environmental Justice Study showed that the transportation planning and programming activities performed by the SMTC are not known to have been disproportionately distributed regarding the designated target populations.

Transportation Needs for Senior Citizens is becoming an area of increasing concern as the population of the MPO ages. At the suggestion of the FHWA in furthering environmental justice initiatives, and recognizing a growing elderly population (as discussed in previous chapters), this LRTP 2007 Update represents the second time that the SMTC has devoted specific attention to senior citizen transportation needs.

An emerging initiative that has a great deal of potential benefit for the MPO area is Intelligent Transportation Systems (ITS). ITS refers to the application of electronics, communications, hardware, and software that support various services and products to address transportation challenges. The NYSDOT in conjunction with the SMTC and its member agencies developed a strategic plan for deployment of ITS for the Syracuse Metropolitan Area (principally Onondaga County).

Another significant emerging initiative is Security. Since September 11, 2001, security has affected all levels of government in a substantial manner. Transportation is no exception. Most of the issues related to security and transportation are outside of the purview of the MPO. The MPO can, however, act as a conduit to facilitate interagency cooperation to that end.

Another emerging initiative is the Safe Routes to Schools Program (SRTS) is a Federal-Aid program of the U.S. Department of Transportation's Federal Highway Administration (FHWA). The Program was created by Section 1404 of SAFETEA-LU. The SRTS Program is funded at \$612 million over five Federal fiscal years (FY 2005-2009) and is to be administered by State Departments of Transportation (DOTs). The Program provides funds to the States to substantially improve the ability of primary and middle school students to walk and bicycle to school safely.

The final emerging initiative in Chapter 4 is Enhancement Projects. The Transportation Enhancement Programs (TEP) has continued through all of the transportation legislation, now including SAFETEA-LU. 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.

- **Emerging Projects**

University Hill Area: The University Hill area is one of the most intensive areas in terms of land use and transportation in the SMTC study area. Due to complex transportation issues in the University Hill area, a comprehensive transportation study known as the “University Hill Transportation Study” has been initiated. The goal of the study is to develop a set of recommendations (policy and infrastructure) that address the wide range of transportation and land use issues in the University Hill study area. The study consists of three parts: data collection and analysis, identification of issues, and the presentation of alternative solutions and recommendations.

Due to the existing intensive land use in a limited geographic area, a comprehensive transportation study that focuses on the issues of interstate access, institutional parking, and transit/walking/biking. There is also a need to look at non-automobile alternatives and improvements such as additional park and ride shuttle systems and other mass transit options. A major aim of the initiative is to ensure the economic viability of the institutions located in the study area while minimizing impacts to surrounding neighborhoods.

Lakefront Development District: Over the past 15 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. The area is undergoing a continued transformation into what is now known as the *Syracuse Lakefront*. Included in the 800-acre district are the Franklin Square district, the existing Carousel Center (regional shopping mall), and the Syracuse Inner Harbor. Some of the more significant redevelopment projects underway and proposed for the Lakefront Development area include the development of DestiNY USA, the continued redevelopment of abandoned manufacturing facilities into new mixed-use housing and offices in Franklin Square and the significant redevelopment of an underutilized canal port on the Barge Canal system at the southern end of Onondaga Lake. Similar to revitalization efforts across the entire Erie Canalway, the Syracuse Inner Harbor is being renovated into a recreational and tourism facility, inclusive of a public promenade, marina, amphitheater, mixed-use waterfront development, housing, and recreational amenities.

Congressional Funded Projects (Earmarks): Approximately \$22 million in Congressional Earmarks will be funded through the projects listed in Chapter 4.

Chapter 5 - Safety Conditions and Infrastructure Maintenance

- **Vehicle Safety**

Strategies to improve the safety of the highway systems are often grouped in one of three categories: education, engineering and enforcement. Overall, traffic fatalities have declined in recent years locally, particularly when measured against the number of miles traveled per vehicle. National and statewide fatality rates have also declined. Much of this recent improvement results from increased education, enforcement efforts aimed at reducing the number of people driving with ability impaired, and new vehicle safety systems such as air bags and anti-lock brakes. The SMTC member agencies play a key role in reducing the number and severity of accidents as well. Much of the local effort is directed at engineering improvements to the highway system itself.

- **Bike/Pedestrian Safety**

As part of the SMTC's Bicycle and Pedestrian Plan, the SMTC examined bicycle/motor vehicle and pedestrian/motor vehicle collisions, and their associated injuries and fatalities in Onondaga County for the years 1987-2000 using collision data gathered from the New York State Department of Motor Vehicles (NYSDMV), which was the most recent data available. Upon examination and analysis of the data, generally speaking, the number of bicycle/motor vehicle collisions and pedestrian/motor vehicle collisions over the fourteen-year period analyzed has decreased (with some annual fluctuation). Collision locations were mapped utilizing the NYSDOT Centralized Local Accident Surveillance System (CLASS) along with the SMTC's GIS system and the SMTC found that the majority of high bicycle/motor vehicle and pedestrian motor vehicle collision incidences and occurred in the City of Syracuse at heavily traveled intersections.

- **Infrastructure**

Bridges: Onondaga County has 492 bridges on thruway, state, county and local roads. The NYSDOT maintains a Bridge Management System (BMS) for all of these bridges. The BMS rates the bridge deck, bearings and other structural elements on a weighted scoring system. Thruway, state and local bridges are rated by the NYSDOT on a scale of 1.0 to 7.0, with scores falling into three categories: Priority Deficient, Deficient, and Non-Deficient. A deficient condition does not mean that the bridges are unsafe, but rather they are candidates for rehabilitation work, replacement or even perhaps closure. Priority deficient bridges are given a priority for funding over those that are deficient. Many bridges with 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. The condition of bridges in the SMTC area has been a critical funding issue for a number of years. The large number of bridges and the percentage of bridges that are rated as Priority Deficient and Deficient combined with the limited amount of money available for funding improvements has made this a key improvement area noted by the NYSDOT and other SMTC member agencies.

Pavement: 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 facilitates predictions of when to cost effectively overlay, rehabilitate or reconstruct a road. The NYSDOT system uses a visual rating system with a scale of 1 to 10 for surface conditions, which are categorized into poor, fair, good, or excellent condition. 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. Although the OCDOT rating system is not identical to the NYSDOT system, it is comparable since OCDOT also uses a 1-10 scale. By placing an annual work activity on the SMTC's UPWP to examine pavement condition, the SMTC is able to produce a document that allows its member agencies to comprehensively view the total pavement condition in a summary format both numerically and graphically. This helps allow for the decision makers to plan for the appropriate funding expenditures for proper pavement maintenance.

One thing that needs to be pointed out is that the vast infrastructure for bridges, pavements and other resources that exists in the MPO area requires constant maintenance and upkeep to operate safely and effectively. This required maintenance utilizes the lion's share of the annual transportation capital expenditures and leaves little left over for new initiatives.

Chapter 6 - Mobility, Accessibility and Intermodal Transportation

- **Existing Trends**

A few of the key trends in the local community that relate to transportation planning and programming are outlined below.

Changing Demographics and Transportation Choices: The changing demographics have resulted in a shift in transportation choices being made by the community. This is reflected in the increase in vehicles per household, increase in total vehicle miles traveled, and also a corresponding increase in average commute times.

Regional/Global Economy Factors: Previously, the majority of employment and manufacturing were mainly concentrated in a few large employment centers in Onondaga County, yet now smaller firms are spreading throughout the region. Due to the large number and type of niche markets of these smaller size firms, there is more diversity in employment in the MPO area.

Changing Demographics and Transportation Design Parameters: As outlined in the document, the demographics of the MPO area have changed in the past 20 years. In particular, the change in demographics over the past decade plus has shown an increase in the elderly population in the SMTC region. Although this is not a new finding since the SMTC's original LRTP, changing demographics have contributed to a shift in certain transportation design parameters, particularly toward improved/increased visibility.

- **Operating Agency Practices**

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. Each of these areas are described in more detail in the full LRTP 2007 Update.

- **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 of the 2007 LRTP Update examines how the entities in the SMTC area are working together for the common goals of the transportation network. There are certain key areas (Corridor Management, Access Management, ITS Implementation) discussed in the LRTP 2007 Update 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.

Chapter 7 - Air Quality and Conformity Determination

- **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, project level analysis for Congestion Mitigation/Air Quality (CMAQ) funding, and requirements for the State Energy Plan (SEP) and Greenhouse Gas analysis. The SMTC and its member agencies take a multi-faceted approach to improving and monitoring air quality impacts within the SMTC planning area

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's LRTP, 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.

In examining the results of the conformity analysis for the SMTC relative to this 2007 LRTP Update, output shows that carbon monoxide emissions between the base year of 2003 and the forecast year of 2027 will be significantly reduced. The analysis indicates that with the completion of construction or implementation of the projects on the TIP, the area will still result in emission levels that are lower than the 2003 base year.

Since the regional implementation program of transportation projects, as reflected in the TIP and derived from the goals and objectives of the LRTP, have been shown to meet the required emission reduction test for air quality conformity, and there are no applicable TCMs in the current SIP for the Onondaga County area, **the LRTP 2007 Update has been shown to be consistent with applicable conformity regulations and the SIP.** No goals, directives, recommendations or projects of the LRTP will contradict requirements or commitments of the SIP or the intent of the CAAA or other applicable federal and state guidance.

- **Energy and Greenhouse Gas Impacts**

A policy objective of both the U.S. Department of Transportation and the State of New York is the conservation of energy through a reduction in motor fuel consumption. In addition, the New York SEP has identified a reduction of greenhouse gases (CO₂) as an objective for all LRTPs.

Similar to the documentation relating to air quality emissions above, the SMTC performed a quantitative analysis on both energy consumption and carbon dioxide emissions that may result from the implementation of the 2007 LRTP. This analysis, included to promote the policy objectives of federal and state transportation departments, is intended to focus awareness on these issues. The results of the analysis demonstrate that the projects new to the 2027 LRTP horizon year will provide for a decrease in the emission of VOC, NO_x, CO, and CO₂ and the amount of direct energy used by vehicles in the Syracuse MPA.

The SMTC and its member agencies will continue to develop processes and tools to further monitor and improve our air quality for a variety of pollutants, while working towards enhanced energy savings and a more effective transportation system operation. In addition, the SMTC and its member agencies will continue to work closely with the New York State Department of Transportation Environmental Analysis Bureau to achieve the goals and objectives of the State Energy Plan. However, it is anticipated that significant additional resources and funding will be required to address this area. Metropolitan Planning Organizations (MPOs) generally do not have the level of expertise and resources on hand that are now being required for increasingly more complex and integrated analysis in this subject area. In addition, the MPOs will require greater clarity and consistent detailed guidance, training and tools to allow for such analysis.

Chapter 8 - Long-Term Outlook and the Financial Plan

- **Asset Management**

Asset Management and Infrastructure Maintenance: 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 2007 Update.

Pavement Maintenance/Road Reconstruction: Most member agencies have programs for preserving infrastructure maintenance, including pavement and bridges.

Bridge Repairs/Improvements: The NYSDOT inspects all bridges in the Metropolitan Planning Organization (MPO) area and determines goals for the condition of both state and local (non-state) bridges.

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.

Transit Maintenance and Improvements: Centro is leading the way in Central New York in the use of alternative fuel, low emissions vehicles. CNYRTA is seeking funding to construct a stand-alone Common Center transit facility where bus operations can be conducted off-street and out of general traffic patterns.

- **Exceptions**

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, listed below.

- **Additional 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.
- **New Transit Initiatives:** Centro will continue to pursue alternative service concepts.
- **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).
- **New Development Potential:** Theoretical plans for the Lakefront area call for various economic development opportunities. One such plan is the Destiny USA initiative. If built to its advertised potential, these plans could significantly impact the MPO area.
- **Intelligent Transportation Systems (ITS):** ITS is becoming more of an active methodology to assist in traffic and incident management.
- **Specific Identified Improvements:** As part of the SMTC's long range planning process, four projects (two federally funded, two privately funded) are identified as essential to the transportation systems, but not currently programmed on the TIP. The projects include Bear Street Extension, third lane of Frontage Road, additional travel lane on NY 31, and North Salina Street lane reduction.

- **Resources Available**

The 2020 LRTP, when published in 1995, anticipated a total of \$3.050 billion in funding over the 25-year planning period. This LRTP 2007 Update anticipates a total of \$3.034 billion in funding over the remaining term of the planning period. The major sources of funding, shown in Table 8-1 and 8-3, include the federal government at 31.0% (\$941 million) of the total, the State Dedicated Fund at 26.4% (\$802 million), Onondaga County at 6.4% (\$193 million) and the City of Syracuse at 1.4% (\$43 million). The balance is comprised of other State and local sources at 24.3% (\$679 million)² and Centro operating revenue at 6.8% (\$206 million). It is anticipated that all traditional funding mechanisms will be exhausted with the implementation of this LRTP 2007 Update.

The largest share of the total resources available will be expended to maintain the existing transportation system. For this 2007 Update, the 2001 cost of each objective has been pro-rated using the new 20-year resource base of \$3.034 billion. The results show that maintenance of

² The number does not match the number for "Other State and Local Funds" on Table 8-1 because it includes some non-transit funding that cannot be broken out from that number.

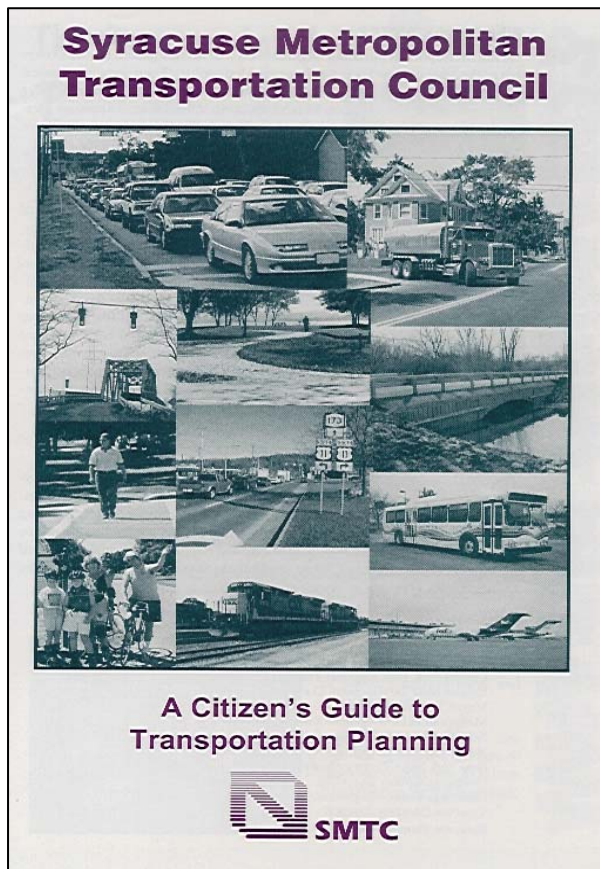
existing bridges and pavement will absorb 59% of the budget (\$1.79 billion). An additional 23.8% (\$722 million) will be allocated to support the area transit system; 10.7% (\$324 million) will be used to improve congested locations, reduce single occupancy vehicles (SOVs) and the Americans with Disabilities Act (ADA) compliance; and 3.6% (\$110 million) will be spent for efforts to increase safety at high incident locations. The remaining 3.0% (\$90 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 2007 Update also supports a number of innovative initiatives new to this area. Examples of the latter include funds which have been allocated to encourage the application of ITS technology in the Syracuse region and an effort to devise a cost/benefit methodology for application to future TIPs.

Chapter I: Introduction

A. What is the Syracuse Metropolitan Transportation Council?

As the Metropolitan Planning Organization (MPO) designated by the Governor of the State of New York, the Syracuse Metropolitan Transportation Council (SMTC) was created in 1966 to carry out the continuous, comprehensive and cooperative transportation planning process for the Syracuse Metropolitan Area, which includes all of

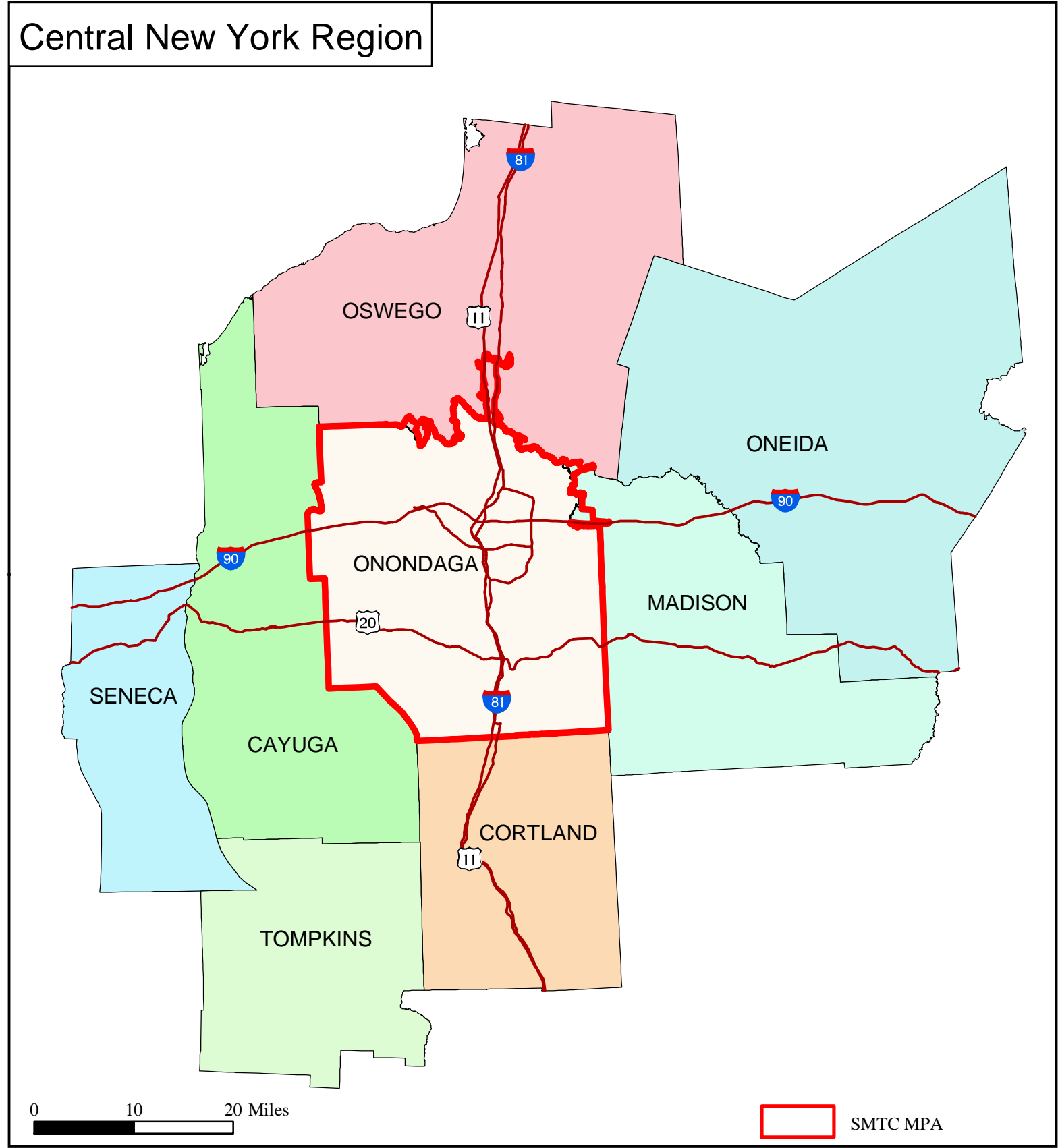
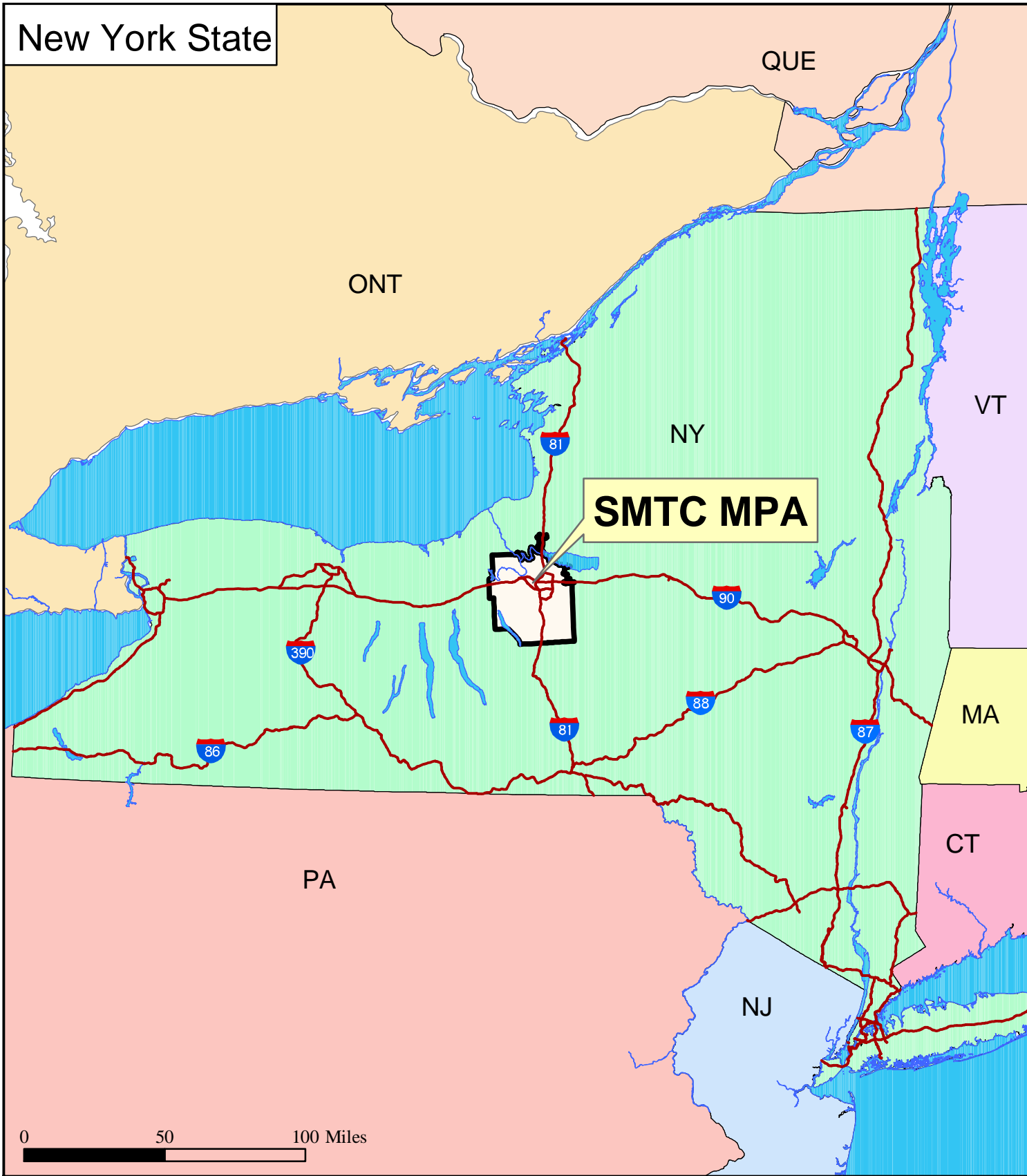
Onondaga County and small parts of Oswego and Madison Counties. The SMTC area is centered in the City of Syracuse, the transportation hub and economic center for Central New York (see Map 1).



In addition to maintaining a Long Range Transportation Plan (LRTP), a 20-year vision of future transportation projects and improvements, the SMTC conducts a number of specific transportation planning activities as part of its biennial Unified Planning Work Program (UPWP), some of which include: traffic corridor studies; transportation data collection; safety improvement analyses; congestion management; and multimodal transportation planning (including bicycle and pedestrian planning). The SMTC is also responsible for the maintenance of the area's Transportation Improvement Program (TIP), a multi-year program that funds

capital projects related to transit, local roadways and interstates, bridges, bicycle and pedestrian amenities, and more. It is important to note, however, that the SMTC is not an agency that can implement particular transportation improvements, but serves as a collaborative forum where transportation issues are studied, and recommendations made.

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, Planning and Executive Committee. Served by the SMTC central staff, these committees serve as the hierarchy to the transportation planning activities of the SMTC.



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SMTC Metropolitan Planning Area Long-Range Transportation Plan 2007 Update Map 1

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



Basemap Copyrighted by NYSDOT
 Data Sources: SMTC, NYSDOT, 2001
 Prepared by SMTC, 03/2006

The Policy Committee consists of the elected and appointed officials representing local, State and Federal governments and other organizations/agencies having an interest or responsibility in transportation planning and/or programming in the Syracuse Metropolitan Area. The primary responsibility of the Policy Committee is to establish policies for the overall conduct of the SMTC.

The Planning Committee, which is established by the Policy Committee, is composed of the professional/technical representatives of both Policy Committee members and public agencies having direct or indirect responsibility for transportation planning and/or 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 for recommendation to the Policy Committee all major studies and planning activities.

The Executive Committee is made up of Planning Committee members and provides oversight of the day-to-day operation of the Central Staff for financial management, personnel and other administrative requirements.

SMTC Policy Committee members include 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 Metropolitan Development Association (MDA), the New York State Department of Environmental Conservation (NYS DEC), 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. Oswego and Madison Counties are represented on the Policy Committees as non-voting, advisory agencies.

B. Purpose of the Long Range Transportation Plan

Transportation Legislation

On August 10, 2005, the most recent transportation legislation bill, *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) was signed into law. SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the five-year period of 2005 to 2009.¹ Through SAFETEA-LU, a total of \$244.1 billion in funding is guaranteed for highways, highway safety and transit. This represents the largest surface transportation investment in United States history. The two landmark bills that brought surface transportation into the 21st Century - the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21) - shaped the highway program to meet the Nation's changing transportation needs. SAFETEA-LU builds on this firm foundation, supplying the funds and refining the programmatic framework for

¹ U.S. Department of Transportation Federal Highway Administration, *SAFETEA-LU*, 2/22/06, <<http://www.fhwa.dot.gov/safetealu/>>.

investments needed to maintain and grow our vital transportation infrastructure.² It is important to note that in all of its transportation planning activities, the SMTC is required to adhere to rules and regulations put forth in the new SAFETEA-LU transportation legislation.

How is the SMTC's LRTP affected by SAFETEA-LU? The LRTP is a blueprint to guide the Syracuse Metropolitan Area's transportation development over a 20 to 25 -year period. Legislatively required every four years (prior to SAFETEA-LU, every three years)³ to reflect changing conditions and new planning principals, the LRTP is based on projections of growth and travel demand coupled with financial assumptions. The LRTP specifically looks at major urban transportation planning concerns such as environmental/air quality; comprehensive access to transportation; alternative transportation modes (especially bicycle and pedestrian); the impact of land development on the transportation system; highway traffic congestion; and maintenance of the existing infrastructure.

It is important to note that 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.

² U.S. Department of Transportation Federal Highway Administration, *SAFETEA-LU*, 2/22/06, <<http://www.fhwa.dot.gov/safetealu/summary.htm>> (August 25, 2005).

³ Frequency of Long Range Plan Updates: Congress has attempted to bring into sync TIP development (which had been on a maximum two-year cycle), long range plan development (which had been on a three-year non-attainment, five-year attainment cycle) and air quality conformity (which is triggered either by TIP, long range plan or air quality plan adoption). As part of this the law now states that the transportation plan shall prepare and update the plan every four years (or more frequently if the MPO elects to). *SMTC doesn't begin this new cycle until we have adopted a new LRTP Update under SAFETEA-LU. After the LRTP 2007 Update is adopted, the SMTC will not be required to complete the next update for four years.*

In an effort to bring the LRTP in compliance with SAFETEA-LU legislation, the LRTP 2007 Update must be adopted and adhere to the new and additional planning factors and guidelines noted within the SAFETEA-LU legislation. If the MPO could not meet the July 2007 deadline, a one- year extension may have been granted assuming a good faith effort was put in place prior to July 2007 to bring the LRTP in line with SAFETEA-LU requirements. Anticipating the occurrence of the LRTP 2007 Update approval schedule to go beyond July 2007, the SMTC in consultation with the Federal Highway Administration and the New York State Department of Transportation prepared an Action Plan for addressing the SAFETEA-LU requirements in the LRTP 2007 Update. The Action Plan specifies particular approaches that the SMTC would utilize to proceed towards SAFETEA-LU compliancy in the LRTP 2007 Update, thereby providing a good faith effort on behalf on the MPO. On February 15, 2007 the Planning Committee recommended that the Policy Committee adopt the Action Plan. The Policy Committee then adopted this Action Plan on March 12, 2007. The *Action Plan for Addressing SAFETEA-LU Requirements in the LRTP 2007 Update* along with its associated adopted resolution (SMTC Policy Resolution 2007-4) can be found in Appendix I. Every element listed in the *Action Plan*, which was also reviewed by FHWA, has been incorporated into this 2007 LRTP Update Report.

In January 1995, the SMTC published the 2020 LRTP. This was followed three years later with the 1998 Update, again with a 2001 Update, and once more with the 2004 Update. All documents were prepared in compliance with 23 CFR 450.322 and 49 CFR 613.100, which is also the basis for this document - the 2007 Update, to fulfill review and update requirements. Since this document is an update, some information and data may not be balanced due to modifying/adding data to the original 1995 information. The original 1995 LRTP is the base document and this 2007 Update represents modifications to that plan.

The 2007 Update has been prepared on the basis of an evaluation of the initial LRTP completed in 1995 and the 1998, 2001, and 2004 Updates, as well as changing circumstances of a significant nature that have occurred and affected these four documents. The 2007 Update should not be viewed as a stand-alone document, but instead should be used in conjunction with the LRTP published in 1995, and the 1998, 2001, and 2004 Updates. **This 2007 Update is fashioned after the 2004 Update in form and content with updates reflecting only changing conditions and new legislation, the balance of the document remains the same.**

During the last decade, several changes in federal legislation have had a substantial impact on how MPOs, such as the SMTC, 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 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, now that the interstate highway system has been completed.

The LRTP presents a vision of the transportation system and the projects that will bring that vision to reality over time. Central to that vision is the protection of the value of investments already made in developing the transportation system while providing resources to pursue innovative solutions to mobility constraints and enhancing travel choices available. Also central to the LRTP is the need to adjust the land development patterns and transportation system investments, where practical, to conform to existing development guidelines (i.e., Onondaga County's 2010 Development Guide, the Onondaga County Settlement Plan, and the City of Syracuse's Comprehensive Plan).

1. Public Involvement

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. Such legislation underscores the need for public involvement, calling 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.



I-481 Industrial Corridor Transportation Study Public Meeting

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 PIP for the LRTP 2007 Update.* SMTC's well-established PIP process, which has been followed for all LRTP updates, is now a mandated federal requirement under SAFETEA-LU. Such a proactive and dynamic PIP development process ensures the continual review of meaningful public involvement objectives and concepts, as opposed to one stagnant PIP that the SMTC must follow in all its transportation planning activities. Depending on the nature of the project, such groups as freight shippers, business developers, property owners, community leaders, social service agencies, fire and police representatives, and/or representatives of public transit, to name a few, are actively

sought as participants in the project process. Input from such groups is important to the success of the project in meeting identified needs. The varying PIPs also consider the differing characteristics and impacts of different geographical areas on the focus of the study. For example, the existing conditions, the transportation issues, and the corresponding recommendations for the University Hill Transportation Study (located in the heart of the City of Syracuse's collegiate and medical campuses) are quite different from that of the Fayetteville-Manlius Road/Route 257 Pedestrian Accommodation Feasibility Study, a transportation planning activity focusing on pedestrian connection options along a one-mile stretch of State Route 257 in the Town of Manlius. Thus, the SMTC created an individual project-specific PIP for both studies, in which differing methods allow the public to better participate in the study. The PIP also pinpoints when in the project the public involvement meetings will be held that allow for the exchange of information and input. The SMTC also has an umbrella PIP for the MPO as a stand-alone document. The SMTC is looking to update this PIP in the near future.

The SMTC has taken several steps to strengthen the public involvement process. In addition to holding public meetings, the SMTC continues to recruit the necessary technical personnel and community representatives, as appropriate, to serve on a project-specific Study Advisory Committees (SAC). The SAC, consisting of representatives from affected organizations, local and state governments and agencies, and selected community representatives, meets regularly with the SMTC to assist in managing projects and provide needed input and direction.

In addition to the SAC, a list of interested "stakeholders" (a broader group of interested individuals with significant relations and interest in a particular planning study or activity) is maintained by the SMTC. The stakeholders are sent pertinent study



Bicycle and Pedestrian Plan Stakeholder Workshop

information, kept apprised of significant study developments, notified of all public meetings, and encouraged to provide feedback and comment regarding the particular planning study or activity.

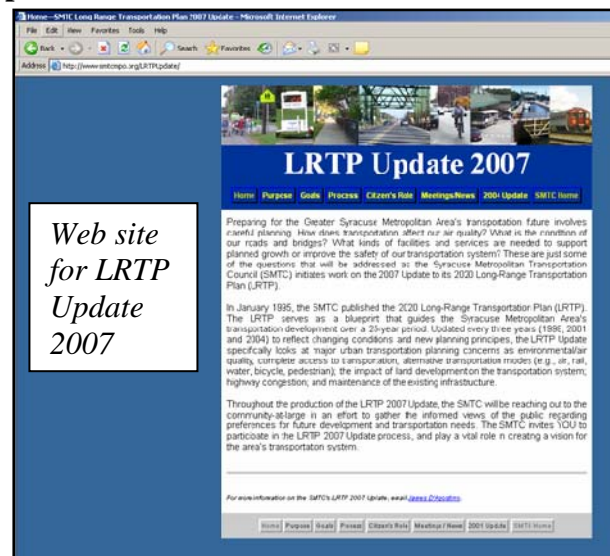
Separate meetings are also considered for the stakeholders group at various points during some projects, so that the SMTC may report on the progress of a study effort, and solicit input.

Since the 2001 Update, the SMTC has continued to improve and expand upon its already impressive public involvement efforts. The following items are some of the noteworthy acts and methods the SMTC has implemented to inform and invite the public to participate:

- a) **SMTC Web Site [www.smtcmpo.org]:** In September 2001, the MPO launched a “new and improved” SMTC web site, which now contains general information on the SMTC, detailed “headline” information on its studies, products, public participation opportunities, and other pertinent news and developments. The site also provides a “one-stop shopping” location for various SMTC-produced reports and study documentation. The improved web site has received a significant number of hits, has been extremely useful and cost-effective in its posting of final reports, and has become a site that the public relies on for meeting notices, and UPWP project updates. Most importantly, it has become another source for the public to participate in the transportation planning process.

The public involvement aspects pertaining to the web site have also been strengthened. The SMTC has taken advantage of the Internet and its web site by creating a sub web site specific to individual UPWP projects. For example, a sub web site for the SMTC’s Bicycle and Pedestrian Plan was created [www.smtcmpo.org/bike-ped] and is still being utilized. In addition, sub web sites for the University Hill Transportation Study [http://www.universityhillstudy.com/] and the LRTP 2007 Update [http://www.smtcmpo.org/LRTPUpdate/] have been established as well. The

SMTC will continue to use its web site for project-specific sub web sites in the future, publicizing project news, updates, and opportunities for public participation. The SMTC has received accolades from the FHWA on the content of the website. This website comprehensively presents the body of work of the SMTC and is freely accessible to all. Final plans and reports, such as the LRTP, TIP and UPWP, are electronically available on the SMTC website for public review.



- b) The use of **press releases** to announce various meetings, project updates, and available reports has been upgraded in its distribution. The SMTC is now e-mailing its press releases to local media and agencies/individuals/citizens of interest.
- c) **SMTC newsletter, DIRECTIONS:** The SMTC continues to promote its activities through its newsletter, which has grown in its total distribution count from approximately 1,500 in 1999 to about 2,500 in 2006. The SMTC also began promotion of its online version of *DIRECTIONS*, and the newsletter is distributed via e-mail to hundreds of recipients.

- d) **Final Reports:** The SMTC has attempted to make better use of technology in making transportation planning reports, memorandums, and documents available for public review and possession. Central staff has implemented procedures that allow for final reports to be accessed via CD-ROM, e-mail (PDF file), or accessed on the SMTC web site. The SMTC continues to make its reports available at its offices, and at local libraries throughout Onondaga County.
- e) Continued and improved distribution of various project-specific **fact sheets and meeting announcement flyers**. The SMTC has received considerable feedback and inquiries following the distribution of such material. SAC members are assisting in the distribution of these flyers in an attempt to get the “grass-roots” community involved.
- f) **Project specific newsletters** have been developed to provide focused information and project updates on particular UPWP projects.
- g) **SMTC brochure: *A Citizen’s Guide to Transportation Planning*** was produced in the Fall 2001. It has been well received in its attempt to explain the role and purpose of the SMTC. In fact, it has been recognized by the public in its effective explanation of the MPO process (e.g. the progression and relationship of the LRTP, UPWP, and the TIP). The SMTC will be revisiting this guide within the next year to update it as appropriate.
- h) **Media Relationships:** Continued and heightened relationships with the local media have led to increased media exposure over the past three years for the SMTC and many of its transportation planning activities. The SMTC has been working with all mediums, television, radio, and print, to promote the activities and public participation opportunities to the public. In addition, the SMTC has established a good working relationship with students from Syracuse University who conduct interviews for their public communications class, and the Syracuse University newspaper. This is helping to spread the SMTC news to the college setting/environment.
- i) **Advertisements:** When necessary, the SMTC has arranged for advertisements in local newspapers to expand its outreach to all populations. The SMTC has also posted various legal notices and announcements in the print media.
- j) **Representation on the FOCUS (Forging Our Communities United Strengths)**, a community-wide visioning program. This volunteer activity has allowed the SMTC to discuss its role in the community and promote the activities and studies of the SMTC in tandem with the community’s goals and visions.



Route 31 Study Educational Session

- k) **Integration and coordination with the City of Syracuse's Tomorrow's Neighborhoods Today (TNT)**, a citywide community development forum. The SMTC has partnered with this group in the distribution of information, and holding of public meetings in an attempt to reach more citizens in all sections of the City of Syracuse.
- l) **Orientation Packet**: Part of the SMTC's public involvement activities has been to educate our Planning and Policy Committee members, in addition to the general public who request information about the SMTC. Thus, the SMTC created and established an orientation packet for new committee members.
- m) **Onondaga Indian Nation**: The SMTC continues its outreach to the Onondaga Indian Nation in all of its mailings (e.g., press releases, newsletters, flyers, and public meeting announcements).
- n) **Assisting other MPOs**: The SMTC has expanded its outreach to assist in promoting MPOs throughout New York State. In 2002, the SMTC assisted with the design and layout of the New York State Association of Metropolitan Planning Organizations (NYSAMPO) brochure. The SMTC's Communications Specialist designed the graphical layout, and coordinated printing efforts for a brochure that aims to promote the role and purpose of MPOs, and the significance of transportation planning in New York State.
- o) **Comment Cards and Surveys**: The SMTC has implemented various questionnaires, surveys, and comment cards in an effort to obtain additional public participation and opinion.

The SMTC recognizes that the active involvement of the entire community, in addition to the SMTC Policy and Planning Committee members, is paramount to good transportation planning. Public comments are valued because they can shape the direction of a particular transportation study or planning activity, and may help to identify new transportation projects that are important to citizens of the area.

2. Additional Public Involvement Requirements under SAFETEA-LU

With the passage of the new SAFETEA-LU transportation bill, additional requirements have been placed on MPOs for the public participation components of their LRTPs. The new requirements are summarized below.

- **Consultation Requirement**: 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 (EIS) work. The SMTTC intends to complete outreach to the following agencies to appropriately fulfill the consultation requirement (Appendix B provides contact information for these agencies). Some of these agencies are SMTTC 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*
- NYS Department of State – Quality Communities Task Force
- Army Corps of Engineers
- United States Environmental Protection Agency (NEPA Section)
- 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 and Environment Protection (WEP)
- NYS Canal Corporation
- NYSDOT Environmental Unit
- 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
- Save the County Land Trust Onondaga County
- New York Water Environmental Association (NYWEA)
- NYS Emergency Management Office, Region 4
- Onondaga County Emergency Management Office
- US Fish and Wildlife
- Finger Lakes – Lake Ontario Watershed Protection Alliance (FL-LOWPA)
- NYS Floodplain and Stormwater Managers Association
- 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)

*SMTTC Member Agency

- Participation by Interested Parties: “Representatives of users of pedestrian walkways and bicycle transportation facilities” and “representatives of the disabled” have been added to the categories of stakeholders that the MPO shall provide a reasonable opportunity to comment on the transportation plan.
 - The SMTC continually incorporates Environmental Justice within its planning process, and as part of the recently completed Bicycle and Pedestrian Plan, the SMTC completed considerable outreach to the bicycle/pedestrian community and various community organizations.
 - In coordination with the CNYRTA, the SMTC is in the process of preparing a coordinated Public Transit-Human Services Transportation Plan that will address the transportation needs of the disabled.
- Requirement for a Participation Plan: Congress has introduced a new required item. MPOs must develop a formal plan in consultation with interested parties. The SMTC’s PIP for the LRTP 2007 Update satisfies this requirement. In addition, the SMTC is in the process of creating a Public Participation Plan (PPP) for the agency for the new SAFETEA-LU regulations.
- Public Participation Methods: Both for the statewide transportation plan and the MPO long range plan, three methods shall be used “to the maximum extent practicable”:
 - “hold any public meetings at convenient and accessible locations and times;
 - “employ visualization techniques to describe plans; and
 - “make public information available in electronically accessible format and means, such as the World Wide Web, as appropriate...”

The SMTC already engages in the new SAFETEA-LU requirements noted above. For the LRTP 2007 Update in particular, the SMTC completed significant outreach from Summer 2005 through Summer 2006 that include wide-range outreach to diverse community organizations including:

- DeWitt Rotary Club Meeting (Drumlins)
- Fayetteville Senior Center (Fayetteville)
- County Planning Federation Conference (The Marx)
- Town Highway Superintendents Association (Wacky Wyatt's in Baldwinsville)
- FOCUS- CNY LINK Booth at OnCenter. Ran continuous presentation of LRTP on laptop and also had comment sheets available.
- Downtown TNT Meeting (Ida Benderson Center)

The SMTC has found it most useful to “piggyback” onto previously-planned community meetings, essentially becoming an agenda item at these meetings. This ensures a captive audience, giving SMTC an opportunity to reach a broader segment of the population. At each of these meetings, the SMTC shared a presentation (which was also included on the SMTC LRTP project-specific website), held a question/answer period, and asked meeting participants to complete a survey that allowed them to comment on their transportation concerns. This survey was also available on the SMTC’s LRTP project specific website. The surveys can be found in Appendix B.

In addition, the draft LRTP 2007 Update will be sent to interested parties for review and comment, including those agencies noted previously in this section. The final draft LRTP 2007 Update will be available for public comment for a 30 day period, during which time a public meeting will be held. The final draft document will also be presented to the SMTC's Planning and Policy Committees for final approval.

As far as "visualization techniques" are concerned, the SMTC utilizes GIS and mapping, as well as numerous charts and graphs, to aid with visualization. Since the SMTC LRTP is not project specific, visualization techniques will be focused on a system-wide scale. In the coming year, the SMTC will be researching and attempting to expand its visualization techniques to include those which will offer the public the best capacity to understand the Plan's objectives. In addition, the SMTC will engage in a proposed statewide Shared Cost Initiative program that will include training in visualization techniques for MPO staff.

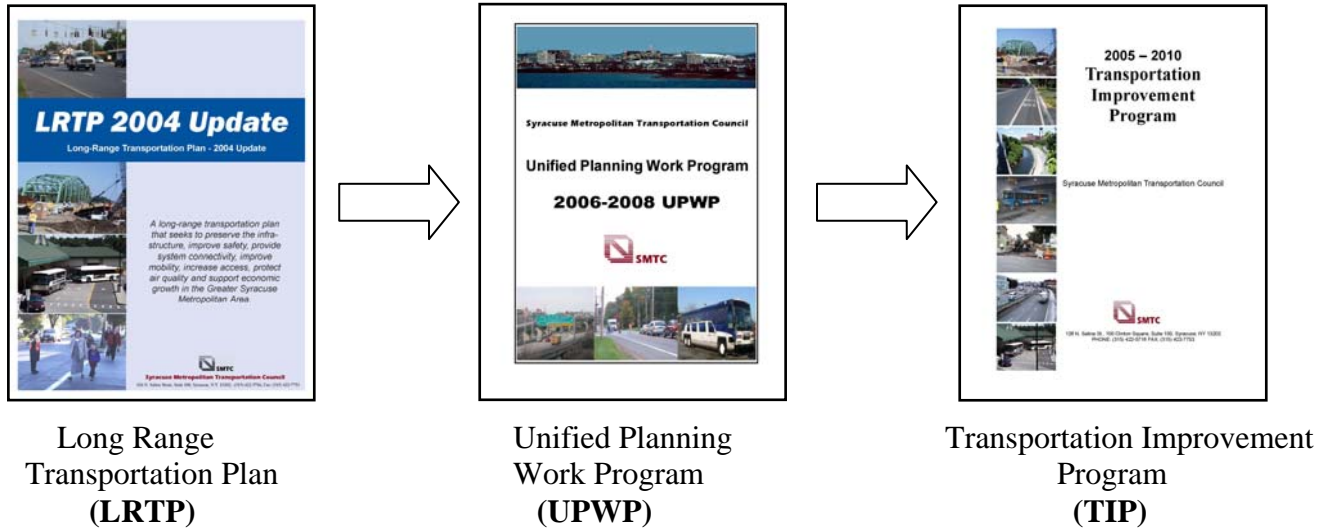
C. Transportation Planning Context

The SMTC develops three key documents that are the ingredients to transportation planning and programming in the Syracuse Metropolitan Area: 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 on the following page (Table 1-1) 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. Each year, the Policy Committee adopts the *UPWP*, which incorporates all the transportation planning activities (and directly supportive comprehensive planning activities) for the coming year. The activities are generally major transportation studies that identify short- and long range needs and reflect the efforts to be undertaken that will lead toward the attainment of the *LRTP* goals and objectives over a number of years. Finally, the SMTC adopts the *TIP*, the SMTC instrument for programming capital improvement projects to complete the planning and implementation process.

Table 1-1

The Planning and Programming Process



D. Process and Funding

1. Transportation Improvement Program (TIP) Process

The SMTC is responsible for the maintenance of the area's TIP, a three-year program that funds capital projects related to public transportation, local roadways and interstates, bicycle and pedestrian amenities, and more. Five pieces of federal legislation significantly affect the TIP and the planning and programming of transportation projects. These include SAFETEA-LU, TEA-21, ISTEA, ADA, and CAAA.

The TIP for the SMTC area is comprised of a staged three-year program (which may change to four under SAFETEA-LU) of transportation capital projects together with a three-year estimate of transit capital and maintenance requirements. While the TIP is usually approved biennially, the document may be amended as needed. The 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 adhere to the following requirements:

1. Identify transportation improvement projects recommended for advancement during the program year. The projects required are those located within the study area and receiving any 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 Plans 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 (TCM) as identified in the State Implementation Plan (SIP) for Air Quality.
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.

The TIP should also include regional highway and transit projects 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 Consultant 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 Analysis Bureau (NYSDOT EAB), 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.

Implications of SAFETEA-LU on the TIP Process

The new SAFETEA-LU legislation now states that the TIP (and the State Transportation Improvement Plan (STIP)) must be updated at least once every four years, and NYSDOT and the NYS MPOs anticipate updating the TIP every two years. SAFETEA-LU also indicates that the TIP must contain a priority list of projects and strategies for four years, a financial plan, and descriptions (type of work, project limits, etc.) of each project in the TIP. In addition, investments in pedestrian walkways and bicycle transportation facilities are to be included in the published annual listing of projects.

2. UPWP Process

The UPWP identifies the transportation planning activities that are to be undertaken in the SMTC study area in support of the goals, objectives and actions established in the 2020 LRTP, which was adopted in January 1995. 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 that a coordinated transportation planning process occurs in the region, which will make positive contributions towards the achievement of the established 2027 goals regarding mobility, facilities, safety, the environment, economy and land use.

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 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 fulfill the Federal and State policies, and 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 into subsequent UPWP's to enable project closure. 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, consistent with the LRTP.

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.

3. Long-Term Funding

As a result of SAFETEA-LU and New York State reformatting its MPO funding formula, the SMTC's planning budgets have recently increased. We do not know if this increase is temporary or permanent. The SAFETEA-LU legislation has passed, and the funding allocated to the state has increased from previous transportation legislation. 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.

Chapter II: Goals and Objectives

A. Introduction

The original 1995 Long Range Transportation Plan (LRTP) provided the policy framework for fulfilling transportation needs within the Metropolitan Planning Organization (MPO) area of responsibility. In January 1995, the adopted LRTP included six goals, 23 objectives and 46 recommended action plans. In the interval since 1995, these goals, objectives and actions have been reflected in the development of the annual Unified Planning Work Program (UPWP) adopted by the SMTC Policy Committee. The member agencies of the Syracuse Metropolitan Transportation Council (SMTC), representing state, regional, county, city and other organizations, cooperate in carrying out the action plans. The SMTC member agencies also participate in the allocation of funds in the annual Transportation Improvement Program (TIP), the SMTC instrument for programming capital improvement projects to complete the planning and implementation process.

B. Changing Program Focus

Since the publication of the 2020 LRTP in 1995, a shift in emphasis has occurred in order to place more emphasis on bicycle and pedestrian facilities planning, such as the Onondaga Lake Circumferential Canalway Trail, the Erie Canalway Trail, the redevelopment of Clinton Square, and the Syracuse University (SU) Connective Corridor Project (to connect SU with downtown Syracuse). The increase in facilities for non-motorized travel creates a stronger multimodal orientation to the work of the SMTC, which is not reflected in the original LRTP. Other issues that are currently receiving more attention, although not noted in the original Plan, include roadside maintenance and periodic clean-up in order to improve the visual attractiveness of the area, as well as enhancements that make transportation facilities accessible under the Americans with Disabilities Act of 1990 (ADA).

In the future, better measures of effectiveness will be needed for assessing the quality of non-motorized transportation facilities, as well as general quality of life issues that are becoming increasingly important in the MPO area. The SMTC currently anticipates that a growing amount of public attention will be given to non-motorized travel, as well as 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 for the foreseeable future.

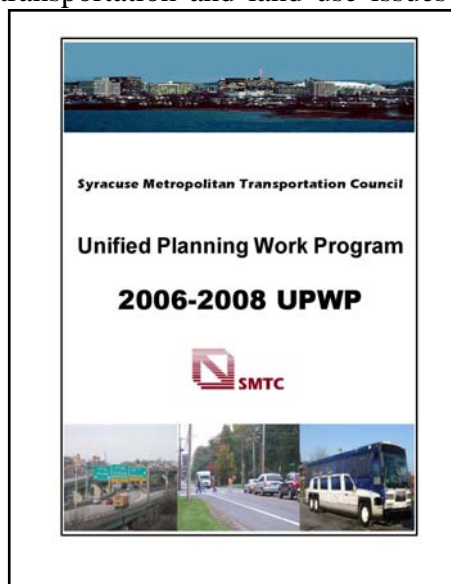
Other issues needing future attention are the roads originally designed for home to market use. These roads have been strip-developed and simultaneously serve as local streets, collectors and arterials, in the absence of a more fully developed hierarchical road network. There may be instances of improving regional links on the Interstate system to support area economic development. One example is the need for a stronger road network around Interstate 481/Kirkville Road in the Town of DeWitt that is built upon a clear

understanding of the best use of the surrounding land and the infrastructure improvements needed to support that development.

A similar example that deals with economic development and interstate access is an area in the Town of Clay that is proposed for new industrial use. There was a need to coordinate local land use plans and policies with future development plans to ensure that any potential new development is proactively planned for in terms of transportation infrastructure and future land use. To that end, the SMTC is engaged in the Clay/Cicero Route 31 Corridor Study. This study comprehensively examines this potential new industrial site along with future land use plans for both towns in an attempt to plan for the transportation system with a corridor that will service the area well into the future. Interstate access and functionality are critical components of this project's success.

C. Progress Achieved on UPWP Projects

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

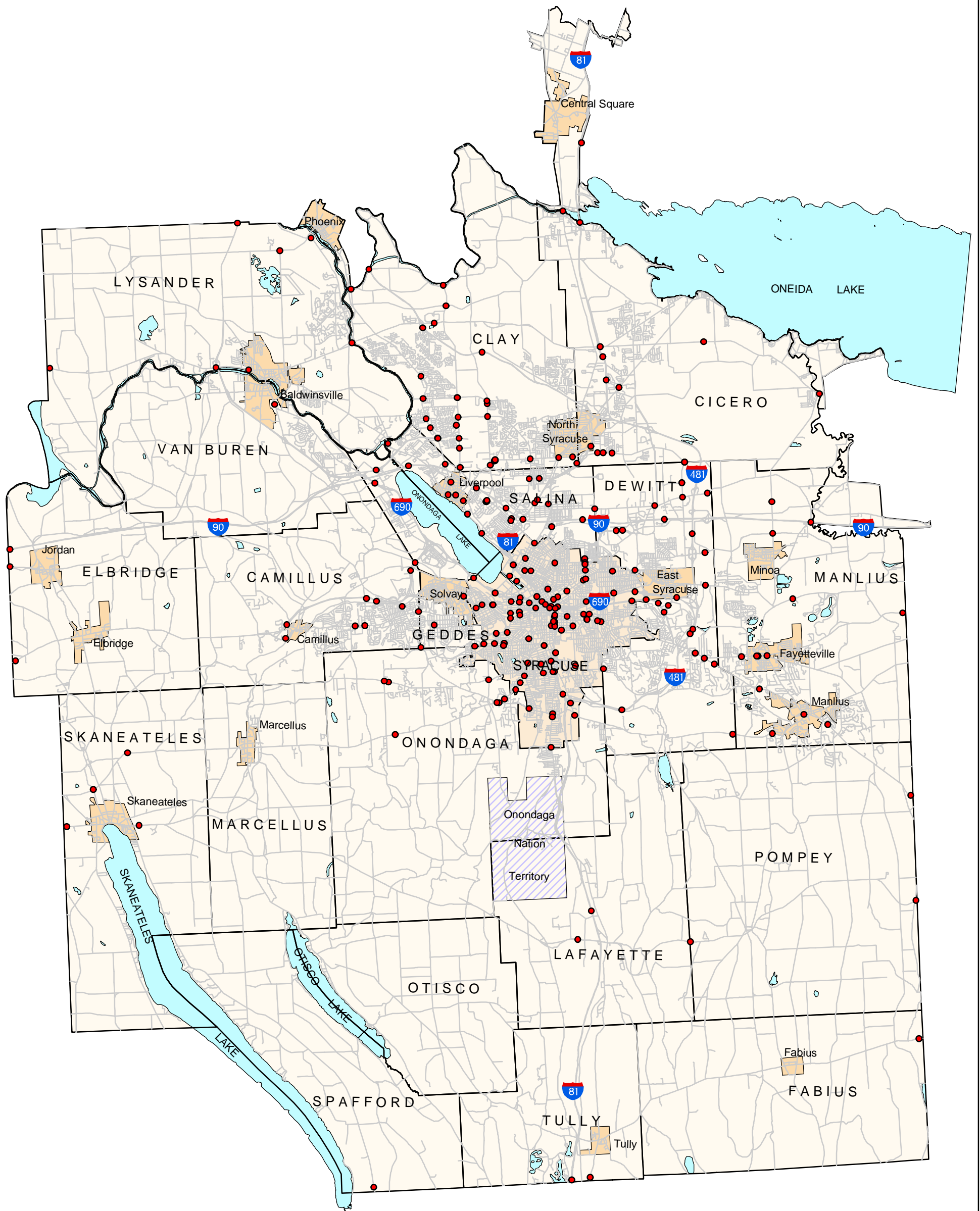


originally selected for inclusion in the SMTC annual UPWP that establishes the activities and programs to be carried out. Examples of projects completed include, but are not limited to, the following: the South Side Transportation Study (October 1999); the Liverpool Area – Onondaga Lake Parkway Transportation Study (February 2000); the University Hill-Special Events Transportation Study (February 2000); the City of Syracuse Truck Route Study (May 2000); South Salina Street Corridor Study (February 2001); James Street Corridor Study (March 2001); DeWitt Comprehensive Plan Transportation Study (April 2001); Taft Road/Northern Boulevard Study (May 2001); Job Access and Reverse Commute Plan (2001); Seneca Turnpike Corridor Study (March

2002); Soule Road Break-In-Access Study (June 2003); Central New York Rail Corridor Inventory (2003); Title VI Reporting for Centro (2004); I-481 Industrial Corridor Transportation Study (December 2004); Bicycle and Pedestrian Plan (March 2005) the biennially completed Congestion Management System (CMS); and annual projects such as the Safety Improvement Analysis, Bridge and Pavement Condition Management System (BPCMS), and Environmental Justice Reports. These projects, together with the implementation actions identified on the following pages, provide an overview of the wide-range of activities being carried out by the SMTC and its member agencies. On Maps 2 and 3, the locations of major transportation planning projects, carried out under the UPWP are shown. Map 2 shows specific project locations, while Map 3 shows general project areas and corridors.

D. Review of Action Plans Implemented

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. The six goals include (1) community safety, (2) community mobility, (3) community environment, (4) community economy, (5) community land use, and (6) community facilities. This 2007 Update will emulate the 2001 and 2004 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 pages that follow, the implemented action plans are presented, together with their respective goals and objectives. 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.



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Specific UPWP Project Locations

Long-Range Transportation Plan 2007 Update

Map 2

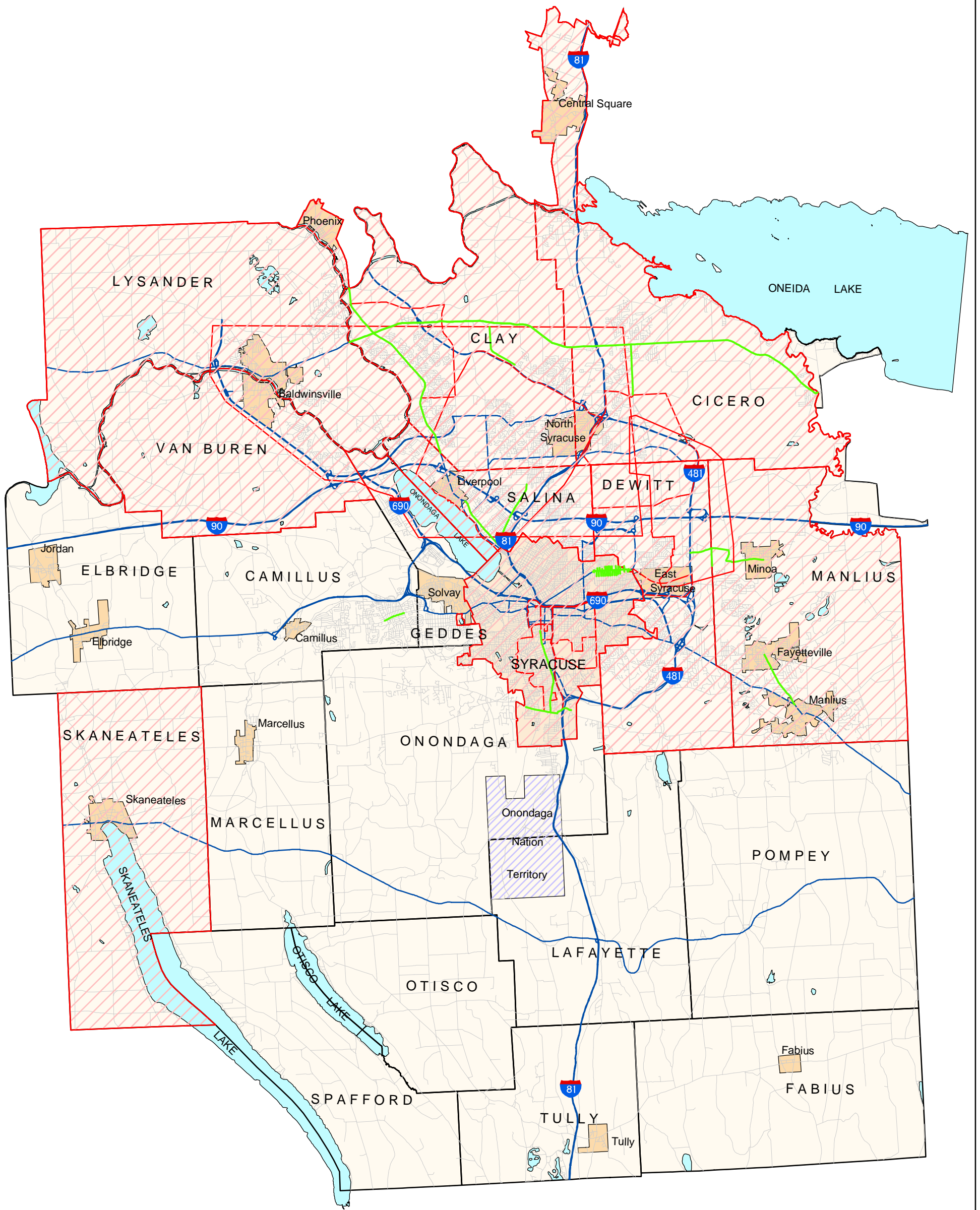
0 2 4 Miles

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



- Site Specific UPWP Locations
- Onondaga Nation
- Towns
- Villages
- City of Syracuse
- Water
- Roads

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Data Sources: SMTC, NYSDOT, 2001
Prepared by SMTC, 03/2006



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General UPWP Project Locations

Long-Range Transportation Plan 2007 Update

Map 3

0 2 4 Miles



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Data Sources: SMTC, NYSDOT, 2001
Prepared by SMTC, 03/2006

- UPWP Project Corridors
- UPWP Project Areas
- Towns
- Villages
- City of Syracuse
- Onondaga Nation
- Water
- Roads

Community Safety

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

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.

Action Plans Implemented:

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 that will replace the Bartell Road bridge over I-81 (to be let 12/08) will include measures to reduce the skew angle of the I-81 northbound exit ramp for traffic turning right onto Bartell Road.
 - A project on Route 31 from Route 11 to Lakeshore Road in Cicero (to be let 9/09) 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.
 - A project on I-81 between Church Street and South Bay Road in Cicero (to be let 6/08) will install continuous median barrier or guide railing.
 - A project on Route 11 at E. Circle Drive in Cicero (to be let 6/08) will include measures to reduce the skew angle of the westbound right turn ramp to Route 11.
 - A project on I-690 westbound at the Thruway Interchange (to be let 6/07) in Van Buren will install high-tech LED pavement markings.
 - A project on Bridge St. (Route 930P) at the I-690 interchange in East Syracuse will install a double left turn lane on Bridge St. 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.
 - A project in the Village of East Syracuse (to be let 2/07) will include measures to reduce the skew angles of the right turn ramps at the Bridge St. (Routes 290 and 930P) intersection with Manlius Center Road (Route 290).

- The Route 92 project from the Syracuse City Line to Erie Boulevard (currently underway) will address driveway access issues between Jamesville Road and Erie Boulevard and will improve left turn capacity along this section.
- The Routes 5 and 92 project from Erie Boulevard to Edwards Drive (recently let) will include measures to reduce the merge/approach skew angles on the I-481 northbound exit to 5 and 92 eastbound and on the I-481 southbound exit to 5 and 92 westbound.
- The Route 173/175 Onondaga Hill Project (to be completed in 2006) realigned the Makyas 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 173 3R project from Fairmount to Onondaga Community College (recently completed) included widening at the Howlett Hill Road intersection to provide an exclusive left turn lane and three-color traffic signal.
- The Route 173 “Pen Hill” project in the Hamlet of Jamesville (recently completed) improved the horizontal alignment, roadside/clear zone and drainage system between the Route 91 intersection and the Onondaga County Correctional Facility.
- The Route 31/Mud Creek bridge project (recently completed) widened Route 31 to a five-lane section from the Great Northern Mall east driveway through Morgan Road.
- The Route 31 Belgium Bridge project (recently completed) reconstructed the existing span and added an additional span across the Seneca River, and included measures to address safety issues at the River Road and Gaskin Road intersections.

2. Recent/upcoming NYSDOT improvements for the ten highest vehicular accident locations on State-owned roads include:

- Route 11, Sand Rd. to South Bay Rd. - A project (completed in 1999) 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 Rd. northbound split; Route 11 northbound at South Bay Rd. southbound; Route 11 southbound at South Bay Rd. southbound and Northern Concourse.
- Route 298 at Carrier Circle - The Route 298 3R project (recently completed) channelized and reduced the approach/merge skew angle of the Route 298 eastbound approach to Carrier Circle.
- Route 11, Northern Concourse to Bailey Rd. - In addition to the measures previously mentioned, the 1999 project also included lane reallocation

measures on Route 11 between Bailey Rd. and Elbow Rd.

- I-81, Liverpool Interchange - The I-81 1R project (to be let 4/07) will address pavement, sign, guide rail and roadside/clear zone issues along I-81 from the I-690 interchange to the Mattydale interchange.
 - Route 11, E. Circle Dr. to Hogan Dr. - A protected-only left turn phase was recently installed for Route 11 southbound traffic turning onto E. Circle Dr. A project on Route 11 at E. Circle Drive in Cicero (to be let 6/08) will include measures to reduce the skew angle of the westbound right turn ramp to Route 11.
 - Route 31, Crabtree Dr. to Lakeshore Rd. - A project on Route 31 from Route 11 to Lakeshore Road in Cicero (to be let 9/09) 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.
 - I-81, from I-690 to Pearl St. - See above I-81 1R project.
 - Route 31, Lakeshore Rd. to Cicero/North Syracuse High School - A recent Highway Safety Investigation recommended a review of the left turn phasing at the intersection with New Country Drive.
 - I-81, Harrison St. to I-690 - The I-81/I-690 Interchange project (1999) replaced scuppers and downspouts on the Almond St. viaduct, cleaned scuppers and downspouts on the Onondaga Interchange, and cleaned the underground drainage system. A 2000 Highway Safety Investigation recommended cleaning bridge drainage systems as part of the annual bridge cleaning project to address wet pavement and ponding-related accidents; the study also recommended consideration of transverse grooving under a future bridge repair project.
 - Route 635 (Thompson Rd.), Carrier Corp. to Carrier Circle - The Route 635 3R project (completed in 1999) widened Route 635 to a five-lane section for left turning capability at the Carrier Corp. driveways and constructed a raised median south of Carrier Circle to address right angle accidents at a commercial establishment.
3. 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 added to the capital program every two years 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.
4. The NYSDOT has developed a Safety Information Management System (SIMS) that provides accident record information on State and local highways and streets.
 5. 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.
 6. The NYSDOT has eliminated a rail grade crossing at Poolsbrook Road in the Town of Manlius.
 7. 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.
 8. 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.
 9. 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.
 10. 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.
 11. The NYSDOT conducts annual Safety Appurtenance (SAFETAP) review 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.
 12. 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.

13. 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.
14. 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.
15. The Region 3 Traffic Management Center (TMC) began its second year of operation in October 2005. 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.
16. The Central New York Regional Transportation Authority (CNYRTA) has a System Safety Plan that is updated every 24 months covering internal and external operations.
17. The CNYRTA uses a system for tracking and categorizing transit accidents using the NYS Public Transportation Safety Board process as a template.
18. The CNYRTA has an extensive training program for all new transit operators and periodically does refresher training for existing personnel. In addition, CNYRTA is in the process of acquiring a computerized training simulator, which is expected to significantly enhance the Authority's training program.
19. The CNYRTA is endeavoring to move Common Center permanently to and alternate weather-protected location where buses can load and transfers may be made out of the general traffic flow. Discussions are ongoing and a new site has been identified. Planning for a new Common Center, capital acquisition, land acquisition, design and construction may take up to five years to accomplish.
20. 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) will add 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 preliminary scope of the project includes 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) This 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.

21. 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 LED's including yellow lights. This will increase pedestrian and vehicular safety. The LED's 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 by the end of 2007. All unwarranted signals will be deactivated after the study is completed and signal upgrades will be initiated.
22. 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.
 23. In support of the new SAFETEA-LU security planning factor, please see Chapter 4, Section B5.

Community Mobility

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

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.).

Action Plans Implemented:

1. The SMTC has implemented the Congestion Management System (CMS) Model, which is updated on a biennial basis. The NYSDOT 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 CMS model has identified mobility hot spots, resulting in projects being placed on the TIP and implemented to address high priority mobility concerns at locations such as Routes 5 and 92. During 2002, the CNYRTA went through a complete route restructuring process. The impact of these improvements has been to enhance service for both work and non-work trips. During 1999-2000, the CNYRTA began two small bus services in suburban/rural areas that provide feeders to the main Centro network as intracommunity circulators. These services were established in the eastern and western portions of the service area as experimental routes. In 2003, one of these routes was discontinued due to lack of ridership.
3. In November 2002, the CNYRTA implemented a complete restructuring of its regular route system in Onondaga County. This action resulted in significant improvements in mobility for its passengers and has been reflected in a 35% increase in ridership (October 2002 vs. October 2005).

4. The CNYRTA has reviewed the factors affecting mode choice in the SMTC area in its continuing efforts to increase transit ridership. Several factors adversely impact the agency's ability to increase ridership. These include: a low density regional development pattern that minimizes opportunities for creating the type of critical mass needed for supporting transit service; low levels of commuter 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 improved air quality; and a high capacity road network.
5. The CNYRTA, together with the NYSDOT and others, has developed plans and instituted transit service improvements and multi-hub based service under the Regional Mobility Action Plan (ReMAP) Project to improve connectivity. The ReMAP study resulted in a plan to serve reverse commuters through a reworking of the existing fixed routes and adding job-site specific small buses for non-traditional commuter times.
6. The CNYRTA has fulfilled its policy to have all transportation facilities comply with the ADA.
7. The CNYRTA has implemented an Automated Vehicle Locator (AVL) system and Automated Passenger Counters (APC) on many of its buses in conformity with the regional Intelligent Transportation System Strategic Plan. The enhanced communications system provides real time information on bus locations at CNYRTA passenger stops and the APCs have proven to be a valuable tool in monitoring the performance of the transit system.
8. The CNYRTA is working with employers to provide employee transit subsidies. There are currently 40 businesses participating in this transit pass program where the employer pays part of the transit fee and receives a tax credit. The Employer Fare Deal also avoids employees having to pay an income tax on the employer contribution.
9. The CNYRTA has completed a project to install bicycle racks on its buses. A majority of the fleet is now equipped with bike racks.
10. The CNYRTA has implemented a Mobility Management Center (MMC) with Federal Job Access/Reverse Commute and New York State Community Solutions Through Transportation (CST) grants. As a transportation broker, the MMC provides mobility services for low-income residents and public assistance clients. Centro's goal is to expand the MMC to other client agencies with special transportation needs.
11. The CNYRTA is endeavoring to move Common Center permanently to and alternate weather-protected location where buses can load and transfers may be made out of the general traffic flow. Discussions are ongoing and a new site has

been identified. Planning for a new Common Center, capital acquisition, land acquisition, design and construction may take up to five years to accomplish.

12. The new funding from 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 provided a new formula grant program for associated capital and operating costs and required that projects be included in a locally developed Human Service Transportation Coordination Plan to begin in FY 2007. 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.

The SMTC recently adopted a resolution (2007-3) that states in the interim, the Regional Mobility Action Plan (ReMAP) and JARC studies as previously adopted by the Policy Committee as the local the Coordinated Public Transit Human Services Transportation Plan will be used. In the future, the SMTC will work with FTA, NYSDOT, various SAC members and transit providers to develop a more inclusive Coordinated Plan. According to established guidance as put forth by the FTA, they “will consider plans developed before the issuance of final program circulars to be an acceptable basis for project selection for FY 2007 if they meet the minimum criteria”.

13. 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 Park & Ride lot is being reviewed by the CNYRTA, 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.
14. 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.
15. The NYSDOT requires that all pedestrian facilities built with federal or state funds comply with the provisions of the ADA.
16. The NYSDOT requires that all repair/retrofit of existing pedestrian facilities to comply with the provisions of the ADA.
17. Under the jurisdiction of the OCDOT, 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. Improved signalization and added capacity at these intersections will improve level of service ratings from over saturated to passable. Additional lanes between the intersections were added to improve mobility through the area during peak hours.

18. The OCDOT also coordinated (2005 completion) the Old Route 57 Closed Loop Project with existing traffic signals from Exit 37 from the NYS Thruway to the Gaskin Road Intersection. This improvement will increase mobility through the corridor as well as alleviate accidents at intersections.
19. 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.
20. 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 \$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.
 - The City is expanding the Traffic Interconnect System by adding the Geddes Street and Genesee Street corridors and the Lodi Street and North Salina Street corridors to the existing Interconnect system.
 - The City has initiated the Syracuse Auto Row Improvements project which includes improving the roadway clearances underneath the railroad bridges at West Genesee Street near Erie Blvd and also the railroad bridge on Erie Blvd West just west of Geddes Street. Both of these structures have low clearances and are frequently hit by trucks.
 - 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.

Community Environment

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

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.

Action Plans Implemented:

1. The CNYRTA now has 120 of the 134 buses (90%) 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.
2. The CNYTRA is endeavoring to move Common Center permanently to and alternate weather-protected location where buses can load and transfers may be made out of the general traffic flow. Discussions are ongoing and a new site has been identified. Planning for a new Common Center, capital acquisition, land acquisition, design and construction may take up to five years to accomplish.
3. The Clean Communities of CNY is supporting National Grid's Electric Car Joint Venture project to manufacture and promote electric car use in Syracuse and New York State.
4. The SMTC is promoting strategies in the Clean Communities of CNY Plan through the participation of its member agencies.
5. 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.
6. 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.

7. 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).
8. 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. There are now two such signs in Onondaga County on I-81 Northbound in northern Onondaga County that advise motorists of lake effect snow conditions.
9. 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.
10. 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.
11. NYSDOT Region 3's "*Regional Strategy – October 2006*" outlines ongoing and future efforts relating to environmental practices and policies that Region 3 is involved in.

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 SMTTC'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.

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.

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 conformity¹, project level analysis for Congestion Mitigation/Air Quality (CMAQ) funding, and requirements for the State Energy Plan (SEP) and Greenhouse Gas analysis. The Interagency Consulting 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 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 Analysis Bureau (NYSDOT EAB), 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 EAB 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, as indicated in Chapter 1 of this LRTP 2007 Update, 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

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.

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 (EIS) work. As part of the public outreach for the LRTP 2007 Update, the SMTC has also completed outreach to the agencies noted in Chapter 1 and Appendix B to appropriately address this consultation requirement. Outreach efforts included a letter sent to all agencies soliciting written comments, as well as meeting at the SMTC to address any concerns relevant to the mitigation efforts as outlined in SAFETEA-LU.

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 the projects design stage.

Consultation as necessary will be undertaken with environmental protection agencies (including the NYSDEC), wildlife management authorities, 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.

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 NYSDOT projects that included environmental mitigation are the Baldwinsville Bypass Project- Phase I (completed), I-690 over CXS Railroad (in planning stages), 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 (TE) funding for stand-alone projects. In both cases, the types of actions eligible for funding are generally the same, although TE projects have more latitude in eligibility as long as the site can relate to a transportation facility.

Congress included the language on TE 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
- Environmental mitigation
 - i. to address water pollution due to highway runoff; or
 - ii. reduce vehicle-caused wildlife mortality while maintaining habitat connectivity

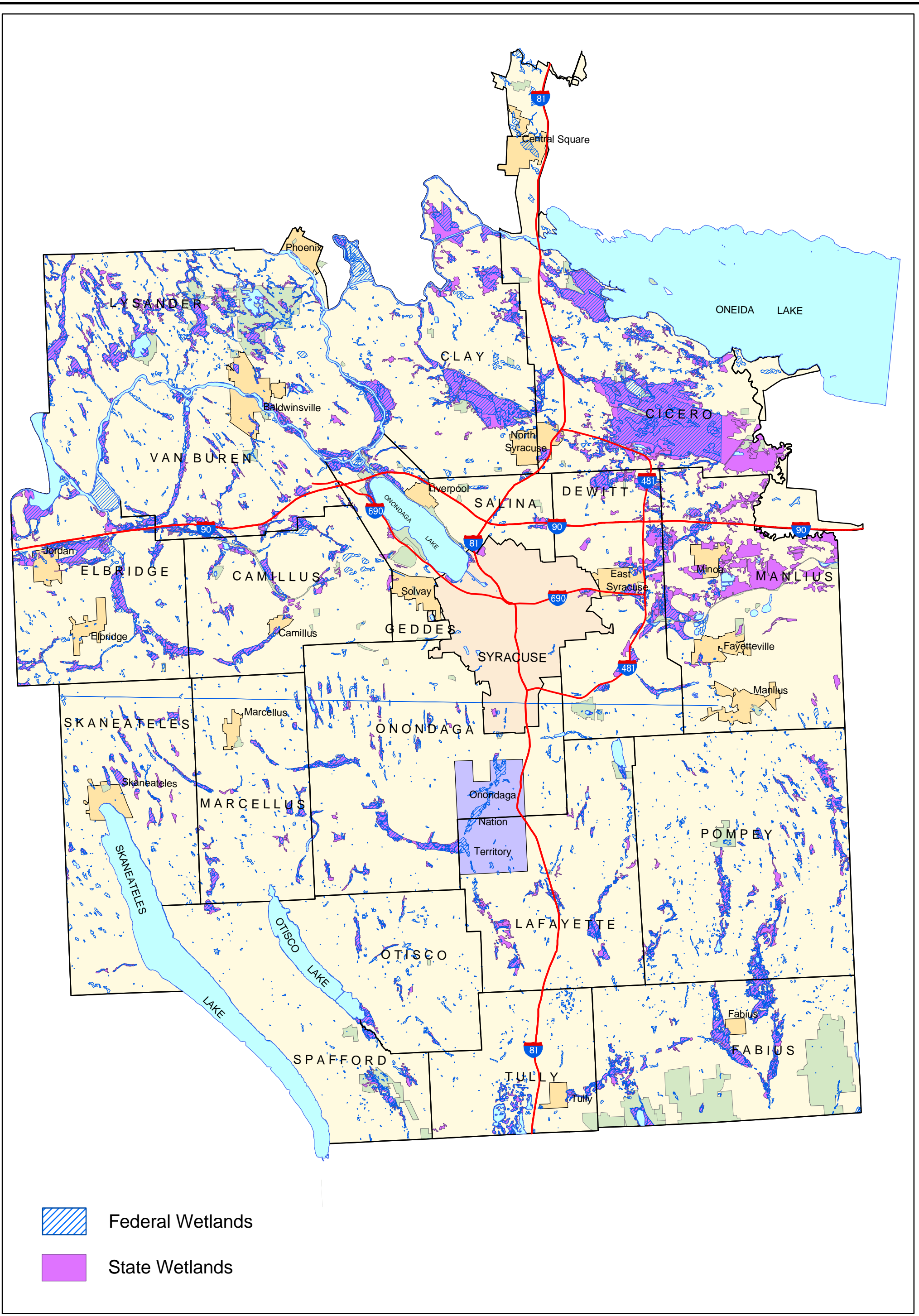
All of the environmental mitigation considerations can philosophically fit into our environmental justice concerns, since we are an integral part of the environment and the condition of the environment impacts us. Specific measures dealing with the mitigation of the transportation system impacts on the human environment are noise abatement, air quality, using alternative power systems (solar) for providing on-going electricity for transportation infrastructure.


In addition, as part of the LRTP 2007 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 4. Map 5 shows Flood Zones and Other Environmentally Sensitive Areas, including historic sites, recreation areas, schools, and cemeteries.


Maps 2 and 3 in Section C (Progress Achieved on UPWP Projects) of this Chapter show the locations of major transportation planning projects carried out under the SMTC's UPWP. Map 2 shows specific project locations and Map 3 highlights general project areas and corridors. The environmentally sensitive areas shown on Maps 4 and 5 can be compared to the locations of the major transportation planning project maps (Maps 2 and 3). 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 project 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 source 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).



 Federal Wetlands

 State Wetlands



*A digital FIRM product developed and distributed 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.

Community Economy

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

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 coordinated linkages to transit, employer transit subsidy and guaranteed ride home.

Action Plans Implemented:

1. The transportation needs of the local and regional business community, and the improvement of intermodal transportation and connectivity continued to be discussed in a number of venues by the SMTC and its member agencies. This includes participation in the Intermodal Roundtable discussions sponsored by the SMTC, which are open to all members of the business community. The focus of the Intermodal Roundtable has been on the movement of freight and on the limitations and restrictions of the transportation network. The input provided at these forums and the results of a survey, which polled a portion of the business community, have proven valuable in identifying transportation needs from the businesses' perspective.
2. Potential TIP projects must meet the criteria contained in the NYSDOT Region 3 Goal Oriented Programming Criteria. Under the capacity/mobility section of the guidelines, a project 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.

Currently under construction in the Town of DeWitt is the \$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. 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 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 CNYRTA efforts previously mentioned, such as the Employer Fare Deal and other employment based initiatives such as the Welfare to Work Transportation Program, being addressed through its Mobility Management Center, contribute to making the area economically competitive. In addition, businesses served by transit are able to recruit employees from a wider range of socio-economic groups and the disabled population than those not served. This is a considerable, publicly funded benefit. Moreover, these population groups are able to be income productive, in part due to the mobility afforded them by the CNYRTA transit system.
7. The CNYRTA is in the process of replacing its primary transit hub (Common Center) in downtown Syracuse with an off-street terminal where customers will be able to safely transfer between vehicles in the comfort of a weather protected facility. Much of the funding for the planned facility is in place. CNYRTA is currently exploring joint development options which may enhance the downtown Syracuse economy.
8. 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.

Community Land Use

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

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.

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. Onondaga County has prepared model zoning, subdivision and highway access control ordinances and regulations.
4. 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.
5. The Lakefront Zoning plan was adopted in January 2004.
6. The City of Syracuse Comprehensive Land Use Plan and other local municipal plans are being completed.
7. 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.

Community Facilities

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

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.

Action Plans Implemented:

1. The NYSDOT allocates TIP funds annually to address bridge maintenance needs in the most cost-effective way. Life cycle costs are a factor in bridge programs. The percentage of State-owned bridges in Onondaga County, in terms of the total number of bridges that are non-deficient, is 69.5%. The percentage of State-owned bridges, based on deck area of bridges that are non-deficient, is 62.8%. Since 1995, funds have been allocated through the TIP to achieve the 2020 goal of 80% non-deficient by number and 83% by deck area. The percentage of deficient bridges in Onondaga County is lower than that of the entire six-county NYSDOT Region 3 area for State-owned bridges. The current condition for all local bridges in Onondaga County is 61.4% non-deficient.
2. The NYSDOT allocates TIP funds annually to address pavement conditions in the most cost-effective way, emphasizing preventive maintenance on the basis of high volumes and functional class. From 1995 to 2000, the percentage of poor condition pavement for medium and high volume State roads decreased from 6.9% to 2.8% in Onondaga County. In 2005, this percentage increased slightly to 3.3%. This exceeds the 2020 goal of reaching not more than 11% poor condition. During the same time frame, the percentage of fair condition pavement for medium and high volume State roads decreased from 47.6% to 24.2% in Onondaga County. In 2005, the percentage was 39.8%. The average pavement condition rating from 1995 to 2000 has increased from 6.56 to 7.27 for medium and high volume roads in Onondaga County. It dropped slightly to 6.88 in 2005. Since 1995, funds have been allocated through the TIP to address pavement conditions with emphasis on preventive maintenance on high volume roads with

- higher-level functional classifications. These numbers show a relatively high quality of pavement condition for the SMTC area (NYSDOT-owned roads) and show that we are making steady improvements and progress towards meeting our stated pavement condition goals.
3. The NYSDOT has implemented the Pavement and Bridge Management Systems.
 4. During the period 1995 through 2000, TIP funds have been programmed to enhance maintenance and construction of pedestrian and bicycle facilities where potential use increases exist.
 5. 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 their locations are identified by NYSDOT Regions and transmitted to the Main Office.
 6. The CNYRTA has completed construction of the William F. Walsh Regional Transportation Center. This facility links transit, rail and air transportation systems. Additional improvements for expanding the existing parking facilities were completed during 2001 to accommodate subsequent passenger growth.
 7. The CNYRTA has begun a study of options for a new Common Center in the City of Syracuse, which will ultimately act as the new nexus of the transit system where Centro routes will meet in a safe, off street, weather protected environment affording patrons a higher quality of service than currently exists. CNYRTA will be seeking public input in the near future and is considering design and site options.
 8. The OCDOT annually dedicates funds, Local and Federal, to the community's bridge program in order to maintain an overall rating of 75%.
 9. 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.
 10. 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. In 2002, the West Shore Trail was opened to the public, and multiple areas of paved trails are currently in design phase.
 11. 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 recently added a bike lane to Comstock Avenue from Stratford Street to Colvin Street, and they are considering extending the bike lane on Colvin Street to Sky Top.
- The City annually dedicates funds (Local and Federal) to the community's bridge program in order to improve/maintain the City's bridge ratings. The Walton Street Bridge Replacement project was completed in 2004 and the City is currently initiating design on six other bridge rehabilitation/replacement projects.
- The City is completing final design plans for the Creekwalk Phase I project which will complete the Creekwalk between Armory Square and Onondaga Lake and plans to complete construction of this Creekwalk by 2009. This facility will be fully handicapped accessible.
- The City is also completing a Creekwalk Phase II Feasibility Study which encompasses evaluating the most feasible location of a Creekwalk between Armory Square and Kirk Park. This study should be completed by the end of 2007.
- The City is initiating street improvement projects along the 800 and 900 blocks of North Salina Street and Hiawatha Boulevard between State Fair Boulevard and Park Street (excludes area between Onondaga Creek bridge and I-81 bridge). The City has completed street improvements on the 400-700 block of North Salina Street. 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, paver section from curb to sidewalk, new and reset curbing, trees, and handicap ramp corners.
- The City has initiated a East Genesee Street Corridor Improvements, with the intent to create a safe ADA compliant connective pedestrian corridor and transit corridor between downtown and Syracuse University. The City

is currently negotiating scope and fee with the consultant on this project and plans to start construction in 2008.

Miscellaneous

On April 27, 2001, the NYSDOT Commissioner and the New York Department of Environmental Conservation (NYS DEC) Commissioner joined with State officials and the Oneida Lake Association to open a new fishing access site in Brewerton, on the south shore of Oneida Lake in Onondaga County (Town of Cicero), and a new fishing access site on the north shore of Oneida Lake in Oswego County (Towns of Hastings and West Monroe).

The NYSDOT developed this \$500,000 project, which includes two fishing sites in two counties and three towns along Interstate 81, to create new opportunities for people to enjoy New York's vast natural resources. Both sites are accessible to people with disabilities and provide safe parking for anyone who visits either site. While creating the new fishing access sites, the NYSDOT addressed a safety concern caused by anglers who parked along the Interstate and then climbed the banks and walked along the shoulders (next to high-speed Interstate traffic) to access the deep-water fishing sites.

The Brewerton fishing access includes a 40-car parking lot with a bus passenger shelter, a paved trail system that leads to the south shore of the lake, a concrete walkway under the I-81 bridge, and a pedestrian bridge that allows people access to the human-made island and deep water fishing sites on the south shore. The West Monroe-Hastings site has a 17-car parking lot, an asphalt trail system that leads to the north shore, and a 20' x 25' fishing platform that provides deep-water fishing access for handicapped individuals. Because of the NYSDOT's cooperation with NYS DEC and the Federal Highway Administration (FHWA), anglers now have safe parking and improved access to one of Central New York's premier fishing sites.³

³ Oneida Lake, an important Walleye fishery, is home of NYSDEC's Constantia Fish Hatchery.

Chapter III: MPA Updated Data and Trends

The existing conditions and needs within the Syracuse Metropolitan Transportation Council (SMTC) study area have stayed remarkably consistent since the last updates with minor exceptions as noted in the following portions of this chapter. This chapter's purpose is to summarize the current state 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. Additionally, the possible continuation of these trends may equate to future needs of the transportation system being somewhat different than they are today. This need will have to be examined in future plans if these trends continue.

The SAFETEA-LU legislation added some language to the environmental planning factor that is pertinent to this chapter of the LRTP 2007 Update. The factor now reads: "Protect and enhance the environment, promote energy conservation, improve the quality of life, and *promote consistency between transportation improvements and State and local planned growth and economic development patterns* (the new language is shown in italics)."

In preparing for the agency planning process, SMTC members reached out to municipalities and other local planning agencies to ensure that transportation improvements were consistent with local growth and economic development plans. This outreach includes agencies that are currently SMTC voting member agencies: the Central New York Regional Planning and Development Board and the Syracuse-Onondaga Planning Agency, as well as the Metropolitan Development Association and Empire State Development Corporation. This process will be strengthened in the next update of the LRTP through the direct involvement of municipalities and other local planning agencies.

As part of the SMTC's transportation forecasting efforts, the SMTC worked closely with various agencies in an effort to predict changes in travel patterns and the utilization of the transportation system's relationship between regional development, demographics, and transportation supply. Planned growth and economic development patterns are major components of the socio-economic and demographic forecasts, which form the foundation of the modeling process used to determine growth in the region. These items are discussed in detail within this chapter.

A. Metropolitan Planning Area Revisions

1. Metropolitan Planning Area Boundary

The Metropolitan Planning Area (MPA) is defined as the area in which the Metropolitan Planning Organization (MPO) is responsible for transportation planning defined by the most current Census as being urbanized, plus the area anticipated to be urbanized by the year 2020.

The MPA Boundary was last updated in spring 2003 to reflect the 2000 Census. The SMTTC's MPA boundary includes all of Onondaga County, and small portions of Oswego County (the Town of Schroepfel including the entire Village of Phoenix, and areas that extend north along Interstate 81 and New York State Route 11) and Madison County (including the Bridgeport area along Oneida Lake as well as a portion along I-90). See Map 6 for the updated MPO boundary based on the 2000 Census.

2. Urban Area Boundary

Along with the revisions of the new MPO Area Boundary, the Urban Area Boundary was also revised. The Urban Area Boundary is the official "urban/rural" boundary demarcation for Federal Highway Administration (FHWA) purposes; it is important for highway functional classification, appropriate roadway design standards, FHWA eligibility for improvements, Emergency Relief funding eligibility, and outdoor advertising control.¹ The SMTTC's Urban Area Boundary surrounds the City of Syracuse metropolitan area, includes additional metropolitan areas within Onondaga County, and also encompasses the urbanized portions of Oswego and Madison Counties that are contiguous to Onondaga County. The portions of the Urban Area Boundary and the MPO Boundary that are outside of Onondaga County coincide (e.g., the only portions of the MPO that are outside of Onondaga County are the expanded urban areas.). See Map 6 for the Urban Area Boundary based on the 2000 Census.

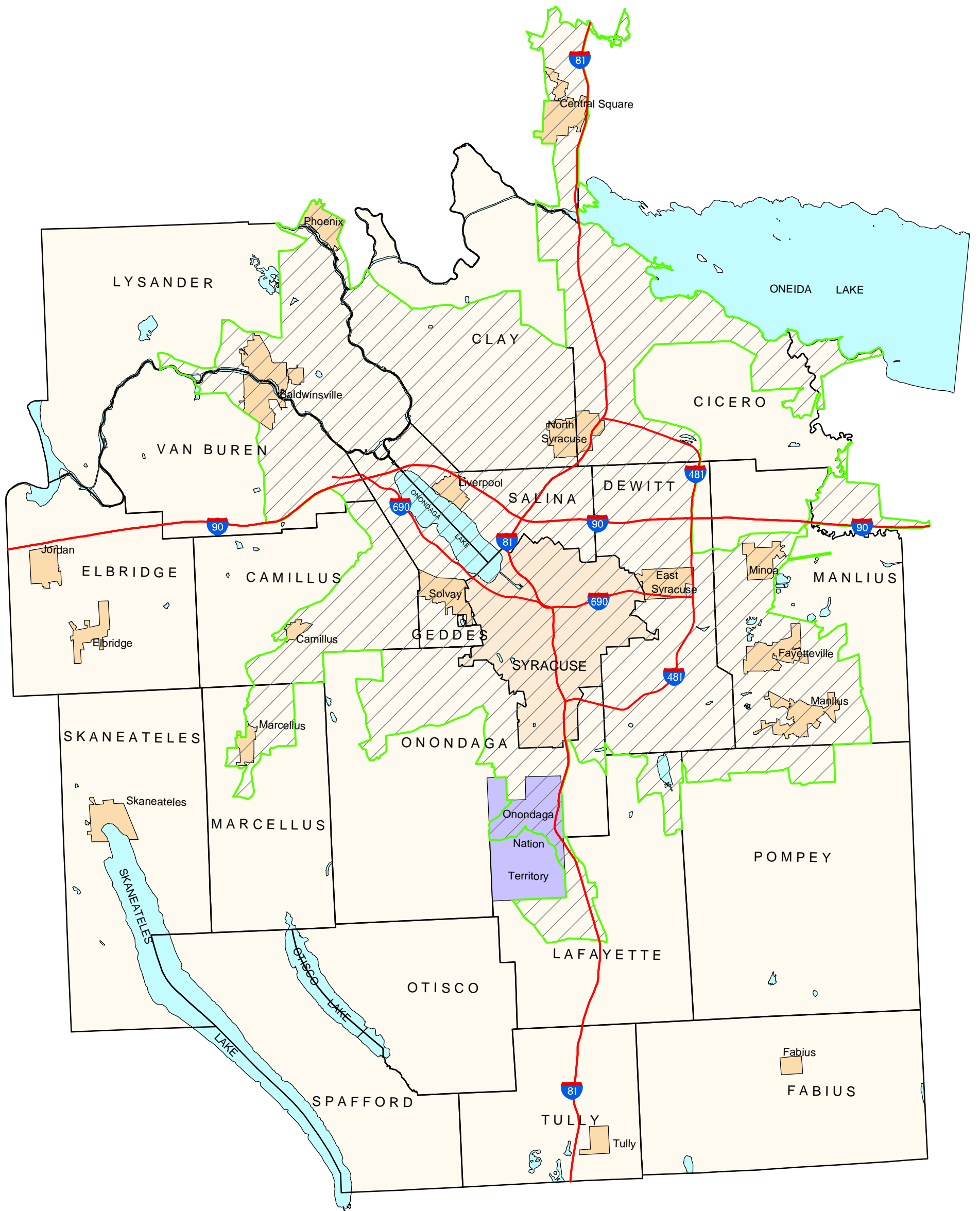
3. Metropolitan Planning Area Highway System

The following contains a brief description of the surface transportation network in the MPA. Additional details on specific topics relating to the MPA Highway System are contained in the corresponding sections of this Long Range Transportation Plan (LRTP) 2007 Update.

The MPA's surface transportation system includes a total of approximately 3,227.47 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.

Within the MPA area, there are various jurisdictions responsible for the highway network. The NYSDOT and the NYSTA own approximately 14.5% of the system (which

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.



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SMTC Metropolitan Planning Area

Long-Range Transportation Plan 2007 Update

Map 6

0 2 4 Miles



Basemap Copyrighted by NYSDOT
Data Sources: SMTC, NYSDOT, 2001
Prepared by SMTC, 04/2006

- Urban Area
- Towns
- Onondaga Nation
- Villages
- City of Syracuse
- Water

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

equals about 468.02 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 24.9% of the system (802.72 centerline miles) and the City of Syracuse is responsible for 13.2% of the system (424.65 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.

The transportation system is organized by a scheme called “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. This topic is discussed in detail in the following section.

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) (non-transit specific funds) is used for maintaining the existing road network. When adopted by the SMTC Policy Committee on May 17, 2005, the most recent five-year 2005-2010 TIP included a total of \$178,408,000 in FHWA funds. Of that amount, approximately \$13,850,000 (8%) has been allocated for transportation related enhancements such as trails and enhancement projects for bicycles and pedestrians. The remainder of all FHWA funds, a total of approximately \$165,558,000 (92%), is for maintenance related projects.

As depicted, it is clear that the majority of capital money for the surface transportation network in the MPA area is for maintenance, 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.

The sections that follow contain greater detail about the surface transportation system including detailed discussions on functional classification, bridge and pavement conditions, incident management/tracking and other related topics.

4. Functional Classification

Functional classification is the process by which streets and highways are grouped into classes or systems according to the character of service they are intended 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.

Table 3-1 provides the number of centerline miles by functional classification for the various MPA jurisdictions. Functional classification is further detailed in the next section of this Update.

Table 3-1

Centerline Miles by Functional Classification for SMTC MPA						
	Principal Arterial	Minor Arterial	Major/Urban Collector	Minor Collector	Local	Total
NYSDOT	185.88	107.09	112.47	24.39	5.02	434.85
NYSTA	31.36	0.00	0.00	0.00	0.00	31.36
OCDOT	26.83	85.25	168.22	107.17	408.30	795.77
Oswego County	0.00	2.96	6.63	0.00	2.48	12.07
Madison County	0.00	0.00	9.00	0.00	1.89	10.89
City of Syracuse	20.34	64.76	32.32	0.00	306.89	424.31
Towns/Villages	0.00	8.48	42.67	3.37	1,579.02	1,633.54
Total	264.41	268.54	371.31	134.93	2,303.60	3,342.79

Source: SMTC's Geographic Information System

Functional classification codes are given to all federal-aid eligible roads. There are four functional classification codes used in the SMTC study area. They include 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.²

At this time, the functional classification system has been revised to take the 2000 Census and revised MPO boundaries into consideration. The SMTC Policy Committee approved these revisions on March 3, 2004 and subsequently submitted them to NYSDOT and FHWA. The revisions have recently received federal approval from FHWA. See Map 7 for the Functional Classification system as approved by the SMTC Policy Committee on March 3, 2004.

² 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>].

B. Metropolitan Planning Area Trends

This 2007 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 has seen notable changes since 1990 in population, economic transition and land use shifts. The trends are typical to most Northeast communities, including:

- 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 towards 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.

Following is a brief analysis of these demographic trends, and how they relate to transportation planning in the SMTC area.

1. Population Distribution

Population Distribution - Current

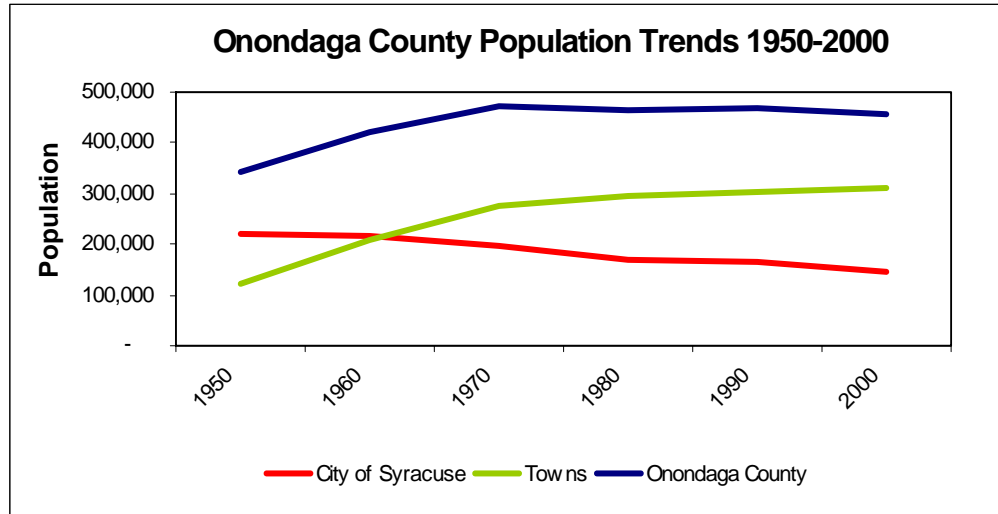
Population shifts within Onondaga County are occurring, mostly from the City of Syracuse to suburban towns. Table 3-2 charts the historic population changes in Onondaga County since Syracuse's peak population of 220,583 in 1950. At that time, the City of Syracuse made up 65% of the total County population. In 2000, it made up only 32% of the total County population. The table illustrates a growing suburban population, at the expense of a declining City population.

According to 2004 Census Bureau estimates (the most recent estimates available at the time of this writing), the trend continues (see Table 3-3).³ The Bureau estimates that between 2000 and 2004, the City of Syracuse has lost 2.85% of its population, while Onondaga County suburbs show a 1.84% increase overall. A few suburban towns have been projected to grow in population by 4% to 6% between 2000 and 2004, including Cicero, DeWitt, Lysander and Pompey. The following suburban municipalities were projected to have lost population in this same time frame include the Towns of Geddes (-1.74%), Salina (-0.06%), and Van Buren (-0.87%). In addition, the Onondaga Nation was projected to have lost -1.77% of its population between 2000 and 2004. Overall,

³ Source: US Census Bureau, Population Division. April 1, 2000 – July 1, 2004 Population Estimates.

Onondaga County's projected estimates show a slight increase (0.32%) in population between 2000 and 2004.

Table 3-2



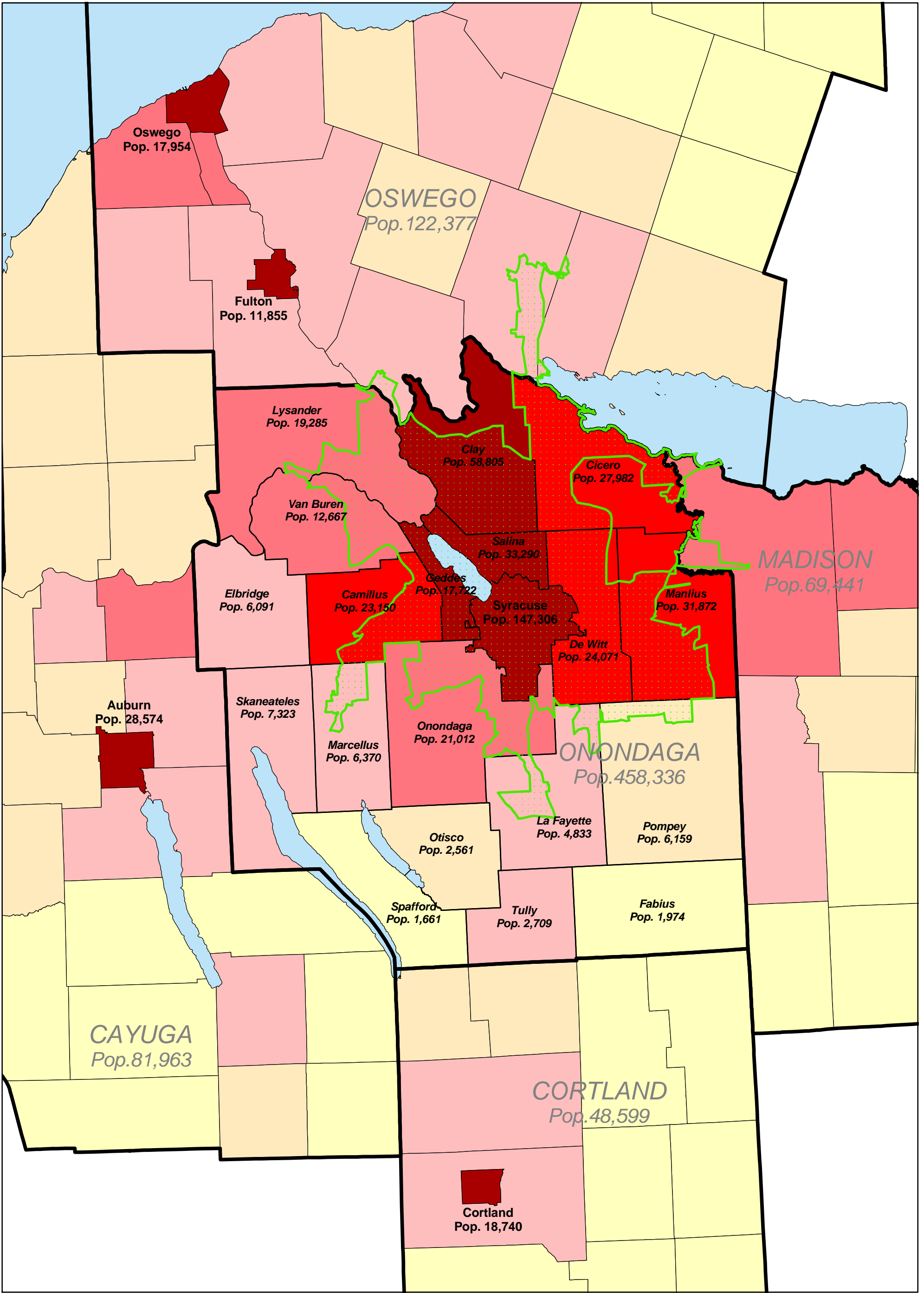
Source: U.S. Census Bureau, Population of Counties by Decennial Census 1900-1990, 2000 SF3 Table P1

Map 8 shows Central New York's regional population distribution using population density (people per square mile of land area) data from Census 2000. 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 2000 U.S. Census, the average population density in Onondaga County is 588 persons per square mile, which includes a peak density of 5,871 persons per square mile in the City of Syracuse and a low density of 42 persons per square mile in the rural Town of Fabius.⁴ In comparison, the population density of New York State is 402 persons per square mile, and the United States population density is much lower at 80 persons per square mile.⁵

⁴ US Census 2000 – Summary Population and Housing Characteristics – Table 15.

⁵ US Census 2000 – [<http://quickfacts.census.gov/qfd/states/36000.html>].



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0 3 6 Miles

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

Regional Population Density

Long-Range Transportation Plan 2007 Update

Map 8



Basemap Copyrighted by NYSDOT
Data Sources: SMTC, NYSDOT, 2001
2000 Census
Prepared by SMTC, 04/2006

Persons per Square Mile

- 0-49
- 50-99
- 100-199
- 200-499
- 500-999
- 1,000-6,000
- Urban Area

Table 3-3

Annual Estimates of the Population for Minor Civil Divisions in New York: July 1, 2000 to July 1, 2005							
Geographic Area	Population estimates						Percent change (July 1, 2000 to July 1, 2005)
	July 1, 2005	July 1, 2004	July 1, 2003	July 1, 2002	July 1, 2001	July 1, 2000	
Onondaga County	458,053	458,870	458,990	458,342	458,137	458,432	0.10%
Camillus town	23,268	23,209	23,191	23,199	23,181	23,165	0.19%
Cicero town	29,958	29,644	29,220	28,585	28,328	28,061	5.64%
Clay town	58,949	59,087	59,039	58,768	58,807	58,825	0.45%
De Witt town	25,032	25,080	25,030	25,021	25,006	24,943	0.55%
Elbridge town	6,123	6,155	6,157	6,169	6,080	6,091	1.05%
Fabius town	2,014	2,014	2,009	1,997	1,976	1,975	1.97%
Geddes town	17,325	17,389	17,479	17,563	17,610	17,721	-1.87%
LaFayette town	4,951	4,954	4,829	4,826	4,826	4,833	2.50%
Lysander town	20,549	20,441	20,322	19,896	19,564	19,348	5.65%
Manlius town	32,431	32,439	32,340	32,279	32,035	31,916	1.64%
Marcellus town	6,316	6,314	6,309	6,288	6,297	6,317	-0.05%
Onondaga town	21,402	21,353	21,299	21,230	21,173	21,091	1.24%
Onondaga Reservation	1,434	1,444	1,449	1,456	1,464	1,471	-1.84%
Otisco town	2,579	2,579	2,577	2,572	2,565	2,563	0.62%
Pompey town	6,566	6,484	6,398	6,312	6,240	6,181	4.90%
Salina town	33,155	33,207	33,240	33,276	33,317	33,306	-0.30%
Skaneateles town	7,382	7,373	7,369	7,363	7,348	7,330	0.59%
Spafford town	1,684	1,679	1,673	1,669	1,664	1,662	1.02%
Syracuse city	141,683	142,771	143,748	144,544	145,334	146,285	-2.40%
Tully town	2,724	2,719	2,730	2,710	2,691	2,683	1.34%
Van Buren town	12,528	12,535	12,582	12,619	12,631	12,665	-1.03%
Suburbs Only*	314,936	314,655	313,793	312,342	311,339	310,676	1.28%

*does not include Onondaga Reservation

Data from Table 5: Annual Estimates of the Population for Minor Civil Divisions in New York: April 1, 2000 to July 1, 2005 (SUB-EST2005-05-36).
Source: Population Division, US Census Bureau. Release Date: June 21, 2006

Population Distribution and Future Projections

As part of the Travel Demand Model Migration at the SMTC (discussed in detail in Section C) the staff and member agencies at the SMTC developed detailed household data for the years 2003 and 2027 (the model's base and future years). This data reflects the input of various experts, member agencies and staff developed projections. The following paragraph details this process as recorded in the Travel Demand Model Documentation.

The U.S. Census provides household data for micro-level enumerations throughout the United States. However, the Transportation Analysis Zone (TAZ) structure created for the SMTC's model was developed to be consistent with specific characteristics of the Syracuse metropolitan area, and the TAZ boundaries are not necessarily coincident with any specific Census enumerations areas. Therefore, a degree of refinement was required by the SMTC to adjust these base year numbers to accurately fit the TAZ structure. This task was performed using aerial orthoimagery to account for any inaccuracies that may have resulted for the consultant's initial creation of the TAZ structure.

The majority of the SMTC's effort relating to the creation of the demographic component of the model was that of forecasting the household information to the horizon year of

2027. This required a process that was consistent with identified trends in population change across the region, and trends identified as unique to the various municipalities of the planning area. First, the SMTC concentrated on developing control totals to base the micro-level forecasted household assignment on. These control totals were based on various demographic projection studies conducted for the area (see Table 3-5); some that showed growth for the area by 2027 and some that showed significant decline. Combined with the SMTC's own regression analysis based on historical Census data dating to 1970, the SMTC and the Travel Demand Model working group agreed that population of the Syracuse region would be relatively stable to the horizon year. Combined with a reduction in persons per household, the SMTC developed household control totals for 2027 that showed a general increase in the number of households. Once the working group approved these numbers as horizon year control totals, the data needed to be assigned based upon certain geographic areas (Municipalities and Transportation Analysis Zones). See Table 3-4 for a graphic representation of the process flow of the demographic forecasting.

Three general areas were identified by the SMTC staff for the aggregation of household data. The first of these areas were areas of general decline, which were typically comprised of old urban core areas that were losing population and, thus losing households. The SMTC applied a general percentage of household declines to account for this change. These percentages were derived as the result of meetings with various agencies for the purpose of identification of areas of likely decline in households.

The second identified areas were suburban and suburbanizing municipalities where new growth in housing was determined to be significant. The SMTC staff met with the Syracuse-Onondaga County Planning Agency, as well as local development officials in the Towns of Lysander, Clay, Cicero, Van Buren, Onondaga, DeWitt, and Manlius to identify site specific locations for planned development and the approximate number of new homes that would be constructed at those locations by the year 2027.

The third areas were determined to be rural areas with little significant change anticipated by the horizon year. Once these three areas were determined to be consistent with the region's control totals, municipal control totals were developed for each town and city in the MPA. These totals were consistent with the three defined areas, with older municipalities such as the City of Syracuse showing declines in number of households, suburban towns such as Cicero and Lysander showing gains in households, and rural towns such as Otisco and Spafford showing minimal change. These control totals allowed the SMTC to apply specific percentage changes to each TAZ based upon the municipal control total. Additionally, the SMTC could apply the site-specific information obtained through the municipal meetings for assignment of household change for specific TAZs. When this process was finalized, the consultant was provided with updated base and horizon year demographic information for each TAZ.

Table 3-4
SMTC's Demographic Forecasting Process

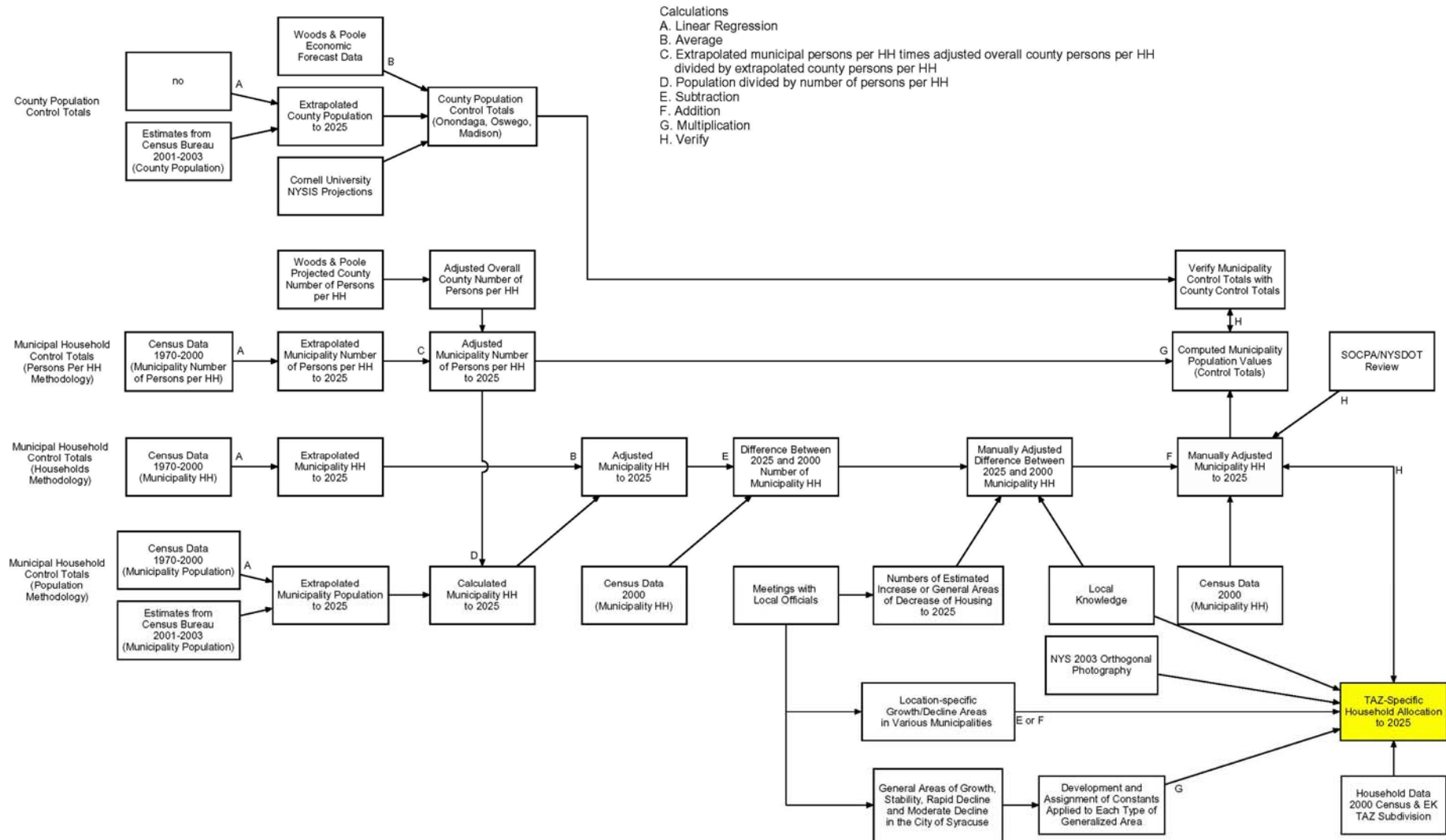


Table 3-5

SMTC Household Projections for Travel Demand Modeling																
														Adjusted TA	TA	2027 HH #s
														2027	2027	to be used in model
	1970	1980	1990	2000	1970	1980	1990	2000	1970	1980	1990	2000		SMTC's Adjusted TA of # persons per HH	Projected Total Persons	Adjusted Post-TAZ Allocation Summary
	Persons	Persons	Persons	Persons	Number of Households (# of HH)	Number of Households (# of HH)	Number of Households (# of HH)	Number of Households (# of HH)	Number of Persons per Household (# persons per HH)	Number of Persons per Household (# persons per HH)	Number of Persons per Household (# persons per HH)	Number of Persons per Household (# persons per HH)				
Madison County	62,864		69,166	69,441	17,741	20,805	23,567	25,368	3.33	2.92	2.72	2.55		2.43	75,019	N/A
Sullivan town	11,969		14,622	14,991	3,402	4,368	5,165	5,688	3.51	3.04	2.82	2.62		2.41	17,302	7,455
Onondaga County	472,835	463,920	468,973	458,336	145,322	165,677	177,898	181,153	3.15	2.72	2.55	2.46		2.43	450,863	188,665
Baldwinsville village	3,943	6,446	6,591	7,053	1,846	2,249	2,511	2,826	3.36	2.82	2.59	2.43		2.13	7,840	3,026
Camillus town	26,841	24,333	23,625	23,152	7,182	7,992	8,917	9,316	3.69	3.04	2.65	2.48		1.81	20,835	10,233
Camillus village	1,534	1,298	1,150	1,249	482	495	483	568	3.16	2.62	2.36	2.18		1.74	1,047	604
Cicero town	22,539	23,689	25,560	27,982	5,960	7,401	9,014	10,538	3.73	3.17	2.84	2.65		2.23	33,265	13,000
Clay town	36,274	52,838	59,749	58,805	10,162	17,299	21,095	22,294	3.57	3.05	2.82	2.63		2.40	73,976	24,848
DeWitt town	29,198	26,868	25,148	24,942	8,422	9,211	9,729	10,068	3.30	2.75	2.44	2.35		1.93	21,834	10,508
East Syracuse village	4,333	3,412	3,343	3,178	1,282	1,276	1,419	1,393	3.30	2.67	2.36	2.28		1.74	2,388	1,408
Elbridge town	5,503	5,885	6,192	6,091	1,642	2,011	2,228	2,322	3.35	2.93	2.78	2.62		2.62	6,624	2,525
Elbridge village	1,040	1,099	1,219	1,103	319	388	447	432	3.26	2.83	2.73	2.57		2.57	1,138	480
Fabius town	1,607	1,811	1,760	1,974	446	591	612	686	3.60	3.06	2.88	2.87		2.87	2,256	832
Fabius village	374	N/A	310	355	N/A	132	129	130	N/A	2.78	2.55	2.93		2.93	345	130
Fayetteville village	4,996	4,709	4,248	4,190	1,540	1,778	1,772	1,893	3.24	2.65	2.40	2.23		1.76	3,563	1,940
Geddes town	21,032	18,528	17,677	17,740	6,389	6,669	6,889	7,257	3.26	2.75	2.53	2.40		2.16	15,397	6,889
Jordan village	1,493	1,371	1,325	1,314	439	454	486	501	3.40	3.02	2.73	2.59		2.47	1,242	530
LaFayette town	4,401	4,488	5,105	4,833	1,186	1,476	1,724	1,826	3.68	3.03	2.90	2.64		2.35	5,221	2,320
Liverpool village	3,307	2,849	2,624	2,505	1,141	1,168	1,125	1,154	2.89	2.44	2.33	2.16		2.05	1,904	1,164
Lysander town	11,968	13,897	16,346	19,285	3,282	4,497	5,839	7,139	3.63	3.09	2.80	2.70		2.43	25,753	9,860

Table 3-5 summarizes the demographic information utilized by the model and reflects a consensus view of selected SMTC member agencies involved in demographic analysis as to the likely population and household trends for the purposes of transportation planning. It must be noted that these forecasts were done for the purposes of Travel Demand Modeling and may vary significantly from other forecasts performed by other agencies for other purposes. Also, the forecasts are believed to be most accurate for the portions of the MPO that are within Onondaga County (most of the MPO) and less accurate for the small portions of Madison and Oswego County that are in the MPO area. This is due to the availability of information and resources utilized at the time of the forecasting efforts.

As shown in the table, the expectation is that the overall number of persons will hold relatively stable, yet the number of persons per household will continue to decline. This will yield a modest growth in the number of households in the developing areas of the MPO as discussed above. When looked at in detail some items stand out, including:

- Forecasts show a continued expectation of shrinking number of households (modest) and a shrinking number of persons (significantly large) in older urbanized areas (i.e. City of Syracuse and older suburban towns).
- Forecasts show a continuation of recent trends of expansion of persons and households in the northern towns of the MPO area (i.e. Lysander, Clay, Cicero, etc.) and to a lesser degree certain other towns within Onondaga County (Onondaga, Manlius, etc.).
- The SMTC area seems to be inline with other older Northeastern Communities of similar size in the U.S. that show an overall stagnation or decline in population and households with a corresponding shrinking in household size according to U.S. Census statistics.

For a detailed discussion of the region's demographics and the Travel Demand Model development process, please refer to the SMTC's Travel Demand Documentation.

Age Distribution

As shown on Table 3-6, between 1990 and 2000, some age cohorts rose while others fell across Onondaga County. Births are declining in Onondaga County. In addition, age cohorts representing young adults (age 18-34) and recent retirees (age 60-74) also posted losses during the 1990s.

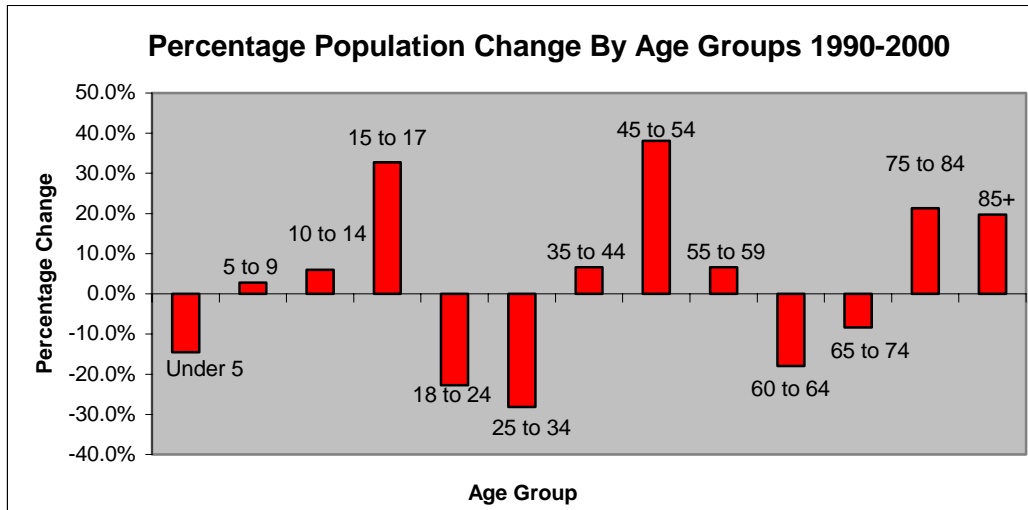
The age makeup of the City and suburban populations has also been undergoing change, similar to communities across the country. Migration patterns within the County have resulted in age group shifts. The median age in Onondaga County is 36.3, with Syracuse tending to



Inner Harbor

be somewhat younger with a median age of 30.5, and the combination of Onondaga County Towns tending to be somewhat older at 39.3. The large college student population decreases the median age in Syracuse.

Table 3-6



Source: U.S. Census Bureau, Summary File 1, Table P12 (2000) & STF1- P11 (1990)

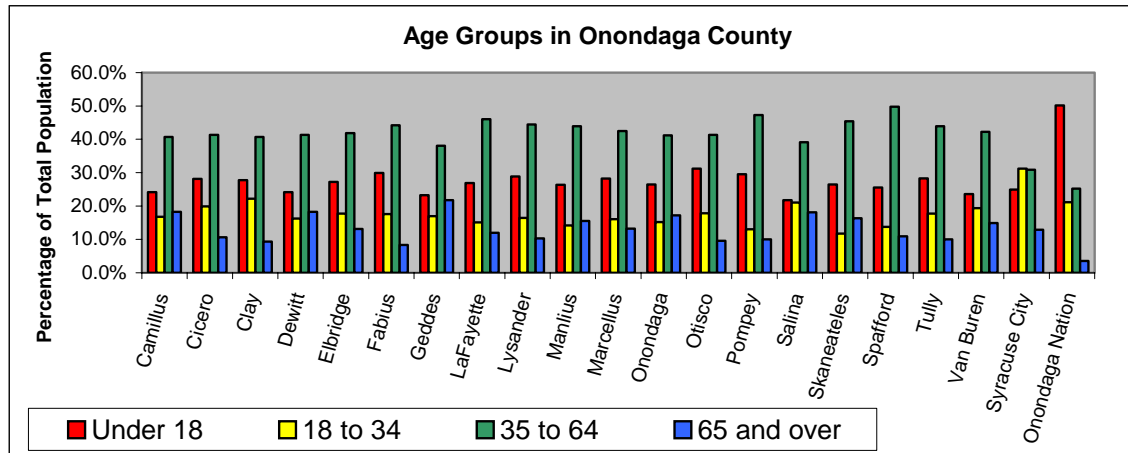
Senior age cohorts (age 75+) show an approximate 20% increase over the past decade, a national trend attributed largely to longer life expectancies. The mobility limitations and reliance on public transportation for this segment of the population will continue to present challenges in transportation planning, especially as the “Baby Boom” generation nears retirement age in lower density suburbs, as opposed to urban areas most conducive to efficient public transit.

The 43-61 age bracket represents the “Baby Boomer” segment of the population. Children of “Baby Boomers” are also represented in the rising 10-14, 15-17, and 35-44 age brackets. The “Baby Boom” generation is generally expected to enter retirement age between 2000 and 2030. During these critical years, demand for housing and transportation services for seniors will increase. Out-migration to warmer climates is also expected to have its greatest effect on the County’s overall population during this time period.

Analysis of age distribution among Onondaga County municipalities (Table 3-7) shows a slight difference between older suburbs versus those showing more recent growth. The older “inner ring” suburbs of DeWitt, Geddes, and Salina average the highest concentrations of people age 65 and older, and the lowest percentages of children under 18. Newer suburbs saw an increase in young families. Suburban towns with the most

recent growth, such as the larger towns of Cicero, Clay and Lysander, show the highest percentages of children under 18 and young adults between the ages of 18 and 34.

Table 3-7



Source: U.S. Census Bureau 2000, Summary File 1, Table DP-1

Families and Households

Table 3-8 provides a summary of Census 2000 family and household characteristics for Onondaga County Households, including comparable 1990 information.

The 2000 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 3% decrease in the number of Family Households, and an 11% increase in Non-Family Households. Of those Non-Family Households, almost 80% were one-person households. 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.

Income and Poverty

As part of this update, the SMTC also examined income and poverty for individuals living within the SMTC planning area. 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-

Table 3-8

Household and Family Characteristics Onondaga County 1990 and 2000			
	1990	2000	Change
Number of Households	177,898	181,153	2%
Family Households	118,575	115,320	-3%
Non-Family Households	59,323	65,833	11%
Householder Living Alone	47,047	53,225	13%
Average Household Size	2.55	2.46	-4%
Average Family Size	3.12	3.07	-2%

Source: U.S. Census Bureau 2000 SF1 Table P18, 1990 STF1 Table P015

U). 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).”⁶

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 clearly in the City of Syracuse, where residents have a median income of just over \$15,000 and a poverty rate at least three times that of surrounding Onondaga County Towns, as shown in Table 3-9.

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

⁶ 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>].

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.

Table 3-9

Income and Poverty				
	2000 Per Capita Income*	2000 % of Individuals Below Poverty Level	1990 % of Individuals Below Poverty Level	1980 % of Individuals Below Poverty Level
Camillus	\$22,591	4.3%	3.1%	3.3%
Cicero	\$21,527	5.1%	3.7%	4.3%
Clay	\$22,011	5.7%	4.0%	4.3%
DeWitt	\$29,198	7.2%	5.8%	5.8%
Elbridge	\$18,682	6.9%	5.8%	9.0%
Fabius	\$21,206	5.7%	4.5%	NIA
Geddes	\$20,986	8.2%	5.9%	4.9%
LaFayette	\$24,591	5.1%	3.5%	3.0%
Lysander	\$26,187	3.8%	4.5%	4.1%
Manlius	\$31,825	3.3%	2.7%	4.1%
Marcellus	\$25,628	3.2%	4.8%	5.6%
Onondaga	\$25,522	4.2%	2.7%	4.9%
Onondaga Nation	\$15,425	7.6%	2.9%	NIA
Otisco	\$19,726	5.7%	7.8%	NIA
Pompey	\$27,970	3.9%	2.9%	5.1%
Salina	\$21,839	7.4%	3.6%	4.3%
Skaneateles	\$28,624	3.2%	3.6%	4.2%
Spafford	\$24,014	5.2%	5.1%	NIA
Syracuse (City)	\$15,168	27.3%	22.7%	18.4%
Tully	\$25,223	6.7%	5.1%	NIA
Van Buren	\$20,997	6.6%	4.4%	6.4%
Onondaga County	\$21,336	12.2%	10.3%	9.6%
United States	\$21,857	12.4%	13.1%	13.0%

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.

2. Local Economy

Transportation Crossroads

The highest concentrations of population and economic activity in Central New York are in the City of Syracuse and adjacent urban areas of Onondaga County. According to the Central New York Comprehensive Economic Development Strategy, over 72% of employment opportunities in Central New York are located in Onondaga County.⁷ There are additional centers of activity along major transportation corridors and in smaller cities such as Auburn, Cortland, Oneida, Oswego and Fulton.

Onondaga County benefits economically as the transportation crossroads of the region. Interstate 81 is a significant north-south corridor reaching from Canada to the southern States, which intersects the New York State 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 to major interstate corridors into neighboring states. New York Route 481 also plays a role in the regional transportation network, stretching north to the City of Oswego from Onondaga County. Other significant corridors include NYS Route 20 that spans across New York State and through three Central New York counties, and NYS Route 5 that carries traffic between Onondaga County and neighboring counties. Additionally, NYS Route 31 serves as the northern Onondaga County connector.

Historic development patterns along the Erie Canal and railroad transportation corridors led to Onondaga County's early prominence. This significant network of interstate highways has continued to ensure its sustainability. Though global economic factors have negatively influenced the area's transportation and goods producing heritage, opportunities remain to take economic advantage of the major transportation assets in the Central New York region.

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 Study Area, it is important to understand the regional economy and its impact on the transportation system.

The Central New York region covers an area of 3,120 square miles and has an estimated population of 780,000. The region generally forms an area of interdependent economic activity, with Onondaga County at its core. Table 3-10 summarizes some key economic indicators for each of the counties in the Central New York region. As shown, Onondaga County accounts for approximately two thirds of the total Central New York labor force.

⁷ Central New York Regional Planning and Development Board, *Central New York Comprehensive Economic Development Strategy*, June 2002.

Table 3-10

Central New York Economic Indicators September 2003 and June 2006						
	Labor Force		Employment		Unemployment Rate	
	Sep '03	June '06	Sep '03	June '06	Sep '03	June '06
Cayuga County	39,400	43,300	37,200	41,100	5.5%	4.5%
Cortland County	23,400	24,500	22,000	23,400	5.9%	4.7%
Onondaga County	246,200	242,800	234,000	232,100	5.0%	4.4%
Oswego County	59,700	62,000	54,700	58,700	8.3%	5.3%
Madison County	36,500	37,100	34,500	35,500	5.4%	4.2%
Central NY Region	368,700	385,200	347,900	367,800	5.6%	4.6%

Source: NYS Department of Labor. Local Area Unemployment Statistics Program

Employment

Central and Upstate New York employment has remained relatively stable over the past several years, though affected by the ongoing national recession. Many of the region's largest employers are located in Onondaga County. These companies and institutions include Syracuse University, National Grid, State University of New York Upstate Medical University, New Process Gear, Bristol Myers Squibb, Verizon Communications, Lockheed Martin, Welch Allyn, Blue Cross/Blue Shield, and Anheuser-Busch. (Of note: One of Syracuse's largest and most prominent manufacturers, the Carrier Corporation, announced in 2003 the elimination of over 1,200 jobs from its DeWitt plant, representing almost half of its workforce.)



Syracuse University



Despite the continued gradual decline of high-profile manufacturing jobs in Central New York, the area is reporting continued job growth, and Onondaga County has been recognized as one of the most diversified metropolitan economies in the State⁸. The unemployment rates for Onondaga County and the Central New York region remain lower than the New York State average (4.5% in June 2006⁹).

⁸ NYS Department of Labor, Division of Research and Statistics. "Employment in New York State", April 2003.

⁹ NYS Department of Labor, Division of Research and Statistics. "Employment in New York State", August 2006.

The strongest economic sectors in Onondaga County are in health care and education, largely located in the City of Syracuse. Employment in the educational and health services sectors was at a record-high level (51,300) in August 2005 and the health sector continues to grow.¹⁰ Other strong sectors include professional and business services and leisure and hospitality. Growth in the local high-tech sector is creating a strong demand for engineers.¹¹ The manufacturing sector, which in the past experienced significant losses, declined by only 400 jobs during the 12-month period ending June 2006.¹²

Estimated Employment by Sector by Municipality

One of the variables utilized in the development of the SMTC's Travel Demand Model included an examination of employment by sector within each municipality in the MPO planning area. The SMTC used the Business Location Analysis Tool (BLAT), provided by NYSDOT, to geocode business locations throughout the planning area. These data included a range of number of employees by employment sector. Since the geocoding process occasionally attributed employment locations to an incorrect location, and the employment figures within the data set included some inaccuracies, the Travel Demand Model Working Group convened for several sessions to refine the location and employment information on a TAZ-by-TAZ basis. These refined data were used to adjust the original BLAT data within the TAZ layer by the modeling consultant, and used for the base year (2003) employment figures in the model for each of the employment sectors identified by BLAT. These figures then provided a framework for the SMTC's projection of the employment data to the horizon year. Table 3-11 summarizes the estimated number of employees by sector by municipality for the base year 2003. It is important to note that employees may work more than one job.

According to Table 3-11, the business sectors with the most number of employees in MPO study area are health, manufacturing, and the retail/trade industries. The City of Syracuse, by far, is the municipality with the most number of employees in the health industry at around 21,000.

This is not surprising considering that the University Hill area alone has several hospitals and medical office buildings dotting its landscape. The City of Syracuse also has the majority of retail and trade employees, followed by DeWitt and Clay. The Town of DeWitt has the highest number of employees working in the manufacturing field, followed by the City of Syracuse and Town of Salina.

¹⁰ NYS Department of Labor, Division of Research and Statistics. "Employment in New York State," October 2005.

¹¹ Ibid.

¹² NYS Department of Labor, Division of Research and Statistics. "Employment in New York State", August 2006.

The next largest number of employees work in the fields of education, financial and real estate, and government. The City of Syracuse is the municipality with the largest number of employees in each of these sectors. Again, this is not a surprise considering the number of education-based facilities located in the University Hill area of the City of Syracuse.

The job sectors with the least number of employees include mining and agriculture. Only the Towns of Manlius and Spafford and the City of Syracuse report employees working in the mining industry. The Towns of DeWitt, Manlius, Onondaga and the City of Syracuse show the most number of employees (around 100 in each municipality) working in the agriculture sector.

Please note that in Table 3-11 is the number of employees by sector by location. This does not account for people holding multiple jobs.

Size of Firms

According to the U.S. Census Bureau, over 83% of establishments in Onondaga County employed fewer than 20 people in 2004; only 17 establishments in Onondaga County employed over 1,000 people in 2004¹³. Table 3-12 graphically shows the breakdown of size of establishments in Onondaga County based on the number of employed workers. Job growth increases in Onondaga County generally come from smaller businesses, while employment by large firms continues to decline.

The trend towards smaller businesses is growing. Smaller commercial and manufacturing firms have 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.

Targeted Commercial/Industrial Sites

In an effort to encourage new business and expansion within the Upstate New York Region, New York State has expanded its *Empire Zones* Program within Onondaga County. This program offers a variety of tax incentives and utility reductions to facilitate business growth in selected target areas. The City's Downtown Area, as well as corridors along I-690, Salina Street and the Lakefront locations have been targeted. The County's Empire Zone acreage continues to grow, allowing for expansion of existing commercial sites along with new, targeted development locations.

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. This

¹³ U.S. Census Bureau, County Business Patterns, 2004.

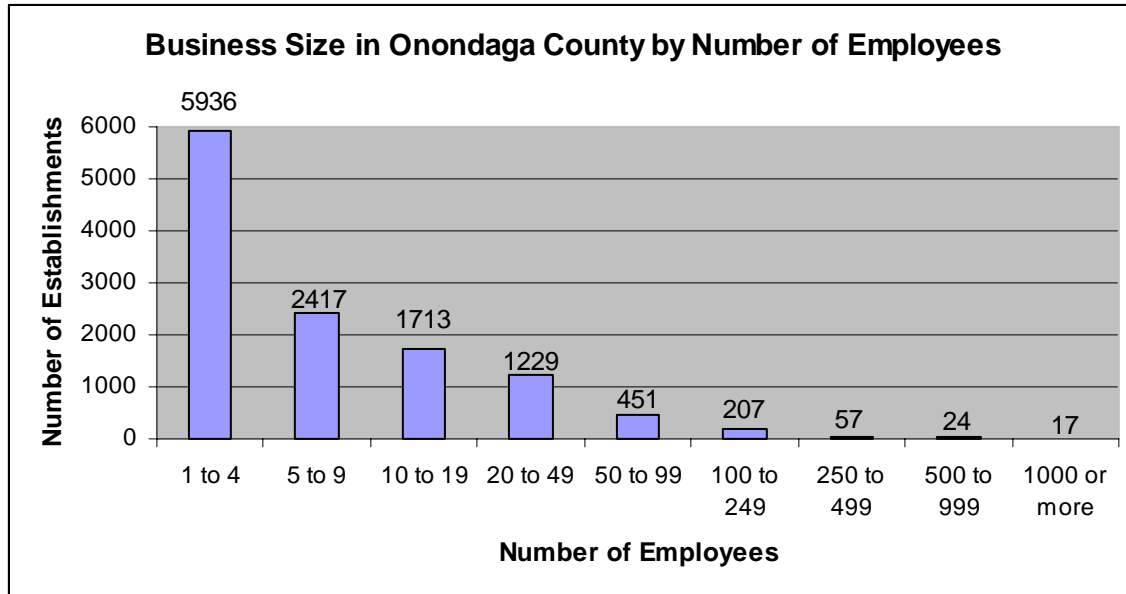
Table 3-11
Employment by Sector by Municipality
(Base Data from 2003*)

Municipality	Population	Number Households	BUSINESS SECTOR																			
			Agri- culture	Business/ Legal	Commun- ication	Cons- truction	Eating/ Drinking Est.	Education	Finance, Insurance, Real Estate	Gov't.	Health	Hotels/ Lodging	Manu- facturing	Mining	Non- Classified	Retail/ Trade	Service	Social Service	Trans- portation	Utilities	Wholesale Trade	TOTAL
Baldwinsville	3,174	1,302	0	80	50	45	170	506	25	185	30	0	90	0	35	135	95	30	75	0	15	1,566
Camillus	23,629	9,461	30	195	10	90	645	997	255	110	485	20	190	0	125	1,685	305	95	65	55	65	5,422
Cicero	26,072	9,720	25	277	100	375	753	425	192	213	90	15	800	0	95	1,498	678	83	488	0	400	6,507
Clay	54,734	19,532	90	815	20	435	1,160	1,080	475	65	1,545	15	2,499	0	100	5,036	595	265	1,254	20	810	16,279
Dewitt	21,646	8,674	140	4,210	590	2,280	1,935	1,366	3,020	555	685	605	9,603	5	950	5,131	965	370	2,595	50	4,760	39,815
East Syracuse	2,974	1,281	25	130	125	440	90	196	45	120	5	0	670	0	20	615	110	80	50	30	135	2,886
Elbridge	6,127	2,326	20	30	0	60	65	321	50	65	5	0	1,060	0	10	195	40	10	5	0	25	1,961
Fabius	1,986	685	15	5	0	40	0	256	0	15	0	100	0	0	0	5	10	0	0	0	0	446
Fayetteville	2,547	1,088	10	85	0	15	125	45	35	15	10	20	320	0	5	255	45	40	0	0	20	1,045
Geddes	9,295	3,791	0	110	0	305	190	200	40	20	535	70	1,230	5	40	747	70	500	115	25	415	4,617
Hastings	4,496	1,910	10	20	0	90	90	452	10	10	55	0	20	0	30	725	60	5	5	0	15	1,597
Lafayette	6,299	2,121	30	10	0	35	90	451	30	80	55	0	25	0	15	50	25	30	5	0	15	946
Liverpool	2,345	1,071	10	30	0	0	135	226	35	237	15	0	0	0	5	200	65	15	5	0	10	988
Lysander	18,015	6,584	90	65	40	138	114	70	283	125	2,204	10	1,470	0	30	195	168	35	143	10	1,079	6,269
Manlius	26,954	10,758	155	245	25	265	230	849	135	55	736	30	1,610	20	70	1,020	455	180	80	0	75	6,235
Marcellus	6,625	2,442	20	25	0	105	50	361	25	100	60	0	40	0	5	110	75	20	15	5	65	1,081
Minoa	2,534	700	0	15	0	10	15	5	0	15	100	0	0	0	0	60	30	0	260	0	20	530
North Syracuse	6,958	2,947	20	230	5	95	235	136	175	75	95	0	100	0	0	440	125	145	40	0	65	1,981
Onondaga	20,556	7,537	115	60	60	125	145	1,422	65	515	1,595	0	50	0	30	360	250	175	45	0	55	5,067
Otisco	2,576	916	10	0	0	10	0	0	0	5	0	0	10	0	0	0	20	0	20	0	30	105
Pompey	6,197	2,167	25	65	0	65	35	10	5	55	25	0	0	0	10	15	135	0	10	20	40	515
Salina	28,994	12,510	45	1,640	80	760	1,210	627	1,180	370	430	393	3,760	0	5	1,584	565	190	1,695	325	1,050	15,909
Schroeppel	2,406	1,031	5	25	0	85	30	272	20	160	10	0	55	0	0	35	20	5	60	0	15	797
Skaneateles	7,447	2,910	0	156	0	167	366	93	59	174	10	74	878	0	59	312	288	54	60	5	58	2,813
Solvay	7,617	3,320	0	90	5	130	75	186	275	70	30	0	590	0	100	211	325	60	40	10	85	2,282
Spafford	1,589	604	5	5	0	5	10	0	0	5	0	50	5	20	10	15	25	0	0	0	5	160
Sullivan	2,715	1,084	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syracuse	147,283	59,129	100	5,470	1,232	1,850	3,575	6,628	8,830	11,794	21,329	475	4,414	15	415	7,080	4,820	3,145	1,445	1,190	2,525	86,332
Tully	2,723	1,032	5	65	0	40	70	232	10	0	15	10	0	0	5	50	70	95	30	0	20	717
Van Buren	11,050	4,426	15	170	0	130	190	211	55	5	115	20	320	10	5	140	130	0	415	15	195	2,141
West Monroe	342	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	467,905	183,178	1,015	14,323	2,342	8,190	11,798	17,623	15,329	15,213	30,269	1,907	29,809	75	2,174	27,904	10,564	5,627	9,020	1,760	12,067	217,009

*Source: NYSDOT provided BLAT data from 2003 was refined by the SMTC Travel Demand Model Working Group and modeling consultant to develop employment data for the SMTC TDM that is summarized in this table

designation entitles business owners in targeted areas to receive regulatory relief and tax breaks to encourage community revitalization.

Table 3-12



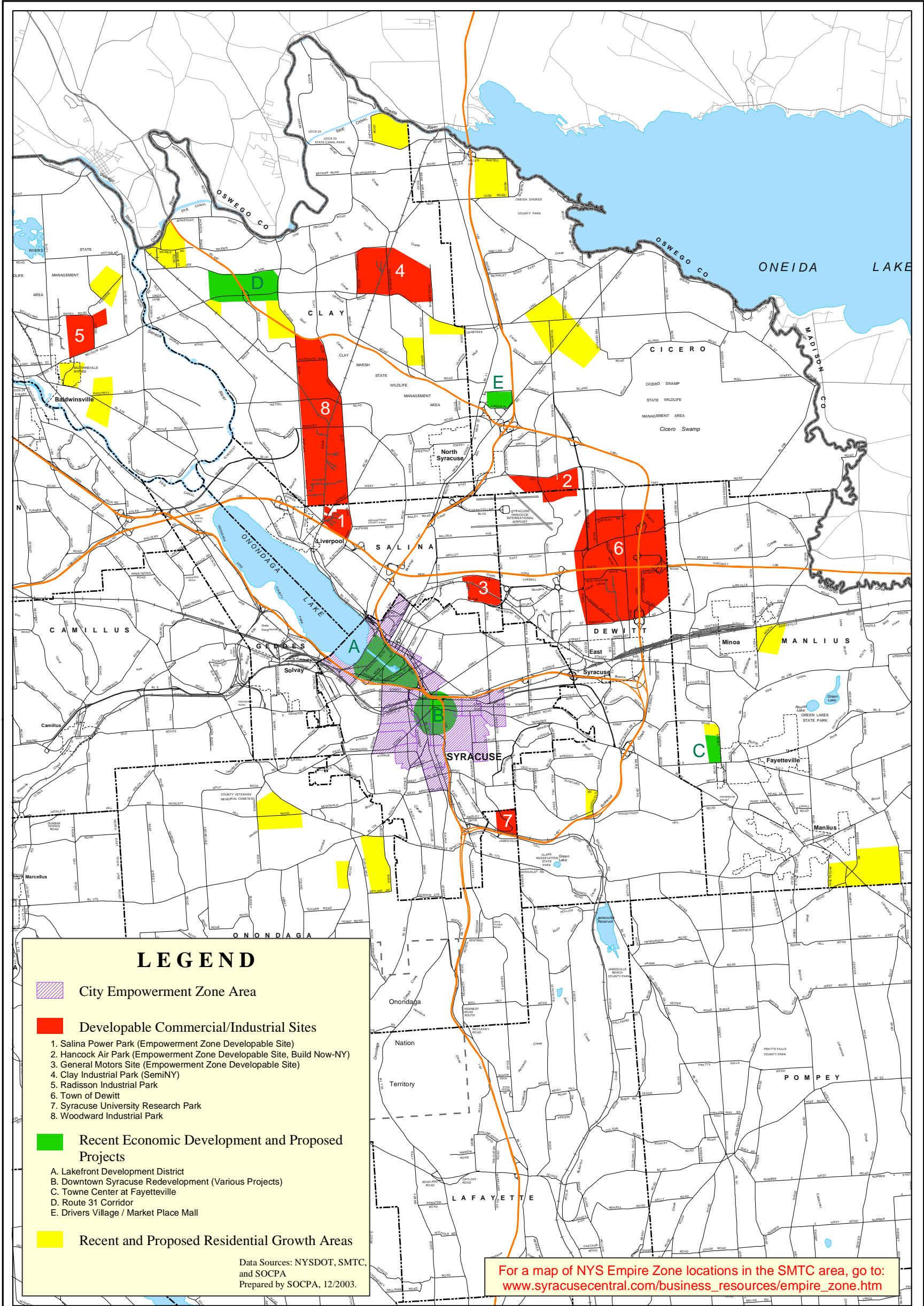
Source: U.S. Census Bureau, County Business Patterns 2004.

The following are some of the sites that Onondaga County is marketing for industrial and commercial development through the Empire Zones, Empowerment Zones or other statewide industrial and high-tech development initiatives:¹⁴

- Clay Industrial Park (SemiNY) 245 acres
- Radisson Industrial Park 50 acres
- Town of DeWitt (Build Now-NY) 108 acres
- Syracuse (University) Research Park (Build Now-NY) 100 acres
- Hancock Air Park (Empowerment Zone, Build Now-NY) 200 acres
- Salina Power Park (Empowerment Zone) 78 acres

In addition to the Town of DeWitt 100+ acre Build Now-NY site, the Interstate 481 corridor, generally in the Town of DeWitt, also houses several existing, and planned commercial and industrial businesses, as well as large amounts of vacant land to support growth. The Woodard Industrial Park in the Town of Clay also represents a large area designated for commercial growth.

¹⁴ Central New York Regional Planning & Development Board. "Central NY Comprehensive Economic Development Strategy Annual Report." June 2003 and 2005.



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Onondaga County Economic Development Areas

Long-Range Transportation Plan 2004 Update

Map 9

This map is for presentation purposes only. Neither SOCPA or SMTC guarantee the accuracy or completeness of this map.



0 1 2
Miles

Recent and Proposed Commercial Projects

Several commercial projects have also taken place outside the previously mentioned marketed sites. The Lakefront, Downtown, and University Hill areas in Syracuse are in planning and development stages for a variety of projects ranging from educational and research to retail, residential and office space. Almost all of the large-scale development that has taken place in the suburbs surrounding the city is retail-based. A brief synopsis of projects, either recently built or under proposed in a public forum, follows:

A. Lakefront Development District:

The continued 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. (*see Changing Needs and Impacts: Lakefront Development District*)

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 in Downtown Syracuse. Syracuse University is investing in several ventures, including new academic buildings, the Center of Excellence in Environmental Systems, a Biotechnology Research Center, and is spearheading the creation of a 'Connective Corridor', linking cultural institutions between Downtown and the University area. Area hospitals also continue to reinvest in their facilities, with several expansion/upgrade projects in progress, including a new Children's Hospital addition to the SUNY Upstate Medical Center. (*see Changing Needs and Impacts: University Hill*)

C. Towne Center of Fayetteville:

Site of the former Fayetteville Mall, the project consists of approximately 400,000 square feet of largely retail and some limited office space on 50 acres of land outside the village of Fayetteville.

D. Clay Route 31 Corridor:

This highly traveled corridor in the Town of Clay has seen a decade of continued retail expansion. Beginning with the construction of Great Northern Mall, the corridor has seen a steady expansion of retail activity, mainly toward the west. Big-box retail uses predominate. Current proposals are focused on extending the retail big-box strip to the west and south, to include the intersection of Route 31 and Route 57 (including possibilities such as Super Wal-Mart and Lowes).

E. Cicero Route 11 Corridor:

This corridor is currently experiencing a surge of new retail activity, with the recent surge of new housing units in the Towns of Clay and Cicero to support it. Since 2000, the two

vacant malls near the Circle Drive/I-481 Interchange have been redeveloped into new retail venues and a large-scale automobile sales and service ‘campus’. This redevelopment activity has spurred a new interest in the Route 11 corridor to the north, which is now seeing new big-box and associated retail uses in various stages of development. Activity on Route 11 to the north of the Route 31 intersection includes a relocated automobile auction facility and a 110-acre mixed-use residential/community facility development known as Cicero Commons.

F. Midler Crossing:

The Pioneer Cos. is developing Midler Crossing on the east side of Syracuse where Midler Avenue meets I-690 and Erie Boulevard. It is slated to house a 170,000 square foot Lowe’s, another small anchor store, a restaurant and a credit union. Additional land to the east is also vacant and the potential for more retail development along this strip of land is possible.

G. Cicero Route 31/South Bay Road:

The intersection of Route 31 and South Bay Road in Cicero has been identified by the Town, and the development community, as a new opportunity for small-scale commercial development. With the success of retail along Route 31 in Clay, and the new residential growth in Cicero surrounding the intersection, this intersection has been rezoned from residential to a commercial zoning district.

H. Van Buren Action Sports Complex (at Winchell Road and Walters Road):

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.

I. Camillus Route 5 Corridor:

New housing development over the past decade has spurred commercial growth and redevelopment in and around the West Genesee Street corridor in Camillus, where a variety of big-box, small retail, and some office spaces are under way and proposed. Redevelopment of the Camillus Mall and Fairmount Fair shopping center has spurred activity throughout the Town.

J. Syracuse 481 Interchange:

Identified as a opportunity in the City of Syracuse’s recent Comprehensive Plan, the Syracuse I-481 interchange area has the potential to support new office, retail and industrial growth. The southeast corner of East Seneca Turnpike and LaFayette Road has seen proposals for a variety of retail uses in recent years.

K. Salina Wal-Mart:

A 205,000 square foot Wal-Mart superstore is proposed for the intersection of Route 57 and the Liverpool By-Pass on a currently vacant site.

L. Tessy Plastics, Elbridge:

This custom injection molding manufacturer recently progressed a 100,000 square foot expansion, adding approximately 200 jobs to its facility on Route 5 in Elbridge. A recent waterline extension along Route 5 has facilitated this expansion as well as additional new development activity along the Route 5 corridor, including a golf course, Byrne Dairy/Gas Station. It is anticipated that this available water may spur additional economic development along the Route 5 corridor, a currently rural area.

M. Route 92 Manlius:

To serve new housing being developed just outside the Village of Manlius and into Madison County, the intersection of Route 92 and Enders Road and Pompey Center Road is seeing new commuter focused development, with an expanded hardware store, strip center and gas station.

N. Hinsdale Road:

A large mixed use development has been proposed for an area of currently vacant land west of Hinsdale Road and immediately north of Route 5. It is anticipated to be a mixture of retail, office, theaters, and various forms of housing. Included in the development is proposed to be a full service Park and Ride for CNYRTA.

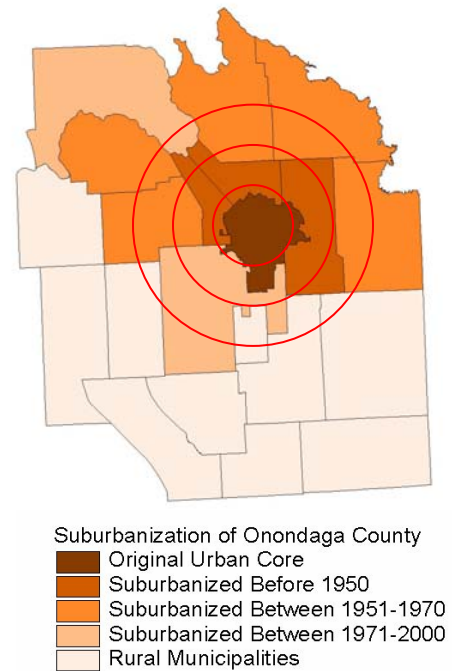
In an effort to attract new jobs and increase population, several new projects are taking place in the SMTC Area, with many more being planned. With that, care must be taken to preserve the separation between urban and rural development patterns; encourage investment in existing communities and transportation corridors; and consider natural resources, environmental constraints and infrastructure costs when dealing with new suburban development.

3. Land Use

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.

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 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 Table 3-2 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.

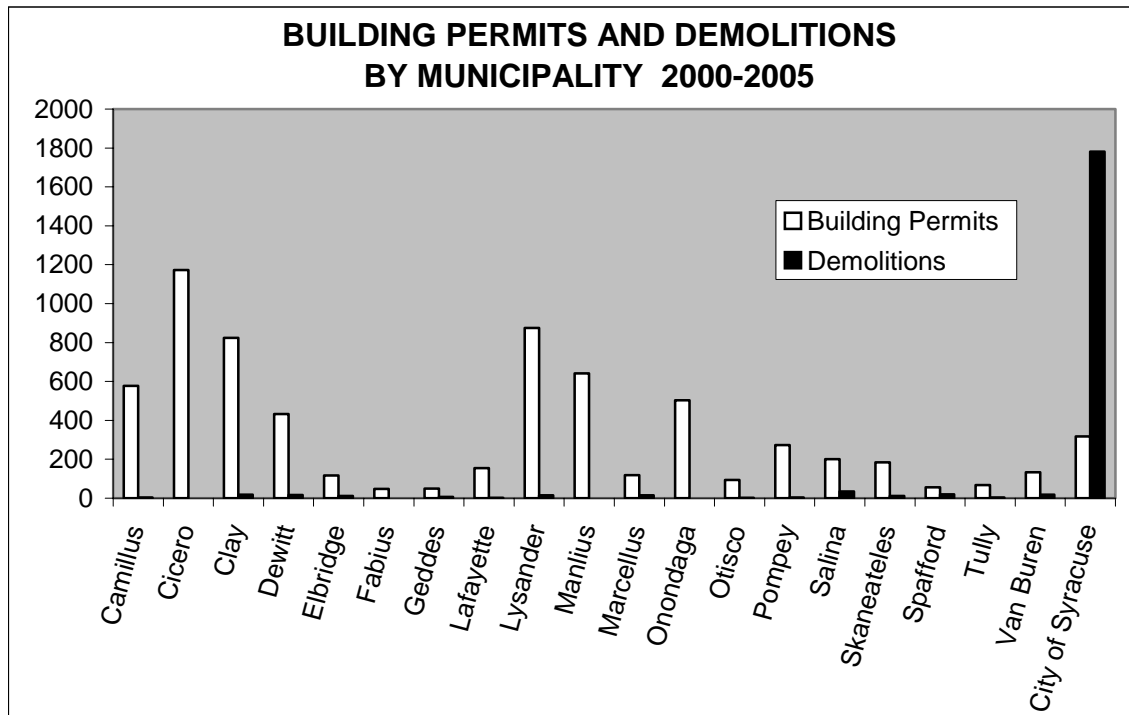
The trend toward suburbanization is shown graphically in the above map and in Tables 3-13 and 3-14. Residential construction in Onondaga County in the past several years has occurred largely in this outer ring – most notably in the towns of Cicero, Clay, Camillus, Lysander, Manlius, and Onondaga. Areas within the inner ring of suburbs, such as the towns of DeWitt, Salina and Geddes see a slowing of growth since 1980. 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.

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 3-14, the number of households over the last several decades has continued to increase in the same outer ring towns where residential construction in Onondaga County occurred in the 1990s. From the travel demand modeling exercise previously discussed in this chapter, looking at the number of households forecasted to the year 2025, this trend continues with the same towns of

Cicero, Clay, Lysander, Manlius, and Onondaga, which are forecasted to continue to grow. The Towns of Salina and Geddes (part of the inner ring of suburbs) are showing a decrease in the number of households for the year 2025, while other inner ring suburbs show a slowing in the growth of households. The City of Syracuse is also expected to continue to lose population into the future.

Table 3-13



Source: SOCPA

The forecasted number of households to the year 2025 follows right along with the previous increases and decreases in the number of households from the 1960s through 2000, and also echoes the building permit data noted in Table 3-13.

The gradual expansion of residential and commercial land uses has significant implications on community land uses and the economy, including an increased demand and cost for transportation infrastructure, utilities and public services, increased commute times and reliance on the automobile for more and longer trips.

However, the demand for affordable land, free parking, large lots and low density have proven difficult to deter. The metropolitan area is gradually expanding, as illustrated by the expansion of SMTTC's MPA and Urban Area Boundary, which reflect changing land use patterns and growth.

Table 3-14

City and Town Households, 1960-2000 and Households Forecasted to 2027 (from SMTC's Travel Demand Model)*						
	1960	1970	1980	1990	2000	Forecasted to 2027
City of Syracuse	67,830	67,671	66,961	64,945	59,482	52,073
Camillus	4,702	7,182	7,992	8,917	9,315	10,233
Cicero	4,028	5,960	7,401	9,014	10,538	13,000
Clay	4,641	10,162	17,299	21,095	22,294	24,848
DeWitt	6,375	8,422	9,211	9,729	10,068	10,508
Elbridge	1,328	1,642	2,011	2,228	2,322	2,525
Fabius	401	446	591	612	686	832
Geddes	5,647	6,389	6,669	6,889	7,262	6,889
LaFayette	876	1,186	1,476	1,724	1,826	2,320
Lysander	2,745	3,282	4,497	5,839	7,139	9,860
Manlius	5,242	7,242	9,633	11,481	12,553	14,553
Marcellus	1,268	1,664	2,061	2,311	2,378	2,952
Onondaga	3,513	4,513	5,961	6,557	7,679	9,595
Otisco	319	405	667	780	922	1,072
Pompey	904	1,178	1,370	1,827	2,154	2,601
Salina	9,006	11,352	13,370	14,166	14,401	13,803
Skaneateles	1,951	2,393	2,705	2,871	2,881	3,093
Spafford	257	313	510	572	631	724
Tully	488	563	802	886	1,030	1,205
VanBuren	2,375	3,157	4,322	5,234	5,288	5,650
Onondaga Nation Territory**	194	200	168	221	304	329
Total Households	124,090	145,322	165,677	177,898	181,153	188,665
*Figures include respective villages						
**Separate Native American Territory						
Sources: U.S. Census of Populations 1960,1970,1980,1990,2000; SMTC Travel Demand Model (developed 2003-2006) to 2027						

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 are being encouraged by Onondaga County, through its *2010 Development Guide: A Framework For Growth*, and the recently produced *Onondaga County Settlement Plan*, which outlines strategies to encourage New Urbanism development practices within Onondaga County. 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.



Annesgrove, in the Town of Camillus

The City of Syracuse has adopted a change to its zoning code within its Lakefront Development area to encourage new high-density, mixed-use development, consistent with the principles outlined in the *Onondaga County Settlement Plan*. 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.

To help the City compete for population and economic opportunities, with funding assistance from the federal government and local private contributions, the *Syracuse Neighborhood Initiative* (SNI) was established in 2000. SNI plans and initiatives focus on improving the City housing market and position City neighborhoods to successfully compete for investment. The construction of new housing units throughout the suburbs of Onondaga County has resulted in an oversupply of housing. This results in the abandonment of older homes, close to the City core. An important focus of the first phase of the SNI was to address the large dilapidated, aging housing stock in the City through rehabilitation (the preferred option for preservation of urban densities) or demolition. The dramatic number of demolitions in the City of Syracuse as shown in Table 3-13 is partially due to this new SNI funding source for demolitions, with 608 demolitions in 2002 alone. The City of Syracuse also recently completed a Comprehensive Plan that addresses the housing trends in the City. See Chapter 4, Section B, for more information on the City's Comprehensive Plan.

In addition to preserving the urban core in the City of Syracuse, new 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 has recently 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.

Land Use and Transportation

Acknowledging the important effects of land use on transportation options, 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 Comprehensive Transportation Study being prepared by the SMTC will focus 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. The current Route 31 Transportation Study is examining the interrelationship between extensive retail expansion and a limited transportation network. Similarly, the Interstate 481 Corridor Study recently examined the effects of continued build-out of industrial and commercial uses on the transportation infrastructure and the importance of preserving capacity on major state and county highways.

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.”¹⁵ The new 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 creation of the Quality Communities Interagency Task Force, which has a mission to ‘study community growth in New York State and develop measures to assist those communities in implementing effective land development, preservation and rehabilitation strategies that promote both economic development and environmental protection’¹⁶. One of the focus areas of the Quality Communities effort is on Transportation and Neighborhoods. The Task Force Report presents several recommendations for local and state agencies as to making sustainable infrastructure decisions, and acknowledges the benefits and costs of providing transportation infrastructure.

C. Travel Demand Modeling

In 2003, the SMTTC began the process to replace its TMODEL Travel Demand model software, which utilizes current and projected population and land use statistics to estimate impacts of proposed transportation infrastructure projects. This process has recently been completed (late 2006). This modeling is a useful and essential tool, helping planners to project necessary improvements and predict typical impacts of land development actions. Additionally, it is mandated that the SMTTC utilize modeling as part of its air quality conformity process (see Chapter 7 for a thorough 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, etc.); 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, etc.).

¹⁵ Source: NYSDOT web site: Power Pt. Presentation on Context Sensitive Solutions.

¹⁶ Source: NYSDOS web site: Quality Communities.

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 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 Chapter 7 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.

Travel Demand Modeling at the SMTC has been in a state of transition due to new software and updating its forecasting information. The SMTC has developed a more accurate and user friendly travel demand model that can be used by the agency’s staff on a regular basis as a tool to predict future traffic volumes and patterns with a higher degree of credibility than the previous model.

The last travel demand model at the SMTC was based on TMODEL2 software. There are limitations as to the ability of the software due to its age and design. For example its graphical output is quite limited and it has no real Geographic Information Systems (GIS)

connectivity. Additionally, existing staff is not fluent in the software, and since it is no longer a “popular” modeling platform nationally – it is hard to find either trained staff or available training for the model. This has led the SMTC to utilize consultants for all of the current modeling activities. This is both expensive and cumbersome. The SMTC discussed these modeling concerns with other NYS MPOs that utilize TMODEL2 as their model and discovered that other MPOs have similar concerns.

In an attempt to solve the common concerns among the MPOs using TMODEL2 software, the SMTC led a statewide initiative to examine the options available to the MPOs that wanted to migrate to another software platform. This process was well attended by other MPOs in the state and was comprehensive in nature. The year-long process led to a final recommendation of TransCAD software as a first choice for replacing TMODEL2 models in New York State. Many of the participating MPOs have either migrated or are in the process of migrating to this new modeling platform as a result of this effort.

The SMTC has recently completed its migration to the new and improved TransCAD model. Most of the new model has been created from scratch; however, selected elements were migrated from the older TMODEL2 model. The air quality conformity for this LRTP 2007 Update is one of the first mandated uses of the new model.

In addition to simulating vehicular traffic, the model will be able to adjust for transit vehicles, bicycles and pedestrians. The model will be a traditional, four-step model that involves the processes of (1) trip generation, (2) trip distribution, (3) mode choice, and (4) trip assignment. The new model will utilize TransCAD software and include a Geographic Information Systems (GIS) interface. The model will be utilized 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 Development Final Report and Documentation. For a discussion on the model outputs as they relate to VMT and air quality conformity please refer to Chapter 7 of this document.

Chapter IV: Changing Transportation Needs and Impacts

A. Travel Modes

1. Passenger Vehicles

By far, the most common mode of transportation utilized in Onondaga County is the passenger motor vehicle, and the popularity of this mode of commuting continues to increase over time. Between 1990 and 2000, the percentage of those driving alone to work increased from 75 to 80 percent. The remaining modes of transportation noted in Table 4-1, including carpooling, public transportation, and bicycling or walking, have shown a decline in usage since 1990.

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.¹

Table 4-1

Changes in Commuting Patterns, 1990 and 2000 Percent of the Labor Force Ages 16 Years and Over Onondaga County			
Transportation To Work	1990	2000	Total Increase / Decrease From 1990 - 2000
Drove Alone	75.2%	80.1%	+ 4.9%
Carpooled	12.1%	9.9%	- 2.2%
Public Transportation	4.5%	2.6%	- 1.9%*
Bicycled or Walked	5.3%	4.1%	- 1.2%
Other	0.6%	0.5%	- 0.1%
Worked at Home	2.4%	2.8%	+ 0.4%
Total	100.1%	100%	-----

Source: U.S. Census Bureau. *Public Transportation includes buses, trains, taxicabs and related services. Other includes motorcycles.*

**While the percentage of people commuting in the labor force ages 16 and up riding public transportation has decreased 1.9% from 1990 to 2000, in recent years the percentage of ridership overall has increased for Centro (see discussion on Public Transit).*

The number of licensed drivers in Onondaga County in 2005 was 316,850, with the total number of all types of vehicles registered in Onondaga County at 340,326.² The mean number of vehicles per household remained relatively steady at 1.52 in 2000 (versus 1.54 in 1990).³ Worth noting, however, is that while the number of vehicles per household remained relatively constant, the number of persons per household fell over the same

¹ CTPP 2000, Table 1.

² <http://nysdmv.com/Statistics/regin05.htm>, and <http://nysdmv.com/Statistics/statli05.htm>

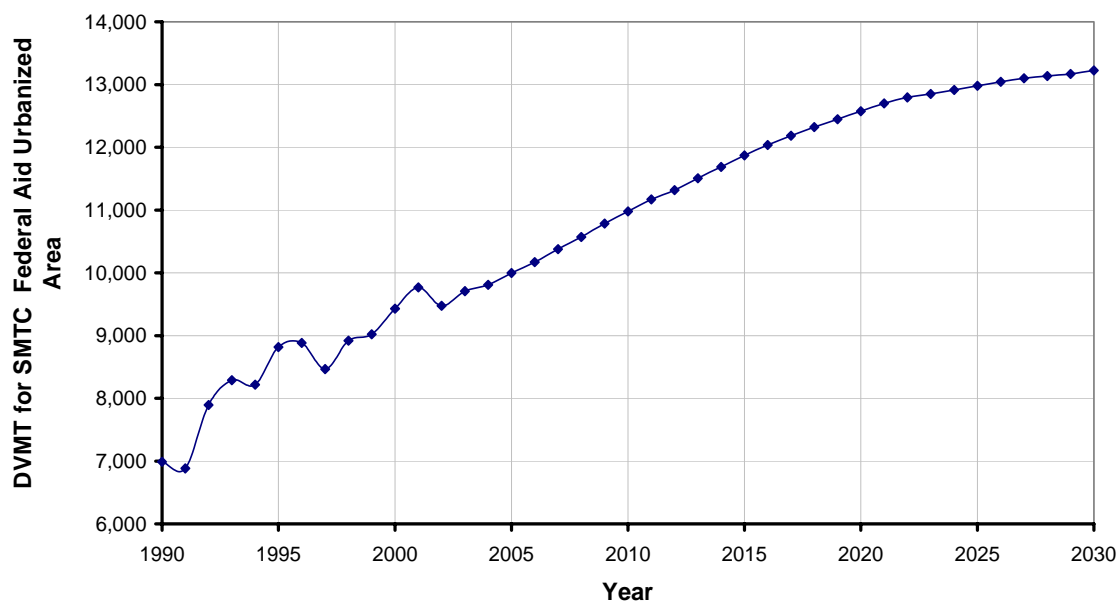
³ CTPP 2000, Table 1.

time period (2.4 persons per household in 2000 versus 2.6 persons per household in 1990). This results in a higher vehicle per person ratio (i.e., larger number of smaller households with the same number of vehicles per household). This trend could logically lead one to ask – “Does this mean people are driving more?” In short, the answer is yes.

According to the Highway Performance Monitoring System (HPMS) provided by the New York State Department of Transportation (NYSDOT), in 2005 the number of Daily Vehicle Miles of Travel (DVMT) in the SMTC Federal Aid Urbanized Area was 9,996. This represents a 43 percent increase over miles traveled in 1990 when the DVMT was 6,990. The following graph (Table 4-2) shows actual HPMS DVMT values for 1990 through 2005, and forecasted travel miles for the years 2006 through 2030. The forecasted DMVT shown in this graph was prepared by the Global Insight, a forecasting consulting firm, for the NYSDOT in 2007.

Table 4-2

**Global Insight* Vehicle Miles Traveled (VMT) Forecast 1990-2005
Actual Highway Performance Monitoring System (HPMS) Daily Vehicle
Miles Traveled (DVMT)**



Sources: NYSDOT, Global Insight*, 2007.

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

Please refer to Chapter 7 (Air Quality and Conformity Determination) for a discussion on SMTC's Travel Demand Model VMT estimates for future years. The travel demand model estimates can (and do) vary from the HPMS estimates.

Journey to Work Forty-Year Trends

As previously stated, the preferred mode of transportation for commuting to work is the single-occupancy automobile. Table 4-3 summarizes the mode of choice for trips to work in Onondaga County from 1960 to 2000. There has been a substantial increase in private vehicle use over this forty-year period, while transit use and walking have declined over time.

Table 4-3
Mode of Trip to Work, 1960-2000

	Private Vehicle/Carpool	Transit	Walked	Bicycled	Home Occupation
1960	70.9%	14.6%	9.9%	NA	3.1%
1970	80.3%	8.5%	7.6%	NA	2.2%
1980	84.4%	6.6%	6.8%	NA	1.4%
1990	87.3%	4.5%	5.1%	.2%	2.4%
2000	90.0%	2.6%	3.9%	.2%	2.8%

Source: U.S. Census Bureau

An examination of the mode of transportation to work by municipality in Onondaga County yields interesting information (see Table 4-4). For example, the City of Syracuse has by far the largest number of people (4,148) using public transportation to get to work, with the Towns of Camillus, Salina and Clay following with approximately 300 public transportation users each. Rural towns south of Syracuse such as LaFayette, Otisco, Fabius, Pompey, Spafford and Tully show very few people use public transportation to get to work. This is due to the minimal coverage of the fixed route service in these municipalities. Centro continues to examine possible route expansion to various areas of the planning area that are underserved or have no service currently available.

In the City of Syracuse, 5,960 people walked to work in 2000. The Towns of Salina, Clay, DeWitt, Camillus and Manlius reported having between 200 and 300 walkers each. The towns with the fewest people walking to work were Spafford and Otisco.

The City of Syracuse, and the Towns of Clay, Manlius, Cicero and Lysander had a large number of people who work at home. Elbridge, Fabius, Otisco, and Spafford had the fewest home workers.

Table 4-4
Mode of Transportation to Work by Town in Onondaga County, 2000⁴

Towns in Onondaga County	Drove Alone	Car Pool	Public Transportation	Other Means	Walked	Worked at Home	Total Workers
Camillus	88.9%	12.5%	3.4%	.4%	2.3%	2.5%	10,993
Cicero	87.6%	7.6%	.2%	.3%	1.1%	3.1%	14,122
Clay	86.5%	.9%	.7%	.7%	.8%	7.4%	30,763
DeWitt	83%	8.9%	2%	.9%	2%	2.1%	11,229
Elbridge	81%	11.8%	1.9%	.06%	2.7%	1.9%	2,942
Fabius	81.9%	9.7%	.4%	.3	2.3%	5.3%	980
Geddes	83.2%	10.8%	1.9%	.5%	1.4%	2.1%	7,888
LaFayette	84.7%	8.8%	0%	.3%	2.6%	3.5%	2,577
Lysander	86.6%	7.7%	.4%	.6%	.8%	3.9%	9,863
Manlius	86.9%	6.5%	.8%	.5%	1.5%	3.8%	15,395
Marcellus	82.8%	7.8%	.7%	.2%	4.9%	3.6%	3,269
Onondaga	86.8%	8.9%	1.1%	.5%	.7%	3%	9,537
Otisco	81.7%	11%	.6%	.4%	1.4%	5%	1,247
Pompey	81.4%	6.3%	0	0	3.3%	8.9%	2,945
Salina	84.2%	9.5%	1.5%	.8%	1.9%	2%	16,495
Skaneateles	82.5%	7.7%	.8%	.7%	3.3%	5%	3,445
Spafford	81.3	10.3%	0	.3%	.6%	7.4%	870
Tully	78.1%	9.3%	.2%	.8%	4.4%	7%	1,371
Van Buren	84.6%	9.7%	1%	.6%	1.4%	2.7%	6,145
City of Syracuse	65.9%	13.7%	7%	1.1%	10%	2%	59,041

Source: U.S. Census Bureau 2000, SF3 Table P30 and CTPP Table 1-102

Commuting in Onondaga County

The 2000 commuting data (see Table 4-4) shows that most people commute in single occupant vehicles. Overall, a small percentage of work trips are made via public transportation. However, in certain zones in the urbanized area, transit is utilized more and is regarded as an indispensable mode of travel for many people. In no instance did bicycling reach even one-half of one percent of work trips made. Carpooling remains an alternative for many.

For those who commute to work, the mean travel time, depending on the county, varied from 19 minutes in Onondaga County to 24 minutes in Oswego County, both of which were lower than the statewide travel time of 31 minutes. The data regarding the percentage of the labor force working outside the county of residence clearly demonstrate

⁴ Some Towns may not add up to 100% due to rounding errors.

that Onondaga County is where most of the jobs in the Central New York region are located. Only 5.9 percent of Onondaga County residents work outside Onondaga County. This is contrasted by much higher percentages in adjacent counties. For example, 28 percent of residents in Cortland County and 49 percent of residents in Madison County travel to a different county to work. These commuting patterns of outlying counties commuting into Onondaga County for work highlight the need for maintaining a well-functioning highway network.



Commuting in Onondaga County on I-81

As noted previously, there has been a 35.52% increase in vehicle miles traveled (VMT) since 1990. Data from a 1995 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 30.28 daily VMT per driver. This number is slightly higher in comparison to Albany (at 26.05 daily VMT per driver), the closest other upstate New York MPA of similar population size. As compared to other upstate MPA areas with less than 3 million people, Syracuse MPA's daily VMT is about average.⁵

⁵ 1996 New York NPTS: A Comparison Study, Table 6.5 Daily Vehicle Miles Travel Statistics of New York State MPO Drivers by MSA size, page 6-12.

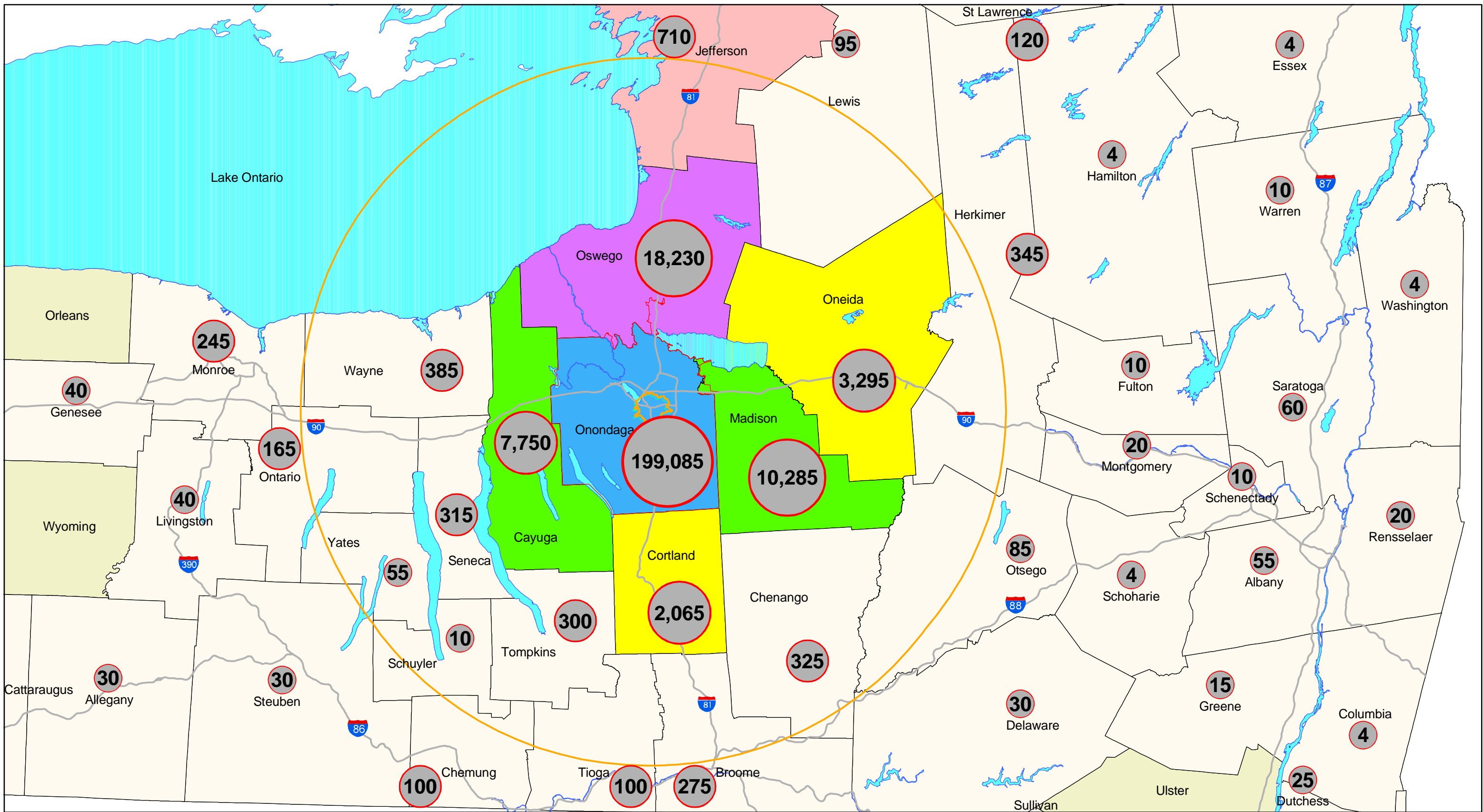
As shown in the 2000 Census data, the highest numbers of people commuting to work in Onondaga County are traveling to the City of Syracuse (87,779) as well as the Town of DeWitt (37,837) and the Town of Salina (17,337).⁶ The number of people commuting to work in a single occupancy vehicle is determined by where jobs are located as well as the density of residential areas and the transit available in those areas. In some cases, an increase in available transit would not be cost effective based on population density. As daily VMT and corresponding trends of an increase in commuting rise, sprawl will continue. For a discussion of sprawl, please see the following paragraph and Appendix C. An additional factor in increasing the use of single occupancy vehicles and VMT is low fuel costs. If fuel is affordable (according to market conditions), people are more likely to drive greater distances.⁷

When presented with an increase in commute times combined with an increase in the movement of residents to the outlying suburbs, one of the main concepts that needs to be addressed is suburban sprawl. The impacts of suburban sprawl greatly affect passenger vehicle transportation. As people move further away from goods, services, and places of work, the use of vehicles and travel time increases. These additional commuting trips increase the burden on the road network. In addition, when sprawl occurs, public transit options become less desirable due to cost and time efficiency factors. Sprawl and development tend to create more of a burden on the passenger vehicle transportation system. The presence and absence of existing infrastructure such as water and sewer systems directly influence development and sprawl. There is now a willingness of residents to move to the outskirts of Onondaga County and to other surrounding counties, where commuting greater distances is acceptable. One of the side effects associated with sprawl is cost. There are additional building and maintenance costs for roads, schools, retail, water and sewer systems, human services, transit services, and abandonment of existing infrastructure, among other things. High usage of the interstate system for commuting travel is directly impacted by sprawl, and traffic counts support that interstate volumes are increasing as commuters are traveling from residences further away from work destinations. Map 10 displays the quantity of workers by county that work in Onondaga County, by county of residence. This shows a willingness to commute considerable distances to work in Onondaga County even though Onondaga County is losing population and has ample housing.

The ongoing change in retail and related development also contributes to sprawl. Retail development that is built away from established areas draws housing development, which in turn entices people to move to these outlying areas. As people move to the new area, more retail development follows to fill in the gap of missing needs and services. The creation of additional housing occurs once again because now there is an established area of retail development. A few examples of this concept are found within Onondaga County along the Route 31 corridor in Clay and Cicero, as well as with the new Town Centre at Fayetteville.

⁶ Census 2000: Residence MCD to Workplace MCD/County Flows for New York: 2000

⁷ Technology Vs. Land Use: Alternative Strategies To Reduce Auto-related Air Pollution by Chang-Hee Christine Bae, Planning & Markets, 1999-2000.



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0 12.5 25 Miles

Number of Workers that Work in Onondaga County per New York County Residence Long-Range Transportation Plan 2007 Update

Map10

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

N
 Basemap Copyrighted by NYSDOT
 Data Sources: SMTC, NYSDOT, 2001
 Census 2000
 Prepared by SMTC, 11/2006

Major Routes
 Number of Workers
 Sixty Mile Buffer
 SMTC MPA
 Water

Number of Workers	
0	3,401-10,500
4-400	10,501-18,300
401-800	18,301-199,085
801-3,400	

As a result of suburban sprawl and its contribution of increased passenger vehicle trips made and longer travel times to work, most funding sources currently available for capital improvements on Onondaga County roadways are utilized for maintaining the current road network. As noted in *Chapter 5: Safety Conditions and Infrastructure Maintenance*, the majority of the funds for the road network are used to maintain the most heavily traveled routes in the county.

Interstate Congestion - There are many issues relating to the high rate of single occupancy passenger vehicles in Onondaga County and the surrounding areas. There is an increase in the amount of traffic on the commuter interstates (I-690 and I-481) as well as on the through-route interstates (I-81 and I-90). 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.

Network – In the northern towns, there is a lack of options for passenger vehicles to move across the Syracuse MPA from east to west or vice versa due to physical and geographic constraints. The main east west corridor is I-90 (New York State Thruway). Other options include I-690 through the City of Syracuse and Route 31 in the northern portion of Onondaga County. Because these routes do not serve the needs of the population, initial efforts are being made to examine the possibility of using different roads to provide an alternative for traffic moving in these directions across Onondaga County.

Interstate ITS - As mentioned in this report, current Intelligent Transportation Systems (ITS) initiatives are aimed at relieving recurring and non-recurring delay caused by passenger vehicle commuting in Onondaga County. Another issue that the ITS program will address is improving passenger vehicle mobility through incident management. Please refer to the ITS section for additional details.

Parking - Suburban sprawl has an additional impact on parking. Parking becomes more of an issue when increasing amounts of people are using passenger vehicles as a mode of transportation, and is of critical importance in dense areas that have a lack of parking such as University Hill and Downtown Syracuse. As part of its mission, CNYRTA constantly strives to increase ridership on its entire system, including and especially those routes that serve areas with restricted parking conditions such as University Hill and Downtown Syracuse.

Air Quality - Additionally, an increase in passenger vehicle traffic has a direct negative effect on air quality and also is a contradiction to the principles of the state energy plan.

City-Residential Demolition - As suburban sprawl continues, a direct result is the de-densification of housing units in the City. For data on demolitions, please see table 3-11. This has significant transportation infrastructure implications, noted below:

- The average commute to work in Onondaga County continues to increase.⁸
- An increased dependency on vehicles for transportation, as indicated through increases in vehicles per household in Onondaga County to a record average.

⁸ U.S. Census Bureau, Census of Population and Housing. 1990 and 2000.

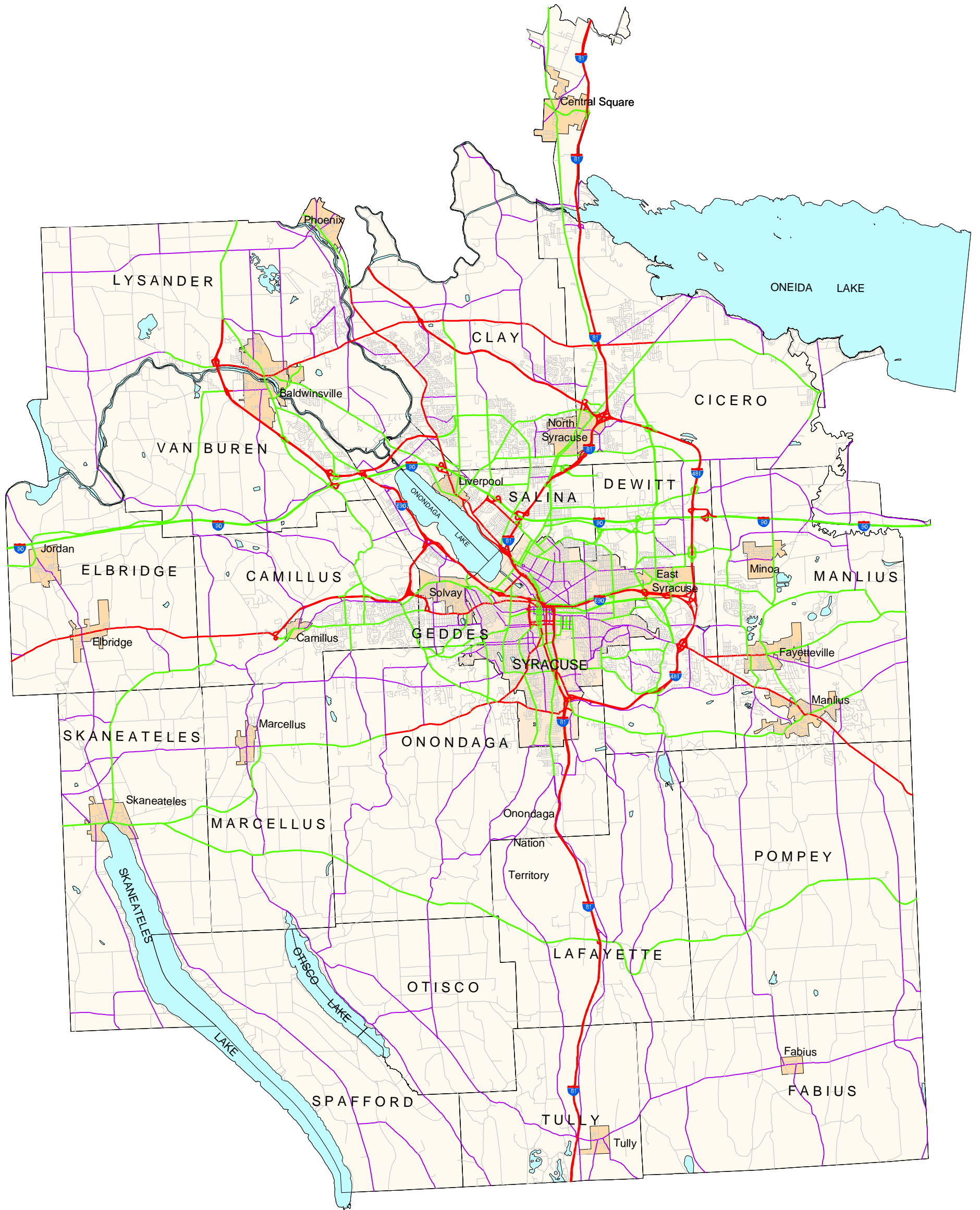
- With larger travel distances to work, 2000 Census figures show decreases in walking, bicycling and public transit, as well as increases in private vehicle usage for commuting to work.
- Providing accessible and cost-effective public transportation becomes more difficult, as residential and job centers are spread out across the County.

Commuter Corridors

In the summer of 2006, the NYSDOT requested that all of the MPOs in New York construct mapping and analysis of Trade and Commuter Corridors as part of a statewide effort of corridor planning and management. To that end, the SMTC staff in combination with NYSDOT staff constructed draft corridor mapping of both commuter and freight corridors. This was done through a joint (SMTC and NYSDOT) process of evaluation of facilitates, functional classification of the road network, population centers, work centers, and related information. Map 11 and Map 18 show the resulting output from this effort.

In terms of commuter corridors, the mapping reflects what this document has established in the previous sections: the residential commuters are spread throughout the MPO area and utilize the variously classified road network hierarchy to navigate their daily commute. A closer look at Map 11 shows that the local population centers (i.e. residential development areas), particularly in the suburban locations, move from the local roadways of residence onto the collector system (labeled on the Map 11 as *tertiary*). From the collector system they move up to the major collectors and minor arterials (denoted as *secondary* on Map 11) and finally, the bulk of commuter traffic ultimately travels on the principal arterial system denoted as *primary* on the map. The map does not directly follow the Functional Class system due to local variation in commuter traffic. Also, minor local variations have been carefully considered (for example the Thruway [I-90] in the SMTC area is not a main commuter corridor and is therefore downgraded to *secondary* on this map while its functional classification is principal arterial).

This commuter corridor identification is helpful in understanding the reality of the “spreading out” of the residential population and the correspondingly large network of infrastructure required to accommodate this geographically dispersed workforce. 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.



Note: SMTC staff produced Working Document for NYSDOT Corridor Initiative

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0 2 4 Miles

Map 11

N

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Datasources: SMTC, NYSDOT, 2001
Prepared by SMTC, 11/2006

Towns
Villages
City of Syracuse
Water

Commuter Corridor Level

- Primary
- Secondary
- Tertiary
- Local

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2. Bicycle and Pedestrian Travel

Census data detailing the modes of travel to work by workers in Onondaga County in 1990 and 2000 are shown in Table 4-5. Additionally, the 2000 Census data are separated to compare City of Syracuse patterns with those of the remaining suburban portions of Onondaga County.

Table 4-5

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

According to the 2000 United States Census, approximately 8,749 workers over the age of 16 within Onondaga County walk or bicycle to work. Of those who walk or bicycle to work, over 70% live within the City of Syracuse. Since 1990, Onondaga County has seen a decrease in pedestrian travel, potentially attributable to a decrease in city population over the past decade. Other factors such as the condition of pedestrian facilities, perceived safety, and alternative mode choices may also be attributable to the decrease.

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 the accessibility of vehicles. Remaining relatively steady since 1990, the latest 2000 Census



Bicycle Facilities

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) recognize 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.

Typical Pedestrian and Bicycle Trip Lengths

When planning new bicycle and pedestrian facilities or upgrading or reconstructing existing roadways to accommodate bicyclists and pedestrians, one of the items for transportation planners and engineers to consider is the typical trip length of pedestrians and bicyclists. According to the *Transportation Planning Handbook*, published by the Institute of Transportation Engineers, "bicycle and pedestrian trips are typically characterized by short trip distances: approximately one-quarter mile to one mile for pedestrian trips and one quarter-mile to three miles for bicycle trips."⁹ In addition, the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* notes that "the pedestrian most likely will not walk over 1 mile to work or over 0.5 mile to catch a bus, and about 80% of the distances traveled by the pedestrian will be less than 0.5 mile."¹⁰

With the majority of bicycle and pedestrian trips covering short distances, land use patterns play a critical role in the current and future development and use of bicycle and pedestrian facilities.

Federal Legislation

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) of 2005 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) legislation and Transportation Enhancements Program (TEP) is 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

⁹ John D. Edwards, Jr., P.E., Editor, *Transportation Planning Handbook*, 2d ed., Institute of Transportation Engineers, Washington, D.C., 1999, p. 604.

¹⁰ American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets*, AASHTO, Washington, D.C., 2001, p. 96.

been, both of these funding sources have been limited compared to other transportation funding mechanisms and are highly competitive in nature.

Pedestrian/Bikeway Planning

Both Onondaga County and the City of Syracuse have bikeway plans and projects underway, several of which are funded through the MPO's Transportation Improvement Program (TIP). Several examples are listed below. See Map 12.

- Bicycle And Pedestrian Plan – The SMTC *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.
- Onondaga Lake Trail, also known as the “Loop the Lake Trail” - The Onondaga County Department of Parks and Recreation and OCDOT continues to work on completing the planned bicycle/pedestrian trail around Onondaga Lake, which



Onondaga Lake Trail

will provide a non-motorized transportation link between Liverpool and Solvay. In 2002, the West Shore Trail was opened to the public, representing another leg of the trail planned to encircle the entirety of Onondaga Lake. In addition, 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 are

currently in design phase. The County is also currently working 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. Funding totaling approximately \$6.5 million for detailed design, construction and inspection

(for the trail's completion) is currently earmarked on the TIP. See Map 12 for the Onondaga Lake Trail, as well as other major existing and proposed trail routes in Onondaga County.

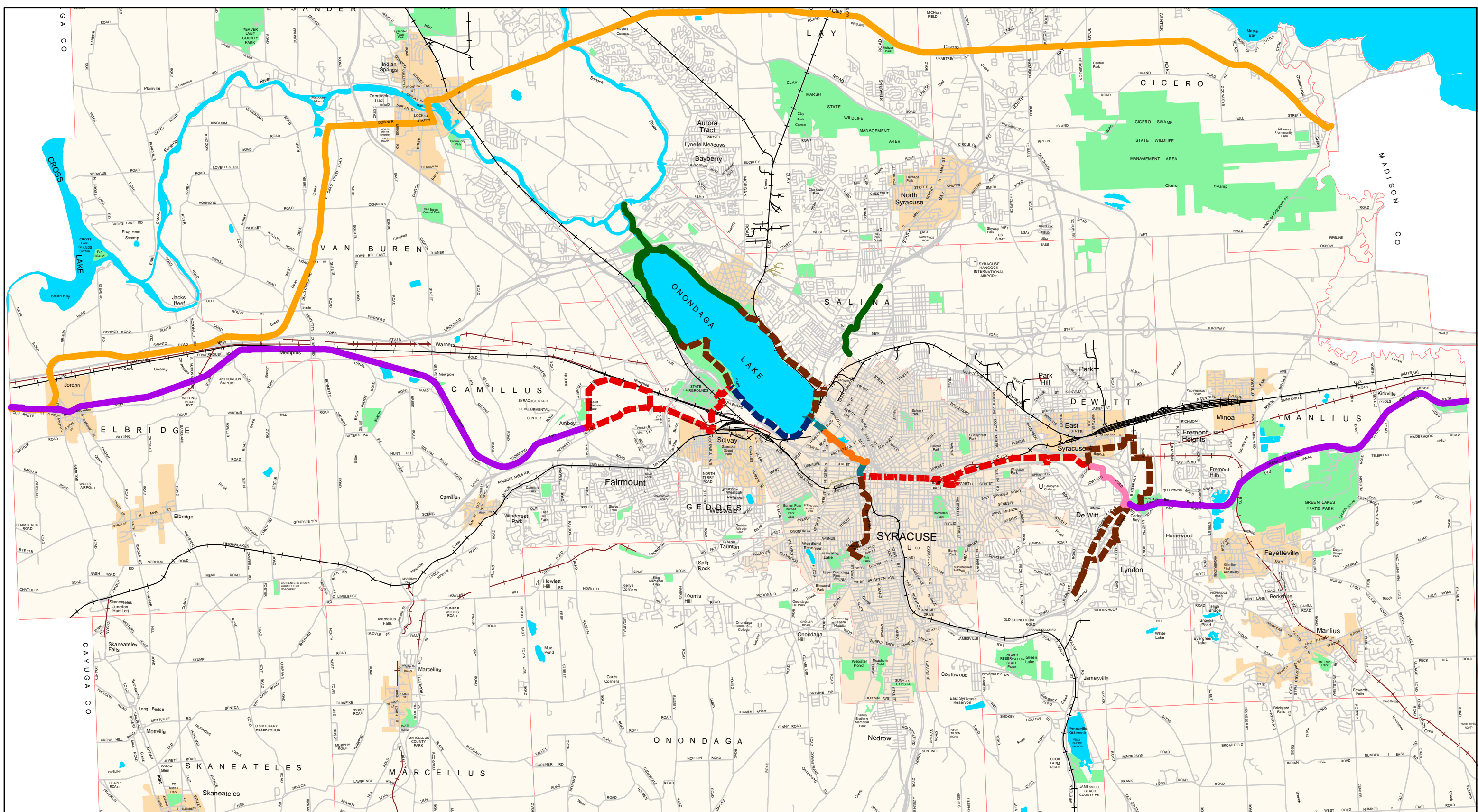
- Onondaga Creekwalk – This multi-use trail system has been in existence since the early 1990s, with completed portions open in the Franklin Square and Inner Harbor areas in Syracuse's Lakefront Area. (A temporary connection has been established as well, connecting the two segments until creekside property can be obtained and removed of pollutants.) The Onondaga Creekwalk is intended to be a continuous trail system on the edge of Onondaga Creek, stretching from Onondaga Lake to the southern city limits and beyond. Another TIP funded project (a Creekwalk extension project) is currently under design extending the trail further south to Armory Square, as well as north to the mouth of Onondaga Lake. Construction for this portion is expected to begin in 2007.



Onondaga Creekwalk

In addition, Phase II of the Creekwalk, which entails the investigation of feasible routes for the continuation of the Creekwalk from the Armory Square Historic District south to Kirk Park within the Onondaga Creek Corridor, is underway. Several neighborhood advocacy groups have supported construction of the Creekwalk and are initiating grassroots campaigns to rediscover the Creek and its recreational opportunities.

- 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 the most urbanized along the entire state route. A proposed ideal route also 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 possibilities for the routing of the Canalway Trail from Camillus to DeWitt. Because the proposed ideal route may take years to implement due to running through various properties with various property owners, the Canal Corporation is looking to develop a route that can be signed and utilized now. The Canal Corporation anticipates utilizing city streets for a good portion of



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Major Existing and Proposed Trail Routes

Onondaga County and the City of Syracuse

Long-Range Transportation Plan 2007 Update

Map 12



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Data Sources: SMTc, NYSDOT, 2001
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Local Trail Routes		Municipal Boundaries	
	Proposed Canalway Trail		Villages
	Existing Old Erie Canal Trail		City of Syracuse
	Existing Creekwalk/Proposed Canalway Trail		Town Boundaries
	Existing DeWitt Trail/Proposed Canalway Trail		Water
	NYS Bike Route 5		Recreation Areas
	Proposed Onondaga Lake Trail/Proposed Canalway Trail		
	Proposed Creekwalk/Proposed Canalway Trail		
	Other Existing Trails		
	Other Proposed Trails		

	Roadways
	Railroads
	Abandoned; Track Removed
	Active
	Inactive

the trail through the City of Syracuse. As of the printing of this document, the Canal Corporation's final proposed route through the City of Syracuse was not yet available. The Onondaga Lake Trail and Onondaga Creekwalk will be incorporated as segments of the Canalway Trail system.

In 2002, New York State announced a \$35 million state funding commitment toward the completion of the entire statewide trail. The Syracuse Area is slated to receive approximately \$3 million towards the effort. Towns and villages along the canal system are attempting to capitalize on the revitalization of the Erie Canalway, and several municipalities such as the Village of Baldwinsville are requesting TIP and other funds for the construction of trail facilities and promenades along the canal. See Map 10 for the proposed routing of the Canalway Trail.

- 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 informational panels on its *Bicycle Suitability Map* to educate bicyclists in proper usage of the racks.



Centro Bicycle Racks

Through various SMTC studies, the SMTC has been made aware of bicycle and pedestrian issues that exist within the MPO area. Commonly, the noting of bicycle and pedestrian issues are required elements of any transportation study. Some of the concerns regarding bicycle travel that the public has shared with the SMTC include a lack of facilities, disregard for safety and a general lack of awareness of the rules and regulations associated with safe bicycle travel. One of the most often stated comments relayed to the SMTC by the public is the lack of dedicated bicycle lanes and routes with appropriate signage within the MPA. To date, the following bicycle lanes currently exist in the City of Syracuse: 1) Comstock Avenue from Stratford Street to East Colvin Street, 2) East Colvin Street from Garfield Place to the east City Line and 3) Meadowbrook Drive from Hurlburt Road to Lancaster Avenue, then along Lancaster Avenue south to East Colvin Street. These bicycle lanes are located within the University Hill area. The 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 such as those identified by the public. During the 2007 construction season, the City is planning to install a bike lane on East Genesee Street from East Ave to the City/DeWitt Line. Additional future sites may include linkages throughout the entire city and also to the Onondaga Creekwalk and the Erie Canalway Trail that is proposed to bisect the city.

The SMTC has also been made aware of several pedestrian issues such as poor sidewalk conditions, inadequate clearing and maintenance of sidewalks, non-compliance with the Americans with Disabilities Act (ADA), and bus stop related issues such as a limited number of shelters and boarding surfaces. 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.

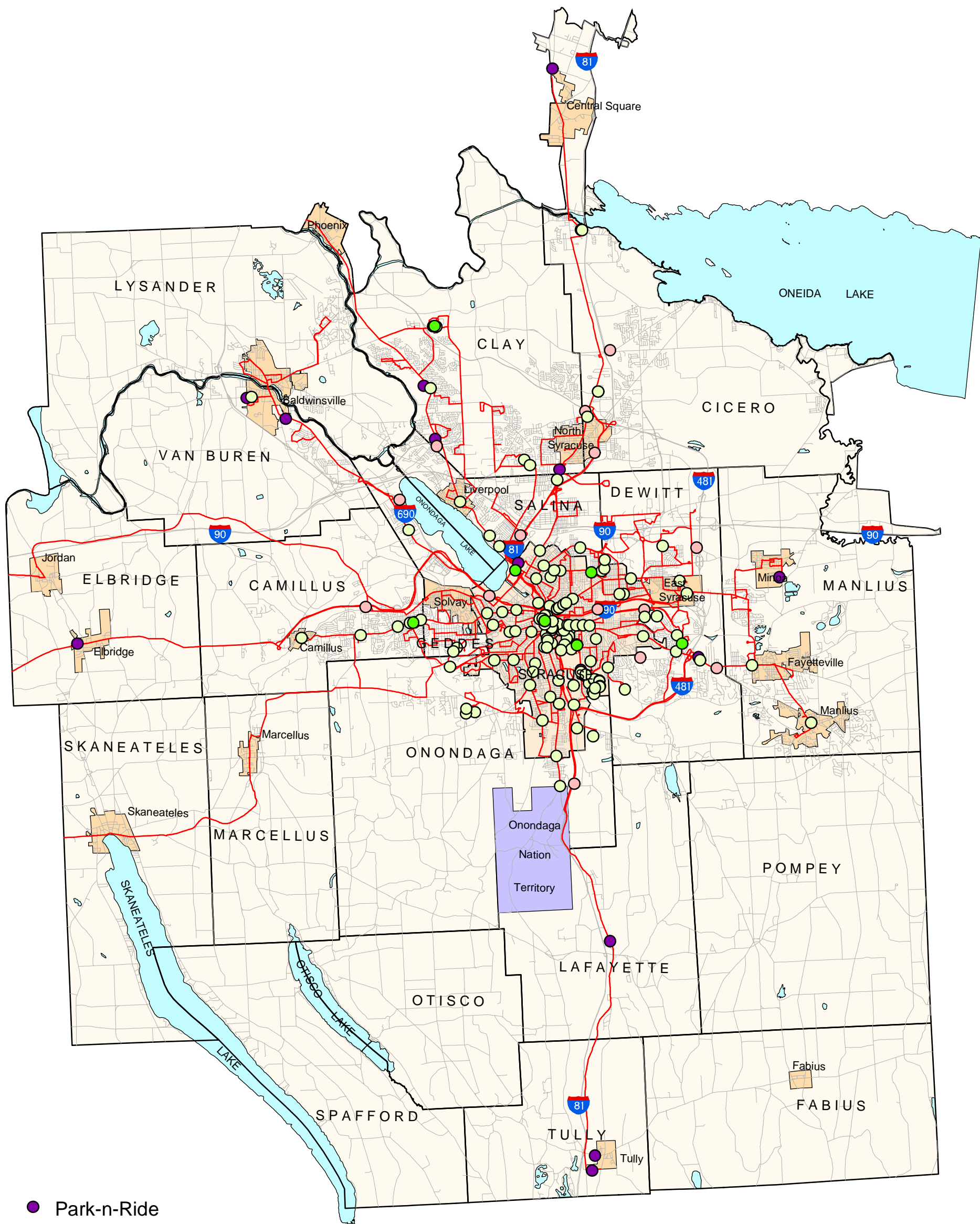
Another bicycle and pedestrian travel related issue that has been shared with the MPO is the need for connectivity between the major destinations within the MPO area, such as parks, shopping centers and colleges/universities. The SMTC's Bicycle Suitability Map (recently published and distributed) furthers this perception as it shows that many of the "popular" destinations have less than favorably rated roadways available for access.

Bicycle and pedestrian improvements continue to be made throughout the SMTC planning area. Improvements such as the addition of bicycle and pedestrian amenities (i.e., bike racks) at key locations, the upkeep of sidewalks and roads, the building of new bicycle and pedestrian facilities, and the continued inclusion of bicycle and pedestrian planning in all aspects of SMTC's work will further promote the use of non-motorized transportation in the MPA. Also, due to increased demand of the Bicycle Suitability Map which was first printed in 2003, the SMTC in early 2006 reprinted an additional 5,000 copies of the map that are free to the public. This map has been well received by the community and additional printings may occur in the future.

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.

3. Public Transit

Centro operates the public transportation system in Onondaga, Oswego and Cortland Counties. Centro operates fixed-route public transit systems and demand-responsive paratransit service with a total fleet of 250 buses housed in five garages; one each in Onondaga, Cayuga and Oswego Counties and two in Oneida County. Centro has made a commitment to convert its fleet to clean fuel technologies. Centro currently has 121 compressed natural gas (CNG) buses in its Onondaga County fleet, comprising (92%) of Centro's peak bus hour requirement of 132 buses. Centro plans to take delivery on 133 clean air diesel/electric hybrid, low floor buses by 2011. When this order is completed virtually all of Centro's regular route fleet will be clean fuel technology vehicles. Smaller, paratransit vehicles will continue to be diesel fueled and Centro will have clean diesel technology for these vehicles, as well. In an effort to promote multimodal transportation uses, bicycle racks can be found on the front of most Centro buses. All future bus purchases will include bike racks and will be clean fuel-technology vehicles.



- Park-n-Ride
- Rideshare
- Shelters
- Transit Hub



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Transit Service

Long-Range Transportation Plan 2007 Update

Map 13

- Towns
- Onondaga Nation
- Villages
- City of Syracuse
- Water
- Roads
- Transit Routes



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Data Sources: SMTC, NYSDOT, 2001
Prepared by SMTC, 08/2006

Centro transports 28,000 people per day in Onondaga County on over 100 transit routes. See Map 13 for transit routes in the MPO area. 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 also implemented community circulator routes that serve suburban areas without traveling into the center of Syracuse with limited success. In addition, locations such as regional shopping centers, the William F. Walsh Regional Transportation Center, and other outlying centers of activity serve as convergence points for transit routes.

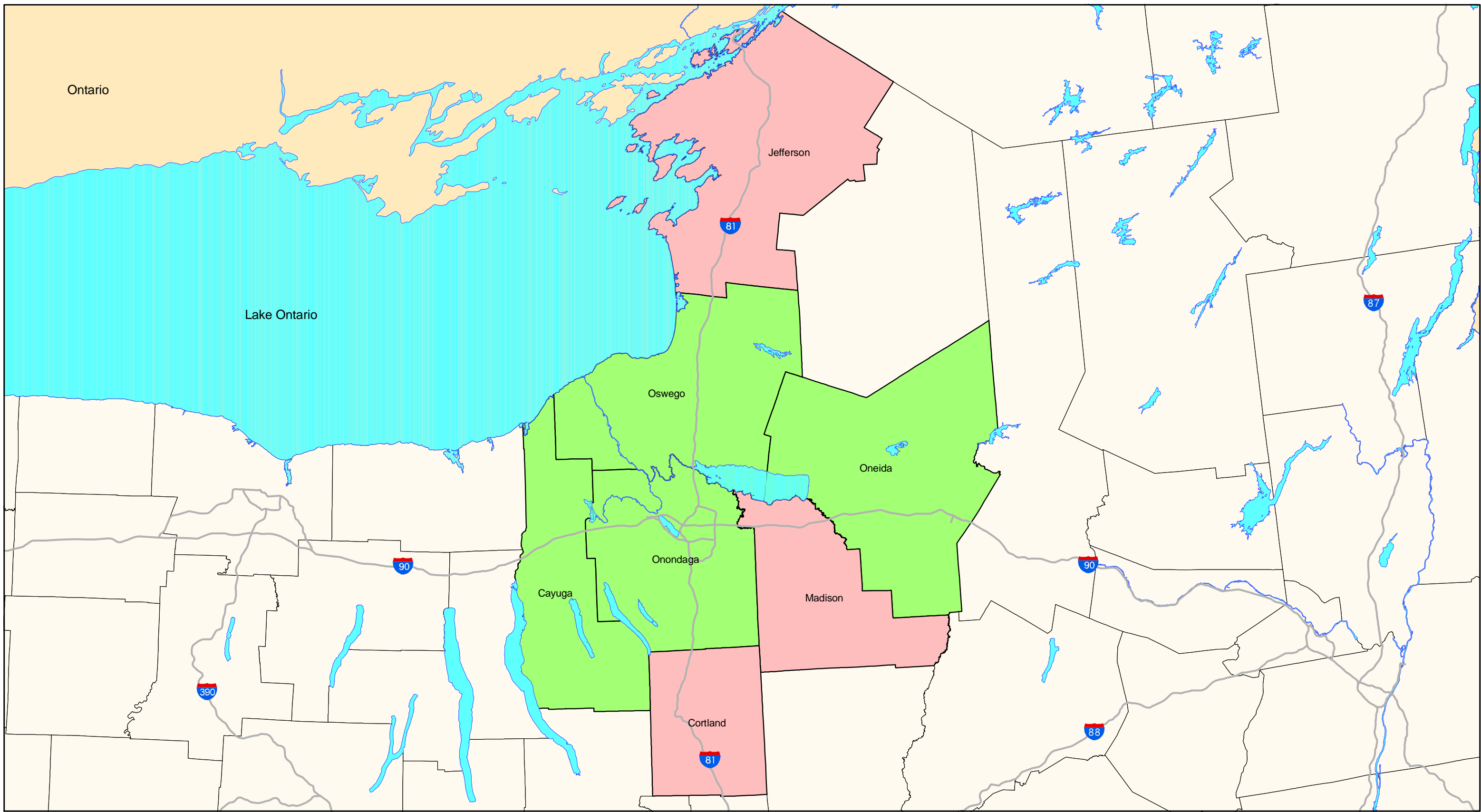
Centro has actively been involved in choosing the location of a new "Common Center" central location where a new facility will be built. The public meeting that reviewed the new location was held in December 2006.

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 SMTTC and into the Herkimer-Oneida County Transportation Study. See Map 14 for the area that Centro services.

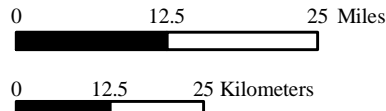
Centro operates connecting routes between the Cities of Syracuse, Oswego, Fulton and Auburn, as well as city transit services within each of these cities. Within Onondaga County, service frequencies in the rush hours are such that all Common Center bus stops are in continuous and heavy use. In the midday and evening periods and on weekends, up to 16 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.

Centro's routing system in Onondaga County was modified in November 2002 to better serve new markets and changing demographics. The updated Centro routing system provides better service to suburban markets, more "one-seat" rides for significant origin and destination pairings and minimizes the percentage of people needing to transfer. In addition, changes were made to accommodate the growing percentage of elderly patrons by connecting senior living and community centers to likely destinations such as Carousel Center, the William F. Walsh Regional Transportation Center and the many medical facilities on University Hill. Finally, a new, simplified route numbering system has been implemented. As a result, Centro ridership has risen substantially in the recent past. For example, in August, 2006, ridership in Onondaga County exceeded that for August, 2005 by 13%. This is indicative of a trend since November, 2002 during which monthly totals have increased as much as 24%. While some of this increase may be due to increasing fuel prices, the steady rise substantially exceeds what might reasonably have been expected from fuel increases alone.

Centro bus stops, bus shelters, park-and-ride and rideshare locations can be found throughout the MPO area (see Map 13). Fares to ride Centro are \$1.00 for travel within one fare zone with a \$.25 charge for crossing into a new zone. Senior citizens and



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CNYRTA Service Area






Long-Range Transportation Plan 2007 Update

Map 14

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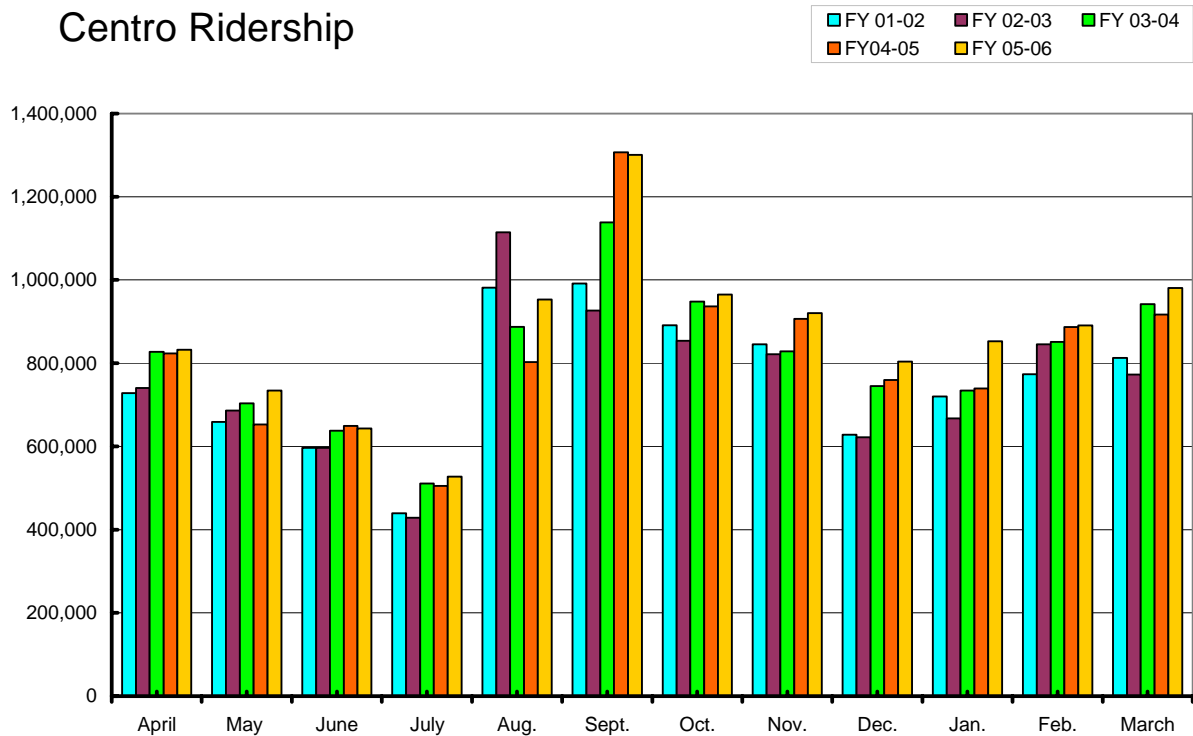


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Data Sources: SMTC, NYSDOT, 2001
Prepared by SMTC, 11/2006

-  CNYRTA Members
-  Eligible for CNYRTA Membership
-  Counties
-  Water
-  Interstates

disabled citizens are charged \$.50 for riding on Centro with a \$.10 extension zone charge. 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 \$.50. General ridership numbers for routes within the MPO area are noted in Table 4-6.

Table 4-6



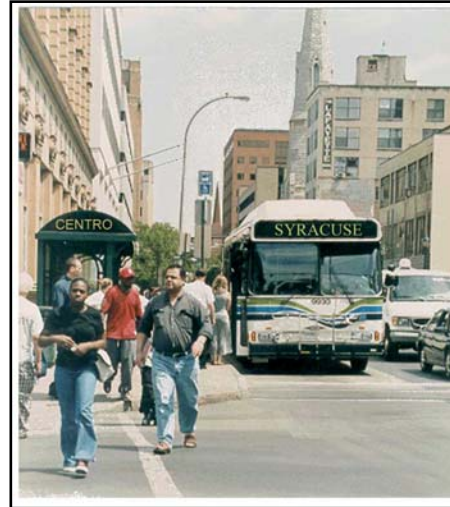
Source: CNYRTA

The CNYRTA ridership numbers noted in Table 4-6 represent Centro's service within all four counties in which the Authority operates. Ridership is reported by fiscal year and includes paratransit service.

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 \$1.25 within one fare zone, with a \$.50 charge for crossing into a new zone.

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 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 Bus Facility

As part of the Regional Mobility Action Plan (ReMap) report completed by Centro in 1999, a Mobility Management Center (MMC) operated by Centro was created to coordinate transportation for people with transit needs (taxi, vans, etc.) that have non-traditional hours and locations, such as rural areas. This program recently provided service to its 100,000th customer. The Mobility Management Center has proven to be successful and effective.

Following is a list of the greatest challenges facing the public and private transit systems within the planning horizon:

- While Centro's recent ridership gains are a sign of success, Centro may need to increase the size of its fleet to accommodate future growth if the trend continues. If Federal funding is not available, Centro's ability to take advantage of this trend will be constrained.
- 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.
- The transit system must attempt to accommodate the growing percentage of elderly patrons. This presents special challenges for the transit system as senior

living and community centers proliferate, often in hard to serve locations. Serving the elderly well also may require acquisition of more expensive equipment, such as low floor buses, voice enunciator systems, etc.

- There are operational and market-driven reasons for the location of Common Center at the intersection of Fayette and Salina Streets. The CNYRTA is endeavoring to move Common Center permanently to an alternate weather-protected location where buses can load and transfers may be made out of the general traffic flow. Discussions are ongoing and a new site has been identified. Planning for a new Common Center, capital acquisition, land acquisition, design and construction may take up to five years to accomplish.
- While Centro has committed to all future bus purchases being clean fuel technology, such equipment is more costly than diesel technology. If Federal funding is not forthcoming, this program may be jeopardized.
- 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. If Federal funding is reduced future ITS projects may be jeopardized.
- Centro also intends to enhance security throughout its transit system in response to Homeland Security concerns and in an effort to combat crime. Again, if Federal funding is reduced future security projects may be jeopardized.
- Intermodal connectivity will be enhanced when the Ontrack railroad bridge over Park Street is completed. This will allow Ontrack Shuttle and special events trains to access the William F. Walsh Regional Transportation Center.
- With the proposed development of the Carousel Center into DestiNY USA, there may be further opportunities for intermodal connectivity and enhancement of regional access to the William F. Walsh Regional Transportation Center, Hancock International Airport and other major trip generators in the urbanized area of the region.
- In order to continue to increase ridership, Centro must compete with the perception that the best mode of travel is via the single occupant passenger car.
- A stable funding source is needed for mobility brokerage activities of social services and paratransit services. Coordination of the multitude of funding sources and providers to maximize the efficiency of the taxpayers' investments should be imperative in the near future.

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. The Central New York portion of the Canal system is shown in Map 15.

Data on the number of lockings through the area is reflected in Table 4-7. Lock E-23 in the town of Clay is the busiest lock, and Lock E-24 the second busiest on the entire New York State Canal System. Forecasts for future years are not available.

Table 4-7

Number Of Pleasure Craft Passing Through Lockings (LOWERED OR RAISED FROM ONE LEVEL TO ANOTHER)						
Location	1995	1997	1999	2001	2003	2005
Lock E-23 State Canal Park, Town of Clay	8,924	7,553	8,072	7,115	6,114	5,384
Lock E-24 Village of Baldwinsville	4,484	3,746	4,171	4,152	3,965	3,142
Total NYS Canal System	126,051	138,619	141,965	135,181	126,523	119,113

Source: New York State Canal Corporation, *New York State Canal System Traffic Reports*, 1996 to 2005.



Lock 24 in Baldwinsville

The regional Central New York Canal Plan and the statewide Canal Recreationway Plan released in the early 1990's both outlined a program of planned improvements to address gaps in services along the system, and set forth goals and objects to enhance and improve the historic, recreational, and economic setting of canal communities throughout the system. Many of these improvements have become reality through programs at the federal, state, and local level

including the NYS Canal Revitalization Program which provided over \$35 million for canalside harbors, ports and trails. Two significant canal harbors, Oswego and

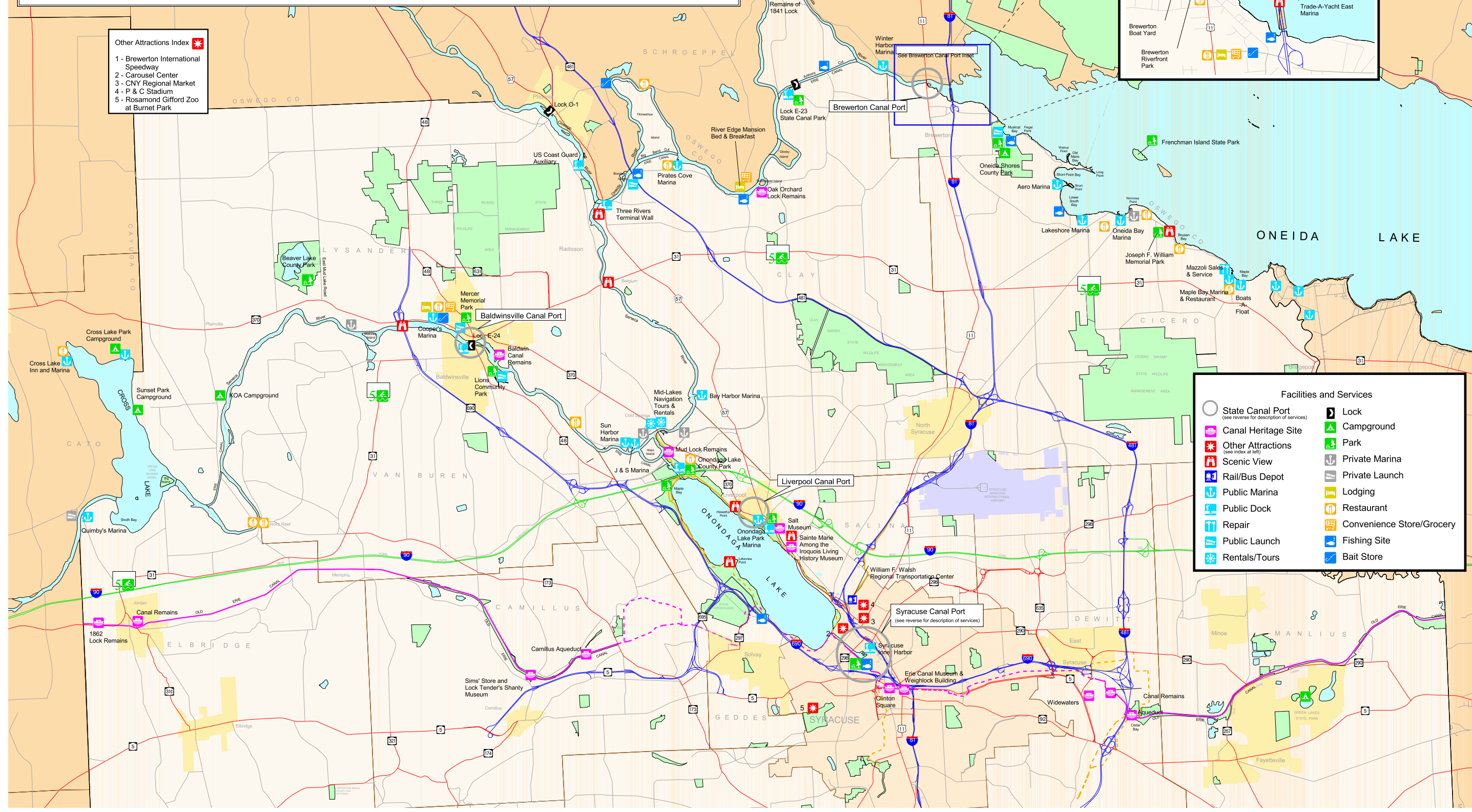
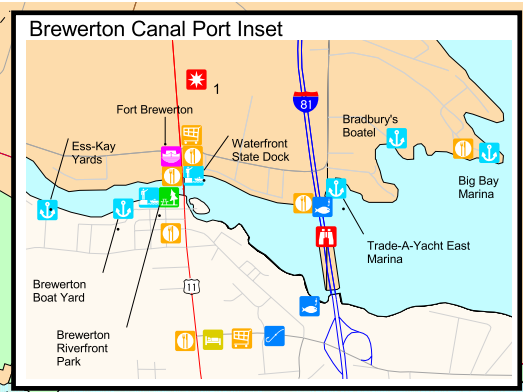
New York State Canal System

Services and Facilities for Public Use in Onondaga County

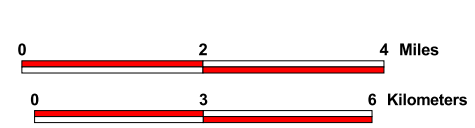
Long-Range Transportation Plan 2007 Update

Map 15

- Other Attractions Index**
- 1 - Brewerton International Speedway
 - 2 - Carousel Center
 - 3 - CNY Regional Market
 - 4 - P & C Stadium
 - 5 - Rosamond Gifford Zoo at Burnet Park



- Facilities and Services**
- | | |
|--|---------------------------|
| State Canal Port (see reverse for description of services) | Lock |
| Canal Heritage Site | Campground |
| Other Attractions (see index at left) | Park |
| Scenic View | Private Marina |
| Rail/Bus Depot | Private Launch |
| Public Marina | Lodging |
| Public Dock | Restaurant |
| Repair | Convenience Store/Grocery |
| Public Launch | Fishing Site |
| Rentals/Tours | Bait Store |



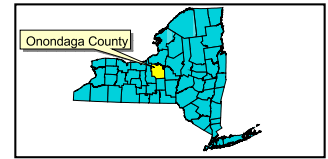
- Bicycle Routes**
- Existing Canalway Trail
 - Proposed Canalway Trail
 - Other Existing Trails
 - Other Proposed Trails
 - NYS Bike Route 5
- Roadways**
- Freeway
 - Tollway
 - Primary Route
 - Secondary Route



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Canal Locations: SMTC
Projection: UTM NAD83
Prepared By: SMTC
March 2002

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Seneca Falls, are in the Central New York Planning Region. Additionally, smaller ports offering boater and trail user services have been developed in numerous central New York communities, including Fulton, Phoenix, Baldwinsville, Brewerton, and Port Byron, and approximately 20 miles of new trail has been developed along the canal in Onondaga (12 miles) and Cayuga (8 miles) county.

Future opportunities for canal transportation improvements in this planning region include several projects announced as part of the recently announced Erie Canal Greenway Grant Awards (see Table 4-8). The Erie Canal Greenway initiative will build upon the Canal Revitalization Program by providing additional financial and technical assistance to canal communities pursuing canal related planning and development projects.

The Canal Corporation has introduced several new marketing initiatives as part of the Erie Canal Greenway program. The first annual Canal Clean Sweep held in 2006 included over 30 clean-up events in preparation for the 181st navigation season and in recognition of Earth Day. In addition, during the weekend of August 12 and 13, 2006, the Canal Corporation held the first annual statewide signature event, Canal Splash!, to highlight the history, beauty, culture and recreational appeal of the New York State Canal System. Throughout the two day, multi-location celebration, over 70,000 people attended the more than 85 events organized by State agencies, communities, non-profits and local businesses. The Canal Corporation will also continue a bi-annual Tourism Matching Grants Program to designated tourism promotion agencies for the development of NYS Canal System promotional materials consistent with regional themes set forth in the Canal Recreationway Plan.

These regional projects will be enhanced through the efforts of the Erie Canalway National Heritage Commission. The Management Plan for the Erie Canalway National Heritage Corridor was approved this year and the federal commission is expected to receive Federal funds of approximately \$1 million annually for ten years to preserve the historical significance of the canal, promote tourism to spur economic development and expand recreational use. Table 4-8 outlines the grant programs and locations.

The major issues and opportunities relating to water transportation in the MPO area that have been identified relate to the canal system and possible future ferry service. The Canal system is being marketed as a tourist attraction, and the development of the Inner Harbor in Syracuse on Onondaga Lake could improve as a featured destination for water transportation services. Additionally, the possible implementation of the ferry service across Lake Ontario traveling to destinations in Canada could greatly improve the capacity of water transportation services in the Central New York region.

Table 4-8
Erie Canal Greenway Grant Program (2006)
Onondaga, Cayuga and Oswego Counties

Project Title	Description	Location
Port Byron Old Erie Canal Heritage Park Restoration	This funding request is to rehabilitate and restore the Erie House, mule barn and blacksmith shop (National Register), located in Port Byron.	Port Byron
Nine Mile Creek Aqueduct Restoration Project	This request for funding is in the Town of Camillus to restore the Nine Mile Creek Aqueduct to an operable condition and upgrade approximately one-mile of canal bed between Warners Road and the aqueduct site. This project is also being funded by the TEP (See Chapter 4, Section B7 for more details).	Camillus
Erie Canal Museum Interpretive & Educational Exhibits	This request for funding is to redesign the Museum's first floor exhibition gallery to incorporate state-of-the-art design and technology with artifacts and archives drawn from the Museum's extensive collection. This project is also being funded by the TEP (See Chapter 4, Section B7 for more details).	Syracuse
Onondaga Lake Park Marina Dock Enhancement	This request for funding will be used to improve the existing marina by providing additional dock space and expand utility services	Liverpool
Henley Park, North and Lock Island Improvements	This grant to the Village of Phoenix is for projects situated adjacent to Canal Lock 1. Improvements include enhancement of boat launching facilities on North Island; kayak/canoe ramp at Henley Park and shoreline stabilization; and interpretive signage, and trail improvements on Lock Island.	Phoenix
South Shore West Trail Dockside Electrical Service & Water Supply Project	The Village of Baldwinsville will install marine electrical and water connections along the seawall on the South Shore West Trail.	Baldwinsville

Source: New York State Canal Corporation, 2006

5. Air Passenger Transportation

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. The facilities are modern and attractive 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.

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.

Air Passenger Service

The number of enplaned passengers through an airport typically fluctuates in response to changes in the economy and other local, national and international conditions.

The full utilization of Hancock International Airport also has 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 to the airport that offers more competitive airfares. Table 4-9 shows the most recent data available for the number of enplaned passengers in the years 2004, 2005 and 2006.

Table 4-9

Enplaned Passengers at Hancock International Airport		
2004	2005	2006
1,135,713	1,228,991	1,113,040

Source: City of Syracuse, Department of Aviation

Forecasts

Air traffic forecasts for the number of enplaned passengers vary depending upon the source as well as the point in time when a forecast is made. Table 4-10 shows the most recent forecast data available for enplaned passengers for the years 2007, 2012 and 2022 from the draft *Master Plan Update*, recently completed in September 2006.

Table 4-10

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.

Changing Needs and Impacts

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 and the war in Iraq 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.

6. Passenger Rail Service

Rail passenger service in the SMTC area is provided through two companies. The National Railroad Passenger Corporation (Amtrak) provides intercity rail passenger service in the Central New York region. The OnTrack shuttle trains operate over trackage operated by the Syracuse, Binghamton & New York Railway, a subsidiary of New York, Susquehanna & Western Railway (NYS&W). The passenger rail system in Onondaga County is shown in Map 16.

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 4-11). 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. With the decrease in travel following the disaster of September 11, 2001 and the addition of discount airline services, patronage has declined during the last three years. Amtrak is examining additional marketing and service restructuring.



Ontrack Train


Table 4-11

Total Arriving and Departing Rail Passengers William F. Walsh Regional Transportation Center 1980-2005							
1980	1990	1999	2000	2001	2002	2003	2005
120,547	118,147	125,459	132,173	127,589	108,650	107,434	95,331

Source: Amtrak



- OnTrack Passenger Stops**
- | | |
|------------------------|------------------|
| 1) Carousel Mall | 4) Colvin Street |
| 2) Armory Square | 5) Rock Cut Road |
| 3) Syracuse University | 6) Jamesville |

 Hancock Airport (Commerical Service)
  OnTrack
  Amtrak
  Regional Transportation Center



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


Air and Rail Passenger Movement Facilities Long-Range Transportation Plan 2007 Update

0 2 4 Miles

Map 16

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 Datasources: SMTC, NYSDOT, 2001
 Prepared by SMTC, 11/2006



-  Towns
-  Villages
-  City of Syacuse
-  Hancock Airport
-  Water
-  Roads

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As a result of Onondaga County's efforts, a Task Force of County Legislative Chairs from across Upstate New York was formed in 1997 to address the issue of incremental implementation of High Speed Rail in New York State and the enhancement of rail freight service to the region.

The Task Force has been instrumental in working to make changes in local taxation of rail properties. For example, with only 17% of its tracks in New York State, CSXT (railroad) paid approximately 50% of its system-wide tax burden to New York State jurisdictions. Legislation supported by the Task Force and signed by the Governor in February 2003 lowered the ceiling for municipal taxation of railroads and exempted certain capital improvements for a specified period, thereby reducing the costs of rail operations and shipping and making New York State more competitive. The legislation also has a provision for reimbursing the municipalities during a transition period.

The Syracuse, Binghamton & New York Railway began operation of OnTrack in 1994 with a recreational rail shuttle service. The service connects Carousel Center to Syracuse University with a stop at Armory Square in the Syracuse Central Business District.



OnTrack in Syracuse Central Business District

During the summer months, service occasionally continues on to Jamesville. A future extension is planned that will provide an additional stop at the William F. Walsh Regional Transportation Center. This future stop will provide passenger service to the adjacent P&C Stadium and Regional Market. Service is currently limited to special events and Saturdays year round.

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.

The proposed Carousel Center expansion to become DestiNY USA may include the construction of a fixed rail service, potentially connecting the Syracuse Hancock International Airport with the William F. Walsh Regional Transportation Center,

DestiNY USA, various Downtown locations and the University Hill area. At this writing, no decision has been made on whether to construct a fixed rail service but, if this occurs, there is presumably a potential for replacing the OnTrack service currently provided since the possible route and service points at this juncture would appear to overlap.

In the Central New York region, there is a need for improved service for passenger rail transportation. In the future, both OnTrack and Amtrak rail services may be in greater demand and should operate with greater consistency. An expansion of these services beyond the current capacity could improve viable transportation options. In addition, the possibility of studying high-speed rail service to be built for enhanced connectivity on a regional basis exists and is being examined throughout the State.

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 17.





Air Cargo












Air Cargo at Syracuse Hancock International Airport



Ports

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

Freight Rail Lines & Owners

-  Auburn Road (Finger Lakes)
-  Baldwinsville Secondary (CSXT)
-  Chicago Line (CSXT)
-  Fulton Secondary (CSXT)
-  Jamesville Industrial Track (Susquehanna)
-  Lake Industrial Track (Susquehanna)
-  Montreal Secondary (CSXT)
-  Syracuse Branch (Susquehanna)
-  Hancock Airport








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Air, Water and Rail Freight Movement Facilities Long-Range Transportation Plan 2007 Update

Map 17

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Datasources: SMTC, NYSDOT, 2001
Prepared by SMTC, 11/2006



-  Towns
-  Villages
-  City of Syracuse
-  Water
-  Roads

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Hancock International Airport. 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. Examples of freight carriers at Hancock include, but are not limited to, Airborne, Business Air, Emery, Federal Express and UPS. Over the past three decades, the tonnage of air cargo has increased from 5,000 in 1967 to 186,784 in 2005 (including mail)¹¹.

Of major importance to the area business community is the fact that 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.

General Aviation Airports. 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.

Highway Freight

Most products utilized by industry or sold in retail outlets at some point move by truck. Air, rail and water intermodal shipments have a trucking aspect at both ends of their trip. In Central New York, a majority of freight shipments move directly by truck from origin to destination. With trucks playing an important role in freight transportation, almost 75% of motor carrier revenues come from long-distance trucking, and the remainder from local trucking. Most truckload freight travels less than 500 miles. Truckloads traveling over 500 miles are more economical if shipped via rail intermodal service. The local and regional nature of trucking was highlighted in the 1993 and 1997 U.S. Department of Transportation Commodity Flow Survey, which found that 30% of the value and 55% of the tonnage moves between locations that are less than 50 miles apart. The SMTC area has a system of Qualifying Highways (national network) and Access Highways designated for use by Special Dimension Vehicles in New York State. Although this network, shown on Map 4 (Functional Classification) is the primary network for truck movements, trucks with trailers measuring 48 feet or less in length are allowed on any roadway not otherwise restricted by local laws or regulations. The Syracuse Metropolitan Area, with Syracuse located at the interchange of the two major truck routes of Interstates 81 and 90 (New York State Thruway), is also home to many regional distribution centers serving the Northeast and eastern Canada, as well as major intermodal connectors to rail and freight networks.

¹¹ The 1967 data is from the Central New York Regional Planning and Development Board, *Central New York Regional Aviation System Plan*, 1996. The 2005 data is from the ACAIS report found on the www.faa.gov web site.

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.

CSXT Transportation - CSXT Transportation (CSXT) 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 Montreal Secondary lines to the north of Syracuse, with the Montreal Secondary being the gateway to Montreal and Canada. CSXT has experienced a three-percent increase in local traffic annually over the last several years and currently handles about 600 carloads of local traffic weekly. Another significant segment of CSXT business is the rail/truck intermodal freight terminal located in the DeWitt rail yard. CSXT handles approximately 50,000 containers annually at the DeWitt facility and this number has grown significantly as former Conrail routes are integrated into the CSXT Service Lanes. CSX Intermodal is currently examining the expansion of the facility to accommodate growth of this market segment. 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 CSXT 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 recently been transformed into a carload carrier as automobile shipments have shifted to other routes via other railroads. 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 - The Finger Lakes Railway, operating the shortline between Solway and Geneva, has produced significant results since taking ownership of the former Conrail Geneva Cluster (including the Auburn Branch). The Finger Lakes Railway has been able to stop the decline of rail traffic in its service area and has increased its business nearly 300 percent. Carloads have increased from 5,600 in 1995 to approximately 17,000 in 2006. Each carload is a business choice made by a shipper in the region to most effectively and economically move their product. Each rail carload is the equivalent of four tractor-trailers resulting in the current years traffic on the Finger Lakes Railway keeping approximately 60,000 tractor-trailers off the regional highway

network. There are positive air quality and highway maintenance impacts from this and other rail freight operations. Further examination of this aspect is included in the Freight Rail Bottom Line Report issued by the American Association of State Highway and Transportation Officials (AASHTO) in 1993. In addition, the rail operation has had a positive impact on job creation and retention in Central New York. Finger Lakes Railway has increased from five employees in 1995 to around thirty currently. It has also indirectly created or secured 1,037 jobs in the manufacturing sector. The Finger Lakes Railway customers see benefits due to the interchange rights with two Class 1 railroads (CSXT and Norfolk Southern (NS)) instead of one. Interchange with CSXT occurs in Solvay and Lyons, while interchange with the NS occurs in Geneva.

Water 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.



Port of Oswego

The State Canal Corporation, together with private entrepreneurs, have been implementing a statewide revitalization program pursuant to seven regional canal plans and the *New York State Canal Recreationway Plan*. The SMTC area (Onondaga County) is included in the *Central New York Canal Plan*, which covers the entire Syracuse MSA of Cayuga, Madison, Onondaga and Oswego Counties.¹² The Syracuse MSA accounts for approximately 19% of the entire State Canal System, with all or parts of the Cayuga-Seneca Canal, Erie Canal and Oswego Canal.

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.¹³ The tonnage carried on the entire canal system has decreased significantly in recent years. The most recent data available shows that in 2003 the total tonnage was 8,711.¹⁴

Commercial passenger vessel traffic is also increasing. For example, tour ships sailing from Rhode Island traverse the Hudson River to the Erie Canal and proceed north on the Oswego Canal to Montreal and then south along the Atlantic Coast, returning to Rhode

¹² Central New York Regional Planning and Development Board, *Central New York Canal Plan*, 1993.

¹³ New York State Canal Corporation, *Traffic Report*, 1999, p.7.

¹⁴ New York State Canal Corporation data.

Island. As with the shipment of goods, the data is too incomplete to provide a statistical overview.

Freight Corridors

As previously mentioned, 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 NYSDOT and SMTC and resulted in a draft of Corridor mapping on 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 9 and Map 16 show the resulting output from this effort.

Map 18 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.

Map 18 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.

In order to improve economic and regional growth in Central New York, the cost of freight movement needs to be lowered, better facilities should be made available (especially for truck freight), and the current system should be used to its full potential.

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



Note: SMTc staff produced Working Document for NYSDOT Corridor Initiative

Regional Freight Corridors Long-Range Transportation Plan 2007 Update

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0 2 4 Miles

Map 18



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Prepared by SMTc, 11/2006

- Towns
- Villages
- City of Syracuse
- Water
- Freight Facilities
- Primary Freight Corridors
- Freight Rail Lines
- Roads

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B. Emerging Initiatives

1. Planning Documents in the SMTC Area

2010 Development Guide for Onondaga County

In 1998, the Syracuse-Onondaga County Planning Agency presented an update to its *2010 Development Guide for Onondaga County*. The *2010 Plan's* vision, goals and policies 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.

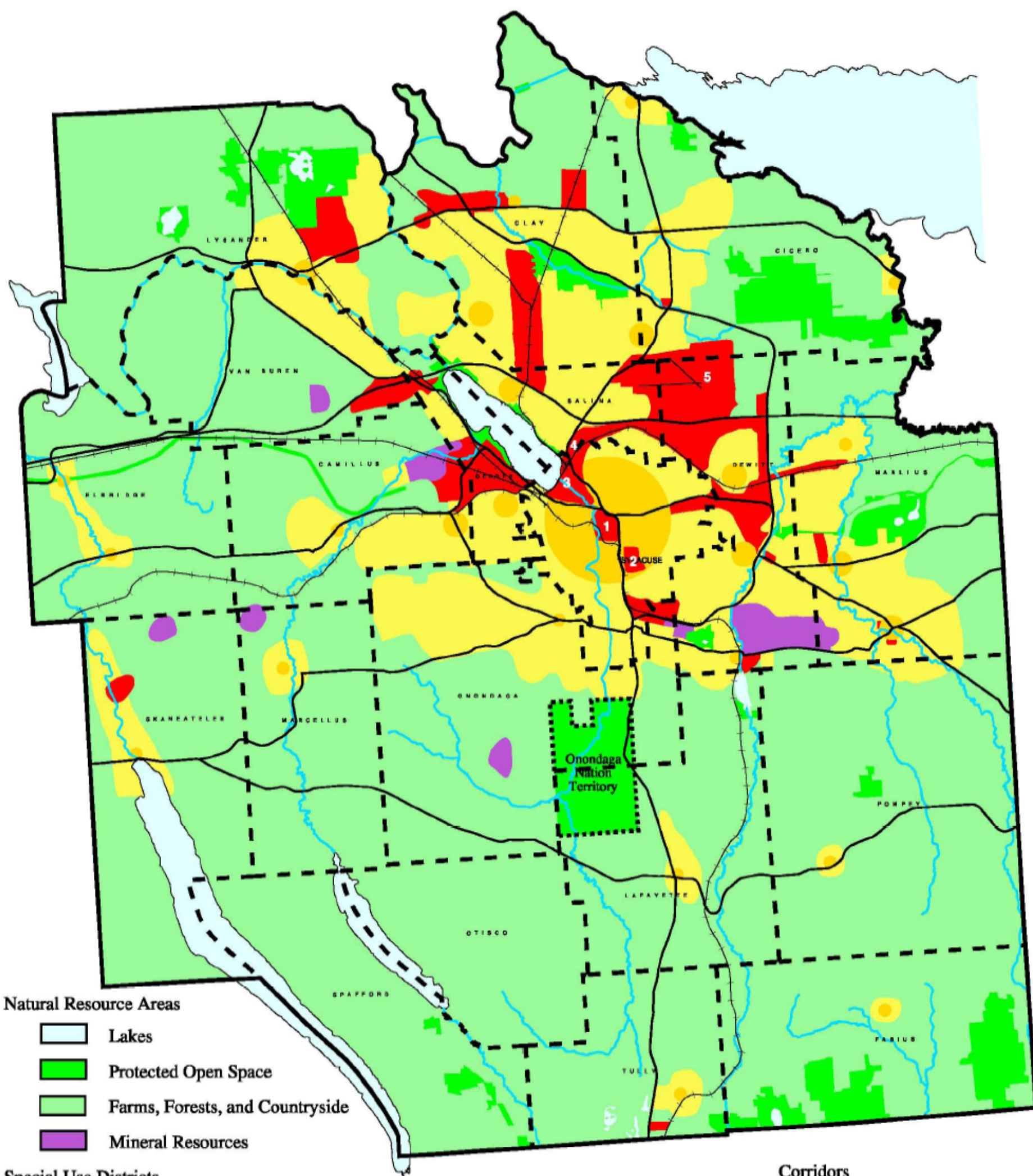
In furthering those goals, Onondaga County's *Policies for Investment and Land Use*, as defined in the 2010 Plan, call for investment in existing communities, preservation of existing infrastructure and transportation assets, sustainable urban and suburban settlement patterns, and protection of the rural 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 following *Land Use Vision* map (Map 19) 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



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 2007 Update

Map 19

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Datasources: SMTC, NYSDOT, 2001
Prepared by SMTC, 01/2007

zoning regulations tend to encourage strict separation of land uses, thus resulting in dependence on the automobile and de-densification of urban areas.

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.

City of Syracuse Comprehensive Plan

According to the City of Syracuse’s Comprehensive Plan 2025, the City prepared its first and only comprehensive plan in 1919. In 2001, it became obvious that the City needed to take a broad look at all of the issues affecting the community and to devise a plan to respond to the rapidly changing global and regional economy. A comprehensive view of the City was necessary; it was time to evaluate the City’s assets and trends and prepare a collective vision for the future of the City’s economy, community facilities, and services.

As a basis for this vision, 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.¹⁵

The City has since begun compiling information for the Land Use Plan which would be adopted as a component of the Comprehensive Plan. Research for the plan began in 2006 and outreach to neighborhoods has begun in 2007. The land use plan would be created in 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 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.

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 DOT'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

¹⁵ <http://www.syracuse.ny.us/Pdfs/Comprehensive%20Plan/Full%20Report.pdf>

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.¹⁶

The City has since begun compiling information for the Land Use Plan which would complement the Comprehensive Plan. Research for the plan began in 2006 and outreach to neighborhoods has begun in 2007. The land use plan would be created in stages throughout 2007, 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 guidelines. The City will then take the recommendations from the land use planning process and in 2008 will revise the zoning ordinance.

2. Environmental Justice

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.¹⁷

¹⁶ Strategies for a New Age: New York State's Transportation Master Plan for 2030.

¹⁷ Transportation & Environmental Justice Case Studies. U.S. Department of Transportation Federal Highway Administration, Federal Transit Administration. December 2000. Pg ii.

Changing Needs and Impacts

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 performed 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.”¹⁸ 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 20) represents consolidated target areas for environmental justice activities within the SMTC study area. It includes concentrations of minority, low income and elderly populations.

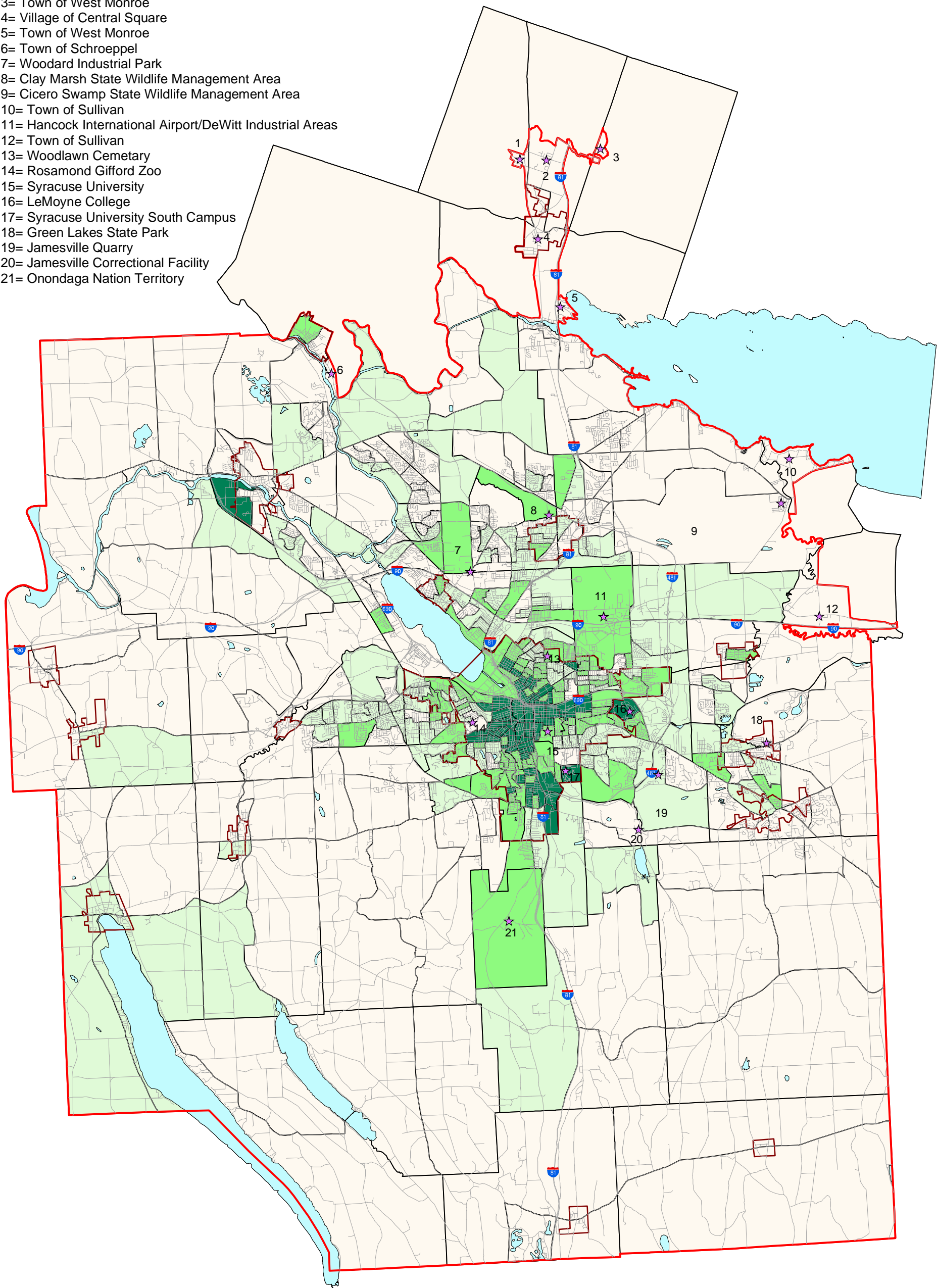
Subsequent actions include strategies for improving the accessibility and distribution of goods and services at neighborhood levels through land use and development patterns.

Title VI

The Title VI project was undertaken by the SMTC on behalf of Centro as part of the 2004-2005 Unified Planning Work Program (UPWP). The main objective of the project was to complete the required triennial Title VI report as specified by the United States Department of Transportation (USDOT) Federal Transit Administration (FTA).

¹⁸ <http://www.fhwa.dot.gov/ctpp/about.htm>

- 1= Town of Hastings
- 2= Town of Hastings
- 3= Town of West Monroe
- 4= Village of Central Square
- 5= Town of West Monroe
- 6= Town of Schroepfel
- 7= Woodard Industrial Park
- 8= Clay Marsh State Wildlife Management Area
- 9= Cicero Swamp State Wildlife Management Area
- 10= Town of Sullivan
- 11= Hancock International Airport/DeWitt Industrial Areas
- 12= Town of Sullivan
- 13= Woodlawn Cemetery
- 14= Rosamond Gifford Zoo
- 15= Syracuse University
- 16= LeMoyne College
- 17= Syracuse University South Campus
- 18= Green Lakes State Park
- 19= Jamesville Quarry
- 20= Jamesville Correctional Facility
- 21= Onondaga Nation Territory












Map 20

100 Clinton Square
126 North Salina Street, Suite 100
Syracuse, New York 13202
(315) 422-5716
Fax: (315) 422-7753
www.smtcmppo.org

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

Basemap Copyrighted by NYSDOT, 2001
 Datasources: SMTC, NYSDOT, 2000
 Prepared by SMTC, 08/2006

Combined Target Areas
by Block Group

-  Below threshold
-  Low-Priority Areas
-  Medium-Priority Areas
-  High-Priority Areas
-  Residential area
-  City/Villages
-  SMTC MPA
-  Water
-  Roads

The Title VI report briefly reviews the requirements that Centro has met regarding active Title VI complaints, obtaining financial assistance, compliance reviews, the signing of the Annual Certifications and Assurances, and recent creation of fixed facilities. The report also included details regarding the data, mapping, and analysis that were completed and instrumental to reaching the concluding determination that Centro has sufficiently met all of the Title VI requirements.

The report determined that when identifying possible areas of non-compliance, Centro has an excellent distribution of transit services for all types of populations; it serves all types of Census Tracts, including Tracts with higher populations of minorities, elderly, and low-income people, and also serves Tracts that fall outside of these target areas.

Based on the data presented, the only area that is possibly non-compliant is northern Oswego County, particularly the Village of Pulaski. Oswego County Public Transit, a division of Oswego County Opportunities, Inc. (OCO), offers local transit service in this area. Since local trips within this area can be made via OCO, Centro's role would be a provision of a long distance transit connection to Syracuse. Centro is aware of this gap in service and has been taking steps to research extending transit routes to this location. The recommendation for the Title VI report was for Centro to review services to this area, as it is a medium-priority combined variable target area. Centro serves all other low, medium and high target areas in Onondaga, Oswego, and Cayuga Counties.

The Title VI report found that Centro puts forth a comprehensive effort to ensure that no group of people in their service area be excluded from transit services. Centro services the defined target areas to a very high degree as evidenced in the report. This service equity is critical since Centro is funded in part by the Federal Transit Administration.

3. Transportation Needs for Senior Citizens

At the suggestion of the FHWA in furthering environmental justice initiatives, and recognizing a growing elderly population (as discussed in previous chapters), 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, which provided the SMTC with much of the data contained in this section.

According to information currently available, there are at least 167 facilities (not including traveling services for seniors such as meal delivery) that meet a variety of human needs at specific locations within Onondaga County¹⁹. These facilities are shown on Map 21 and are listed in Appendix G. Eleven types of facilities are available in

¹⁹ Onondaga County Department of Aging & Youth, *Resources for Seniors in Onondaga County*, 2000.

Onondaga County as identified below; some locations have more than one type of facility on site.

- 3 Adult Family-Type Homes (single family homes in which the owner provides services)
- 11 Adult Homes (for adults of all ages)
- 6 Assisted Living Programs (personal and health care services provided)
- 8 Enriched Housing complexes (long-term care with all services provided)
- 85 Independent Living complexes (apartments)
- 1 Independent Living Services facility (an alternative to nursing home care)
- 8 Medical Model Adult Day Care Centers (medical and social/recreational daytime care)
- 13 Nursing Homes (skilled nursing and chronic custodial care)
- 10 Retirement Communities (apartments and town homes)
- 18 Senior Centers (social, recreational, health and human services support)
- 4 Social Model Adult Day Care Centers (social and recreational daytime care)

There are also many other types of services available for seniors that are not included in the previous list of facilities.

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 21 transportation services providing access to general or specific destinations are available (see Appendix G)²⁰. 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

²⁰ Onondaga County Department of Aging & Youth, *Resources for Seniors In Onondaga County*, 2000, p. 47.

the lower wage scale. A few examples of senior facilities that are currently serviced by Centro include Brighton Towers, Bernardine 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 Towers, 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. However, at this juncture, no information is readily available to the SMTC on what these needs may be. 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 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.²¹ 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.

4. Intelligent Transportation Systems (ITS)

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.

²¹ U.S. Bureau of the Census, 1970 and 2000.

The NYSDOT in conjunction with the SMTC and its member agencies developed a strategic plan 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 website at: www.smtcmpo.org/finalreps.asp#its

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.

ITS Opportunities in the Region

Onondaga County, with an area of approximately 800 square miles, contains the fourth largest upstate city (Syracuse) in New York. Onondaga County and the City of Syracuse occupy a central position within the local, regional, and national transportation system. The region's roadways, public transportation, rail, and airport provide outstanding access to services and employment. In Onondaga County, two major interstates (Interstate 81, which provides connections to the north and south and the New York State Thruway - Interstate 90, which provides access to the east and west) meet in Onondaga County and provide access to all of the Northeast and Canada. In addition, I-690 runs through the City connecting the east to the west. There are approximately 3,100 miles of roadway and almost 500 bridges in Onondaga County. However, in some cases, connections among these facilities, and between these facilities and the local road network, is limited. There are some gaps in the transportation system, and some facilities have reached capacity. Implementation or expansion of ITS strategies/elements could improve the overall safety and mobility of Onondaga County as well as the entire region.

ITS Stakeholder Coalition

In order to build consensus to deploy ITS in an integrated manner, major ITS stakeholders in the region were identified and coalitions among them forged through monthly meetings, workshops and seminars. The core group of the stakeholders which met monthly for the duration of the project included representatives from the NYSDOT, the NYSTA, the SMTC, the City of Syracuse Department of Public Works, the OCDOT, the CNYRTA, the New York State Police (NYSP), the City of Syracuse Police, the

Onondaga County Sheriff's Office, the City of Syracuse Fire Department, and the Onondaga County Department of Emergency Communications 911 Center.

ITS Vision & Goals

The vision for the ITS strategic plan for the Syracuse Metropolitan Area depicts the future regional transportation system in a 20-year horizon. The ITS goals have been developed in view of the deficiencies identified in the region's existing transportation system as well as the long-term vision of the future regional transportation system. The process of identification of vision, goals, and of selection and prioritization of the appropriate ITS service options involved the participation of a wide array of ITS stakeholders. A series of seminars/meetings/workshops were held to develop a consensus and understanding of the ITS goals and service needs for the area.

ITS Implementation Plan

The final product of this 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. Table 4-12 provides a summary of capital costs for some of the recommended projects in the strategic plan. The annual operations and maintenance costs were also estimated as part of the projects, but are not detailed in Table 4-12.

Status of ITS Projects by Agency

Each project identified in the implementation plan was defined with a time frame for implementation, the required components/technologies, locations of deployment, and costs of deployment and operations. With regard to defining a project's implementation time frame, the following criteria were used:

- "Early Action" projects are critical to the operations of the region's transportation infrastructure, and they are recommended for immediate deployment.
- "Short-term" projects are recommended for deployment in one through five years time horizon. These projects are intended to serve the region's immediate transportation needs.
- "Mid-term" projects are recommended for deployment in the six through ten years time horizon. These mid-term projects will build on the short-term projects and provide enhanced functionality and coverage.
- "Long-term" projects are recommended for deployment in the eleven through twenty years time horizon. The long-term projects are intended to expand on the short-term and mid-term projects to complete the comprehensive ITS deployment in the region.²²

²² Syracuse Metropolitan Area ITS Strategic Plan Executive Summary:
http://web.smtcmpo.org/extranet/smtc/reports/ITS_StrategicPlan/1-ExecutiveSummary.pdf

Table 4-12
Summary of Recommended Project Costs

Agency	Deployment Time Frame	Number of Projects	Estimated Capital Costs
NYSDOT Region 3	Early Action	3	\$6.6 M
	Short Term	14	\$ 33.1 M
	Mid Term	9	\$48.8 M
	Long Term	8	\$27.9 M
	TOTAL	34	\$116.4 M
City of Syracuse DPW	Short Term	11	\$ 26.0 M
	Mid Term	9	\$20.5 M
	Long Term	4	\$30.4 M
	TOTAL	24	\$77.0 M
Onondaga County DOT	Short Term	10	\$16.8 M
	Mid Term	8	\$10.4 M
	Long Term	3	\$2.9 M
	TOTAL	21	\$30.1 M
New York State Thruway	Early Action	3	\$4.8 M
	Short Term	3	\$ 4.0 M
	Mid Term	3	\$5.6 M
	Long Term	2	\$2.3 M
	TOTAL	11	\$16.8 M
Central NY Regional Transportation Authority	Short Term	12	\$16.1 M
	Mid Term	11	\$23.1 M
	Long Term	9	\$15.2 M
	TOTAL	32	\$54.2 M

Source: ITS Strategic Plan Executive Summary

The following is a list of ITS Projects by Agency, including implementation time frames.

- **City of Syracuse:** There are 24 projects put forth via the ITS Strategic Plan as of December 2006.
 - 11 short-term (with 1 completed and 7 in progress)
 - 9 mid-term
 - 4 long-term with 1 in progress

Some highlighted City of Syracuse projects worth noting include the evaluation and expansion of the City's existing Traffic Signal Communications Network. Currently the City has 143 Signals interconnected via a fiber optic communications network with central control at the Traffic Management Center at City DPW. The existing control system uses MIST software operating on an OS2 platform. A major portion of this project will be to determine if the City should stay with the MIST software but move to a Windows platform, or to replace the entire system. The City is currently in

contract negotiations with their consultant and the scope of work will include not only this project but others as well. Also included in this contract is the design and construction of an Interconnect Expansion Project on Geddes and West Genesee Streets. The project includes upgrading traffic signal equipment at approximately 24 intersections and installing traffic detection devices and video cameras. Currently, the TIP contains \$2.6 million dollars of CMAQ funds for the project. Additionally it includes the 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.
 - 10 short-term (with 2 completed and 5 in progress)
 - 8 mid-term (with 1 in progress)
 - 3 long-term

Some Onondaga County projects worth noting include:

- A completed project for a closed loop interconnecting 14 intersections along Route 57. Approximately six miles of conduit and fiber was installed and the signals are now on-line and being monitored from both the County's North Area Signal Shop and their main office in downtown.
 - The Taft Road Signal Expansion Project is also partially underway, with a portion of it currently in design. The project includes a wireless network to connect 17 traffic signals and will also include the installation of three CCTV cameras. OCDOT will be allowing NYSDOT to coordinate two of their lights on the county system.
 - Additional Onondaga County ITS initiatives include the conversion of older traffic controllers and Vehicle Fleet Administration.
- **NYSDOT Region 3:** There are 34 projects put forth via the ITS Strategic Plan for NYSDOT Region 3 as of December 2006.
 - 3 early action (with 2 completed and 1 in progress)
 - 14 short-term (with 5 in progress)
 - 9 mid-term
 - 8 long-term

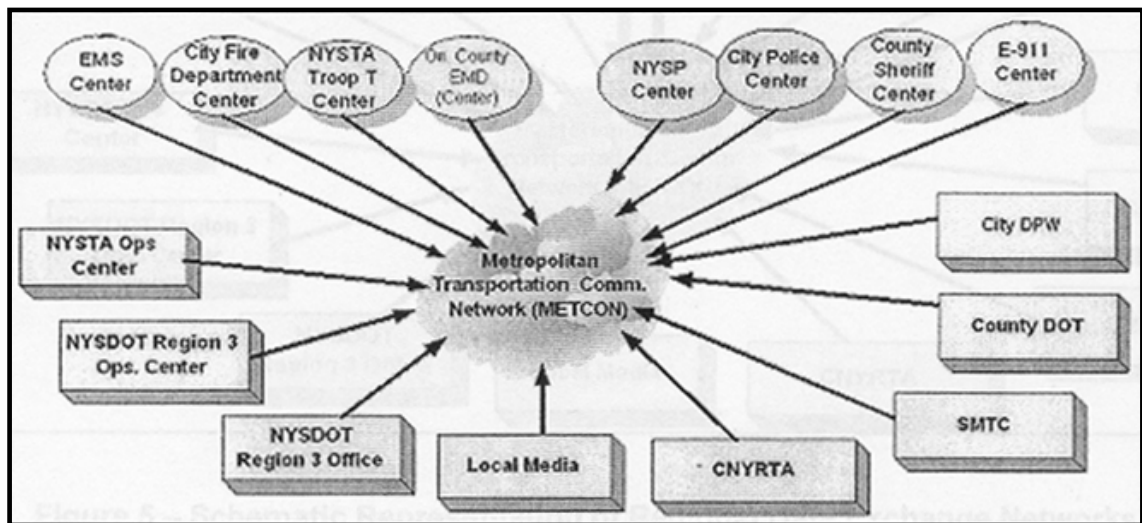
Some NYSDOT projects worth noting include:

- One of the three early action projects completed is the construction of a Traffic Management Center. The Center is located in the State Office Building and has been operational since October 2004. It is staffed with

NYSDOT employees and is operational 24/7. At the TMC traditional and unique activities occur, and it is a central resource for Region 3.

- Another completed early action project is the new SMARTNET Regional Information Exchange Network. SMARTNET stands for:

S – Syracuse
M – Metropolitan
A – And
R – Region 3
T – Transportation
NET – Network



SMARTNET allows for the exchange of this Information via web. It is truly multi-jurisdictional and requires coordination and cooperation of the NYSDOT as well as other MPO member agencies. This graphic shows the various agencies involved in the SMARTNET project.

- The third early action project was to develop a Regional Freeway Management System, which is being built in phases. Currently, I-81 is 99% complete and contains cameras, speed detectors and variable message signs, which are currently on line to



the TMC. Interstate 690 is 50% complete. The northern portion of I-481 is in design with a letting date of October 2006 and the southern section is scheduled for a 2007 letting.

- Another initiative of NYSDOT was the development of the Traffic Operations Working Group. Various agencies participate and are working together to undertake a variety of initiatives. Their tasks include Detour Planning & Review, Incident Review, and other activities. The list of agencies includes:
 - NYSDOT
 - NYSP
 - NYSTA
 - Onondaga County Sheriff, Emergency Management, DOT, 911
 - City of Syracuse Police Department, Fire Department, and the Department of Public Works
 - SMTC
 - Town of DeWitt Police
 - East Syracuse Police
- **New York State Thruway Authority:** There are eleven projects put forth via the ITS Strategic Plan for the Thruway Authority as of December 2006.
 - 3 early action
 - 3 short-term
 - 3 mid-term
 - 2 long-term
- **Centro:** There are 32 Projects put forth via the ITS Strategic Plan for Centro as of December 2006.
 - 12 short-term (with 4 completed and 4 in progress)
 - 11 mid-term (with 2 in progress)
 - 9 long-term

Some CNYRTA projects worth noting include:

- Automated Vehicle Locator (AVL) System
- Radio System Upgrade
- Automatic Passenger Counters
- Surveillance System
- The entire fleet will be equipped with both Counters and a Surveillance System by 2010

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 website at: www.smtcmptpo.org/finalreps.asp#its

5. Security

In the new SAFETEA-LU legislation, an additional planning factor was added to address security as its own entity (see Chapter 1 for the planning factors), and 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 most recent review of the SMTC in September 2005 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 being introduced to the MPO planning processes, notably via the SAFETEA-LU legislation via the separation of the safety and security planning factor, and the new 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. However, most of the issues related to security and transportation are outside of the purview of the MPO. Yet, the MPO can act as a conduit to facilitate interagency cooperation to that end.

The NYSDOT has included a section in their recently adopted 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 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.²³

Centro is also implementing new security measures to be proactive regarding security concerns. They have received a grant to incorporate more fencing and cameras at the bus garage facility and have continued to pursue upgrades that include security measures. These projects are included in the 2007-2012 TIP.

One of the most significant components of security in the MPO area is the ITS initiatives (see *ITS*, above). In addition, projects and tasks including the Freeway Information Management System, Onondaga County Infrastructure Task Force, NYSDOT Traffic Operations Working Group, and Road Weather Information Systems have all incorporated transportation security issues recently. Because the City of Syracuse has many high-profile facilities condensed in a small geographic area, and also due to the general increase in awareness of security issues since September 11, 2001, 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. Currently, the UPWP has a project titled "Emergency Travel Routes" in support of this task.²⁴ The project will be a multi-year task that will entail the preparation and wide dissemination of information necessary for management of travel demands related communications during emergency events. This project will 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. The work products will include GIS databases of the transportation system and transit resources and routes tailored to needs of first responders and emergency management and communications

²³ Strategies for a New Age: New York State's Transportation Master Plan for 2030, Summer 2006.

²⁴ SMTC Planning Certification Review- 2005.

authorities, as well as plans and implementation strategies and necessary capital improvements.²⁵ Additionally, Onondaga County is in the process of creating a new all county Hazard Plan.

6. Safe Routes to School

The Safe Routes to Schools Program (SRTS) is a Federal-Aid program of the U.S. Department of Transportation's Federal Highway Administration (FHWA). The Program was created by Section 1404 of SAFETEA-LU. The SRTS Program is funded at \$612 million over five Federal fiscal years (FY 2005-2009) and is to be administered by State Departments of Transportation (DOTs).

The Program provides 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).²⁶

It is projected that New York State is scheduled to receive approximately \$13 million for the first three years of the program for SRTS projects. This \$13 million will be further allocated throughout each of the eleven NYSDOT Regions as necessary based on individual project needs. It is anticipated that the program will receive another \$8 million in FFY 2007-2008, and \$11 million in 2008-2009, bringing the total to approximately \$32 million. NYSDOT is in the process of drafting the program guidelines. The SRTS program in New York State will consist 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. For further details on the SRTS program, please refer to the website listed at the bottom of the page and the NYSDOT program guidance once it becomes available (tentatively scheduled for Winter 2006).

At this time, the Safe Routes to School funding has not been allocated beyond the state level. In the near future, the regions will be awarded portions of the funding to use for the program.

²⁵ SMTC's 2006-2008 UPWP, Methodology, Page 50,
http://web.smtcmpt.org/extranet/smtc/reports/UPWP_2006-08.pdf

²⁶ Federal Highway Administration , *Safe Routes to School Overview*,
[<http://safety.fhwa.dot.gov/saferoutes/overview.htm>] (8/2006).

7. 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).

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.²⁷

For the latest transportation enhancement cycle, three projects within the SMTC MPA have been selected to receive federal funding. The projects include:

1. Oneida River Lighthouse Park – This project is sponsored by the Town of Hastings, and will receive \$188,000 in SAFETEA-LU transportation enhancement funds. The project will “provide for a public area/park around the Canal lighthouse, one of only three lighthouses on the entire NYS Canal System.”²⁸

The central focus of this project is the rehabilitation of a 1915 canal lighthouse that is still in operation. It would also provide an ADA compliant public space at the foot of the lighthouse, an educational kiosk, interpretive signs, benches, bike racks, four boat slips, and landscaping improvements.

The Oneida River Lighthouse Park will include a fishing access area, canal system and river access, boat access to the park and the Town of Hastings from the canal system, and public access to the waterfront. Currently the Town does not have a defined public access point for residents and visitors to access the north shore of the Oneida River or Oneida Lake.

2. Nine Mile Creek Aqueduct Restoration Project – This project is sponsored by the Town of Camillus, and will receive \$1 million in SAFETEA-LU transportation enhancement funds. The project involves the “restoration of Nine Mile Creek

²⁷ Transportation Enhancements Program *Guidebook for Applicants and Sponsors*, New York State Department of Transportation, Rev 4/2006, pg.1.

²⁸ Project Application for Oneida River Lighthouse Park. Town of Hastings. Pg. 6. June 30, 2006.

Aqueduct to an operable condition and upgrading the condition of approximately one mile of canal bed between Warners Road and the aqueduct structure.”²⁹

The Nine Mile Creek aqueduct was one of thirty-two aqueducts built between 1835 and 1845. Under this project, the aqueduct will be restored to its original condition. The work to be done includes masonry repair, dredging of Nine Mile Creek for accumulated debris, installation of water level controls, and replacement of the watertight wooden trunk that carries the canal over the creek.

Almost two miles of additional waterway will be available to the general public for watercraft activities through this restoration project, and there is an expectation that tourism will increase as a result of the increased park access by water and the educational value of the aqueduct.

3. Erie Canal Museum Interpretive Center – This project is sponsored by the Onondaga County Department of Transportation on behalf of the Erie Canal Museum in Syracuse, NY. The project will receive \$1.2 million in SAFETEA-LU transportation enhancement funds. The enhancement allocation will be utilized for Phase 1 of the project; purchase of a vacant building and make “interior renovations in preparation for installation of new leading edge exhibitions.”³⁰



Erie Canal Museum

This project provides the funding to purchase and renovate a vacant building near the existing museum. The new Interpretive Center will expand the existing Canal Museum and provide further exhibit space and educational opportunities. The project includes purchase of the building, interior renovations such as a new HVAC system, demolition of existing interior, installation of an elevator, alterations to lighting and power, updating of the fire and security systems, and new doors and entryways to support ADA accessibility. The new space will feature a working lock model, interactive and static exhibits, multimedia presentations and hands-on learning areas, displays of artifacts and archives, a classroom for programs or lectures, and a gift shop.

²⁹ Nine Mile Creek Aqueduct Restoration Project. Town of Camillus. Pg. 6. June 2006.

³⁰ Erie Canal Museum Interpretive Center Project Application. Erie Canal Museum. Pg. 4. June 2006.

C. Emerging Projects

1. University Hill Area

The University Hill area is one of the most intensive areas in terms of land use and transportation in the SMTC study area. Due to complex transportation issues in the University Hill area, a comprehensive transportation study known as the “University Hill Transportation Study” is currently part of the SMTC’s UPWP.

The project will build on two earlier transportation planning efforts for University Hill. The initial effort included the University Hill Special Events Transportation Study completed in March 2000. This study resulted in numerous small-scale improvements to traffic management in the study area. The second effort concluded in 2003 with a detailed inventory of Existing Conditions related to transportation and land use.

Changing Needs and Impacts

In the past decade, the University Hill area has seen an extraordinary change in land use resulting from the proximity of numerous hospitals, universities, and affiliated medical/research facilities. This has changed the dynamics of transportation in the area. The intensive land use generates a significant amount of vehicular traffic and an increasing demand for parking. Also, the type and density of land use encourages a



Traffic Conditions on University Hill

substantial amount of bicycle and pedestrian traffic creating numerous conflict points between these modes of transportation and vehicles. This mix of institutions, businesses, homes and events results in traffic being a major issue on University Hill.

The plan will identify proposed improvements to meet the needs of University Hill for issues as they develop over the next 20 years. The three primary issues this initiative will focus on include interstate access, institutional parking, and transit/walking/biking. A major aim

of the initiative is to ensure the economic viability of the institutions located in the study area while minimizing impacts to surrounding neighborhoods.

As part of the project, two alternative visions for transportation on the Hill will be analyzed. One vision will summarize the likely future if transportation relies primarily on automobiles. The alternative will examine the impacts of a greater emphasis on transit, walking and biking than currently exists. Each will be compared to the current planned vision for development on University Hill to assess impacts, benefits and costs. The

effort will involve the participation of a Working Group, an Institutional Focus Group and Stakeholders.

2. Lakefront Development District

Over the past 15 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*. Included in the 800-acre district are the Franklin Square district, the existing Carousel Center (regional shopping mall), and the Syracuse Inner Harbor.

In 1999, the City of Syracuse endorsed the Syracuse Lakefront Master Plan, which identified over \$500 million in new investment opportunities and a vision for mixed-use development and recreational growth and redevelopment activity within the Lakefront Area. In 2003, the City adopted an updated Master Plan, which again encouraged urban scale mixed-use development and included updated redevelopment projects underway to date. New zoning regulations are currently being written for the area to reflect the New Urbanism concepts presented in the Onondaga County Settlement Plan, especially to reflect a vibrant, mixed-use, and accessible urban district, fitting with the context of neighboring areas in the city.

Some of the more significant redevelopment projects underway and proposed for the Lakefront Development area include the development of DestiNY USA, the continued redevelopment of abandoned manufacturing facilities into new mixed-use housing and offices in Franklin Square and the significant redevelopment of an underutilized canal port on the Barge Canal system at the southern end of Onondaga Lake. Similar to revitalization efforts across the entire Erie Canalway, the Syracuse



Inner Harbor

Inner Harbor is being renovated into a recreational and tourism facility, inclusive of a public promenade, marina, amphitheater, mixed-use waterfront development, housing, and recreational amenities.

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 totaling approximately \$330 million is fully permitted and is set to being in early 2007. The expansion will make 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; as well as develop a research and development park. 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.

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.



Syracuse Lakefront

3. Congressionally Funded Projects (Earmarks)

Several projects within the SMTC Metropolitan Planning Area will be funded through Congressional Earmarks. The following is a list of these projects:

- Rehabilitate and redesign Erie Canal Museum in Syracuse, NY through the Erie Canalway National Heritage Corridor Commission (\$400,000)
- Reconstruction of East Genesee Street connective corridor to Syracuse University in Syracuse, NY (\$3.36 million)



A conceptual rendering of the East Genesee Street connective corridor

- Design and Construction for a Syracuse University Transportation Facility in Syracuse (Garage for the Center of Excellence, \$4 million)
- Develop an identity and signage program for the Erie Canalway National Heritage Corridor (\$800,000)
- Deer Avoidance System, to deter deer from milepost marker 494.5, Ripley, PA, to 304.2, Weedsport, NY along I-90 (\$200,000)
- DestiNY USA Design, Research, Construction and Improvements (\$5 million)
- Various transportation projects related to the DestiNY USA project (\$5 million)
- Syracuse - University Connective Corridor Transit Project (\$4 million)

Approximately \$22 million in Congressional Earmarks will be funded through these projects.

Chapter V: Safety Conditions and Infrastructure Maintenance

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 Syracuse Metropolitan Transportation Council (SMTC) Metropolitan Planning Organization (MPO) area, and the majority of financial resources are allocated to the maintenance of the existing highways and bridges.

A. Safety

1. Vehicle Accident Analysis

Strategies to improve the safety of the highway system are often grouped into one of three categories: education, engineering and enforcement. Overall, traffic fatalities have declined in recent years, particularly when measured against the number of miles traveled per vehicle.

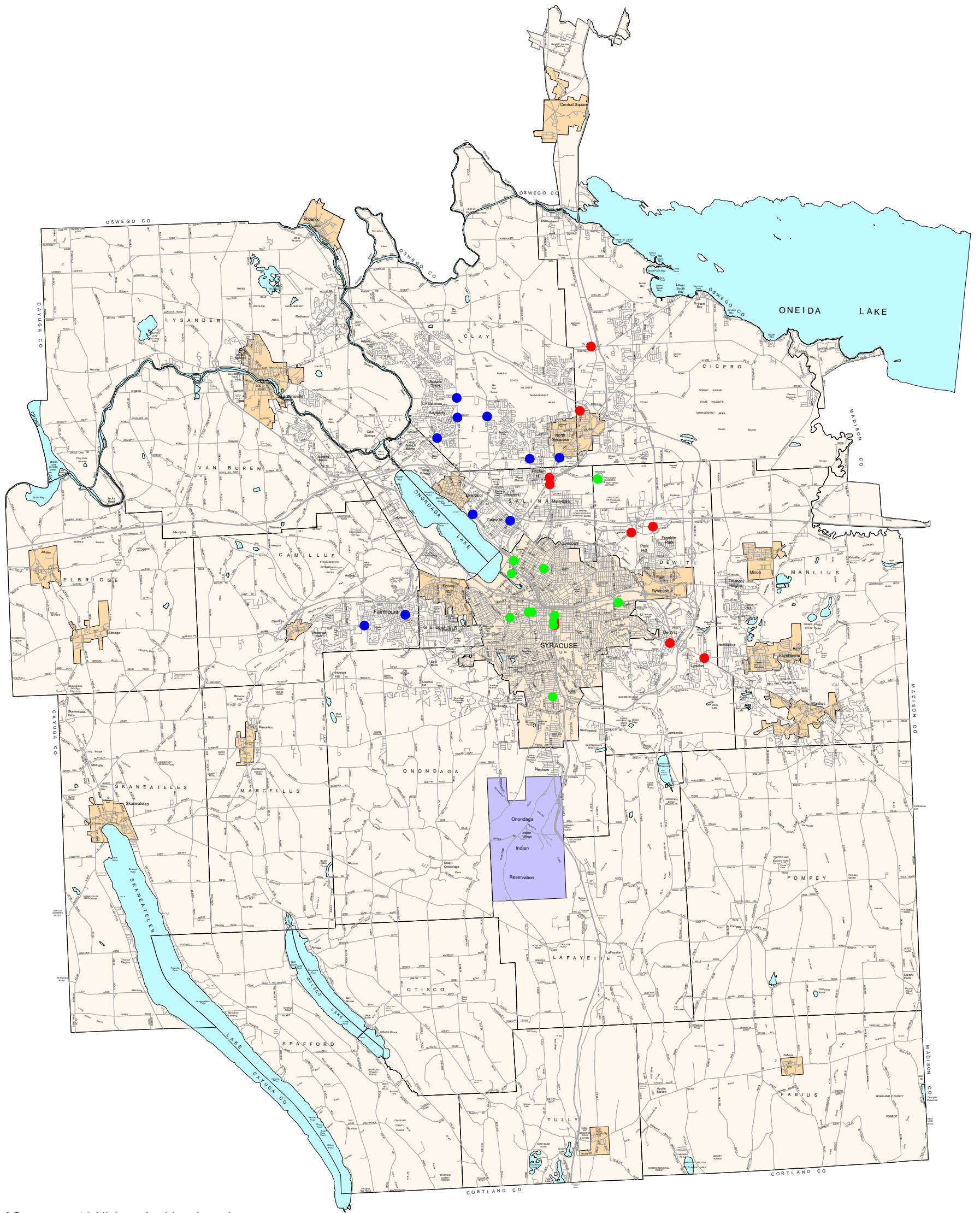


I-81

National fatality rates have declined from a high of 5.5 fatalities per 100 million vehicle miles traveled (VMT) in 1966 to 1.47 fatalities per 100 million VMT in 2005. Statewide, the number of fatalities has decreased from 1,679 in 1995 to 1,429 in 2005¹. Much of this recent improvement results from increased education, enforcement efforts aimed at reducing the number of people driving with ability impaired, and new vehicle safety systems such as air bags and anti-lock brakes (see Map 22 for high accident locations/concentrations).

The SMTC member agencies play a key role in reducing the number and severity of accidents as well. Much of the local effort is directed at engineering improvements to the highway system itself. Ten accident locations for state roads, county roads and city roads in the SMTC study area are shown in Table 5-1. This table lists the most recent data for the number of reported accidents for State, County and City owned roads. The accompanying map (Map 22) portrays geographically the accident locations highlighted in Table 5-1. In recent years, due to the change in the availability of NYSDOT's Centralized Local Accident Surveillance System (CLASS) data, the SMTC has not been able to obtain the accident data that was traditionally used to complete Table 5-1. Therefore, for this 2007 Update, the City and State obtained their own data for Table 5-1. The County did not have more recent data available, so their data has not been updated since the 2004 Update. In the future, the CLASS data may become available again.

¹ <http://www-fars.nhtsa.dot.gov/main.cfm>



- City of Syracuse - 10 Highest Accident Locations
- Onondaga County 10 Highest Accident Locations
- NY State 10 Highest Accident Concentrations

* see table 5-1 for corresponding data



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

10 Highest Accident Locations in the MPA by Jurisdiction* Long-Range Transportation Plan 2007 Update

Map 22



- Towns
- Onondaga Nation
- Villages
- City of Syracuse
- Water
- Roads

Basemap Copyrighted by NYSDOT
Data Sources: SMTC, NYSDOT, 2001
Prepared by SMTC, 01/2007

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

Table 5-1

Ten Priority Vehicular Accident Locations					
City of Syracuse		Onondaga County		New York State	
January 2006- December 2006		January 1998- December 2000		2004-2005	
Location	Total Number of Accidents	Location	Total Number of Accidents	Location	Total Number of Accidents
2100 Park Street	21	Buckley Road and Taft Road	74	Rt. 298- Court Street to New Venture Gear Dr	15
2515 Erie Blvd East	18	John Glenn Boulevard and Rt. 57	60	Rt. 298 at Carrier Circle	77
Almond Street and Harrison Street	17	Buckley Road and Morgan Road	46	Rt. 11- Bear Road to 930J	19
Hiawatha Boulevard West and Solar Street	14	Buckley Road and Henry Clay Boulevard	43	Rt. 11 - Northern Connection to Bailey	20
East Adams Street and Almond Street	14	Old Liverpool Road and Electronics Parkway	39	Rt. 11- at Mattydale Oval	77
West Fayette Street and South West Street	12	Buckley Road and 7th North Street	36	Rt. 481-I at Rt. 5 and Rt. 92 Interchange	64
South West Street and West Fayette Street	11	Onondaga Road and West Genesee Street	35	Rt. 92- Jamesville Road to Erie Boulevard	29
1000 Col Eileen Collins Boulevard	11	South Bay Road and East Taft Road	35	I-81 at Adams St.	62
700 First North Street	10	Morgan Road and Wetzel Road	33	I-81- Harrison Street to I-690	73
800 Erie Boulevard West	10	West Genesee Street and Hinsdale Road	33	Rt. 31 - Crabtree and Pardee Road to Rt. I-81	36
Almond Street and East Genesee Street	10				
4141 South Salina Street	10				

Sources: City of Syracuse Police Department, New York State Department of Transportation CLASS Data 1/98-12/00, NYSDOT
Note: The direction of the accident is unknown.

The presence of a high number of accidents does not always indicate a problem. 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.



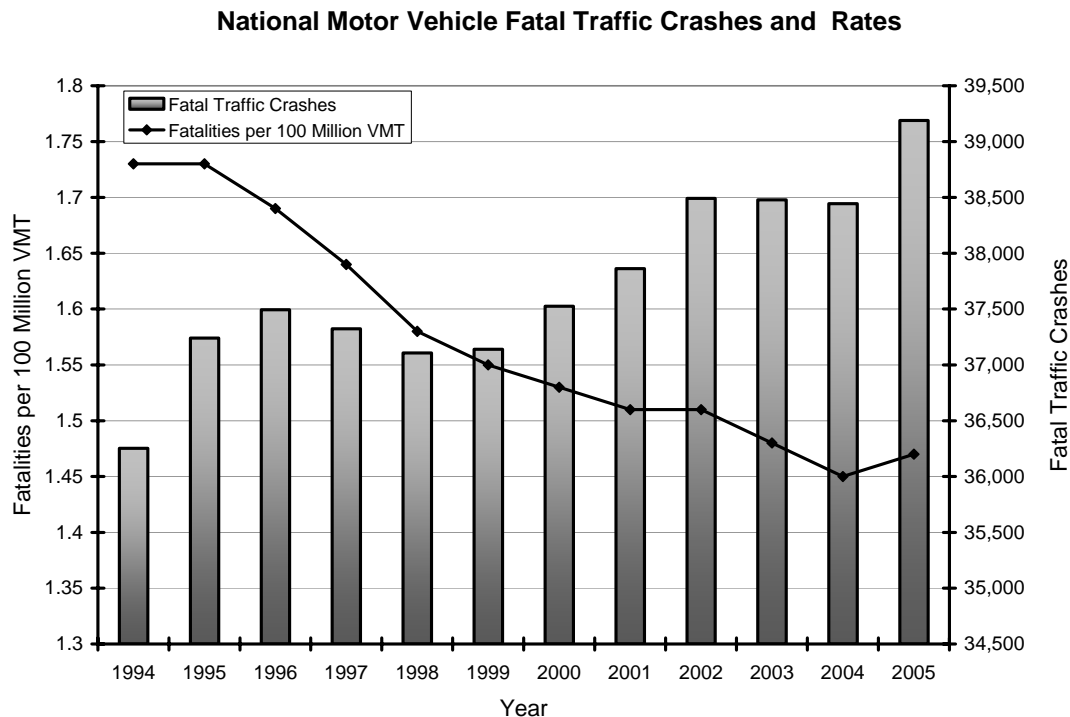
Lights On Caravan

The SMTC has been an active participant with the Onondaga County Traffic Safety Advisory Board (OCTSAB) over the years. Members of the SMTC staff have served as Secretary to the OCTSAB, with staff most recently serving as Chairperson. 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.”² To that end, staff has acted as the chair of the annual *Lights On Caravan*, held yearly to remember the victims of drunk and drugged driving in Onondaga County. The Caravan begins at the Central New York Regional Transportation Authority (CNYRTA) headquarters and travels to a local high school. Additionally, the OCTSAB recognizes the traffic safety efforts of area law enforcement professionals at their annual Awards Breakfast. The OCTSAB also has sub-committees that address such issues as Aggressive Driving and Bicycle and Pedestrian Safety.

Overall, the statistics available from the National Highway Traffic Safety Administration for national highway fatalities show that the number of fatal traffic crashes has increased since 1994 (see Table 5-2). However, it is important to note that while the number of fatalities appears to have increased, the rate of fatalities per 100 million VMT steadily decreases due to the total overall VMT increasing nationally and in New York State. The VMT is increasing at a greater rate than the total number of fatal traffic crashes. Therefore, the actual rate of fatalities is improving because of the volume to accident ratio. Table 5-3 represents the overall decline in fatal traffic crashes in New York State from 1994-2005. Additionally shown is the decrease in fatalities per 100 million VMT in New York from 1.49 in 1994 to 1.04 in 2005, again showing a steady decrease due to the overall increase statewide in VMT. With safety programs and improving technology, the overall trend of a reduction in fatal highway accidents may continue.

Table 5-2

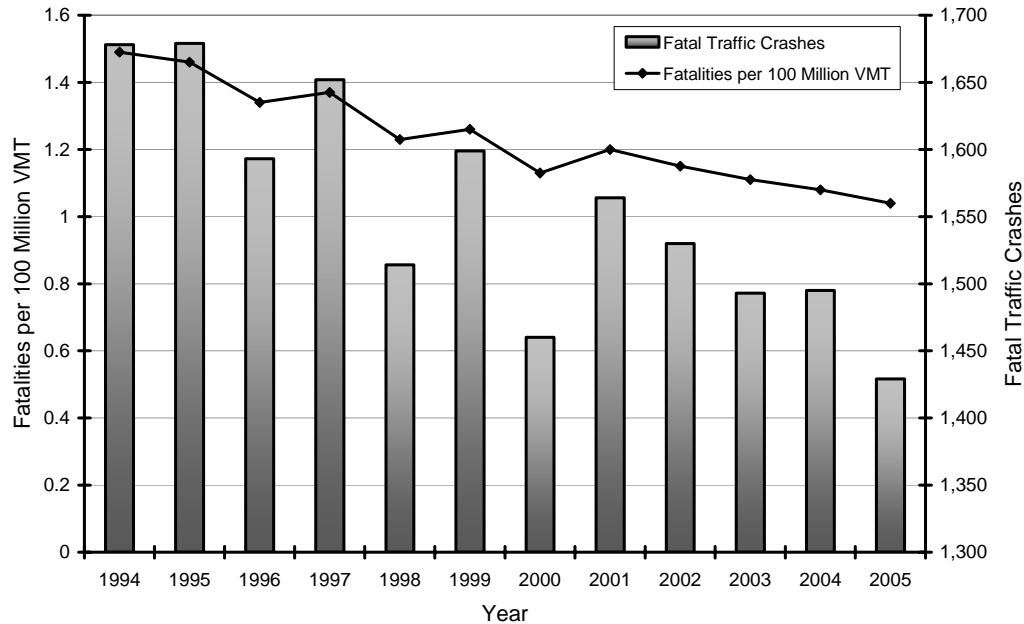


Source: National Highway Traffic Safety Administration: <http://www-fars.nhtsa.dot.gov/main.cfm>, http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/36_NY/2005/36_NY_2005.htm

² Onondaga County Traffic Safety Advisory Board By-Laws, adopted November 12, 2002.

Table 5-3

New York Vehicle Fatal Crashes and Rates



Source: National Highway Traffic Safety Administration: <http://www-fars.nhtsa.dot.gov/main.cfm>,
http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/36_NY/2005/36_NY_2005.htm

Table 5-4 shows the types of accidents reported in Onondaga County from 1996-2003. There was a significant increase in total accidents from 1996 to 2000, followed by a sharp decrease due to the method of data collection for reportable accidents. During the years shown, the fatal accidents in Onondaga County remained about the same, where the number of injury related accidents, and pedestrian and bicycle accidents decreased.

In New York State during the same time period (1996-2003), the reportable fatalities, death rate per 100 million vehicle miles, and the injury rate per 100 million vehicle miles all decreased substantially. See Table 5-5.

Table 5-4**Onondaga County Reportable Accidents**

	1996	1997	1998	1999	2000	2001	2002	2003
Total Accidents	6259	7313	10151	11787	13010	9971	6450	3873*
Fatal Accidents	36	39	37	34	20	30	35	35
Injury Accidents	4528	4462	4540	4509	4431	4038	4172	4038
Pedestrian Accidents	288	279	200	275	258	238	262	220
Bicycle/Motor Vehicle Accidents	182	177	174	155	156	132	103	115
<p>*Starting in October 1997, the DMV recorded property damage only crashes that were reported by police but had no motorist report submitted. This policy was rescinded in mid 2001; the most direct impact of this change was a large decrease in the number of property damage only crashes; the effect is also reflected in the total number of crashes.</p>								

Source: NYSDMV: <http://www.nydmv.state.ny.us/stats.htm>, www.safeny.com/02Data/ONONDAGA-02-Data.pdf

Table 5-5**New York State Reportable Accidents**

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Motor Vehicle Deaths	1590	1630	1504	1585	1444	1381	1509	1477	1495
Death Rate/100 Million Vehicle Miles	1.34	1.36	1.22	1.25	1.15	1.19	1.13	1.09	1.09
Injury Rate/100 Million Vehicle Miles	249.69	233.83	228.14	230.28	232.67	136.64	134.63	123.49	112.70

Source: NYSDMV: <http://www.nydmv.state.ny.us/stats.htm>, www.safeny.com/02Data/ONONDAGA-02-Data.pdf

2. Bicycle/Pedestrian Accident Analysis

The SMTC completed its policy level Bicycle and Pedestrian Plan in March 2005. Included in the plan are bicycle and pedestrian collision data, analyses and associated maps. The following text is a summary of the information included in the Bicycle and Pedestrian Plan.

Onondaga County Collision Data

Using collision data gathered from the New York State Department of Motor Vehicles (NYSDMV) Form 144A, the SMTC examined reported bicycle/motor vehicle and pedestrian/motor vehicle collisions in Onondaga County for the years 1987-2000. Only those accidents reported to the NYSDMV are included in the data.

Bicycle Collisions, Injuries, Fatalities: 1987-2000

The following is a summary of NYSDMV bicycle collision data for Onondaga County, including number of reported collisions, number of injuries, and number of fatalities between 1987 and 2000. Please refer to Table 5-6.

In general, the number of bicycle/motor vehicle collisions over the fourteen-year period analyzed shows a downward trend (with some annual fluctuation). The largest number of bicycle collisions occurred in 1987 at 283, while the fewest amount occurred in 1999 at 155.

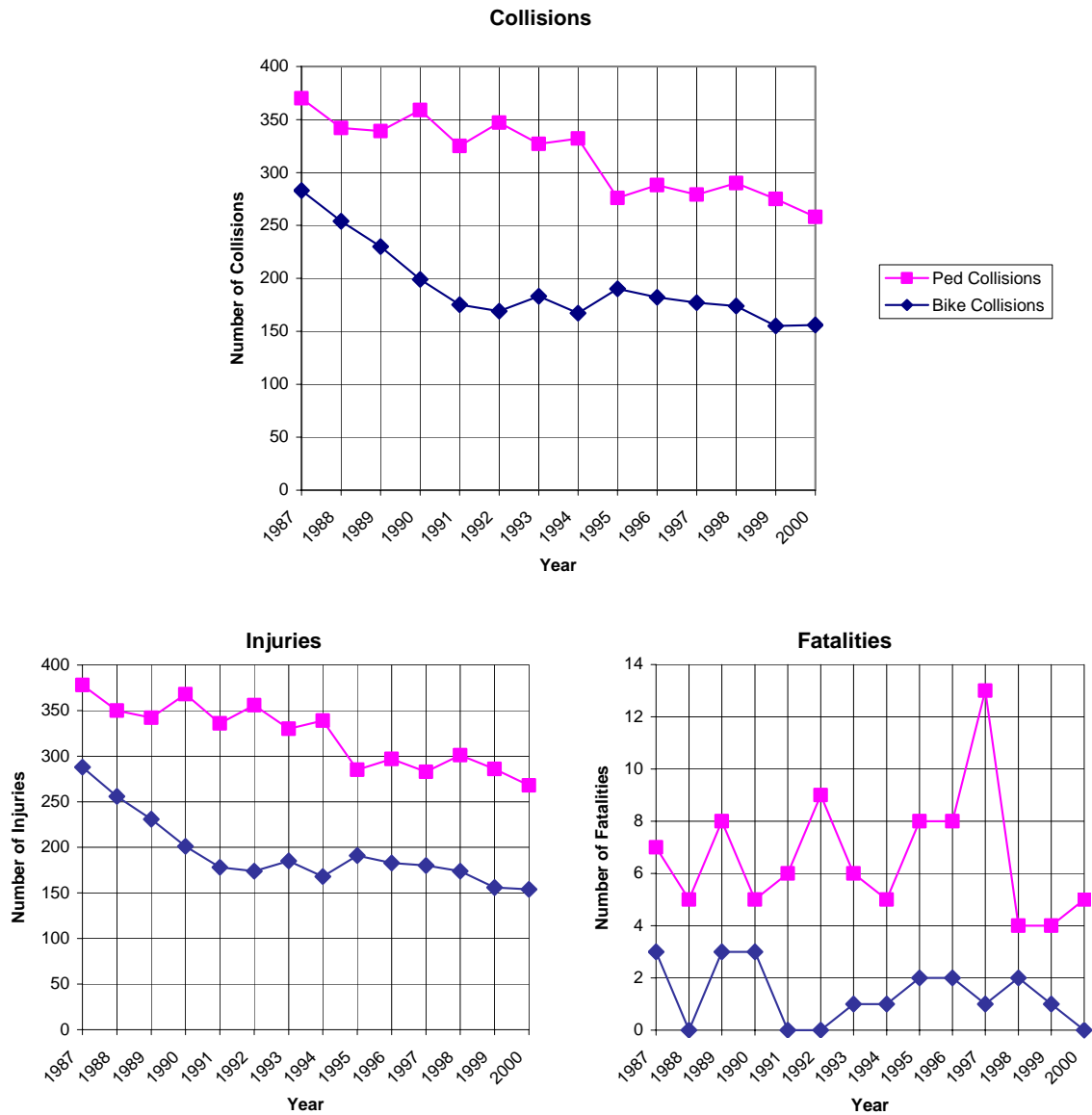
The number of injuries occurring as a result of bicycle/motor vehicle collisions was also evaluated. The bicycle injury data mimics the number of collisions reported between 1987 and 2000, with a *near* one-to-one relationship occurring between the number of collisions and number of injuries. Overall, the data indicates a downward trend in the number of bicycle/motor vehicle collision related injuries that occurred between 1987 and 2000.



Bicycle Facilities

Data on the number of fatalities occurring as a result of bicycle/motor vehicle collisions was also obtained. The data on fatalities does not echo the similar trend noted between the number of bicycle collisions and number of injuries. However, it can be noted there were typically more bicycle/motor vehicle collision related fatalities in years where more bicycle/motor vehicle collisions occurred.

Table 5-6
NYSDMV Reported Bicycle /Motor Vehicle and Pedestrian Motor/Vehicle Collisions,
Injuries and Fatalities
1987-2000
Onondaga County



Source: New York State Department of Motor Vehicles, 1987-2000.

Pedestrian Collisions, Injuries, Fatalities: 1987-2000

The following is a summary of NYSDMV pedestrian collision data for Onondaga County, including number of collisions, number of injuries, and number of fatalities between 1987 and 2000. Please refer to Table 5-6.

Although the pedestrian/motor vehicle collision data fluctuates from year to year through a series of increases and decreases, there is a general downward trend (with annual variation) in the overall number of collisions that occurred between 1987 and 2000.

The number of injuries occurring as a result of pedestrian/motor vehicle collisions was also evaluated. The pedestrian injury data trend mimics that of the pedestrian collisions, showing increases and decreases from year to year, but an overall downward trend in the number of injuries sustained in pedestrian/motor vehicle collisions between 1987 and 2000. For every case year, the number of pedestrian collision injuries exceeds the number of pedestrian collisions. This could be attributed to more than one pedestrian being injured in a single collision event, or that individual(s) within the motor vehicle were injured as a result of the collision.



Pedestrian Crossing in Liverpool

The data on fatalities occurring as a result of pedestrian/motor vehicle collisions does not echo the similar trend noted between the number of pedestrian collisions and number of injuries sustained as a result of pedestrian/motor vehicle collisions. However, it can be noted that in the span of the fourteen years evaluated, at least four pedestrian/motor vehicle collision fatalities occurred each year.

Bicycle and Pedestrian Collision Maps

The SMTC has mapped Onondaga County bicycle/motor vehicle and pedestrian/motor vehicle collision locations using data provided by the NYSDOT Centralized Local Accident Surveillance System (CLASS). The maps display the collisions that occurred within the City of Syracuse as well as the remainder of the MPO between 1987 and 2000. It is important to note that the CLASS data utilized to develop the collision maps was limited to collision reports that had the most accurate location data. Therefore, the data on the maps cannot be directly compared to the data shown in the line graphs.

Bicycle and Pedestrian Collision Locations 1987-2000

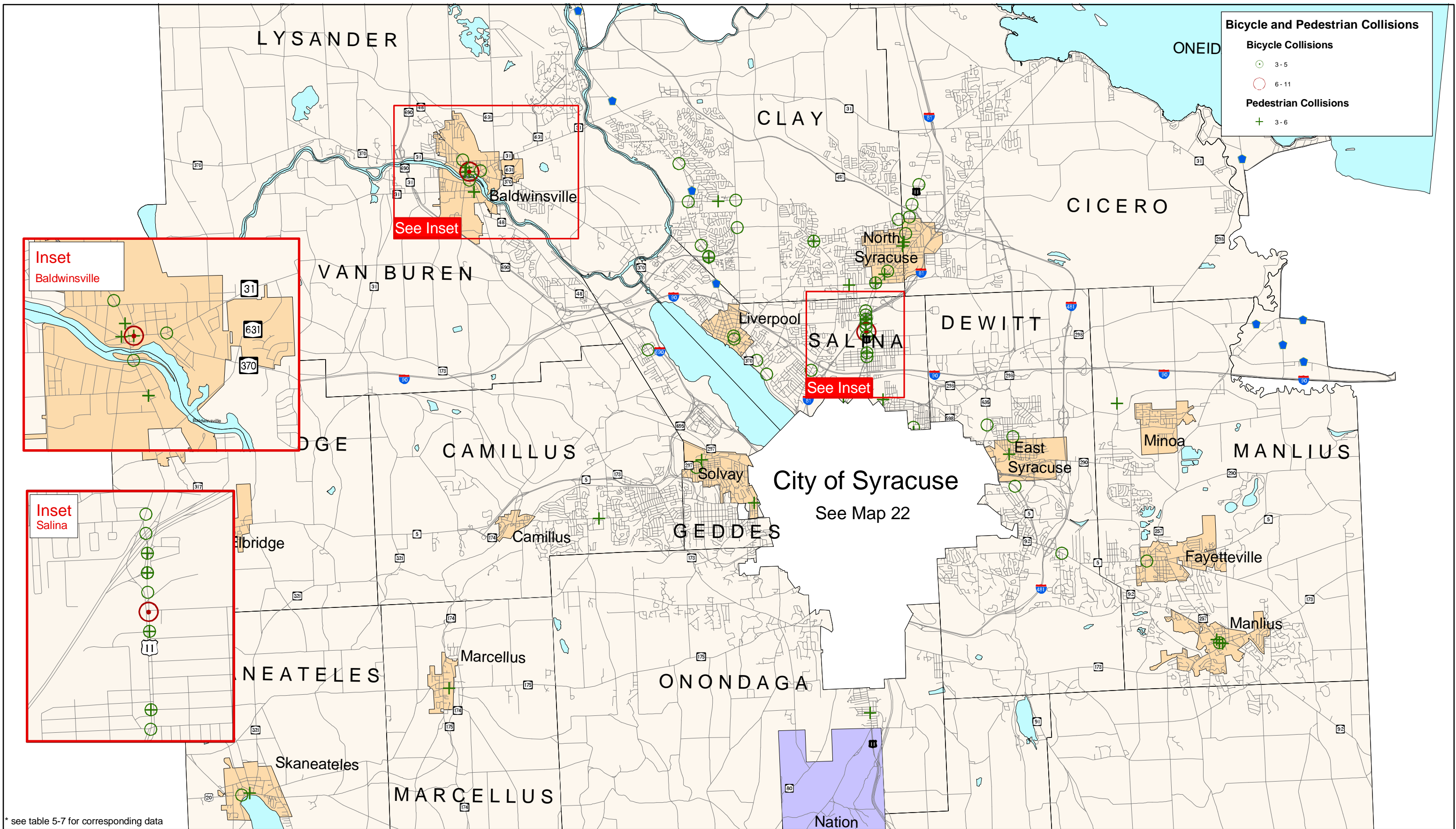
The following table, Table 5-7, identifies the top ten locations with the most reported bicycle/motor vehicle and pedestrian/motor vehicle collisions over the fourteen-year period analyzed. More than ten locations are listed as several locations reported having the same number of collisions. See Maps 23 and 24 for collision locations occurring in the Onondaga County and the City of Syracuse. Only the collisions that had accurate location information listed on the accident report could be mapped.



Bicyclists in Syracuse

The majority of high bicycle/motor vehicle and pedestrian/motor vehicle collision incidences occurred in the City of Syracuse at heavily traveled intersections.

The location with the highest amount of bicycle/motor vehicle accidents (11) noted over the fourteen-year period analyzed is the intersection of Lodi Street with Butternut Street and Catherine Street. This is a five-legged intersection located in a commercial area with numerous driveways. This intersection is currently being studied by the City of Syracuse as part of a signal interconnect study. In the future, the implemented recommendations may improve the safety of this intersection. The location with the highest amount of pedestrian/motor vehicle accidents (52) noted over the fourteen-year period analyzed is the intersection of Fayette Street with South Salina Street. This intersection is located in downtown Syracuse and serves as a major transit hub for Centro. Numerous pedestrians walk within this area to utilize transit service, and to reach downtown destinations such as restaurants, shops, and employment centers. Centro will be moving this major transit hub to a new Common Center location in the future, which may improve safety at this intersection.



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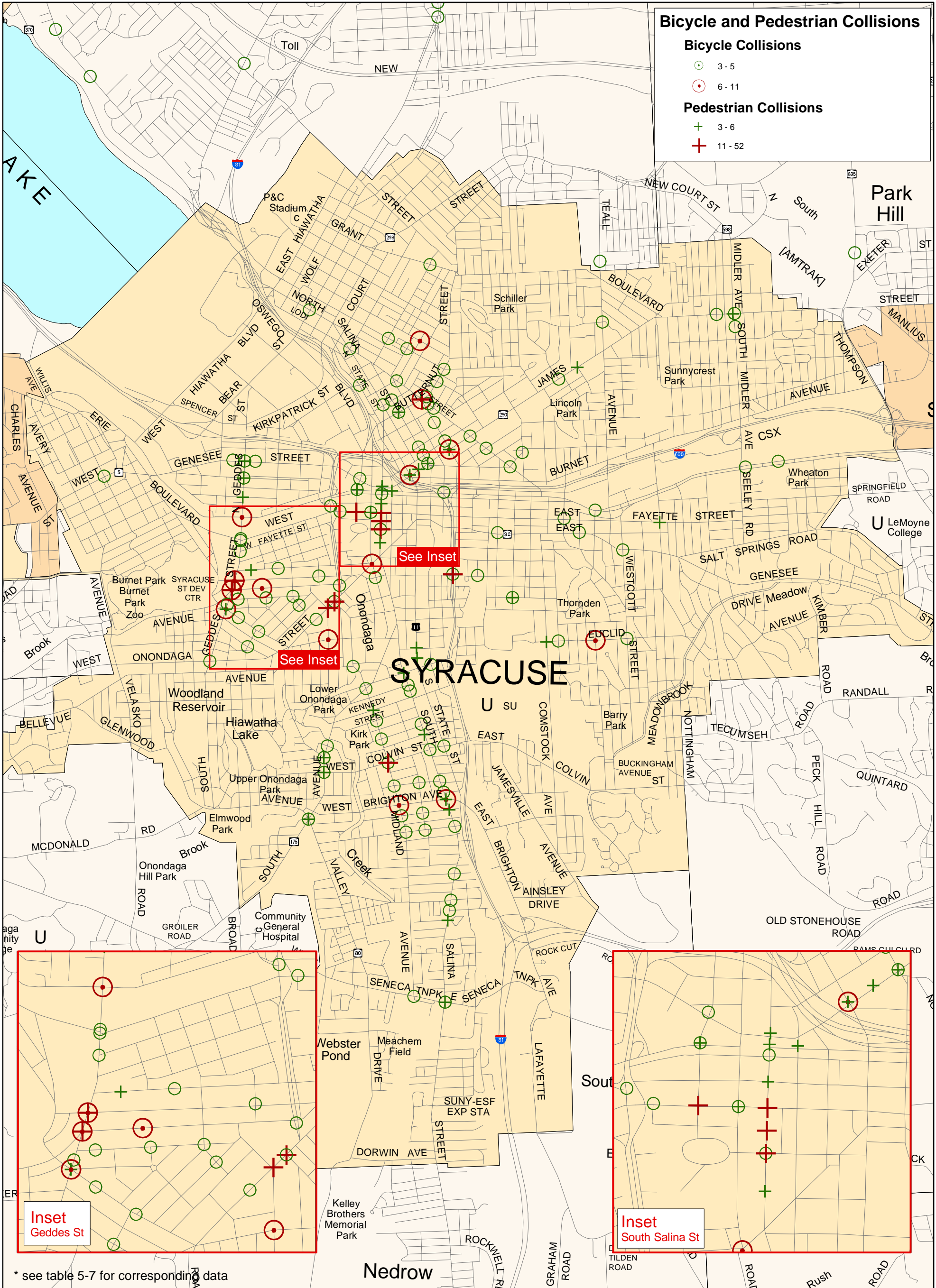
Highest Bicycle and Pedestrian Collisions* Onondaga County 1987-2000 Long-Range Transportation Plan 2007 Update

Map 23



Basemap Copyrighted by NYSDOT, 2001
Data sources: SMTC, NYSDOT, 2001
Prepared by SMTC, 01/2007

- Onondaga Nation
- Cities
- Villages
- Towns
- Water
- Roads



* see table 5-7 for corresponding data



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Highest Bicycle and Pedestrian Collision* City of Syracuse 1987-2000 Long-Range Transportation Plan 2007 Update

Map 24

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Datasources: SMTC, NYSDOT, 2001
Prepared by SMTC, 01/2007



- Onondaga Nation
- Citys
- Villages
- Towns
- Water
- Roads

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Table 5-7

Highest Bicycle and Pedestrian Accident Locations January 1998 - December 2000			
City of Syracuse			
Bicycle/Motor Vehicle Collisions		Pedestrian/Motor Vehicle Collisions	
Location	Total Number of Accidents	Location	Total Number of Accidents
Lodi St. and Butternut St. and Catherine St.	11	E. Fayette St. and W.Fayette St. And S. Salina St.	52
James St. and N. State St. and S. State St.	8	E. Jefferson St. and S. Salina St.	17
S.Clinton St. and W. Onondaga St. and Gifford St.	7	E. Adams St. underneath I-81 near Almond St.	15
South Ave and Tallman St.	7	S. Salina St. between W. Fayette St. and E. Jefferson St.	14
S. Geddes St. and Delaware Ave.	7	Midland Ave and W. Colvin St.	14
S. Salina St. and W. Brighton Ave and E. Brighton Ave	7	Lodi St. and Butternut St. and Catherine St.	13
E. Division St. and Carbon St.	6	W. Fayette St. and S. Franklin St.	13
Catherine St. and James st.	6	S. Geddes St. and Seymour St.	12
N. Geddes St. and Erie Blvd. West and S. Geddes St.	6	Slocum Ave. and W. Onondaga Ave. and South Ave.	11
S. Geddes St. and Seymour St.	6	Midland Ave and W.Onondaga Ave.	11
S. Geddes St. and Shonnard St.	6	S. Geddes St. and Shonnard St.	11
Shonnard St. between S. Geddes St. and Oswego St.	6		
Midland Ave. and W. Brighton Ave.	6		
Euclid Ave and Lancaster Ave.	6		
Onondaga County Roads			
Bicycle/Motor Vehicle Collisions		Pedestrian/Motor Vehicle Collisions	
Location	Total Number of Accidents	Location	Total Number of Accidents
Oswego St. and E. Genessee St.	8	N/A	N/A
Brewerton Rd. and Hinsdale Rd.	7	N/A	N/A

Source: New York State Department of Motor Vehicles, 1998-2000.

B. Infrastructure Maintenance

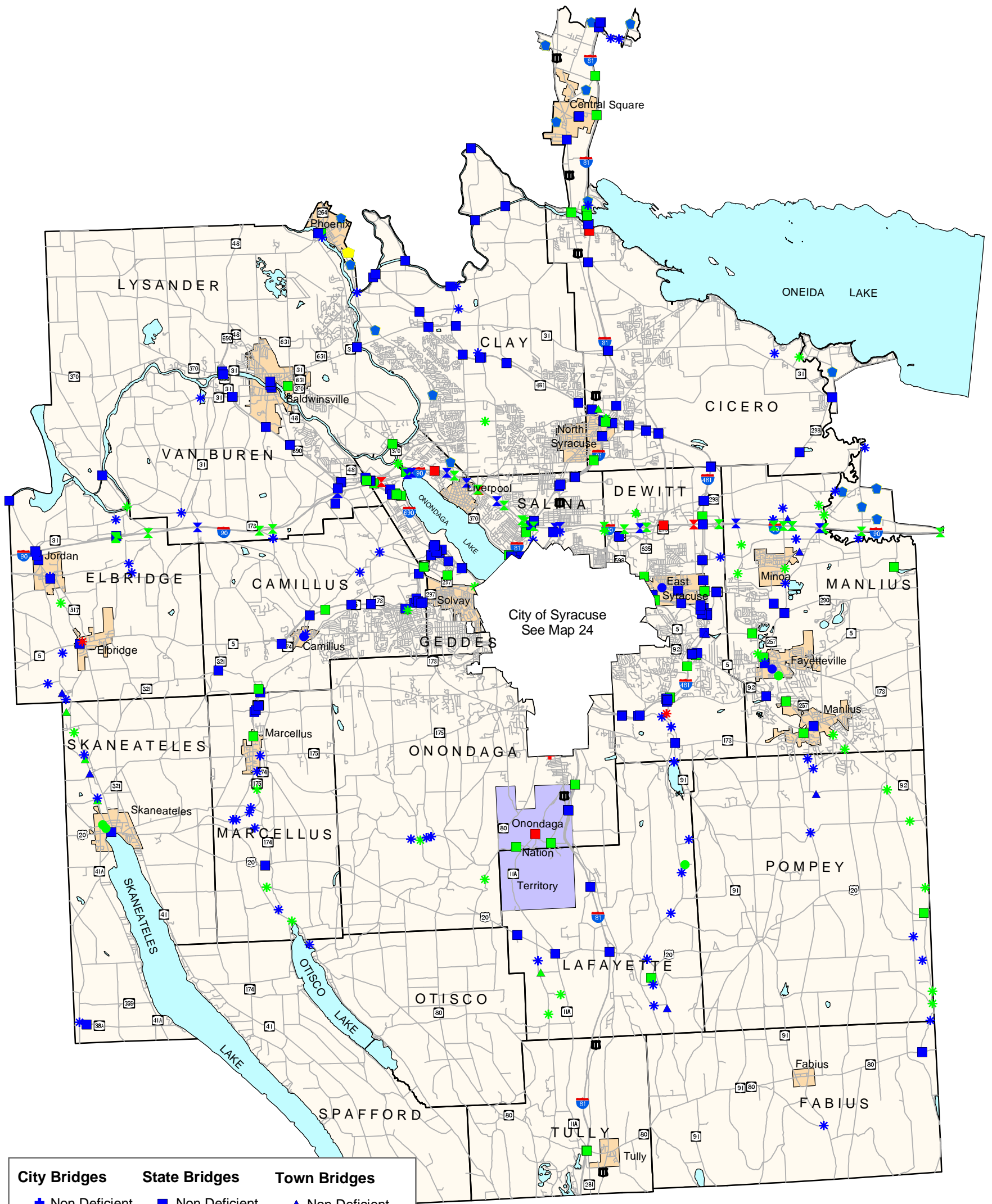
1. Bridge Conditions

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 rated as Priority Deficient and Deficient combined 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 need repair within the same time frame because many are of the same age. Specifically, there are 124 bridge spans on the I-81 viaduct alone that will need repair in 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 for those repairs. Because of the priority ranking system that is used to determine which bridges get fixed first, the problem is particularly acute for low volume bridges that are often essential to rural areas (see Maps 25 and 26 for bridge conditions).

The Metropolitan Planning Area (MPA) boundary for the greater Syracuse area was updated during the 2003-2004 program year to reflect changes in the 2000 Census. The MPA expanded to include portions of Madison and Oswego Counties (see Urban Area Boundary, Chapter III, A, 2), which increased the number of bridges and miles of pavement in the MPA area. The following sections describe the most recent data (2005) for Onondaga County infrastructure.



Belgium Bridge Reconstruction



City Bridges	State Bridges	Town Bridges
<ul style="list-style-type: none"> Blue Plus: Non Deficient Green Plus: Deficient Red Plus: Priority Deficient 	<ul style="list-style-type: none"> Blue Square: Non Deficient Green Square: Deficient Red Square: Priority Deficient 	<ul style="list-style-type: none"> Blue Triangle: Non Deficient Green Triangle: Deficient Red Triangle: Priority Deficient
County Bridges	Thruway Bridges	Village Bridges
<ul style="list-style-type: none"> Blue Asterisk: Non Deficient Green Asterisk: Deficient Red Asterisk: Priority Deficient 	<ul style="list-style-type: none"> Blue X: Non Deficient Green X: Deficient Red X: Priority Deficient 	<ul style="list-style-type: none"> Blue Circle: Non Deficient Green Circle: Deficient Red Circle: Priority Deficient



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Bridge Ratings as of 2005 in the MPA

Long-Range Transportation Plan 2007 Update

Map 25

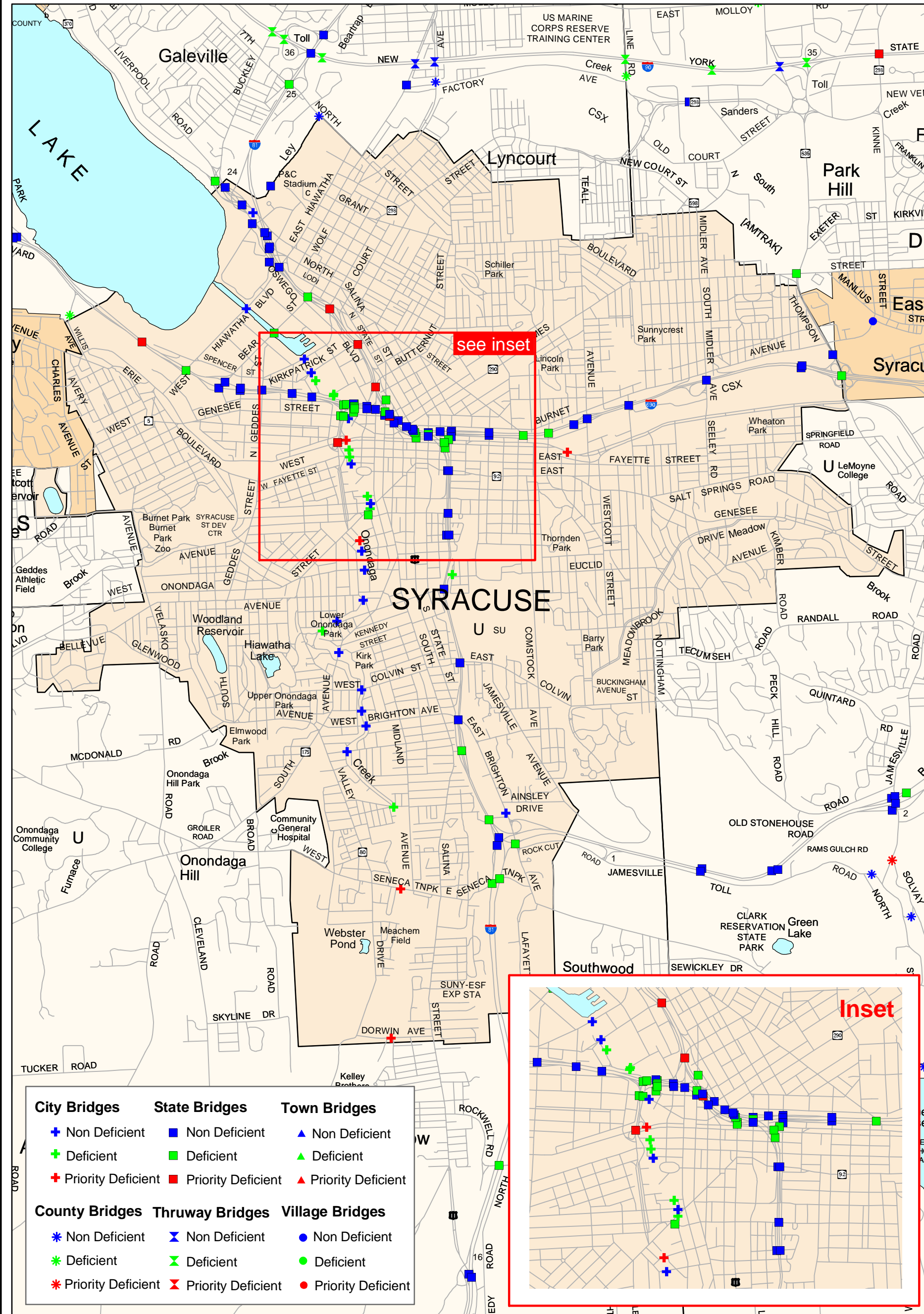
0 2 4 Miles

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- Towns
- Villages
- City of Syracuse
- Onondaga Nation
- Water
- Roads

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Bridge Ratings as of 2005 in the City of Syracuse Long-Range Transportation Plan 2007 Update

Map 26

0 0.4 0.8 Miles

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- Towns
- Villages
- City of Syracuse
- Water
- Roads



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Bridge Maintenance System (BMS)

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. Priority deficient bridges are those which have a condition rating of less than 3.0, or a condition rating between 3.0 and less than 3.999 with an annual average daily traffic (AADT) of over 4,000 vehicles. Priority deficient bridges are given a priority for funding over those that are deficient. Many bridges with 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 (TA) bridges in Onondaga County are presented in Table 5-8. 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.



Reconstructed Belgium Bridge

Transportation Advisory Committee (TAC), that allow for element-specific bridgework (i.e., crack and deck sealing, bearing lubrication, etc.) to be completed for preservation and preventative/corrective maintenance for bridges in Onondaga County. The new funding options allow for more specific bridge elements to be maintained than could be funded in the past. Previously, the only federal-aid eligible maintenance activity was bridge painting for local bridges.

As of 1997, forty-four (44) percent of all bridges within Onondaga County were considered to be deficient or priority deficient. This percentage decreased to approximately 35% in 2005 (see Table 5-8). However, the number of *all* non-deficient bridges in Onondaga County in 2005 was approximately 65 percent, which was a decrease from 71 percent in 2002.

Recently, guidelines have been approved for increasing funding options, available through the NYSDOT Region 3

**Table 5-8
2005 Bridge Conditions in MPA**

Bridge Jurisdiction	Total Number of Bridges	Number of Deficient Bridges (non-priority deficient)	Percent of Deficient Bridges (non- priority deficient)	Number of Deficient Bridges*	Percent of Deficient Bridges*	Number of Priority Deficient Bridges	Percent of Priority Deficient Bridges	Number of Non- Deficient Bridges	Percent of Non- Deficient Bridges
City of Syracuse	32	10	31%	15	47%	5	16%	17	53%
Onondaga County DOT	96	32	33%	34	35%	2	2%	62	65%
Oswego County	3	0	0%	0	0%	0	0%	3	100%
Madison County	1	0	0%	0	0%	0	0%	1	100%
New York State DOT	298	77	26%	87	29%	10	3%	211	71%
New York State Thruway Authority	41	23	56%	26	63%	3	7%	15	37%
Towns in the MPA	14	7	50%	7	50%	0	0%	7	50%
Villages in the MPA	7	4	57%	4	57%	0	0%	3	43%
Total	492	153	31%	173	35%	20	4%	319	65%
*A deficient rating includes all bridges rated as deficient as well as all priority deficient bridges.									

Source: SMTc

2. Pavement Conditions

One of the NYSDOT goals in its Goal Oriented Program (GOP) is stabilizing pavement conditions at or above 1986 levels. According to the NYSDOT Region 3 GOP and Criteria:

“The pavement goal seeks to give priority to projects on the National Highway System and to the corridors with high commercial traffic volumes or potential for economic growth, and stabilize pavement conditions at or above the level of 60 percent of pavement in good condition and an average surface rating of 7.0.”

In order to monitor progress toward this goal, 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.

Table 5-9

State Pavement Conditions in 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%
Source: New York State Department of Transportation, Pavement Condition of New York's Highways		

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 27 and 28 for pavement conditions. Please note that there is no definition for “Rated Roads” in Maps 27 and 28. 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.

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 5-9 shows the average pavement rating of state roadways within Onondaga County and the percent of pavement that is considered in poor condition.



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All Rated Roads in SMTC MPA* Long-Range Transportation Plan 2007 Update

Map 27



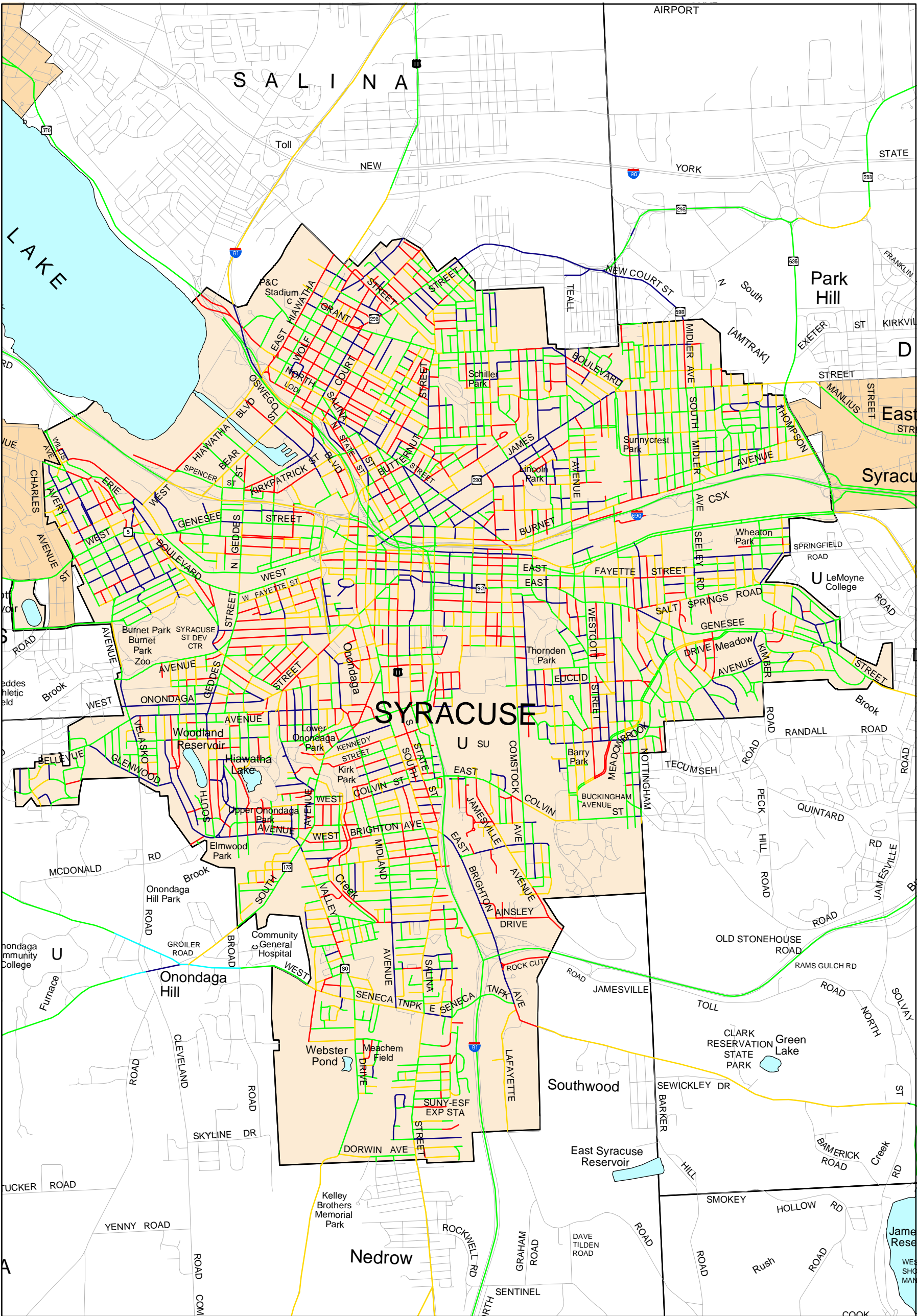
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 Data Sources: SMTC, NYSDOT, 2005
 NYSTA, OCDOT, 2005
 Prepared by SMTC, 01/2007



- Towns
- Villages
- Onondaga Nation
- Water
- Unrated Roads

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



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All Rated Roads in the City of Syracuse*

Long-Range Transportation Plan 2007 Update

Map 28

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

0 0.4 0.8 Miles

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Data Sources: SMTC, NYSDOT, SYR DPW 2005
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Roads in the City of Syracuse

- Excellent (9-10)
- Good (7-8)
- Fair (6)
- Poor (1-5)
- No Data
- Unrated roads
- Towns
- Villages
- City of Syracuse
- Water



Route 173 Eastbound

As reflected in Table 5-9, the average pavement conditions on the State highway system have slightly decreased since 2001 while the percent of poor pavement decreased significantly. The 2006 ratings show that Onondaga County's State route pavement average condition ranks 29th best out of 62 counties in the state and as of 2002, state roads were exceeding the 2020 goals of no more than 11 percent having poor pavement conditions and 26 percent having fair pavement conditions. However, the 2006 data shows an increase in the percentage of fair pavement conditions to 39.1%. Overall, the State roads are still meeting the goal of reaching an average condition rating of 7.0 for all medium and high volume roads.

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. The City then 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.³ From 2001 through 2005 the City reconstructed an average of 22 to 23 centerline miles per year. In 2006, with record-setting material prices, and a reduced budget, the City only reconstructed 9 miles of street. In the future, the average miles of pavement reconstructed per year is expected to increase to maintain pavement conditions.

The OCDOT system is not identical to the NYSDOT system, although the system is comparable since OCDOT also uses a 1-10 scale. 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. Using year 2005 costs per mile for each type of paving program, the total costs amount to almost \$12.95 million per year for paving, compared to the \$9.5 million spent for the year 2006.

The aforementioned information in Chapter 5, 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 City of Syracuse: Improved Street Maintenance Program, received by the SMTC in 2002.

Chapter VI: Mobility, Accessibility and Intermodal Transportation

A. Introduction

The purpose of this chapter is to identify issues relating to the various modes of transportation and evaluate how well the operating entities are individually and collectively meeting the goals and objectives outlined in the Syracuse Metropolitan Transportation Council (SMTC) Long Range Transportation Plan (LRTP). Individually, 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 Department of Public Works (as well as the various towns and villages), and the Central New York Regional Transportation Authority (CNYRTA) 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.

B. Existing Trends

1. Changing Demographics and Transportation Choices

The existing and forecasted trends outlined in the original 2020 LRTP have experienced some minor changes, however, for the most part have continued and are the same as those reflected in the 2000 Census, the LRTP 2004 Update, and this LRTP 2007 Update. Yet, there have been some minor changes in the demographic makeup of the community that are consistent with the trends outlined in the original LRTP. In 2004, a few of these minor changes included an increase in vehicle miles traveled and longer commuting times and distances. This continues to be the case in 2007. These small changes to the transportation system in response to these relatively minor demographic shifts are outlined below.

The 2000 Census data has revealed that there have been changes in demographics in the Metropolitan Planning Organization (MPO) area, which have resulted in an increased reliance on personal vehicles for transportation needs. The data shows that persons per household have decreased while median age and the total number of households have increased. The changing demographics have resulted in a shift in transportation choices being made by the community. This is reflected in the increase in vehicles per household, increase in total vehicle miles traveled, and also a corresponding increase in average commute times.

2. Regional/Global Economy Factors

Job centers

The original 2020 LRTP notes that growth in industry continued in smaller firms (less than 50 employees) and that small and medium-sized firms were experiencing great success.¹ As noted

¹ 2020 Long Range Transportation Plan, Syracuse Metropolitan Transportation Council, January 1995, p. 28.

in the 2004 Update, and again in this 2007 Update, job growth increases in Onondaga County continue to come from smaller businesses, while employment by larger firms is declining. Previously, the majority of employment and manufacturing were mainly concentrated in a few large employment centers in Onondaga County, yet now the smaller firms are spreading throughout the region. Due to the large number and type of niche markets of these smaller size firms, there is more diversity in employment in the MPO area. This diversification of the employment base involves various economic sectors thereby making the local economy more secure and less influenced by the actions of a few large employers. Hopefully this diversification will lead to a more stable employment base in the future.

However, smaller firms have moved away from downtown and other areas of concentrated development. These businesses are becoming dispersed throughout the Syracuse Metropolitan Area, placing a greater strain on the transportation network, as single occupancy vehicles travel to and from work from farther reaching places than before. In addition, an activity that was not anticipated in 1995 was the increase of Internet shopping and just-in-time shipping. Large shipping firms, such as Federal Express and United Parcel Service (FedEx and UPS) are experiencing growth due to these changes in technology. The increased use of the Internet coupled with a growing number of smaller firms in existence has led to more vehicles traveling to farther places within the region. Additionally, more people from outside the region are traveling into Onondaga County to work at these firms, resulting in increased traffic on the area's commuter corridors.



Online Shopping

The 1995 LRTP also discusses the trade industry and notes that warehousing and wholesale trade have always flourished in the study area because it is within two trucking days or an hour's flight from 52% of all businesses in the United States.²

Retail Centers

As noted previously, retail centers have developed quickly in a few locations in suburban Onondaga County, including the Route 31 corridor in the Town of Clay, Route 5 in Fayetteville, and along Route 11 in Cicero. More recently, retail centers are beginning to expand in the Fairmount and Camillus suburban areas located west of the City of Syracuse. This expansion of suburban retail development was not entirely anticipated in the original 2020 LRTP. As pointed out in previous sections of this report, retail sprawl can go hand in hand with general suburban sprawl and has a negative effect on both transportation and land use. Retail sprawl has also contributed to the expansion in outlying residential areas. For a further discussion on sprawl, see Appendix C.

² 2020 Long Range Transportation Plan, Syracuse Metropolitan Transportation Council, January 1995, p. 28.

Residential Areas

In the original 2020 LRTP, it was noted that population growth occurred primarily in the northern suburbs, as well as in the eastern and western portions of the MPO area. The original LRTP also stated that declining populations were located in the City of Syracuse as well as in some of the older towns (i.e., Geddes, DeWitt, Salina, and Camillus) surrounding the City. As mentioned in previous sections of this report, the trend of moving from the City of Syracuse to suburban towns has continued.

Since the 2020 LRTP, residential areas have continued to grow in the outlying portions of the MPO region. As people move further away from goods, services, and places of work, both the reliance on personal vehicles and actual travel times increase. Additionally, commuting trips increase the burden on the existing road network. In addition, when sprawl occurs, public transit options become less desirable due to time efficiency factors. This pattern of sprawl development is creating more of a burden on both the existing physical transportation system as well as on the operations of that system.

3. Changing Demographics and Transportation Design Parameters

As outlined in the previous chapters, the demographics of the MPO area have changed in the past 20 years. In particular, the change in demographics over the past ten years has shown an increase in the elderly population in the SMTC region. Although this is not a new finding since the SMTC's original LRTP, changing demographics have contributed to a shift in certain transportation design parameters; particularly toward improving and increasing visibility of signage, striping, traffic signals, etc. An additional aspect of the change in design parameters includes safety concerns. Listed below is a *representative sample* of some of the local initiatives that are being implemented in an effort to address the changing demographics of the MPO area.

- Transit: Centro now has new, easier to read destination bus signs on the front and sides of its newer buses (the majority of the city bus fleet). The signs are backlit, have a larger font and are fluorescent yellow, which is easier to read than white. The exceptions are the over-the-road coaches used on the routes to Auburn and Oswego that make up less than 10% of the total fleet. These will continue to have older curtain style signs for the foreseeable future. Centro recently revised its entire route system in an effort to make it more accessible and responsive to the needs of its users. These changes are due, in part, to the Regional Mobility Action Plan (ReMap) study, which identified the need to augment the traditional hub and spoke system to better



Hybrid Centro Bus

respond to changing conditions in suburban areas. Finally, Centro has implemented a plan to purchase low-floor buses as it replaces aging buses in its fleet, which are easier for the elderly population to board. By 2011, Centro expects its entire city transit bus fleet to be low-floor buses.

- Signs: Larger text sizes are being used for street signs and guide signs, as the signs are being replaced. In addition, fluorescent yellow-green warning signs are being used to enhance the visibility of crosswalk and school bus warning signs. Also, the City of Syracuse has recently replaced street signs in downtown with street signs that now include block numbers to assist in navigating City streets.
- Pavement Markings: Six-inch wide line pavement markings are now the standard on limited access freeways and interstate highways. The previous standard was a 4-inch wide stripe.
- Traffic Signals: Existing eight-inch signal indications are being replaced with larger, 12-inch indications. Red and green light emitting diode (LED) indicators have replaced bulbs and colored lenses, primarily because of lower energy costs. A second benefit from this replacement is greater visibility, especially during inclement weather. In addition, traditional pedestrian indications (WALK/DON'T WALK) are being replaced with countdown timers for ease of use on City, County and State roads. Pedestrian phases are also being re-timed based on a slower pedestrian walking speed of 3.3 feet per second, as opposed to the traditional speed of four feet per second. At the same time, exclusive pedestrian phases are now utilized at intersections with a high concentration of elderly pedestrians.

Notably, the City completely replaced all traffic signals and pedestrian signals under its jurisdiction to LED lights as of December 2003. Beyond the increased electrical efficiency and longer life span of LED lights, these lights are easier to see, especially in inclement weather. The new LED lights in the City are expected to save \$20,000 per month in electricity charges, which will in turn help pay for the \$1.2 million upgrade (and eventually save the City approximately \$20,000 per month). In addition, the majority of traffic signals under the jurisdiction of NYSDOT are LED lights, with the exception of some yellow bulbs, as this color light is not lit long enough to justify the cost of replacement. Similarly, OCDOT has a LED light replacement program in which all green, red and arrows under the county jurisdiction were replaced by 2007. Currently, approximately 80 of the 90 total OCDOT lights are LED. In the future, as an intersection is rebuilt, the entire signal will be replaced with LED lights, including the yellow bulbs.

- Bicycle/Pedestrian: As the public has become more aware of the benefits of leading a healthy lifestyle, transportation engineers and planners have been increasingly called upon to include more multimodal opportunities in design, particularly those that will accommodate pedestrians and bicyclists.

In the SMTC MPO area, there are several existing trails, such as the Erie Canalway Trail that currently runs from DeWitt to the east into Madison County, as well as from Camillus to the west into Cayuga County. Connecting the Canalway Trail through the

remainder of Onondaga County (primarily through the City of Syracuse) would provide



Creekwalk

an east-west bicycle and pedestrian corridor through the SMTC MPO area. The New York State Canal Corporation, with input from the City of Syracuse and SMTC, is currently developing a primarily on-street route to be signed through the City of Syracuse to connect the existing Canalway Trail in DeWitt to the existing Canalway Trail in Camillus. In addition, the Onondaga Lake Trail is approximately one-half completed at this time, and once complete will provide a connection to the Erie Canalway Trail by way of the Creekwalk. The City of Syracuse is completing final design plans for the Creekwalk Phase I project which will complete the Creekwalk between Armory Square and Onondaga Lake. The City plans to complete construction of this creekwalk by 2009. This facility will be fully handicapped accessible.

The City is also completing a Creekwalk Phase II of this project which involves a Feasibility Study that is currently underway. This study encompasses evaluating the most feasible location of a creekwalk between Armory Square and Kirk Park in the City of Syracuse. This study should be completed by the end of 2007. The completion of each of these trails will eventually provide bicycle and pedestrian connections in such a way that local towns and villages can perhaps begin development of trails that will connect to this larger system.

In addition, three municipalities in the SMTC MPO area have received federal Transportation Enhancement funding to begin work on constructing trails in their jurisdictions. The Town of Lysander plans to begin work on constructing a trail by fall 2007/spring 2008 that will begin at the Village of Baldwinsville's North Shore Trail and Village Center Walk, connect through Town neighborhoods along the Seneca River, and tie to the Onondaga Lake Trail at Long Branch Park. The Village of Baldwinsville and Village of Marcellus also each received Transportation Enhancement funding that will be used to complete similar trails in their jurisdictions. The South Shore East Trail project in the Village of Baldwinsville is moving forward as the Village has been working on putting easements together. As an aside, Baldwinsville's north Shore East portion of the trail was recently completed. The Village of Marcellus's Nine Mile Creek Walk is making progress as the Village is now going back to the architect for the final Creek Walk drawings. These trails could also eventually connect to the larger Canalway Trail.

As noted previously, the following bicycle lanes currently exist in the City of Syracuse: 1) Comstock Avenue from Stratford Street to East Colvin Street, 2) East Colvin Street from Garfield Place to the east City Line and 3) Meadowbrook Drive from Hurlburt Road to Lancaster Avenue. This bike lane then runs along Lancaster Avenue south to East Colvin Street. During the 2007 construction season, the City is planning to install a

bike lane on East Genesee Street from East Avenue to the City/DeWitt Line. In addition, through the 2007-2008 UPWP, the SMTC will lead an effort for the City of Syracuse to develop a Bicycle Boulevard project within the University Hill area. The project will examine the Bike Boulevard Network routes recommended in the University Hill Transportation Study and develop a proposed network to utilize 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. Also, the City of Syracuse will be meeting regularly with the Syracuse Onondaga Cycling Coalition (SOCC) to discuss the addition of bicycle amenities (namely bicycle lanes and routes) to City streets in a logical network.

C. 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.

1. 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.”³ 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. Because this process is being modified, there will be additional information regarding corridor management in the next LRTP.

Some relevant examples regarding corridor management for SMTC member agencies are included below.

- The Onondaga County Settlement Plan gives examples of transportation policies for facilities in urban and rural areas. For further information about transportation policies in the Settlement Plan, please refer to Appendix H.
- The City and State 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.

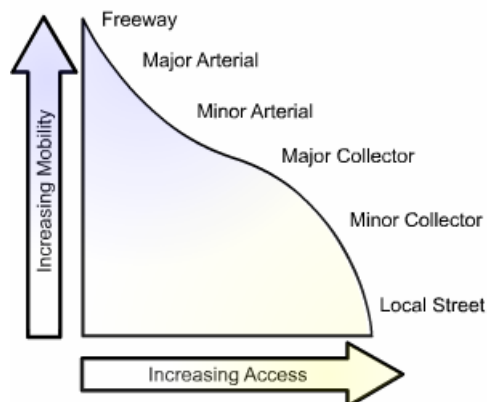
³ Access Management Manual, Transportation Research Board of the National Academies, 2003.

- 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.
- An example of corridor management in the MPO area is the SMTC's I-481 Industrial Corridor Transportation Study that was completed in December 2004. For this project, the I-481 corridor was studied to determine the best response for both the transportation network and land use planning in the study area given likely future land use development scenarios in the area. Corridor-wide and site specific recommendations were developed for the I-481 Industrial Corridor.

Another example is SMTC's Soule Road/Break in Access Study that was completed in June 2003. One of the major elements of this study was an examination of the impacts of recent and planned major commercial developments along the Route 31 Corridor in terms of their influence and impact on access to Interstate I-481 and the road network in the general area. One of the primary motivations for the study was to determine if existing access to the Interstate system should be altered to allow for improved traffic operations and safety along the Route 31 Corridor. The Town of Clay and the NYSDOT recently asked the SMTC to revisit this previously completed study. The SMTC is currently developing an addendum to the finished report that will include updated traffic counts, a photo array and updates to the Synchro analysis. Upon completion, the addendum will be forwarded to the NYSDOT and the Town of Clay.

- 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.

2. 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.”⁴ 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.”⁵ Access management is an important issue to the SMTC area due to the job and retail center growth previously discussed in this chapter.

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, tries to incorporate 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.

3. 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 in the SMTC area (such as the recently completed ITS Strategic Plan), please refer to the ITS section in Chapter 4 of this document.

A few representative samples regarding ITS strategies for SMTC member agencies are included below.

⁴ Access Management Manual, Transportation Research Board of the National Academies, 2003.

⁵ Transportation Planning Handbook, 2nd Edition, Institute of Transportation Engineers.

- The City of Syracuse Traffic Control Center manages 143 of the 299 signalized intersections in the city. They presently have four different programmed cycles. The timings consist of am, pm, mid-day and off peak timings. Each cycle has resulted in a reduction of emissions ranging from ten to fifteen percent. The City is presently working on the expansion of the system through the West Genesee/Geddes Street project as well as the North Salina Street/Lodi Street project. The city is planning to install more cameras on its present system as well as on any future expansions. The City has also submitted a TIP application for future expansions to the north/south/east/west corridors.
- Centro is pursuing many ITS related technologies. Options include placing automated vehicle locators (AVL) and automated passenger counters on buses to collect transit data. Centro has also purchased web-based trip planning software and cameras to mount in buses.
- The NYSDOT has developed a plan for statewide implementation of a multi-agency, multi modal Information Exchange Network (IEN), with the first phase presently in operation and accessible through the NYSDOT website. A transportation IEN is a computerized system that collects and distributes a variety of static and real time information about the transportation network. It usually includes information related to: 1.) incidents and accidents, 2.) road conditions and reports, 3.) construction and maintenance lane restrictions, 4.) planned (and un-planned) road and lane closures, 5.) detour and alternate route information, 6.) weather information, or 7.) impacts from major sporting and special events.
- At various locations in the MPO area, mile markers on highways have increased in size in order for drivers to see the markers more clearly. The change in size aids 911 calls, as cell phone users can more easily determine their location based on the improved mile markers.
- The OCDOT completed a project to install a closed loop traffic signal system on Old Route 57 from the Thruway interchange to Gaskin Road in 2005. As funds become available Onondaga County will look to install traffic systems on other high volume corridors within their jurisdiction. In the future the County would like to utilize an AVL system to enhance snow and ice control operations throughout the County.

Additionally, further examples of how NYSDOT has incorporated ITS into their operating practices are listed below.

- Phase I (I-81) and Phase II (I-690) of the incident management system and the Transportation Management Center (TMC) have been constructed and are operational. The TMC is manned 24/7/365 and provides up to date information on road conditions, construction activities, lane closures and so forth through the Department's website. Phases III and IV (I-481) are under construction with Phases V and VI proposed to be on the Department's upcoming Capital Program.

4. 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.

- Ongoing and recently completed studies at the SMTC have examined one of the key multimodal facilities in the MPO area, the DeWitt rail yard, from a multi-agency perspective. Examples of these SMTC studies include the I-481 Industrial Corridor Transportation Study, and the Northern Boulevard/Taft Road Study. Both studies called for an examination of possible improvements in the access to the DeWitt yard as well as to its surrounding roadways. This may be necessary as the volume of trucks accessing the yard continues to increase. Various agencies are working together to plan a 20-year vision to see what is possible from an economic development perspective for the functionality of the rail yard, as well as from a community perspective for the functionality of the surrounding surface transportation infrastructure. Recently, there have also been changes to the functional classification system to better allow for transportation planning related to truck freight movement between I-481 and the DeWitt rail yard.
- 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 facilitated the building of the Regional Transportation Center, which interfaces train and intercity bus travel as well as improved transit connectivity. In addition, CNYRTA is planning on constructing a 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 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, 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 will 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 available right-of-way usually can accommodate typical sidewalk design standards; however, it is sometimes not sufficient to meet the minimum requirements for bicycle facilities within the roadway. The City will consider the installation of dedicated bicycle lanes under certain circumstances, such as at locations where an identified traffic or safety issue will be improved by said installation.
- The City considers multimodal needs during all capital improvement projects and also considers requests from residents. A bike lane was added to Comstock Avenue from Stratford Street to East Colvin Street. The City has also installed a bike lane on East Colvin Street from Garfield Place to the east City Line. Additionally, the City has installed a bike lane on Meadowbrook Drive from Hurlburt Road to Lancaster Avenue, and Lancaster Avenue south to East Colvin Street. During the 2007 construction season, the City is planning to install a bike lane on East Genesee Street from East Ave to the City/DeWitt Line. The City considers sidewalk improvements and upgrades to meet current ADA regulations within their street reconstruction program and their City sidewalk program. In addition, through the 2007-2008 UPWP, the SMTC will lead an

effort for the City of Syracuse to develop a Bicycle Boulevard project within the University Hill area. The project will examine the Bike Boulevard Network routes recommended in the University Hill Transportation Study and develop a proposed network to utilize 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 Fingerlakes 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.

In addition, approximately twelve percent of the 2005-2010 SMTC Transportation Improvement Plan (TIP) funding is allocated to bicycle and pedestrian improvements, such as trail development and streetscape improvements. This includes the reconstruction of the East Genesee Street (Connective Corridor) project sponsored by the City of Syracuse. This allocation does not include TIP projects that construct sidewalks and/or increase shoulder space as part of other projects. There are also several transit related projects on the TIP.

4. 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 on a biennial basis 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 has 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”.⁶

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 currently conducts these counts for the SMTC and this schedule corresponds with their traffic counting program.

Through the CMS, the SMTC will offer 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.

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

⁶ Interim Guidance for Implementing Key SAFETEA-LU Provisions on Planning, Environment, and Air Quality for Joint FHWA/FTA Authorities, September 2, 2005, <http://wwwcf.fhwa.dot.gov/hep/igslpja.htm> (February 1, 2007).

activities within the transportation planning process, including support for regional transportation goals that go beyond addressing congestion.

With the start of the new program year in April 2007, the SMTC and the CMP SAC will be developing a new approach to the CMP. All of the count information gathered through the CMS/CMP processes will also be incorporated into the SMTC's new 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 a 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 Congestion Management System (CMS) biennially, 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 CMS report plays in the SMTC's work program.
- The City uses the SMTC CMS 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 upcoming TIP, any warranted intersection improvements will be incorporated into the design of the project.
- Another use for the CMS report is allowing Centro to incorporate CMS data to tweak 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 CMS and BPCMS to develop their Long Range transportation improvement program. In addition, the CMS 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.

D. 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 SMTC is continuing its collaborative study titled "Northern MPA Planning". The Working Group for this study coordinates communications with municipalities to address issues regarding transportation and land use planning in the northern portion of Onondaga County and the southern portion of Oswego County.
- 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.

1. 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 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.
- Again, examples of corridor management include SMTC’s I-481 Industrial Corridor Transportation Study, the Soule Road/Break In Access Study, and the OCPB 239 Review. Please see Operating Agencies Practices/Corridor Management section in this chapter for further discussion regarding these projects.
- The OCDOT completed a project to install a closed loop traffic signal system on Old Route 57 from the Thruway interchange to Gaskin Road in 2005. As funds become available Onondaga County will look to install traffic systems on other high volume corridors within their jurisdiction. In the future the County would like to utilize an Automated Vehicle Locator (AVL) system to enhance snow and ice control operations throughout the County.
- 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.

2. 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.

3. 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 4 of this document.

The following examples are a sampling of ITS projects that highlight the cooperative effort of local municipalities and agencies working together.

Centro is currently implementing its AVL system. A possible partnership using AVL between the City of Syracuse and Onondaga County has been discussed in an effort to attempt combining their AVL needs with Centro's system.

As previously stated, the City is planning on expanding the interconnect system as recommended in the ITS Study. The City is using spare fiber and installing additional fiber when necessary to connect all of the City of Syracuse Departments to each other and also with the NYSDOT and OCDOT. The City of Syracuse is also planning to upgrade its Traffic Control Center (TCC) software.

- **SMARTNET (formerly METCON)**

Information on timing and location of construction work zones requiring lane closures and/or traffic diversions is often not shared with other agencies (transportation, transit, emergency service provider) or even within the agency performing the work. This sometimes results in a disruption or overloading of adjacent highway facilities; delayed response by emergency service providers; and/or a conflict with other existing work zones.

The project objectives were to develop a communications network capable of sharing construction activity and transportation related information with other interested agencies in the Syracuse area, and among all six counties of Region 3. This was an

early action ITS project completed by NYSDOT, and is truly multi-jurisdictional in nature. Also note that NYSDOT now has a website (www.travelinfony.com) that contains traffic information such as quick updates on roadwork, accidents, and other similar problems. It also shows construction zones, accidents and incidents, emergency closures, and weather.

The regional goal is to collect information on construction activity, special event traffic, incidents, and unscheduled road closures that can be shared among local agencies. This advance notice can result in accommodation of increased traffic flows on diversion routes; advance planning for rerouting of transit and emergency services; interagency coordination; and minimization of conflicts with ongoing work zones. Information on incident location will be helpful to transportation agencies if their assistance as secondary responders is requested.

- Wireless Enhanced 911

A portion of the wireless E911 system was funded through the Transportation Improvement Program (PIN 380475). The NYSDOT also applied an ITS Integration Earmark in the amount of \$317,000 to this project. This portion of the wireless E911 project is now in use (see problem definition below). Currently, 911 is in the process of designing a portion of the improvement, which will include further upgrades to the communication system. This involves installation of a new CAD system to locate the caller's position on a GIS based map and then automatically dispatch the appropriate emergency responder. This second phase is funded solely through 911.

Basic 911 service provides only a voice connection to a predetermined Public Safety Answering Point (PSAP). Enhanced 911 service automatically provides a call back number (ANI) and location (ALI) by interfacing their wire-line telephone call to a specialized computer system and database. Due to this ITS project, enhanced 911 (E911) service is now available for 911 calls placed from a wireless (cellular) telephone. In the past, callers from wireless phones had to verbally relay their location before help could be sent. Agitated or excited citizens who encountered an emergency often required an intense questioning process before they were able to provide an accurate location to the emergency service provider. Callers who were incapacitated may not have been able to respond to the 911 operator's questions. If the caller was unable to relay their location information, the emergency service provider had little chance of locating them.

Thirty percent of 911 calls are currently made from wireless phones and it is projected that this will increase dramatically in the next five years. The shift in preference from wire-line to wireless telephone use without the implementation of Wireless E911 (WE911) will likely compromise the integrity of the emergency services system.

The objectives of this ITS integration project are to: 1.) Enhance incident management detection and response within Onondaga County; 2.) Reduce emergency response time (medical, fire, police); and 3.) Integrate operation of the Department of Emergency

Communications (911 Center) with the City of Syracuse Transportation Operations Center.

- Traffic Management Center

One of the early action ITS projects for NYSDOT that has been completed is the Traffic Management Center (TMC). The Center is located in the State Office Building and has been operational since October 2004. It is staffed with NYSDOT employees and is operational 24/7. At the TMC, traditional and unique activities occur, and it is a central resource for Region 3.

Chapter VII: Air Quality and Conformity Determination

A. Introduction

Air Quality, as it pertains to the operations of the Syracuse Metropolitan Transportation Council (SMTC) and its member agencies, includes the state and federal requirements for transportation conformity, project level analysis for Congestion Mitigation/Air Quality (CMAQ) funding, and requirements for the State Energy Plan (SEP) and Greenhouse Gas analysis.

The SMTC and its member agencies take a multi-faceted approach to improving and monitoring air quality impacts within the SMTC planning area. Improvements in traffic monitoring technology or engine development, such as diesel-electric hybrids transit fleets and Light Emitting Diodes (LED's) in traffic signals, can result in reduced emissions of pollutants and energy savings. Planning studies of long range transportation issues generally examine the impacts of improvements on the region's air quality. Each project proposed for use of CMAQ funds requires an analysis of the air quality impacts of that particular project. This chapter will examine the three main areas under which the SMTC attends to air quality: conformity, CMAQ and Energy/Greenhouse gases.

B. 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 (LRTP), Transportation Improvement Programs (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.

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).

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”.

Budgets are developed as part of the air quality planning process by the New York State Department of Environmental Conservation (NYSDEC) and approved by the Environmental Protection Agency (EPA). The FHWA, FTA, and the New York State Department of Transportation Environmental Analysis Bureau (NYSDOT EAB) participate with NYSDEC and EPA as members of the Interagency Consultation Group (ICG) that approves the budgets.

1. Non-Attainment Background

The SMTC metropolitan planning area (MPA) consists of all of Onondaga County and small portions of Madison and Oswego Counties. 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 non-attainment 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.

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.

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, in cooperation with the NYSDOT EAB, 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 emissions impacts of a proposed project will: 1.) be less than the emissions in the SMTC base year (2003); 2.) will remain below budgets established for selected future years as determined by the Onondaga SIP and the Interagency Consultation Group (specifically 2009, and 2013), and 3.) 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 2007 Update shows that SMTC is well below the 2003 standards, 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 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 2027 for this LRTP 2007 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 2007 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.

2. Generation of Vehicle Miles Traveled and Average Speed Forecasts

The SMTC uses TransCAD as its travel demand-modeling platform.

The data forecasts used in the model are derived from several sources. Current population estimates were obtained via the 2000 census and estimates were calculated for 2003 (base year), along with future population estimates for the horizon year (2027) being forecasted by a working group of local professionals with experience in demographic analysis. This working group included the Syracuse-Onondaga County Planning Agency (SOCPA), New York State Department of Transportation (NYSDOT), SMTC, and others.

Land use data in the model (e.g., type of employers and number of employees) was similarly calculated for both the base and future scenarios utilizing the above-mentioned working group with the addition of key economic development agencies and personnel, and local officials. Some of the key additions to the working group included the Director of the Onondaga County Industrial Development Agency and the CNYRPDB's Director of Economic Development.

Travel data for transit was included in the modeling, taking into account Central New York Regional Transportation Authority (CNYRTA) fixed route service. CNYRTA's paratransit service (Call-a-Bus) is treated as shared ride trips. Additionally, bicycling and walking trips were also quantified via some system wide adjustments.

3. Projects Included in the Analysis

The conformity rules have designated several categories of projects that, by their nature, will not affect regional emissions. These projects are categorized as “**exempt**”. Highway and transit projects of the types noted below are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. However, a particular action of the type listed below is not exempt

if the MPO, in consultation with the ICG, concurs that it has regionally significant emissions impacts.

The following list of exempt projects is derived from “Table 2 - Exempt Projects” in 40 CFR Part 93.126, 6 NYCRR Part 240.27 and “Table 3 – Projects Exempt from Regional Emissions Analysis” in 40 CFR Part 93.127.

➤ **Safety**

1. Railroad/highway crossing
2. Hazard elimination program
3. Safer non-Federal-aid system roads
4. Shoulder improvements
5. Increasing sight distance
6. Safety improvement program
7. Traffic control devices and operating assistance other than signalization projects (i.e. Intelligent Transportation Systems (ITS) maintenance and ITS operations)
8. Railroad/highway crossing warning devices
9. Guiderails, median barriers, crash cushions
10. Pavement resurfacing and/or rehabilitation
11. Pavement marking demonstration
12. Emergency relief (23 U.S.C. 125)
13. Fencing
14. Skid treatments
15. Safety roadside rest areas
16. Adding medians
17. Truck climbing lanes outside the urbanized area
18. Lighting improvements
19. Widening narrow pavements or reconstructing bridges (no additional travel lanes)
20. Emergency truck pullovers

➤ **Mass Transit**

1. Operating assistance to transit agencies (or entities that provide transit service)
2. Purchase of support vehicles
3. Rehabilitation of transit vehicles
4. Purchase of office, shop, and operating equipment for existing facilities
5. Purchase of operating equipment for vehicles (i.e.: radios, fare boxes, lifts, etc.)
6. Construction or renovation of power, signal, and communications systems
7. Construction of small passenger shelters and information kiosks
8. Reconstruction or renovation of transit buildings and structures (i.e.: rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures)
9. Rehabilitation or reconstruction of track structures, track, and trackbed in existing rights-of-way
10. Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet
11. Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR 771.

➤ **Air Quality and Other**

1. Continuation of ride-sharing and van-pooling promotion activities at current levels
2. Bicycle and pedestrian facilities
3. Planning and technical studies that do not proceed to construction
4. Grants for training and research programs
5. Planning activities conducted pursuant to titles 23 and 49 U.S.C.
6. Federal-aid systems revisions
7. Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action
8. Noise attenuation
9. Advance land acquisitions (23 CFR 712 or 23 CFR 771)
10. Acquisition of scenic easements
11. Plantings, landscaping, etc.
12. Sign removal.

13. Directional and informational signs (i.e. ITS maintenance and ITS operations)
14. Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities)
15. Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational or capacity changes.

➤ **“Hot-Spot” Project-Level Conformity Analysis**

1. Intersection channelization projects
2. Intersection signalization projects at individual intersections
3. Interchange reconfiguration projects
4. Changes in vertical and horizontal alignment
5. Truck size and weight inspection stations
6. Bus terminals and transfer points

The Part 93.127 project types (“Hot-Spot” Project-Level Conformity Analysis) are not required to be included in the regional emission analysis, but the local effects of these projects with respect to CO concentrations must be considered to determine if a hot-spot analysis is warranted prior to making a project -level conformity determination.

Projects which are expected to affect the distance, speed or capacity of a roadway, and do not fall under any of the above noted classifications, are categorized as “**non-exempt**” and must undergo a conformity analysis. All of the non-exempt projects included in the 2007-2012 TIP that could be modeled did undergo a conformity determination analysis for the 2027 scenario and are included in Table 7-1.

Table 7-1

Non-Exempt Projects Included in the Analysis			
PIN	Project	General Scope	TCM?
375285	Geddes/Genesee Sts Signal Interconnection	Upgrading of signals and inclusion in existing interconnect system.	No
375272	Lodi St/North Salina St. Signal Improvements	Upgrading of signals and inclusion in existing interconnect system.	No
375479	N,S,E,W Interconnect Expansion	Upgrading of signals and inclusion in existing interconnect system.	No
Source: SMTC, 2007-2012 TIP. “PIN” stands for project identification number; “TCM” indicates whether or not the project is a Transportation Control Measure.			

4. Emissions Modeling

The 2007 emissions analysis was based upon the latest emission factors available for Onondaga County. The results of the analysis include an estimate of the total daily CO emissions from mobile sources (cars, buses, trucks) in Onondaga County. This emissions analysis is based on calculations for a winter day with vehicle, traffic and weather conditions that are the most conducive to carbon monoxide production. The above analysis includes measures from the emission control program. Specific examples include the gas cap integrity check, anti-tampering program, an on-board diagnostics system check, and the California Low Emission Vehicle II Program (CAL LEV II).

5. Results of the Emissions Modeling

The modeling output shows that CO emissions between the base year of 2003 and the forecast year of 2027 will be significantly reduced. The analysis indicates that with the completion of construction or implementation of the projects on the TIP, the area will still result in emission levels that are lower than the 2003 base year.

In addition to the required emissions level conformity test, the SMTc staff and the NYSDOT analyzed several milestone years between the 2003 base year and the 2027 Plan year. The results of these analyses demonstrate the gradual reductions in CO emissions over time for the milestone years. These are shown in Table 7-2.

Table 7-2
Emissions Modeling Results

Year	2003	2009	2013	2020	2027
Budget	N/A	372	357	357	357
Emissions Analysis	409.99	198.20	162.85	146.15	153.55

Source: SMTc

6. Timely Implementation of Transportation Control Measures (TCMs)

All of the TCMs from the previous Maintenance Plan have been implemented. No new TCMs have been identified in the Maintenance Plan for the years 2003-2013. The previous TCMs from the 1999-2004 TIP are shown for informational purposes in Table 7-3.

7. Transit Impacts on Conformity

The Transportation Conformity Rule (40 CFR Part 93), issued by the USEPA, requires that the conformity determination for each Plan and TIP must discuss how transit operating policies (including fares and service levels) and assumed ridership have changed since the previous

conformity determination (93.110(c)). In addition, the conformity determination must include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time (93.110 (d)).

The CNYRTA has not had a fare increase since 1995. According to the CNYRTA, there would be no fare increase in the foreseeable future as fares are raised only as a last resort. The same applies to service levels. The CNYRTA reduced service in 1995, however in November 2002, service was added as part of a major restructuring of bus lines and service hours. As a result of the route restructuring, CNYRTA's ridership is up approximately 4% overall. Finally, CNYRTA will continue to pursue the service concepts proposed in the ReMAP Study completed in 1999 to the extent possible, given adequate funding. These concepts include small bus community circulators in suburban settings, express services between downtown and outlying locations and the development of key hubs. There has been limited success to date with some of those service concepts. Two new bus routes were added; one is doing moderately well, while the other was cancelled due to lack of sufficient ridership.

Table 7-3

Transportation Control Measures (TCMs) Update				
PIN	Project	1994-1999	1999-2004	Comments
303519	RT 57, phase IV, Gaskin to RT 31	Construction 11/96		Implemented
310412	RT 635, RT 5 to RT 298	Construction 11/94	Construction 6/98	Implemented
310413	RT 298, Syracuse to Carrier Circle	Construction 11/98	Construction 4/02	Implemented
375206	Harrison Street Traffic Signal	Construction 9/95		Implemented
375207	Buckley Road Improvements at Bear Road	Construction 11/95		Implemented
380272	Oncenter Signs	Construction 1/94		Implemented
380275	Downtown Syracuse Signal Interconnect System	Engineering 11/96	Construction 7/96	Implemented
380307	Connections Ride Sharing Program			Implemented
380312	AVL System	Construction 10/96		Implemented
382074	Fare Collection System	Construction 10/96		Implemented
382089	Shelter Schedule Panels	Construction 10/94		Implemented
Source: Syracuse Metropolitan Transportation Council, 1999-2004 Transportation Improvement Program.				

8. Summary

Since the regional implementation program of transportation projects, as reflected in the TIP and derived from the goals and objectives of the LRTP, have been shown to meet the required emission reduction test for air quality conformity, and there are no applicable TCMs in the current SIP for the Onondaga County area, **the LRTP 2007 Update has been shown to be consistent with applicable conformity regulations and the SIP.** No goals, directives, recommendations or projects of the LRTP will contradict requirements or commitments of the SIP or the intent of the CAAA or other applicable federal and state guidance.

The conformity analysis prepared by the SMTC, with the support of NYSDOT EAB, may be found in Appendix D.

C. Congestion Mitigation/Air Quality Program

The CMAQ program was established under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 as a funding source for transportation projects and programs that help support the goals of the 1990 CAAA of 1990. The program was reauthorized under TEA 21 and the latest transportation legislation, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The main goal of the CMAQ Program is to fund transportation projects that reduce emissions in non-attainment and maintenance areas. In the context of total available federal transportation funding, CMAQ makes a small but targeted contribution toward addressing air quality issues.

Congestion mitigation is also a goal of the CMAQ Program. Congestion relief can contribute to improvements in air quality by reducing travel delays, engine idle time and unproductive fuel consumption. Over the past twenty-five years, vehicle miles traveled (VMT) have more than doubled, while lane miles have increased slightly. As VMT increases there is greater opportunity for congestion and increased emissions.

All sponsors in the Syracuse metropolitan region requesting CMAQ funds must provide an air quality analysis for review and approval by the SMTC and NYSDOT EAB. CMAQ projects funded by the SMTC in the 2007-2012 fiscal year time frame include:

- Geddes/Genesee Signal Interconnect (signal upgrades and linking to signal interconnect system);
- Lodi/North Salina Street Signal Improvement (signal upgrades and linking to signal interconnect system);
- N, S, E, W Signal Interconnect Expansion;
- Replace CNG Transit Buses with Hybrids (CNG fleet replacement project with modern technology (diesel-electric hybrids));
- New York State Department of Transportation Freeway Incident Management System Phase 5 and 6; and

- New York State Thruway Authority ITS Implementation Project.

According to the CMAQ analysis, the combined first year benefit of these projects is roughly 116 tons/year in CO emissions and is shown in Table 7-4.

Table 7-4

CMAQ Projects in the 2007-2012 TIP Benefits in Tons Per Year

Sponsor	Project	Anticipated Year Complete	Tons/Year Benefits
City of Syracuse	Geddes/Genesee Signal Interconnect	2010	3.81
City of Syracuse	Lodi/North Salina Signal Improvement	2010	1.85
City of Syracuse	N, S, E, W Signal Interconnect Expansion	2011	12.76
NYSDOT	Freeway Incident Management System Ph. 5-6	2009/10	37.0
NYSTA	Thruway ITS Implementation	2009	2.0
Centro	Replace NOVA CNG buses with Hybrids	2009	11.08
Centro	Replace Orion V CNG buses with Hybrids	2011	48.00
TOTAL			116.50
<i>This table was created from information derived from the SMTC's 2007 – 2012 TIP and various individual CMAQ analyses calculated by the SMTC for various projects.</i>			

Once CMAQ projects have been completed, a “before and after” study is necessary (according to federal requirements) to confirm the benefits predicted by the project sponsors. To ensure continued emissions benefits from a project, the EAB and SMTC require that the scope be reviewed and an analysis completed for each year that funds are requested.

D. Energy and Greenhouse Gas Impacts

1. Introduction

A policy objective of both the U.S. Department of Transportation and the State of New York is the conservation of energy through a reduction in motor fuel consumption. In addition, the New York State Energy Plan (SEP) has identified a reduction of greenhouse gases (CO₂) as an objective for all LRTPs.

Similar to the documentation relating to air quality emissions above, the SMTC performed a quantitative analysis on both energy consumption and carbon dioxide emissions that may result from the implementation of the 2007 LRTP. This analysis, included to promote the policy objectives of federal and state transportation departments, is intended to focus awareness on these issues.

2. State Energy Plan

The 2002 SEP laid the foundation for many of the State's transportation policies with regard to energy-efficient travel. The SEP is coordinated with the statewide Master Transportation Plan prepared by the NYSDOT and the SIP for air quality prepared by the NYSDEC.

"The SEP achieves a true integration of transportation issues with energy, environmental and economic development issues. It contains several recommendations and goals that affect the transportation sector and how we do business. Among the more significant recommendations and goals are:

- Reducing energy use across all sectors and all fuels by 25 percent by 2010 from 1990 levels;
- Reducing greenhouse gas emissions across all sectors and all fuels by 5 percent by 2010 and 10 percent by 2020 from 1990 levels;
- Including greenhouse gas, air quality and energy production (and mitigation, as appropriate) in the development of transportation plans, programs and projects at a metropolitan and statewide level;
- Redirecting transportation funding to energy efficient transportation alternatives;
- Targeting open space funding to prevent suburban sprawl, reduce vehicle miles traveled, and reduce energy use and pollutant emissions; and
- Supporting, adopting and enhancing various emission control strategies."¹

The statewide Master Transportation Plan emphasizes maintaining transit infrastructure and providing operating improvements that will continue to improve the energy efficiency of travel in New York. The significant continuing investment in Intelligent Transportation Systems (ITS) statewide is also expected to have a positive effect on future energy use.

The policies and objectives set forth in the SEP provide many areas where efforts to improve the efficiency of the transportation system are aligning with these new travel trends, such as the statewide ITS program, passenger rail and bus infrastructure upgrades, transit enhancements, promotion of new pedestrian and bicycle facilities and intermodal freight access improvements.

Energy use in the transportation sector is derived from the amount of travel, expressed as VMT, and fuel economy, expressed as miles per gallon (MPG). Increasing energy efficiency in the transportation sector can be accomplished by reducing VMT, increasing the fuel economy of the vehicles used for travel, or by reducing congestion and vehicle delays. Reducing VMT can be achieved in a number of ways, from an absolute reduction in travel to increasing the occupancy of

¹ Memorandum from Michael Fleischer, First Deputy Commissioner to Executive Staff, Assistant Commissioners and Regional Directors, September 23, 2002.

each vehicle to move the same or more travelers in fewer vehicles (e.g., shifting from single-occupant vehicles (SOVs) to HOVs, which include carpools, vanpools, and transit vehicles).

The primary methods used to reduce congestion and its impacts are decreasing Vehicle Hours of Delay (VHD) and total VMT. Every action undertaken by the State or local transportation agencies to mitigate the growth of congestion attempts to accomplish one or both of these objectives. These actions by nature are multimodal; covering highway construction and operating projects, transit capital projects and operating policies (e.g., fare incentives), and motor carrier and rail freight services.

3. SMTC Initiatives & the New York State Energy Plan

The SMTC and its member agencies fully support the efforts and goals of the New York State Energy Plan and there are several examples indicative of this support. The NYSDOT, the Onondaga County Department of Transportation (OC DOT) and the City of Syracuse have upgraded a number of their traffic signals to use LEDs, which save energy and are longer lasting than standard bulbs. The NYSDOT and the CNYRTA maintain CNG fueling stations and both agencies are increasing their fleets of CNG vehicles, with the CNYRTA beginning to replace the CNG fleet with diesel-electric hybrids, which further reduce energy, greenhouse gases and CO emissions. In addition, the City of Syracuse has an established CNG fueling facility maintained by the Department of Public Works that services not only the growing City fleet of alternative fueled vehicles, but also provides services for other agencies and municipalities.



CNYRTA Diesel-Electric Hybrid Bus

Previous UPWP studies have included ridesharing programs, emergency energy contingency plan development, staggered work hours feasibility, and several traffic improvement studies that have had direct input into the TIP development. In particular, extensive work has been completed on the coordination and optimization of traffic lights in the City of Syracuse.

In addition, the SMTC has funded through its TIP process in the past an Environmental Technology Degree program to support the Alternative Fuels Technology Center at Onondaga Community College, as well as an expanding fleet of CNG and clean-fueled buses for the transit authority. The SMTC is also a stakeholder in the Clean Communities of Central New York program.

The CNYRTA envisions that by 2011 their fleet would consist of Diesel-Electric Hybrids allowing the retirement of the existing diesel fleet and the operation of clean-fueled buses

throughout their regional system (where currently CNG buses cannot operate). The support of the CNYRTA's efforts by the SMTC will allow the replacement of both diesel and CNG with an even cleaner, more energy efficient transit fleet. The Hybrid buses get improved mileage as well as significantly reduce emissions.

4. Private Sector Initiatives

In Central New York the private sector has also been active in initiatives that support the goals of the State Energy Plan. CSX Transportation has been retrofitting its fleet of diesel engines with an auxiliary power unit (APU) generator, which allows the railroad to reduce idling thereby saving fuel, energy and substantially reducing emissions from railroad sources. The APU provides for power during idling and shuts down the main locomotive engine. According to the CSX Transportation Mechanical Department and the EPA, during idling the APU provides for the following reductions in emissions:

- 85% reduction in Carbon Dioxide (CO₂)
- 91% reduction in Nitrous Oxides (NO_x)
- 94% reduction in Hydrocarbons (HC)
- 96% reduction in Carbon Monoxide (CO)
- 84% reduction in Particulate Matter (PM)

Improvements by short line railroads in the region have also contributed to conversion an increasing amount of freight traffic being converted from truck to rail thereby reducing number of truck trips and reducing congestion while saving energy and reducing emissions.

In addition to the above noted endeavors by the SMTC and its member agencies, the state energy plan requires an analysis of energy consumption and greenhouse gas for TIPs and Plans. The process and results of that analysis are described below.

5. 2027 Long Range Plan 2007 Update Energy Analysis

The LRTP 2007 Update is the second document that requires both an analysis of energy usage and an analysis of greenhouse gas emissions; the first being the LRTP 2004 Update. The NYSDOT EAB provided guidance on the approach to this process. These guidance documents are as follows:

- *Air Quality Analysis of Transportation Improvement Programs, Regional Transportation Plans, and Capitol Project programs – Technical Guidance to Assist Metropolitan Planning Organizations and Department of Transportation Regional Offices Meet the Objectives of the 2002 New York SEP* (January 21, 2003);
- *Development of Revised NYSDOT Energy Analysis Guidelines (Draft), Subtask 12a: Energy Analysis Guidelines for TIPs and Plans* (June 21, 2002); and
- *Development of Revised NYSDOT Energy Analysis Guidelines (Draft), Subtask 12b:*

Greenhouse Gases (CO₂) Emissions Estimates for TIPs and Plans (June 21, 2002).

To comply with/adhere to this guidance, the SMTC staff worked through a nine-step process that included:

1. Projects were reviewed based on guidance provided in 6 NYCRR Part 240.6 (h) (2) for their significance in affecting energy consumption and the appropriate projects were identified as non-exempt projects.
2. Travel Demand Modeling was completed to determine the impact of future projects in the Syracuse MPA. The analysis scenarios included a year 2027 No-Build and a year 2027 Build (2027 is the horizon year of the SMTC LRTP). The No-Build scenario includes the 2003 roadway network with 2027 demographic and employment projections, while the Build scenario consists of the 2027 road network and 2027 land-use characteristics.
3. Off-model Projects analysis to account for the visions of the 2027 LRTP that could not be modeled in TransCAD. Transit and bicycle/pedestrian transportation projects were analyzed as off-model projects. Using information developed by the SMTC and its member agencies, SMTC calculated the reduction of VMT as a result of transit and bicycle and pedestrian system improvements envisioned in the LRTP. The off-model analysis also accounted for emissions reductions associated with the conversion of the Centro bus fleet from CNG to diesel-electric hybrids.
4. Regional Emissions Modeling. For this analysis the SMTC utilized emissions factors by road type and speed for Volatile Organic Compounds (VOC), Nitrogen Oxide (NO_x) and CO for both the Build and No-Build scenarios. The SMTC then calculated the number of grams of each pollutant produced for each scenario.
5. Direct Energy Analysis. Direct energy represents the energy consumed by vehicles using a transportation facility (for this analysis, “facility” is defined as the roadway segments in SMTC’s regional travel demand model). Each scenario total VMT was multiplied by the percentage of each vehicle type to determine vehicle type VMT. That vehicle type VMT was then divided by the fuel economy rate to calculate the number of gallons of fuel used. These fuel consumption values were then converted to British Thermal Units (BTUs) by multiplying each gallon by 125,000. Finally, the total direct energy consumption (in BTUs) was summarized for all vehicles in either scenario.
6. Indirect Energy Analysis. Indirect energy represents the energy required to construct and maintain the transportation system. For this analysis, per EAB guidelines, only the energy used in construction activities for the identified Non-Exempt projects, including new construction, reconstruction, rehabilitation, and widening was analyzed. Certain non-exempt projects, such as ridesharing, include no energy-consuming construction or maintenance activities, and therefore, an indirect energy calculation is not applicable. However, one rehabilitation project, two road widening projects, and one new construction project from the LRTP 2007 Update were included in the indirect energy analysis.
7. CO₂ Emissions Estimates from Direct Energy Consumption. The guidance from EAB

provides Carbon Emission coefficients based on vehicle type. The Direct Energy consumed (by vehicle type) was multiplied by the Carbon Emission Coefficients for both gasoline and diesel engines and then by a factor representing the amount of carbon that is oxidized. This process created a value representing total tons of carbon dioxide emitted.

8. CO₂ Emissions Estimates from Indirect Energy Consumption. Similar to the step above, the indirect energy consumed was multiplied by the Carbon Emission Coefficients for diesel vehicles and then by a factor representing the amount of carbon that is oxidized. The results were the total tons of Carbon emitted.
9. Documented and presented the results of the analyses.

6. Analysis Summary

The results of the analysis indicate that the 2027 Build scenario, including the off-model transit, bicycle, and pedestrian improvements, will result in lower levels of pollutants and direct energy use as compared to the 2027 No-build scenario. In other words, the projects included in the 2007 LRTP will provide for a decrease in the emission of VOC, NO_x, CO, and CO₂ and the amount of direct energy used by vehicles in the Syracuse MPA. The VOC, NO_x, CO, and CO₂ emissions analysis and the energy analysis are summarized in Table 7-5.

**Table 7-5
Emissions and Energy Analysis Summary**

Scenario	VMT	Air Pollution Emissions			Energy		Greenhouse Gas (CO ₂) Emissions	
		VOC g/day	NO _x g/day	CO g/day	Direct (BTUs)	Indirect* (BTUs)	Direct (tons)	Indirect (tons)
2027 No-Build	12,820,010	2,792,844	2,810,512	139,269,694	88,840,684,966	0	1,887	0
2027 Build (with off-model assumptions)	12,630,375	2,675,300	2,071,269	136,965,362	87,526,546,440	41,952,000,000	1,860	913
Change (Build - No Build)	-189,635	-117,544	-739,243	-2,304,332	-1,314,138,526	--	-28	--
Percent Change (Build - No Build)	-1.48%	-4.21%	-26.30%	-1.65%	-1.48%	--	-1.48%	--
* The intent of the indirect energy and greenhouse gas calculations was to measure the impact of the construction of the projects in the SMTC Long-Range Plan. The indirect energy used in the 2027 No-Build scenario is zero (as is the greenhouse gas emissions arising from the indirect energy used); therefore it is not possible to compute the percentage difference between the two scenarios.								

Further details of the analysis steps utilized by SMTC staff and the results thereof are shown in Appendix E. This appendix details several important considerations relevant to both greenhouse gas and energy calculations.

E. Conclusions

The SMTC and its member agencies will continue to develop processes and tools to further monitor and improve our air quality for a variety of pollutants, while working towards enhanced energy savings and a more effective transportation system operation. In addition, the SMTC and its member agencies will continue to work closely with the New York State Department of Transportation Environmental Analysis Bureau to achieve the goals and objectives of the State Energy Plan. However, it is anticipated that significant additional resources and funding will be required to address this area. Metropolitan Planning Organizations (MPOs) generally do not have

the level of expertise and resources on hand that are now being required for increasingly more complex and integrated analysis in this subject area. In addition, the MPOs will require greater clarity and consistent detailed guidance, training and tools to allow for such analysis.

Chapter VIII:

Long Term Outlook and the Financial Plan

A. 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.

1. Asset Management and Infrastructure Maintenance

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 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 Federal Aide Eligible or 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). 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 and geometric adjustments such as the straightening of a curve. 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 207 total buses in its fleet including 121 compressed natural gas (CNG) buses. Centro has constructed a CNG fueling facility that is open to the public. However, this facility is currently being used only by companies with fleet vehicles. Additionally, 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 buses at approximately \$500,000 each. In looking toward future improvements, hydrogen fuel cell buses (approximately \$1 million each) will improve air quality. As buses require maintenance and eventual replacement during their life cycle, there is a need for continuous money to be available to upgrade and upkeep Centro's fleet. Additionally, instead of purchasing a few buses each year to keep the fleet operable, Centro purchases a larger number of buses every few years because this allows for a reduced rate on the bus price.

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.

CNYRTA is seeking funding to construct a stand-alone Common Center transit 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 actively been involved in choosing the location of a new “Common Center” central location where a new facility will be built. The public meeting which reviewed the new location was held in December 2006.

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.

- **Additional 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. Recent examples of projects that are either completed or underway include the added capacity improvements 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.

- **New Transit Initiatives:**

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. One example of this concept is the successful Mobility Management Center, which Centro plans on expanding.

- **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. Twelve percent of the 2005-2010 TIP funding is allocated to bicycle and pedestrian projects.

- New Development Potential:

Potential plans for the Lakefront area call for various economic development opportunities. One such plan is the Destiny USA initiative. Recently, approvals and bonding have occurred for Phase 1 of the Destiny project. It is hoped that the progress on this project will continue. If built to its advertised potential, these plans could significantly impact the MPO area. Due to the movement on this project, the



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next Long Range Transportation Plan (LRTP) will take into consideration 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.

- Intelligent Transportation Systems (ITS):

As noted in several locations throughout this document, ITS is 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, four projects are identified as essential to the transportation systems, 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 two have funding sources already identified and planned for. The details of these projects are:

- **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. The completion of the project will be necessary as part of the next phase of the Lakefront Development. The site has been bonded by Onondaga County Industrial Development Agency (OCIDA), which is essential mitigation to further the Lakefront Development as defined in OCIDA's SEQR funding statement on March 9, 1998. This project will be completed by 2013, and will be privately funded. The project should cost in the range of \$1-1.5 million.

- **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 this 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. The completion of this project will fulfill commitments previously made regarding the expansion of Carousel Center, which was not started previously due to an oil tank on the land needed for the additional lane. This project will be completed by 2013, and will be privately funded. The project should cost in the range of \$5-6 million.
- **Additional Travel Lane on NY 31** – NY 31 from Morgan Road to Henry Clay Boulevard will feature an additional travel lane in each direction. The configuration will be consistent with NY 31 west of Morgan Road, with two travel lanes each way and a fifth lane in the center for left turn movements. The intersection of NY 31 and Henry Clay Boulevard will be updated accordingly. This project will be federally funded and completed shortly after the 2012 TIP. The project should cost in the range of \$4 million.
- **North Salina Street Lane Reduction** – North Salina Street, currently with two travel lanes in each direction, will be reduced to one travel lane in either direction with a center left turn lane. The bounds of this change will be from East Division Street in the south to Isabella Street in the north (700 and 800 block of North Salina Street). This project will be federally funded and completed by 2020. The project should cost in the range of \$800,000.

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.

B. Financial Plan

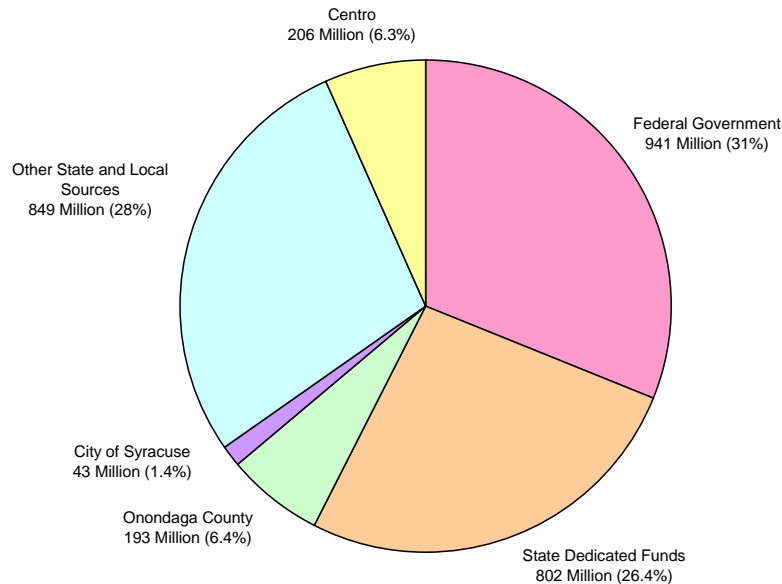
1. Resources Available

The 2020 LRTP, when published in 1995, anticipated a total of \$3.050 billion in funding over the 25-year planning period. This LRTP 2007 Update anticipates a total of \$3.034

billion in funding over the remaining term of the planning period. The major sources of funding, shown in Table 8-1 and 8-3, include the federal government at 31.0% (\$941 million) of the total, the State Dedicated Fund at 26.4% (\$802 million), Onondaga County at 6.4% (\$193 million) and the City of Syracuse at 1.4% (\$43 million). The balance is comprised of other State and local sources at 24.3% (\$679 million)¹ and Centro operating revenue at 6.8% (\$206 million). It is anticipated that all traditional funding mechanisms will be exhausted with the implementation of this LRTP 2007 Update.

Table 8-1

Resources Available- Major Sources of Funding



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 2020 has not been changed from the original LRTP of 1995. Although the transit portion of Table 8-2 and 8-3 shows fewer total dollar resources under the 2001-2020 column, the annual amount is greater now for the Update period than was the case when the LRTP was originally published. The 2007-2027 column for highway funding corrects previous misrepresentations that were not based on the assumption that all of the allocations would be spent in a 25-year period.

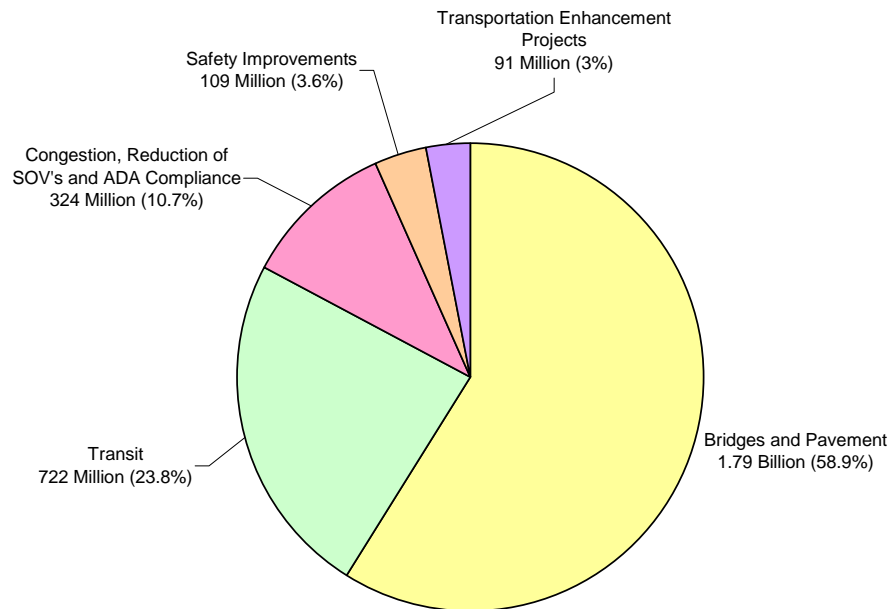
For this 2007 Update, the 2001 cost of each objective has been pro-rated using the new 20-year resource base of \$3.034 billion. The results show that maintenance of existing bridges and pavement (Facilities 1-3 in Table 8-4, as well as Table 8-2) will absorb 59% of the budget (\$1.79 billion). An additional 23.8% (\$722 million) will be allocated to support the area transit system; 10.7% (\$324 million) will be used to improve congested locations, reduce single occupancy vehicles (SOVs) and the Americans with Disabilities Act (ADA)

¹ The number does not match the number for "Other State and Local Funds" on Table 8-1 because it includes some non-transit funding that cannot be broken out from that number.

compliance; and 3.6% (\$110 million) will be spent for efforts to increase safety at high incident locations. The remaining 3.0% (\$90 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 2007 Update also supports a number of innovative initiatives new to this area. Examples of the latter include funds which have been allocated to encourage the application of ITS technology in the Syracuse region and an effort to devise a cost/benefit methodology for application to future TIPs.

Table 8-2

Resources Available to Maintain Existing Transportation System



3. Evaluation of the Project Financial Tracking Process

A review of the LRTP section on Goals, Objectives and Action Plans for this Update 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 over the short term (the next three years) to restructure the current project tracking system in order to make documentation of goal progress more effective. Essentially, this will occur by linking each project with one or more specific goals. 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.

The resources on Table 8-1 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 (FHWA) 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. The \$3.034 billion in federal funding was established based on an extrapolation of historical trends. There was a need to extrapolate this number because the planning period was extended by three years.

Table 8-3

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)
<i>The estimates below were calculated as planning estimates for the corresponding planning periods and are not to be interpreted as actual budgets.</i>					
Transit Funding Sources					
Federal-FTA	\$180 M	\$99 M	\$91 M	\$105 M	\$216.6 M
State Dedicated Funds	\$30 M	\$16 M	\$15 M	\$17 M	\$20 M
Other State and Local Funds	\$290 M	\$327 M	\$301 M	\$557 M	\$611.6 M
Operating Revenue	\$170 M	\$167 M	\$154 M	\$177 M	\$205.6 M
Total Transit Funding	\$670 Million	\$609 Million	\$561 Million	\$856 Million	\$1053.8 Million
Highway Funding Sources					
Federal-FHWA	\$1095 M	\$1087 M	\$1000 M	\$920 M	\$941.4 M* (see note)
State Dedicated Funds	\$1010 M	\$801 M	\$738 M	\$784 M	\$802.2 M
Onondaga County-Capital Program	\$225 M	\$242 M	\$233 M	\$189 M	\$193.4 M
City of Syracuse- Capital Program	\$50 M	\$70 M	\$64 M	\$42 M	\$43.0 M
Other Municipalities in the SMTC Area	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)
Total Highway Funding	\$2.380 Billion	\$2.200 Billion	\$2.025 Billion	\$1.935 Billion	\$1.98 Billion
Total Highway and Transit Capital Funding	\$3.050 Billion	\$2.809 Billion	\$2.586 Billion	\$2.791 Billion	\$3.034 Billion

Source: NYSDOT and CNYTRA

Notes and Assumptions: The 2007-2027 column for highway funding corrects previous misrepresentations that were not based on the assumption that all of the allocations would be spent in a 25-year period.

2004-2020 (16 years) Estimated Resources-Transit Operations and Capital Funding

Federal-FTA- Assume continuation of current 5307 program at approximate level of \$5 million per year. This program is subject to reauthorization approximately every six years, as well as to specific annual appropriation levels that can be less than the authorization.

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 \$800,000 per year over this 16-year period.

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 be nominally higher over this period compared to previous estimates.

The STOA program was substantially increased in the fiscal year beginning April 1, 2002 and was continued at a slightly lower level in the fiscal year beginning April 1, 2003. For purposes of estimation, we anticipate the April 1, 2003 level of \$19.7 million to be the base amount going forward. This is the primary reason for the substantial increase in this resource category.

Local match for STOA, plus some small non-required subsidies, is expected to hold at about \$2.7 million per year.

With federal capital programs estimated at \$5 million per year (representing 80% of project costs) results in a total capital program of up to \$6.25 million per year. The NYS share of a \$6.25 million annual capital program is 10% or \$625,000.

FHWA- The total FTA and FHWA funding is based on an extrapolation of historical trends due to the planning period three year extension.

Operating Revenue-Projected at approximately current levels, with nominal increases.

***The two Federally funded projects (Additional Travel Lane on NY 31 and North Salina Street Lane Reduction) listed in Chapter 8, Section 2 (Specific Identified Improvements) total Approximately \$4.8 Million. Details of FHWA fund source will not be completed until Capital Projects Committee meeting.**

Table 8-4

Allocation of Resources by Long Range Transportation Plan Objective					
OBJECTIVE	1995 – 2020	1998 – 2020	2001-2020	2004-2025	2007-2027
Mobility 1 – Transit service	\$520 M	\$479 M	\$441 M	\$664 M	\$721.8 M
Mobility 2 – Improve LOS at congested locations	\$300 M	\$276 M	\$254 M	\$252 M	\$273.9 M
Mobility 3 – Decrease the number of SOVs	\$25 M	\$23 M	\$21 M	\$21 M	\$22.8 M
Mobility 4 – Comply with ADA	\$30 M	\$28 M	\$26 M	\$25 M	\$27.2 M
Mobility 5 – Greater utilization of electronic communication	\$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
Environment 1 – Implement programs that improve air quality	\$15 M	\$14 M	\$13 M	\$13 M	\$14.1 M
Environment 2 – Implement carbon monoxide SIP	\$14 M	\$13 M	\$12 M	\$12 M	\$13.0 M
Environment 3 – Decrease use of road salt	\$5 M	\$5 M	\$4 M	\$4 M	\$4.3 M
Economy 1 – Support access to economic development	\$50 M	\$46 M	\$42 M	\$42 M	\$45.7 M
Economy 2 – Maintain operation/condition standard on principal arterials	\$0	\$0	\$0	\$0	\$0
Economy 3 – Employer coordination of employee travel	\$12 M	\$11 M	\$10 M	\$11 M	\$12.0 M
Facilities 1 – Bridge maintenance	\$776 M	\$715 M	\$659 M	\$652 M	\$708.8 M
Facilities 2 – Pavement maintenance	\$1172 M	\$1079 M	\$994 M	\$984 M	\$1069.7 M
Facilities 3 – Maintain sidewalks & other pedestrian/bike facilities	\$10 M	\$9 M	\$8 M	\$8 M	\$8.7 M
Safety 1 – Reduce accident rates at highest accident locations	\$95 M	\$87 M	\$80 M	\$80 M	\$87 M
Safety 2 – Reduce the highest intermodal accident locations	\$25 M	\$23 M	\$21 M	\$21 M	\$22.9 M
Safety 3 – Assist planning officials and developers in accommodating travel in new developments	\$0	\$0	\$0	\$0	\$0
Total	\$3.050 Billion	\$2.809 Billion	\$2.586 Billion	\$2.791 Billion	\$3.034 Billion
Source: New York State Department of Transportation					