LONG-RANGE TRANSPORTATION PLAN

2001 Update

SMTC

Syracuse Metropolitan Transportation Council

LONG-RANGE TRANSPORTATION PLAN 2001 UPDATE

MAY 2001

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Long-Range Transportation Plan 2001 Update

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Adoption of the 2020 Long-Range Transportation Plan 2001 UPDATE **SMTC Policy Resolution No. 2001-07**

SYRACUSE METROPOLITAN TRANSPORTATION COUNCIL

POLICY COMMITTEE

May 14, 2001

WHEREAS, The Syracuse Metropolitan Transportation Area contains a complex, multimodal transportation system, which must be maintained in a good state of repair to preserve the infrastructure, improve safety, provide system connectivity, improve mobility, increase access and support economic growth; and

WHEREAS, the Syracuse Metropolitan Transportation Council (SMTC) is the federally designated Metropolitan Planning Organization (MPO) responsible for the preparation of long-range transportation plans; and

WHEREAS, the Transportation Equity Act for the 21st Century (TEA-21) of 1998 mandates that MPOs must update their long-range transportation plans every three years; and

WHEREAS, the SMTC has prepared the 2020 Long-Range Transportation Plan 2001 Update to examine and consider changes in trends and conditions, and to confirm the validity of the forecasts and assumptions used in the 1995 Long-Range Transportation Plan and the 1998 Long-Range Transportation Plan Update; and

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

WHEREAS, the projects in the 2020 Long-Range Transportation Plan 2001 Update, including other major regional transportation projects not receiving federal funds, has been determined to conform with the New York State Implementation Plan for Air Quality (SIP); and

WHEREAS, This determination is consistent with conformity provisions for maintenance areas; and

WHEREAS, the 2020 Long-Range Transportation Plan 2001 Update has been made available for public comment, and subsequently approved by the SMTC Planning Committee; and

WHEREAS, the SMTC Policy Committee is the policy making body of the MPO having the authority to adopt the 2020 Long-Range Transportation Plan 2001 Update;

NOW THEREFORE BE IT RESOLVED that the Syracuse Metropolitan Transportation Council Policy Committee does hereby approve the 2020 Long-Range Transportation Plan 2001 Update.

BE IT FURTHER RESOLVED that the 2020 Long-Range Transportation Plan 2001 Update conforms to the New York State Implementation Plan for Air Quality (SIP) through previous analyses by measurably reducing the amount of carbon monoxide emitted from mobile sources and by implementing, in a timely manner, the Transportation Control Measures defined in the SIP.

William E. Sanford, Chairperson	Jon Edinger, Secretary
SMTC Policy Committee	SMTC Policy Committee
Date: _____	Date: _____

CHAPTER 1
INTRODUCTION

Background

In January 1995, the Syracuse Metropolitan Transportation Council (SMTC) published the 2020 Long-Range Transportation Plan (LRTP). This was followed three years later with the 1998 Update. Both documents were prepared in compliance with CFR 450.332, which also is the basis for this document, the 2001 Update, to fulfill triennial review and update requirements. The 2001 Update will be the last update of the LRTP. During 2001, the SMTC will begin a three-year process to completely revise the LRTP, with a 20-year forecast period, for publication in 2004.

The 2001 Update has been prepared on the basis of an evaluation of the LRTP and the 1998 Update, as well as changes of a significant nature that have occurred affecting the two documents. The approach used in preparing the 2001 Update is that the document 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 Update. In general, sections of the LRTP that are not substantially affected by changing circumstances are not included in this document. The 1998 Update was used as reference information in preparing this document but is entirely replaced by the 2001 Update. Four examples of differences between the 1998 Update and the 2001 Update documents are:

1) The completion of several planning projects from the annual SMTC Unified Planning Work Program (UPWP) and substantial progress on other projects;
2) Inclusion of more recent demographic data resulting from Census 2000;
3) Changes made in the Federal Highway Administration planning factors to be considered in conducting UPWP planning projects and in the SMTC Transportation Improvement Program (TIP) for selecting implementation projects; and
4) Progress achieved in the Action Plans identified in the LRTP, included in Chapter 2.

2020 Long-Range Transportation Plan

During the last decade, several changes in federal legislation have had a substantial impact on how Metropolitan Planning Organizations (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 and the Transportation Equity Act for the 21st Century (TEA-21) of 1998. Collectively, this legislation addresses 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 to conform with Onondaga County's 2010 Development Guide.

Public Involvement

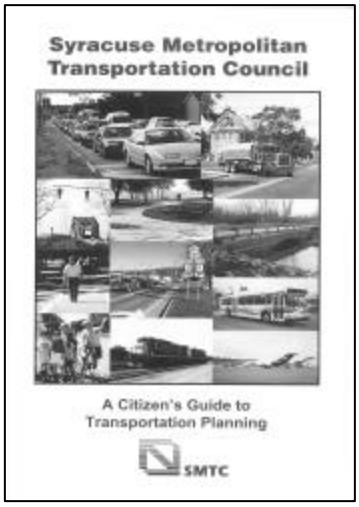
Engaging the public early and often in the planning process is critical to the success of any transportation plan or program, and it is required by numerous state and federal laws. Such legislation underscores the need for public involvement, calling on MPOs such as the SMTC to provide citizens, affected 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.

The SMTC recognizes that the active involvement of the entire community, in addition to the SMTC Policy, Planning and Study Advisory Committee (SAC) 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.

Since the 1998 Update, the SMTC has taken several steps to strengthen the public involvement process. In addition to public meetings, the SMTC also recruits the necessary technical personnel and community representatives to serve on a project-specific SAC. Such a committee is created for most of the SMTC planning activities to assist in managing projects, as well as provide needed input and direction. A staff Communications Specialist works with the technical staff to expand opportunities for public input on each of the projects conducted under the annual UPWP. For many of the SMTC activities, a project-specific Public Involvement Plan (PIP**)** sets the framework for the public involvement opportunities that will be available throughout the course of the project. The PIP also pinpoints when in the project the public involvement meetings will be held that allow for the exchange of information and input. These meetings are in addition to the project SAC meetings, which are of a more technical nature and held on a more frequent basis. Public input opportunities are also provided during meetings of the SMTC Planning and Policy Committees.

Other methods the SMTC uses to inform and invite the public to participate include the use of press releases to announce various meetings, project updates, and available reports; the production of its quarterly newsletter, DIRECTIONS; the creation and ongoing development of the SMTC web site;

distribution of various project-specific fact sheets and flyers; and the use of public comment cards and questionnaires. In addition, the SMTC invites the public to "**get involved in the transportation planning process"** in its new and improved brochure, A Citizen's Guide to Transportation Planning.



Insofar as the preparation of the *2001 Update* is concerned, the public involvement process includes announcing opportunities for review and comment on draft documents in the news media as well as utilizing the public forums of the SMTC Planning and Policy Committees. Since a major rewrite of the entire LRTP is not being undertaken at this time, the SMTC determined that no special committee structure was needed beyond the already extensive formal SMTC committee structure.

SMTC Study Area

As the MPO designated by the Governor of the State of New York, the 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 a small part of Oswego County. The SMTC area is centered in the City of Syracuse, the transportation hub and economic center for Central New York (see Map 1-1).

Map 1-1: SMTC Study Area

Click here to view the map.

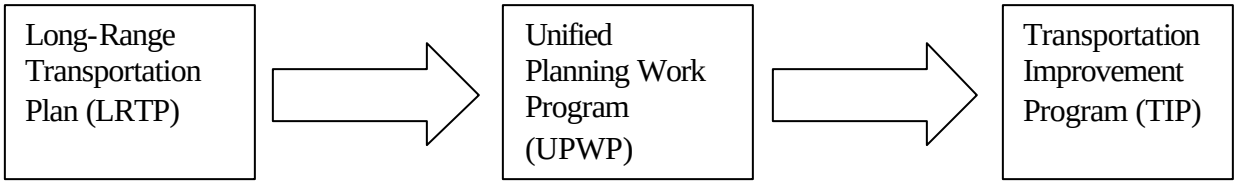
SMTC Planning and Programming Process

The process contains the three major elements, of which the LRTP is one element, as illustrated in Figure 1-1. In addition to maintaining a LRTP (a 25-year vision of future transportation projects and improvements), the SMTC, through its UPWP, conducts a number of specific transportation planning activities, some of which include: traffic corridor studies; transportation data collection; accident surveillance; congestion management; and multi-modal transportation planning (including bicycle and pedestrian planning). The SMTC is also responsible for the maintenance of the area's TIP, a five-year program that funds capital projects related to transit, local roadways and interstates, 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 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 and directly supporting 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 each year the annual TIP, which is the financial program for making investments to strengthen the transportation system.

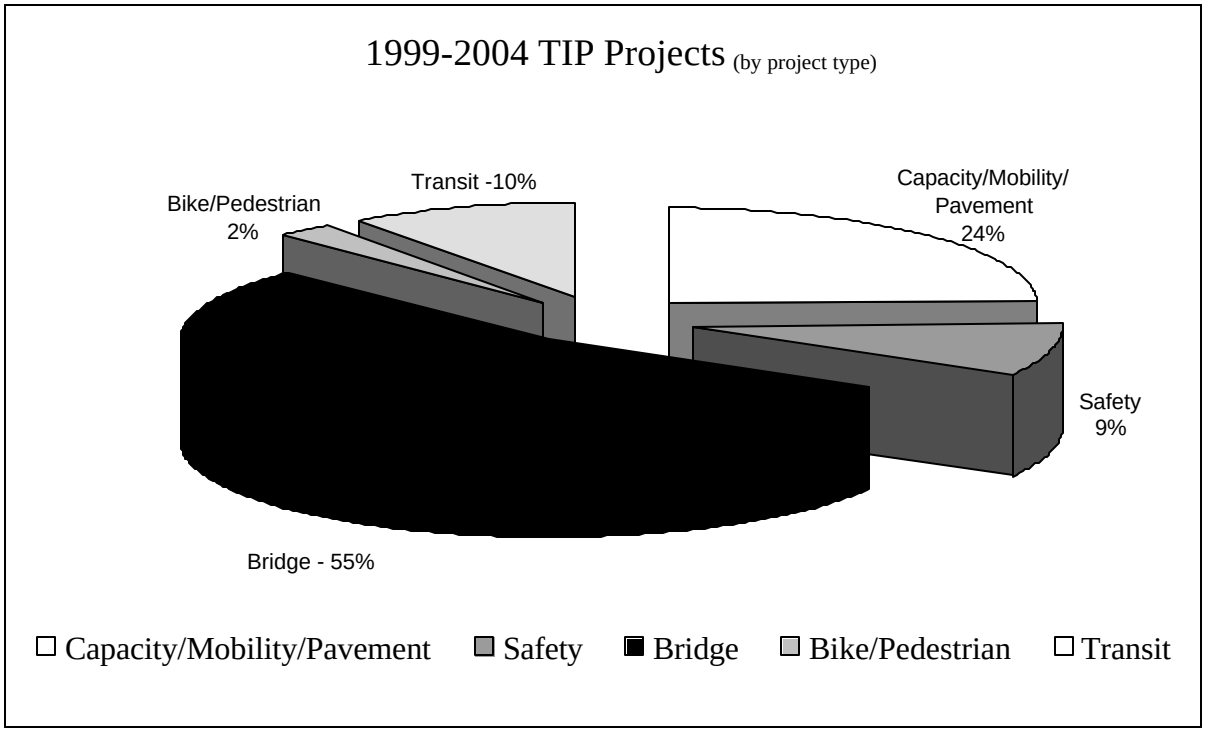
Figure 1-1:

The Transportation Planning and Programming Process



The chart in Figure 1-2 shows the percentage of TIP projects by project type.

Figure 1-2



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.

TEA-21's Seven Planning Factors

The TEA-21 presents the seven priorities established by the Federal Highway Administration that must be considered as part of the national transportation planning process for every UPWP transportation planning project and TIP line item. The seven planning priorities in TEA-21 represent a consolidation of the 16 planning factors that had been required under the earlier federal legislation (which had previously been 15 requirements). The seven TEA-21 planning factor requirements are as follows:

1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.
2) Increase the safety and security of the transportation system for motorized and non-motorized users.
3) Increase the accessibility and mobility options available to people and for freight.
4) Protect and enhance the environment, promote energy conservation and improve quality of life.
5) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
6) Promote efficient system management and operation.
7) Emphasize the preservation of the existing transportation system.

Organization of the 2001 Update

In order to orient the reader, the information in the chapters that follow is presented in nearly the same order as the 1998 Update, as reflected in the Table of Contents to this document. One addition is a new Chapter 2, providing a brief discussion of the current status of the goals, objectives and action plans that were set forth in the LRTP.

CHAPTER 2
GOALS, OBJECTIVES and ACTION PLANS

Introduction

The 2020 Long-Range Transportation Plan (LRTP) provides 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 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.

Changing Program Focus

During the interval since the publication of the LRTP in 1995, a shift in emphasis has occurred in order to include more activities involving bicycle and pedestrian facilities planning, such as the Onondaga Lake Circumferential Trail and Canalway Trail and the redevelopment of Clinton Square. The increase in facilities for non-motorized travel creates a stronger multi-modal orientation to the work of the SMTC that is not reflected in the original LRTP. Other issues that are currently receiving more attention, although not noted in the original LRTP, 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).

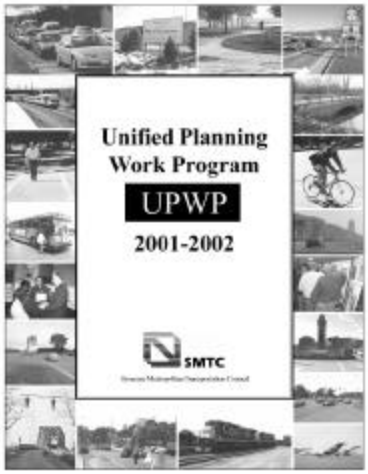
For the future, better measures of effectiveness will be needed for assessing the quality of non-motorized transportation facilities, as well as general quality of life issues that are increasingly important in Onondaga County. The SMTC currently anticipates that, in the future, a growing amount of attention will be given to non-motorized travel, as well as to the maintenance of the bridge and pavement infrastructure, which currently have some significant needs for attention. 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, rather 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 that have been strip-developed and simultaneously serve as local streets, collectors and arterials, in the absence of a more fully developed hierarchical road network. Also, more regional links are needed to the Interstate system to support area economic development and municipal decision-making. 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. Another example is an area in the Town of Clay, which is proposed for new industrial use, including a Chip Fab site, involving the same types of issues.

Progress Achieved on UPWP Projects

During the interval since the 1998 Update, 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, which 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); and the South Salina Street Corridor Study (February 2001). These projects, together with the implementation actions identified in the following pages, provide an overview of the wide range of activities being carried out by the SMTC and its member agencies. In Map 2-1, the location is shown of major transportation planning projects, carried out under the UPWP.



Review of Action Plans Implemented

Part of the process for updating the LRTP during 2001 includes the identification of action plans, which have been implemented under each of the six goals during the years since 1995. The 1998 Update did not address implementation actions associated with specific goals and objectives. 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.

MAP 2-1
1995-2001 UPWP Completed Planning Studies

Click here to view the map.

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 initiate remediation measures that, within five years, will reduce the accident rate at these locations by an average 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.

Safety Action Plans Implemented:

1. The New York State Department of Transportation (NYSDOT) has instituted an annual program to identify high accident locations and institute remedial design improvements, including the following.

    - The Carrier Circle safety capital project (1993) channelized Route 635, Thompson Road and Route 298 westbound approaches and upgraded traffic signs; the Route 298 3R project (expected 2001 letting) will channelize and reduce approach/merge skew angle of Route 298 eastbound approach.

    - The I-81/I-690 Interchange capital project (1999) replaced scuppers and downspouts on Almond Street viaduct, cleaned scuppers and downspouts on the Onondaga interchange, and cleaned the underground drainage system. A recent highway safety investigation (2000) 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.

    - The I-690 at Route 635 (Thompson Road) capital project (1996) improved channelization and signs within the interchange, including creation of a two-lane exit along I-690 eastbound.

    - The Route 11 near Bailey Road capital project (1999) included channelization and lane reallocation improvements at I-81 northbound exit at Route 11 northbound/Northern Lights Plaza; Route 11 northbound and South Bay Road northbound split; Route 11 northbound at South Bay Road southbound; Route 11 southbound at South Bay Road Southbound/Northern Concourse; Route11 between Bailey Road and Elbow Road.

- The Route 31 and County Route 57 capital project (completed in 2000) created a five-lane section on Route 31 from Theodolite Lane to Soule Road.

- The Adams and Almond Streets capital project (completed in 2000) upgraded and coordinated downtown traffic signals; a 2000 maintenance by contract (MBC) project resurfaced the Adams Street Arterial.

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

   - Route 298 between Court Street and Carrier Circle.

   - Adams Street (Salina to Almond) with a double left turn from Townsend Street to Adams Street (1998).

   - Route 11, from Sand Road to South Bay Road (see above).

   - Route 31 to Route I-81 - currently exploring alternatives to reduce accidents and congestion along the corridor.

   - Erie Boulevard (Route 5) at Thompson Road. The highway safety investigation (1997) recommended review of set back loop operation, sign upgrade and consideration of signal interconnect; the loops were checked and lane use signs were upgraded or added.

   - Route 11, Wally Road to Taft Road. The highway safety investigation (2000) recommended review of signal clearance intervals.

   - Route 11 at South Bay Road (see above).

   - Route 298, Court Street Road to GM Circle. The Route 298 3R project (2001 letting) will address various safety and operational deficiencies between Arterial Road and Carrier Circle.

   - Route 11 at Bailey Road (see above).

   - I-81 at 7th North Interchange. The highway safety investigation (1997) recommended upgrading chevrons on the exit loops with speed advisory panels.

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 programmed for the purpose of eliminating a safety deficiency and/or reducing accident frequency and severity.

- Safety Enhancements, which are safety improvement components added to a paving or infrastructure improvement project to reduce accidents and severity at high accident locations and cluster locations.

4. The NYSDOT is currently developing a Safety Information Management System (SIMS) that will provide accident record information on State and local highways and streets.

5. The NYSDOT is currently pursuing a program to produce a comprehensive statistical and GIS- based report on pedestrian and bicycle crash data.

6. The NYSDOT has eliminated a rail grade crossing at Poolsbrook Road crossing 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 problems, as well as current and anticipated needs.

8. The NYSDOT is implementing the guidelines contained in the brochure Best Practices In Arterial Management and An Information Guide to the Highway Work Permit Process in order *to* enhance safety.

9. The Central New York Regional Transportation Authority (CNYRTA) has a System Safety Plan, which is updated every 24 months covering internal and external operations.

10. The CNYRTA uses a system for tracking and categorizing transit accidents. During 2001, a new tracking process is being initiated using the NYS Public Transportation Safety Board process as a template.

COMMUNITY MOBILITY

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

Objectives:

- To provide fixed-route or demand-responsive transit service to all areas with urban population densities (approximately 1000 or greater per square mile) and to all 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 Americans with Disabilities Act (ADA).
- To encourage greater utilization of electronic communication with the workplace and to conduct personal business (shopping, etc.).

Mobility Action Plans Implemented:

1. During the period 1995 through 2000, the CNYRTA has gone through a complete route restructuring process. Part of the effort has been to decentralize operations and shorten transfer and trip times, with all transfer trips routed through the Regional Transportation Center, Carousel Center or Shoppingtown Mall.. 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 have been established in the eastern and western portions of the service area. A similar service will be extended to the northern service area during 2001-2002.

2. The Congestion Management System (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 and the Baldwinsville Bypass.

3. The NYSDOT is evaluating alternative funding sources for a new Seneca River bridge crossing in Baldwinsville (Baldwinsville Bypass Project). The Baldwinsville Bypass Project, Phase II, is on the TIP for right-of-way (ROW) and design, but construction funds are not yet identified.

4. 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 TSM 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.

5. The SMTC has implemented the CMS Model, which is updated on an annual 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.

6. 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; a high capacity road network; and a limited level of interest in ride-sharing.

7. The CNYRTA works with area employees to promote ride sharing and employer transit subsidies. As indicated above, a continuing fact is the low level of interest in ride sharing and the other factors noted which tend to support and reinforce automobile usage.

8. 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.

9. 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.

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

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

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

13. The CNYRTA has developed an outreach program to discuss the potential for expanding transit service ridership. These efforts include customer focus groups, meetings with municipalities as a part of the previously mentioned ReMAP project, plus numerous individual one-on-one discussions. These outreach efforts are being repeated during 2001 and again thereafter every two years. Another initiative being undertaken by CNYRTA is an Automatic Vehicle Locator (AVL) system that, when operating in the coming year or two, will result in communications units being installed that provide real time information on bus locations at key CNYRTA passenger stops.

14. The CNYRTA is working with area employees to promote ride sharing and with employers to provide employee transit subsidies. The ride sharing efforts have proven difficult. However, there are currently 40 businesses participating in a 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.

15. The CNYRTA is nearing the completion of a project to install bicycle racks on all of its buses. A majority of the fleet is now equipped with bike racks.

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.

Environment Action Plans Implemented:

1. The CNYRTA now has 110 buses, or 62 percent of its fleet, powered by compressed natural gas (CNG), as alternative fuel replacement. This replacement effort is continuing, as new buses are required. 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 Clean Communities of CNY is supporting Niagara Mohawk Power Company's Electric Car Joint Venture project to manufacture and promote electric car use in Syracuse and New York State.
3. The SMTC is promoting strategies in the Clean Communities of CNY Plan through the participation of its member agencies.
4. As indicated previously, the SMTC and its member agencies are promoting multi-modalism in their transportation projects by planning and implementing enhanced transit, carpooling, bicycling and walking opportunities.
5. The SMTC member agencies are implementing measures contained in the New York State Implementation Plan Redesignation 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 Dome events at Syracuse University.
6. 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 affect snow conditions.

7. The City of Syracuse and Onondaga County have instituted improved intermunicipal coordination and cooperation for snow and ice removal on arterial highways within the City of Syracuse.

COMMUNITY ECONOMY

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

Objectives:

- To place particular emphasis in allocating funding resources 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.

Economy Action Plans Implemented:

1. The transportation needs of the local and regional business community and ways to improve intermodal transportation and connectivity are 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 this forum and the results of a survey of 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 which displays characteristics beneficial to the community may be ranked higher, based on their 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 through the IAP for $950,000 plus 300,000 in multi-modal 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, which secured over 1,000 jobs for Central New York. The construction project, coupled with the designation of Willet Parkway, West Entry Road and Henry Clay 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. Similar projects were completed at Solvay Paperboard, Climax Corp, and Roth Steel.

4. The SMTC undertook a City of Syracuse Truck Route Study and published a plan for truck routes and freight movement. The SMTC member agencies participated in the study, which was presented to the City of Syracuse transportation officials to implement recommended improvements.

5. The SMTC has adopted TIP selection criteria that give appropriate weight to intermodal connectivity for freight. Regional capacity and mobility shall also be improved by increased transit, bicycle and pedestrian travel and enhanced by promoting the connectivity of the NHS 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, ReMAP Project and other employment based initiatives such as the Welfare to Work Transportation Program, being addressed through a new Mobility Management Center, contribute to making the area economically competitive

COMMUNITY LAND USE

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

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 which improve street capacity for highway improvements, are related to municipal land use regulations which are supportive of mobility protection.
- To support development patterns, densities and design options which are conducive to transit service, pedestrian and bicycle travel.

Land Use Action Plans Implemented:

1. The Onondaga County has prepared, sometimes with consultants, 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, which are supportive of the SMTC 2020 LRTP and Onondaga County's 2010 Plan.

2. The SMTC is pursuing the implementation of the guidelines contained in the brochure Best Practices In Arterial Management, prepared by the NYSDOT in cooperation with the NYS Association of Metropolitan Planning Organizations and others.

3. Onondaga County has prepared, sometimes with consultants, model zoning, subdivision and highway access control ordinances and regulations.

COMMUNITY FACILITIES

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

Objectives:

- To increase the bridges with condition ratings of better than 5 to 80 percent and to increase the deck area of bridges with condition ratings of greater than 5 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 2500 AADT): 11 percent poor; 26% fair and average condition rating of 7.0 for all medium and high volume roads by 2020.
- To rebuild sidewalks and other pedestrian or bicycle facilities most used by cyclists and pedestrians.
- 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.

Facilities Action Plans Implemented:

1. The NYSDOT programs 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 69.4%. The percentage of state-owned bridges, based on deck area of bridges that are non-deficient, is 70.5%. 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 for the entire six county NYSDOT Region 3 area for state-owned bridges. The current condition for all local bridges in Onondaga County is 57.7% non-deficient.

2. The NYSDOT programs 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 has decreased from 6.9% to 2.8% in Onondaga County. 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 has decreased from 47.6% to 24.2% in Onondaga County. This exceeds the 2020 goal of reaching not more than 26% fair condition. 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. This compares favorably with the 2020 goal of reaching an average condition rating of 7.0. 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.

3. 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.

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

5. The CNYRTA has completed construction of the William F. Walsh Regional Transportation Center. This facility links transit, rail and air transportation systems and has experienced a 15 percent growth in passengers served over the past two years. Additional improvements call for expanding the existing parking facilities during 2001 to accommodate the passenger growth.

6. The NYSDOT (Headquarters) is currently engaged is developing the Intermodal Management System. When available, this tool will be used to display all grade crossings on a GIS and, pending yet further development, will display other features.

7. The CNYRTA has a program item in the TIP to implement bus waiting shelters.

CHAPTER 3
LAND USE AND POPULATION

Introduction

The Syracuse Metropolitan Transportation Council (SMTC) 2020 Long-Range Transportation Plan (LRTP) characterized land uses in the SMTC study area according to five major types. These consist of: (1) the City of Syracuse urban core; (2) Towns and Villages; (3) Agricultural Land; (4) Shoreline; and (5) Random Development. Since 1995, there have been no major changes in land use patterns, although the gradual suburbanization of rural lands continues. Suburban sprawl continues to characterize residential development and this urban growth pattern is expected to continue through 2010.

Within the Syracuse Urban Core, several substantial developments have been completed and others are underway, each requiring the SMTC to assess the individual and collective impacts on the core-area transportation infrastructure. A brief description of those completed in recent years follows.

- Central New York Regional Market: The Regional Market, serving both wholesale and retail buyers, is nearing completion of an $8.4 million project. The funds are being used for a reconfiguration of the wholesale buildings and renovation and restoration of the historic retail market structures, including new roofs, windows and doors, as well as improvements to the parking areas and general beautification of the property. The Market features produce from area growers and other products on a year-round basis.

- P&C Stadium: P&C Stadium is a $32 million multi-use sports facility, which is home to the AAA Syracuse SkyChiefs baseball team. The Stadium, which opened in 1997, annually hosts more than 100 other sporting, entertainment, and cultural events.

- William F. Walsh Regional Transportation Center:

The Intermodal Transportation Center opened in 1998. The $21 million facility serves both rail and bus passengers, with space for a general passenger waiting area serving Amtrak, Ontrack, Greyhound and Trailways, ticket sales, food vendors, package express services, general information, airport shuttle service to Hancock International Airport and ground transportation services.

• Carousel Center Expansion: The largest retail center in Central New York, the Carousel Center, is currently attracting more than 15 million visitors annually and offers 1.5 million square feet of retail and entertainment space on four levels of shops, restaurants, movie theaters and parking facilities. There are over 170 retail facilities, including seven anchors, 18 restaurants and eateries, a 19-screen cinema and a fully restored 1909 antique carousel. These facilities are centered around a seven-story atrium with an observation deck and conference rooms. The Carousel Center developers are proceeding in accordance with previously proposed plans to invest $900 million to more than triple the Center size by adding new shops and restaurants, a hotel and new entertainment features which together will employ 11,000 people. Prominent among these new features is a Syracuse Aquarium.

• Inner Harbor: In 1988 the City of Syracuse began the most ambitious development project in its history, the $1 billion reclamation and redevelopment of 800 blighted acres separating Downtown from the Onondaga Lake waterfront. Since then, over $550 million in private investment, leveraged by $30 million in public improvements, has transformed the former fuel tank storage area known as "Oil City" into a redevelopment area. Center to the overall redevelopment plan is the Inner Harbor, which will serve as a tourism destination and a catalyst for surrounding private development. The Inner Harbor project is an adaptive reuse of a barge canal terminal and maintenance facility, aimed at creating a waterfront attraction and amenity within an inland urban center. Construction is now underway on the $36 million project including: a marina and charter boat operation, restaurants and retail stores, infrastructure improvements and a promenade and public parking.

• Clinton Square: In the heart of Downtown Syracuse, Clinton Square is undergoing a renovation and enhancement that is anticipated to be completed during 2001. A large public space is being created by closing one block of Erie Boulevard, which divides the Square into a coherent public space -- suitable for a wide range of functions. These proposed activities include summer concerts, winter ice skating, the Farmers Market, the Christmas Tree lighting ceremony and other activities throughout the year.

Onondaga County has an adopted County plan, the 2010 Development Guide, which encourages maximum use of existing infrastructure, sustainable development patterns and good community planning. The goals and policies of the 2010 Development Guide are to be translated into implementable plans and ordinances through the Onondaga County Settlement Plan, a New Urbanist approach that creates compact, mixed use and sustainable settlement patterns capable of enhancing existing transportation and transit systems rather than promoting sprawl. The Settlement Plan will be followed by extensive educational

efforts to encourage municipalities to adopt the Settlement Plan's model design and zoning recommendations. Efforts by Onondaga County to further educate municipalities concerning the relationship between land use planning and transportation systems are actively supported by the SMTC. These efforts compliment the SMTC's LRTP objectives to support development patterns, densities and design options, which are conducive to establishing efficient transit service and supporting pedestrian and bicycle travel.

DEMOGRAPHICS OF THE STUDY AREA

Population

Until the results of the 2000 Census are available, the 1990 data must continue to be used and supplemented with more recent estimates where available. Table 3-1 (on following page) shows the population changes over the last several decades for both Onondaga County as well as the Bureau of the Census' four-county Syracuse Metropolitan Statistical Area, of which Onondaga County is a part, for comparison purposes.

Table 3-1

Syracuse Metropolitan Statistical Area
Population 1950 to 1999

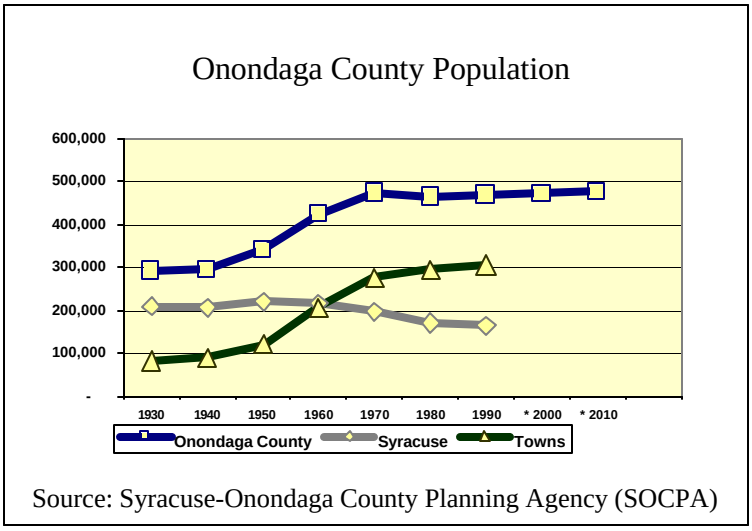
County	1950	1960	1970	1980	1990	2000
Cayuga	70,136	73,942	77,439	79,894	82,313	81,963
Madison	46,214	54,635	62,864	65,150	69,120	69,441
Onondaga	341,719	423,028	472,835	463,920	468,973	458,336
Oswego	77,181	86,118	100,897	113,901	121,771	122,377
Syracuse MSA Total	535,250	637,723	714,035	722,865	742,177	732,117

Source: U.S. Census of Population, 1950-1990; U.S. Bureau of the Census estimate for 1999.
The Syracuse Metropolitan Statistical Area is a four-county area designated by the Bureau of the Census for reporting demographic data on a metropolitan area basis.

According to the U.S. Bureau of the Census, the County's estimated 1999 population has declined by 3% since 1970 (see Figure 3-1). The City of Syracuse's population has declined since 1950 and the older towns surrounding the City began losing population after 1970. Meanwhile, growth has

occurred in the suburbs since 1950, especially the northern towns. The results of Census 2000, when available, are expected to reflect a continuation of these trends.

Figure 3-1



Source: Syracuse-Onondaga County Planning Agency (SOCPA)

Insofar as the future is concerned, the most recent series of projections, issued by the New York Empire State Development Corporation in 1989, predicted a County population of 476,615 in 2010; this projection appears to be extremely optimistic, given the Census Bureau's estimated decline in the County's population from 1990 to 1999. The Empire State Development Corporation is financing a new population projection series which will be available in 2002. In light of recent Census Bureau estimates, it is likely that the 2010 population estimate of the County will neither grow nor decline substantially in comparison with 1990. This lack of County population growth is consistent with the SMTC transportation policy of a continued emphasis on improving and preserving the existing infrastructure. Although total vehicle miles of travel are expected to increase over time, major expansions of the SMTC highway network are not currently anticipated.

Aging Population

As is the case nationwide, Onondaga County's resident population is aging (see Table 3-2). The transportation needs of an aging population include the development of travel alternatives serving a segment of the population less able or interested in using a personal automobile. The SMTC supports both the expansion of transit service as an option for meeting travel needs and compact mixed use development patterns that reduce the need to drive to obtain basic necessities.

Table 3-2

Population Estimates by Age Group for Onondaga County, 1999	
Age Group	Population Size
Total Population	456,215
Ages 0 – 4	31,024
Ages 5 – 17	82,370
Ages 18 – 24	45,349
Ages 25 – 44	138,072
Ages 45 – 64	95,724
Ages 16 +	354,211
Ages 21 +	320,559
Ages 65 +	63,676
Ages 85 +	8,337
Source: Syracuse-Onondaga County Planning Agency; Internet, U.S. Bureau of the Census, http://www.census.gov/population/estimates/county/ca/cany99.txt	

Household and Persons Per Household Projections

The most recent household data is from the 1990 Census. The 1990 data indicates an increase of 53,808 households in Onondaga County in the 1960-1990 period (21%) and a decrease of 2,885 households in the City of Syracuse during the same period. Household projections for Onondaga County made in 1990 (see Table 3-3) reflect an increasing number of households but at a decreasing rate. This trend has been confirmed with the decline in the number of building permits from the decade of the 1970s to the 1990s for the County.

Table 3-3

Onondaga County Household Projections	
Year	Number of Households
1990	177,898
1995	182,198
2000	185,398
2005	188,089
2010	190,398
Source: Syracuse-Onondaga County Planning Agency.	

The Census figures for the number of persons per household size have declined from 3.41 persons per household in 1960 to 2.64 persons in 1990 (see Table 3-4), mirroring national trends.

Table 3-4

Persons Per Household in Onondaga County *	
Year	Household Size
1960	3.41
1970	3.25
1980	2.80
1990	2.64
2000	2.52 **
2010	2.45 **
Source: Syracuse-Onondaga County Planning Agency (SOCPA). * Total population divided by the number of occupied households. ** SOCPA projection.	

New Construction and Demolition of Dwelling Units

Between the years 1990 and 1999, a total of 10,827 residential building permits were issued in Onondaga County (see Table 3-5). Of those, only 881 (8%) were issued for the City of Syracuse. However, during the same period, 2,088 residential units were demolished, of which 2,003 (96%) were in the City of Syracuse, resulting in a net loss of 1,122 units in the City of Syracuse.

Table 3-5

Building and Demolition Permits Issued Between 1990 and 1999 in Onondaga County

Onondaga County	Total Building Permits	Single Family Building Permits	Multiple Family Building Permits	Demolition Permits
1990	1,429	1,272	157	201
1991	1,302	1,072	230	173
1992	1,322	1,242	80	152
1993	1,302	1,045	257	185
1994	1,186	933	253	191
1995	743	664	79	261
1996	957	654	303	257
1997	663	633	30	212
1998	872	764	108	184
1999	1,051	949	102	272

Building and Demolition Permits Issued Between 1990 and 1999 in the City of Syracuse

City of Syracuse	Total Building Permits	Single Family Building Permits	Multiple Family Building Permits	Demolition Permits
1990	164	47	117	197
1991	105	65	40	168
1992	76	48	28	141
1993	101	56	45	171
1994	116	40	76	183
1995	67	34	33	251
1996	173	15	158	246
1997	28	14	14	205
1998	35	10	25	175
1999	16	7	9	266

Source: Syracuse-Onondaga County Planning Agency, January 21, 2000.

The fact that new residential units are being built in Onondaga County, despite the slight decline in County population size, is due to the movement of residents from the City to the suburbs, as well as the decrease in household size.

THE CENTRAL NEW YORK ECONOMY

Manufacturing and Construction

The LRTP points out that manufacturing continues to be an important sector in the Onondaga County economy, due to the area's geographic location, transportation facilities and skilled labor force. However, the number of manufacturing jobs dropped from 41,498 in 1990, to 37,751 in 1999. The loss of 3,747 manufacturing jobs reflects changes by area manufacturers, involving the relocation of some Onondaga County manufacturing firms to other geographic areas. However, it should be noted that the lowest local employment level in manufacturing was in 1995 and employment in manufacturing has risen by over 2,000 since then. The total number of manufacturing firms in Onondaga County has decreased from 578 to 543 between 1990 and 1999.

Weekly wages in the manufacturing sector are still the highest of any sector, indicating how important this sector is to the local economy. Manufacturing wages for workers in Onondaga County, according to the New York State Department of Labor, increased from an average of $626 per week in 1990 to $871 per week in 1999.

The number of establishments engaged in the construction industry fell by 203 between 1990 and 1999. During the same period, employment in construction also fell by 2,410 jobs. This reflects the general recession of the early 1990s and a continued lower level of construction activity compared to 1990. It should be noted that employment in construction is up by 866 from the low point in 1996. The expansion of the Carousel Center is also expected to add to the number of construction jobs. See Table 3-6 for combined manufacturing/construction employment data.

Table 3-6

Employment Data for Manufacturing and Construction Employment
in Onondaga County, 1975 – 1999

Year	Number of Establishments	Average Annual Number Employed
1975	1,530	53,355
1980	1,564	55,829
1985	1,638	56,270
1990	1,970	54,303
1995	1,856	45,531
1999	1,732	48,146

Source: Syracuse-Onondaga County Planning Agency, Internet, http://www.labor.state.ny.us/html/employ/hist202.htm [Industry Codes 03 and 04].

Trade

Wholesale trade remains a significant sector in the local economy, reflecting Onondaga County's excellent geographic location and transportation facilities. Between 1990 and 1999, 19 new establishments involved in wholesale trade were created. However, this was accompanied by a reduction of 498 employees in wholesale trade, even though wholesale trade has increased in employment since its low point in 1993. Retail trade establishments increased by 76 between 1990 and 1999 while employment decreased by 3,344. The expansion of the Carousel Center is expected to increase the number employed in the retail sector in the future. Combined employment data for manufacturing and construction is presented in Table 3-7.

Table 3-7

Employment Data for Wholesale and Retail Trade Employment
in Onondaga County, 1975 – 1999

Year	Number of Establishments	Average Annual Number Employed
1975	3,387	44,248
1980	3,536	47,894
1985	3,609	54,594
1990	3,820	62,749
1995	4,116	58,856
1999	3,915	58,907

Source: Syracuse-Onondaga County Planning Agency, Internet, http://www.labor.state.ny.us/html/employ/hist202.htm [Industry Codes 06 and 07].

Transportation and Public Utilities, Service, and Finance, Insurance and Real Estate Sectors

During 1990-1999, 69 new establishments in transportation and public utilities were added while the number of jobs decreased by 324 (see Table 3-8). Service industries had the greatest growth of any sector in the period 1990-1999 in Onondaga County, with the number of establishments increasing by 855 and employment by 10,081 (see Table 3-9). Meanwhile the Finance, Insurance and Real Estate Industry saw the number of establishments increase by 229 and employment decrease by 3,257 during the 1990-1999 period (see Table 3-10).

Table 3-8

Employment Data for Transportation and Public Utilities Employment in Onondaga County, 1975 – 1999

Year	Number of Establishments	Average Annual Number of Employed
1975	327	13,155
1980	318	14,210
1985	353	15,372
1990	397	18,442
1995	449	16,882
1999	466	18,118

Source: Syracuse-Onondaga County Planning Agency, Internet, http://www.labor.state.ny.us/html/employ/hist202.htm [Industry Code 05].

Table 3-9

Employment Data for Service Industries Employment in Onondaga County, 1975 – 1999

Year	Number of Establishments	Average Annual Number Employed
1975	2,599	38,535
1980	2,922	60,042
1985	3,346	71,743
1990	3,762	85,678
1995	4,321	91,543
1999	4,617	95,759

Source: Syracuse-Onondaga County Planning Agency, Internet, http://www.labor.state.ny.us/html/employ/hist202.htm [Industry Code 09].

Table 3-10

Employment Data for Finance, Insurance and Real Estate Employment in Onondaga County, 1975 – 1999

Year	Number of Establishments	Average Annual Number Employed
1975	700	13,042
1980	715	15,150
1985	759	17,871
1990	942	19,455
1995	1,099	16,731
1999	1,171	16,198

Source: Syracuse-Onondaga County Planning Agency, Internet, http://www.labor.state.ny.us/html/employ/hist202.htm [Industry Code 08].

Tourism

The Onondaga County area has many rivers and lakes, as well as extensive natural resource areas, that attract local recreational and visiting tourist use and form a substantial part of the economy in Onondaga County. Improvements in tourist attractions are on-going and an area of particular emphasis is along the State Canal System, especially the Syracuse Inner harbor area and around Onondaga Lake. The planned expansion of the Carousel Center is also expected to substantially increase tourism in the future.

Future Expectations

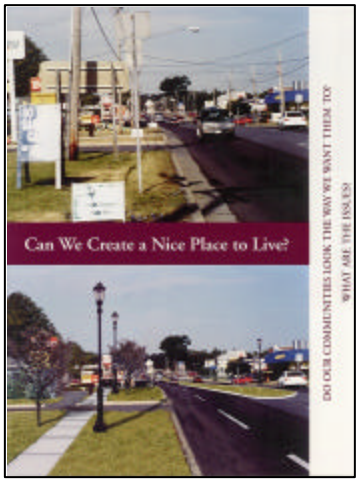
While the total number of industrial establishments has increased during the past decade, average employment is down somewhat, reflecting the County's decade-long struggle to regain the employment levels which peaked in 1990. The positive element is that unemployment is very low, significantly less than in 1990, and the trends are positive in employment numbers. The economic objectives in the SMTC LRTP continue to be to:

- To place particular emphasis in allocating funding resources 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.

Land Use and Transportation Planning Linkage

Onondaga County is in the forefront of communities seeking a more effective utilization of land resources, along with cost effective provision of infrastructure. The SMTC supports these efforts and encourages a greater recognition of the need for municipalities to strengthen the local decision-making process that links land use and transportation planning. One facet of the SMTC's efforts has been to educate municipal board members concerning how planning decisions involving land use and transportation greatly impact accessibility, mobility, capacity and safety of the transportation facilities serving the study area.



New modeling and simulation techniques are available to assist the SMTC in monitoring and evaluating the impacts of land use decision-making on the transportation infrastructure. These techniques allow the SMTC to forecast changes in travel demand as a result of proposed land use changes. Potential impacts can be predicted and these impacts can be graphically portrayed in ways that allow transportation policy-makers and the public to "see" and understand more clearly the potential impacts of change.

Planning techniques are available to achieve the SMTC goals and include: encouraging mixed use development which permits shorter travel distances; creating development areas with a larger critical mass that allows for transit service; and, requiring developers to design their developments to permit and encourage more walking and biking between places and activities. Onondaga County is promoting the concepts of "new urbanism" which encourage neighborhood sized, mixed use development that decreases reliance on automobile travel for every facet of normal living. Part of the challenge faced by Onondaga County and the SMTC is how best to redevelop older urban/suburban areas rather than encourage new sprawl in the suburbs.

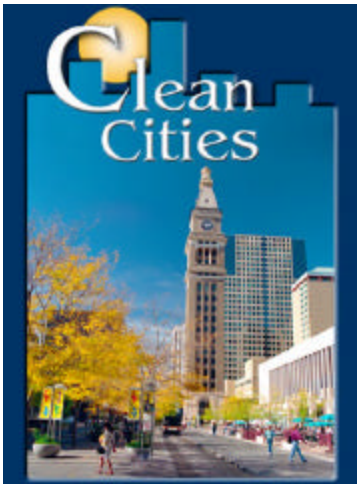
Another technique encouraged by the SMTC as a way to achieve its goals is arterial highway access management that seeks to preserve the travel mobility along major thoroughfares. Arterial access management techniques involve land use planning and transportation strategies which offer benefits to existing and new arterial corridors. Techniques include instituting minimum driveway spacing and intersection requirements, interconnecting commercial parking lots, using marginal (service) roads and permitting access to the highway at the fewest controlled intersections possible. When incorporated as a part of a broad strategy involving improved planning for land development, transportation planning tools can yield positive results by improving the flow of traffic and making the roadways safer while maintaining accessibility.

CHAPTER 4
AIR QUALITY

Introduction

The Syracuse Metropolitan Transportation Council (SMTC) area includes Onondaga County, which is currently designated by the United States Environmental Protection Agency (USEPA) as a "maintenance area" for carbon monoxide. Onondaga County will remain a maintenance area for twenty years, until the year 2013. Air quality regulations require an analysis to determine if planned improvements will continue to support the approved "maintenance plan" and the continued improvement of the quality of air in Onondaga County. This "conformity analysis," performed by the SMTC with assistance from the New York State Department of Transportation's (NYSDOT) Environmental Analysis Bureau (EAB), demonstrates the SMTC's continued attainment status. The conformity test for the SMTC maintenance area demonstrates that the "build" emissions will be less than the base year emissions and that Transportation Control Measures (TCMs) are being implemented in a timely manner. The conformity determination/statement required for this 2001 Update is included later in this document. The SMTC's role over the next several years will be to track information provided by the New York State Department of Environmental Conservation's (NYSDEC) air quality monitoring of pollutant levels and assist in the continued support for TCMs and other programs such as "Clean Cities" that help minimize the adverse impacts of transportation services on the environment.

Clean Communities of Central New York (CCCNY)



The CCCNY is essentially an outreach effort of the United States Department of Energy's (USDOE) "Clean Cities" program to consolidate goals incorporated in the energy policy act, Executive Order 12844, and the Clean Air Act Amendments (CAAA). These federal directives commit the nation's transportation sector to energy use that is more efficient, less dependent on foreign sources, less environmentally disruptive, sustainable and safe.

To that end, partnerships between local governments and industry representatives have been established to expand the use of alternative fuel. Initially, this meant local action to: (1) facilitate alternative fuel vehicle (AFV) production and conversion; (2) provide greater fuel choices; (3) expand the refueling infrastructure; and (4) support regulated fleets. Central New York phased into this arraignment on June 15, 1995 through a Memorandum of Understanding (MOU) between a private/public coalition and the USDOE.

Since the signing date, the CCCNY developed the organizational capability to meet its commitment. The CCCNY retained an association manager (as required by the MOU) and began to expand the AFV infrastructure. Grants were obtained from the New York State Energy Research and Development Authority (NYSERDA) and the USDOE to build a multi-municipal fueling station and purchase fifteen AFV vehicles for use by the Onondaga County, the City of Syracuse, the Syracuse Housing Authority and the Syracuse City School District.

Of equal importance, the CCCNY simultaneously reached out to the community through a series of community briefings, stakeholder meetings, public appearances and joint ventures with the major automobile manufacturers to showcase AFV products and at the same time give the CCCNY a higher profile. As the program matured, however, the program came to a public policy crossroads where energy initiatives, environmental regulation, public health concerns and economic opportunity fused into a single issue. As a result, the CCCNY became involved in helping the area sort out implications rising from the EPA rule revisions, technology advances in energy and transportation, utility deregulation and community consensus building for economic viability.

The CCCNY has assisted the Chamber of Commerce and Manufacturers Association of Central New York (MACNY) in analyzing the effect of the USEPA rule revisions for ozone and particulate matter. The CCCNY played an major role in helping Onondaga County Community College successfully obtain Congestion Mitigation Air Quality (CMAQ) funding to add an alternative fuel division to its advanced technology expansion plan and assisting the New York State Technical Extension Center (NYSTEC) at Rome, the Alternative Fuel Technology Center, in meeting its mission. The National Alternative Fuels Training Consortium has enlisted the aid of the CCCNY to expand the role of Onondaga Community College as a Regional Alternative Fuels (AF) Training Center.

The CCCNY continues to work to improve educational, technical and economic opportunities for Central New York. The CCCNY recently spearheaded the campaign to successfully designate Interstate 90 as an Interstate Clean Transportation Corridor. The NYSERDA, USDOE, the City of Syracuse and the Onondaga County Legislature have endorsed this proposal. The CCCNY recently met with City and County officials and with USDOE agency heads to develop a request to be designated under the "Rebuild America" program in order to receive assistance to retrofit public housing and school buildings to make them more energy efficient.

The CCCNY assisted the NYSDOT in its statewide Compressed Natural Gas refueling effort. At the request of the New York State Thruway Authority (NYSTA), the CCCNY provided assistance in the development of an AF refueling station at the Warners rest area. The CCCNY will be playing a substantial role in the development of projects for the State Enhancement Projects and Clean Cities Challenge involving such entities as the United States Postal Service, the City of Syracuse

and Onondaga County. The CCCNY, with the continued support of its "stakeholders," will continue to develop improvements that benefit the economic vitality and quality of life in Central New York.

Central New York Regional Transportation Authority (CNYRTA)

The Central New York Regional Transportation Authority (CNYRTA) currently operates a fleet of 110 compressed natural gas (CNG) buses in regular route operations in Onondaga County. The CNYRTA has committed to a conversion of the remainder of its fleet to CNG over the next 12 to 15 years. When completed, the region will have expended $32.5 million on the buses, as well as $4.3 million to construct a CNG fueling station at CNYRTA's Syracuse facility. This facility also contains a CNG fueling capability that is open to the public and to other fleet vehicles.

Chapter 5
Metropolitan and Inter-City Travel

HIGHWAYS & STREETS

Introduction

Without question, the vast majority of travel within the Syracuse Metropolitan Area is by automobile over a network of interstate highways, major arterials and collectors, and local streets. Management responsibility of this network is divided among New York State, Onondaga County, the City of Syracuse, and to a lesser extent the neighboring towns within the County.

Street Network

Within the Central New York Region, Onondaga County is located at the crossroads of a number of interstate highways that form the backbone of both metropolitan and intercity travel in the State. Limited access facilities that link the Syracuse Metropolitan Area with other parts of the State and northeast include Interstate-90 (the New York State Thruway) and Interstate-81. Bypass or beltway facilities such as I-690 and I-481 supplement metropolitan and intercity travel by providing convenient alternative routes around the Syracuse central area. A number of major State roads (e.g., Route 31 and Route 20) augment the Interstate network by offering more scenic, rural routes for motorists to travel to and through the area. These facilities typically link towns and villages in Onondaga County to places outside the County as well as providing the necessary linkages to the limited access roadway network. Collectively, this highway network connects with similar highways in counties throughout the State (and similarly, across the country).

In addition to the interstate and major state roads, much of the travel in the SMTC's planning area occurs on arterial, collector, and local roads. Map 5-1 shows the functional classification (based on use and access) of the facilities that make up the Onondaga County road network. Other than maintenance and rehabilitation, there have been only three changes to this network since the 2020 Long-Range Transportation Plan's (LRTP) adoption. The changes are as follows:

- A 3500-foot length of road was constructed by the New York State Department of Transportation (NYSDOT) with funding from the state's Industrial Access Program. Brundage

Road, as it is called, provides access to the Anheuser Busch Brewery and removes truck traffic from the Village of Baldwinsville. The road is owned and maintained by the Town of Lysander.

- P&C Parkway was constructed to interconnect P&C Stadium, the William F. Walsh Regional Transportation Center, and the Central New York Regional Market. The NYSDOT provided design and construction supervision. However, the road is owned and maintained by the City of Syracuse.

- Phase 1 of the Baldwinsville Bypass (NYS Route 631) that will link NYS Routes 370 and 31 east of the Village of Baldwinsville is currently under construction. The Bypass, which is being constructed by and will be owned and maintained by the NYSDOT, is intended to reduce truck traffic traveling through the Village of Baldwinsville.

Vehicle Miles of Travel

By far, the preferred mode of transportation for community to work is the automobile (see Figure 5-1), with most commuters driving alone. Figure 5-2 shows the County-wide data by individual town, as well as the City of Syracuse and the Onondaga Reservation.

The Highway Performance Monitoring System (HPMS) provided by the NYSDOT Planning and Strategy Group indicates that the 1999 Average Daily Vehicle Miles of Travel (ADVMT) in Onondaga County was 9,020,000. This represents a 29 percent increase over 1990 travel when the ADVMT was 6,990,000. The following graph (see Figure 5-3) shows actual HPMS ADVMT values for 1990 through 1999 and forecasted travel miles for the years 2000 through 2023. The forecasted ADVMT was prepared by The WEFA Group for the NYSDOT.

MAP 5-1
Functional Classification

Click here to view the map.

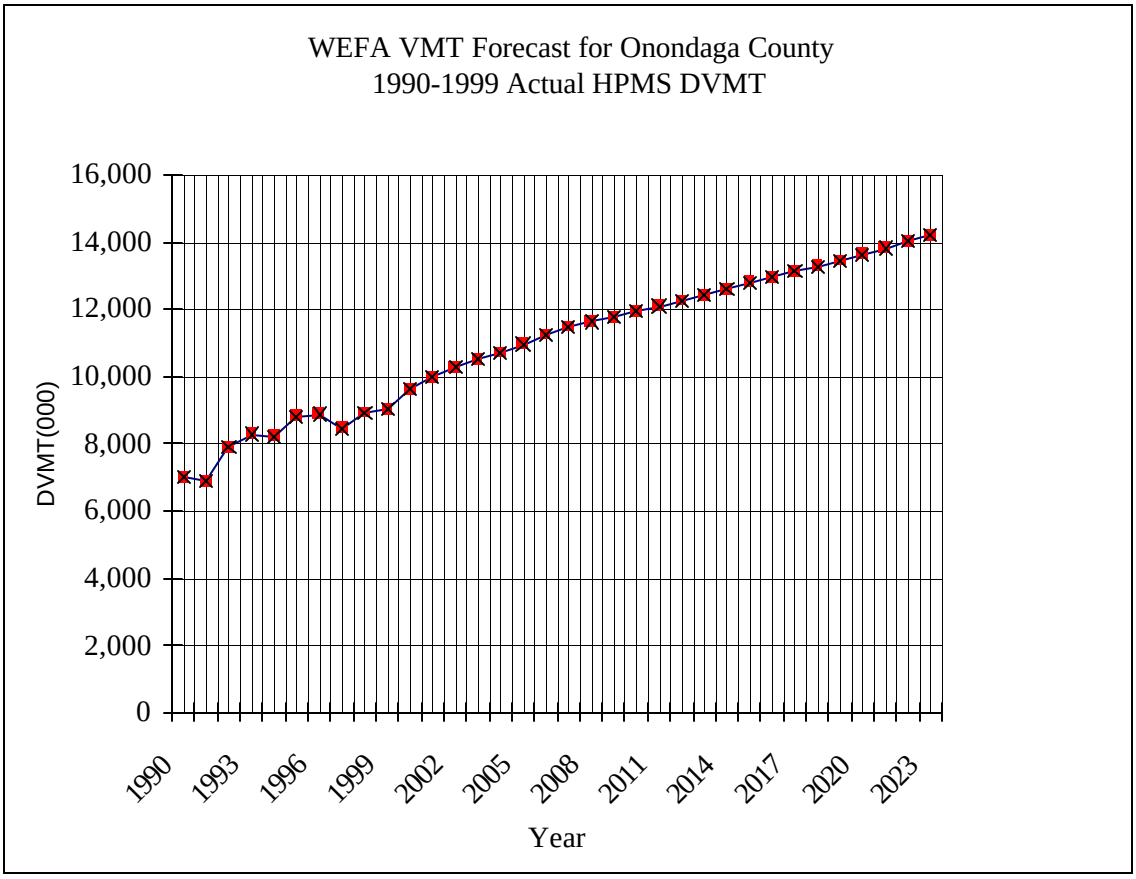
Figure 5-1
Mode of Transportation to Work

Click here to view the map.

Figure 5-2
Mode of Transportation to Work (by town)

Click here to view the map.

Figure 5-3



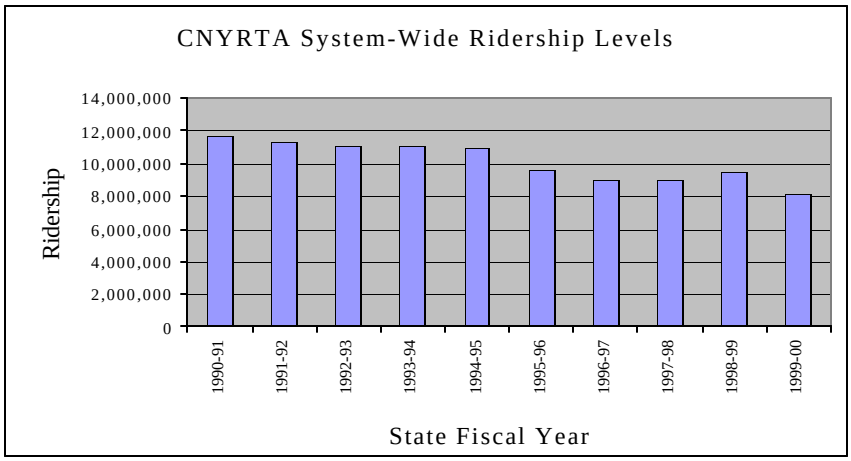
Source: NYSDOT, Planning & Strategy Group

TRANSIT

Introduction

The Central New York Regional Transportation Authority (CNYRTA) is the operator of transit service in the Syracuse Metropolitan Area (see Map 5-2). In the period since the 2020 Long-Range Transportation Plan (LRTP) was written, the CNYRTA has faced serious challenges. In 1995-1996, the transit operator faced significant financial problems. To address these problems, the CNYRTA implemented several major cost savings and revenue enhancement actions in 1995-1996, including a 17% reduction of service in Onondaga County and fare increases in Oswego and Cayuga Counties (20%) and on Call-a-Bus, the region's complementary paratransit service (25%). These fare increases were implemented after a 33% base fare increase in Onondaga County in 1994-1995, which resulted in significant loss of ridership. The system-wide reduction of service (758,000 revenue vehicle miles) in 1995-1996 over 1994-1995, combined with fare increases in all operating subsidiaries, caused revenue passengers to drop 12.5% (1.4 million riders) in 1995-1996 (see Figure 5-4). On April 1, 1996, the CNYRTA cut an additional 5% of service in Onondaga County.

Figure 5-4



Source: Annual Report on Public Transportation Assistance Programs in NYS. Note: 1999-2000 data is from the CNYRTA, and is subject to change due to utilization of new fare boxes.

Management and Service Improvements

In 1998, the CNYRTA opened the William F. Walsh Regional Transportation Center in Syracuse. Located adjacent to Interstate Route 81, the Central New York Regional Market, P & C Stadium, and Carousel Center, this intermodal facility brings together, for the first time in the Central New York community, all ground transportation services, including intercity rail, intercity bus, local and regional bus, and taxi service. The CNYRTA simultaneously restructured a number of its bus routes in order to maximize direct service to the Center from points throughout the region,

furthering the ease of intermodal passenger travel. Since the opening of the Center, all ground carriers have reported significant ridership increases.

The CNYRTA has also taken management actions to reduce costs and increase revenues, including coordination of services provided under the Americans with Disabilities Act of 1990 (ADA) in Oswego and Cayuga Counties with private, non-profit agencies.

There has been a growth in the sale of tokens to the Onondaga County Department of Social Services' Jobs Plus Program. The program issues vouchers for its clients to use CENTRO buses for transportation to program training sites and job interviews. Also, the CNYRTA is currently providing rides to Medicaid clients in Onondaga County who do not state a preference for a type of transportation.

In terms of vehicle improvements, the CNYRTA has incorporated the use of alternative fueled vehicles in its fleet of city and suburban buses in Onondaga County. The CNYRTA has expanded its fleet of compressed natural gas (CNG) buses to 109, which is equal to 62% of the fleet operating in Onondaga County. They expect to replace the remaining urban transit and suburban buses within the next 3 years. The CNYRTA has also constructed a compressed natural gas fueling station, which, in addition to supporting its own fleet, makes CNG fuel available to vehicles owned by clients and the general public. These actions have had a direct benefit on the air quality of the region.

In response to the changing needs of its ridership, the CNYRTA has completed the Regional Mobility Action Plan (ReMAP) of the fixed-route transit and paratransit service delivery system. The study recommended a transit service plan for the Central New York Region to restructure local transportation services and ensure that the region enjoys an efficient, coordinated and integrated transit system. The ultimate goal of the plan is to provide decision-makers with data sufficient to make informed policy decisions on the provision of mobility options for the region. The CNYRTA began a phased implementation of the ReMAP Study in September 2000, with start-up of two new suburban routes. They have also aggressively pursued grants to implement a Mobility Management Center, which was also recommended in the ReMAP Study, and which began operation in February 2001. When fully implemented, this Center will function as a transportation coordinator for the region for participating human service agencies providing client transportation. The Mobility Management Center will initially concentrate on transportation needs of welfare recipients and the welfare-eligible population, in cooperation with Onondaga County.

The ReMAP program is founded on the premise that for transit services to operate effectively in the growing lower density suburban areas of Onondaga County, focal points, known as

transit centers or hubs, are needed to facilitate transfers between services. The hubs will allow transit users to be gathered by collector transportation modes so that they can access higher frequency mass transportation modes. While the CNYRTA has an effective hub in Downtown Syracuse at the Common Center, additional hubs in outlying areas will reduce travel time and increase travel convenience for those whose destinations are outside Downtown Syracuse. Several transfer hubs have already been established at sites outside Downtown, with further development anticipated.

MAP 5-2
Transit Service in the SMTC Study Area

Click here to view the map.

BICYCLING and PEDESTRIAN TRAVEL

Introduction

In Onondaga County in 1990, approximately 21,555 persons (those who were employed and not working at home) walked, took the bus or rode a bicycle to work. Also in 1990, approximately 13% of Onondaga County's households and about 15% of the City of Syracuse's households did not own a car. [1] 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.

TEA-21

The importance of non-motorized travel was clearly recognized in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), gaining national attention on both the policy and funding fronts. Through ISTEA, MPOs were mandated to consider bicycling and walking as transportation plans were prepared. Financial resources to make improvements in the infrastructure were earmarked in this landmark legislation. The Transportation Equity Act for the 21st Century (TEA-21), signed into law in June of 1998, continued to expand these requirements.

TEA-21 builds upon ISTEA's policy innovations and increases funding for the Congestion Mitigation and Air Quality (CMAQ) and Transportation Enhancement programs, which fund most bicycle and pedestrian projects. New provisions, such as eligibility for safety funds and development of design guidance, will help ensure that the needs of bicyclists and pedestrians are addressed. [2]

Cities, counties and states continue to take a proactive role in developing and improving facilities for non-motorized travel. Since the adoption of the LRTP, the SMTC has taken steps toward including bicycle and pedestrian planning in all aspects of its work. Bicycle and pedestrian modes of travel are evaluated within each of the SMTC's Unified Planning Work Program's (UPWP) projects, including corridor studies, where sidewalks and roadways are rated for quality and safety and then given recommendations for future changes and improvements. In addition, bike racks have been installed on all CENTRO buses used in regular route operations, thus providing a connection between transit and traveling by bike.

[1] Statistics are from the 1990 Census Transportation Planning Package (CTPP).

[2] Elizabeth Thompson and Roy Kienitz, *TEA-21 User's Guide*, Surface Transportation Policy Project, Washington, D.C., 1998, p. 37.

Bikeway Plans

Both Onondaga County and the City of Syracuse have bikeway plans. These plans address on-highway and off-highway bikeways, recommending and prioritizing bikeway locations. While the plans are somewhat dated, several facilities identified have been built, partially implemented, or have been proposed (see Map 5-3). Several examples are listed below.

- Onondaga Lake Trail, also known as the "Loop the Lake Trail" - The Onondaga County Department of Parks and Recreation hopes to complete the bicycle/pedestrian trail around Onondaga Lake within approximately five years. In May 2000, Onondaga County lawmakers approved a $480,000 plan to build a paved trail along the west shore of Onondaga Lake, creating a recreational "loop" for bicyclists, skaters, runners and walkers. [3] Funding has also been earmarked in the Transportation Improvement Program (TIP) to complete other portions of the trail.

- Onondaga Creekwalk – The Franklin Square and Inner Harbor sections of the Onondaga Creekwalk have already been built. Once other sections are completed, the Creekwalk will provide an uninterrupted 2.3-mile pedestrian link between Onondaga Lake (and the Onondaga Lake Trail) and Armory Square, in Downtown Syracuse. Eventually, Creekwalk Plans call for extending the Creekwalk to Kirk Park on the south side of Syracuse. The entire Creekwalk trail will be integrated with the Onondaga Lake Trail and the New York State Canalway Trail.

- New York State Canalway Trail – Portions of this trail have been completed within Onondaga County that link to the end-to-end statewide Canalway Trail. In October 2000, the SMTC participated in the First Statewide Greenway and Community Trail Conference, held in Syracuse, New York, where SMTC staff members conducted a mobile workshop, "Routing the Canalway Trail through Syracuse." The presentation discussed various aspects of the Syracuse portion of the Canalway Trail. 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. The proposed route also exhibits widely differing characteristics and features, as it passes over public streets, moderately maintained utility roads, seasonal access roads, multi-use trails, and a waste settling bed. Recently, the Town of DeWitt designated portions of roadway as a bicycle path, and marked the pavement as such. Once completed, the Canalway Trail will connect the DeWitt bike paths in eastern Onondaga County to the Canalway Trail in western Onondaga County, in the Town of Camillus.

[3] "Lawmakers Approve Plan for Onondaga Lake Trail," Post Standard, May 2, 2000.

Beginning in 2001, the SMTC will be commencing a two-year city/county bicycle and pedestrian plan in order to re-visit, update and build upon the previously adopted Bikeway System Plan for Onondaga County (1976) and City of Syracuse Element of the Onondaga County Bikeway System Plan (1980). Through this process, the SMTC also plans to develop a city/county bike map.

Bicycle and pedestrian improvements will 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 Onondaga County and the City of Syracuse.

MAP 5-3
Major Trail Route Map

Click here to view the map.

AIR PASSENGER SERVICE

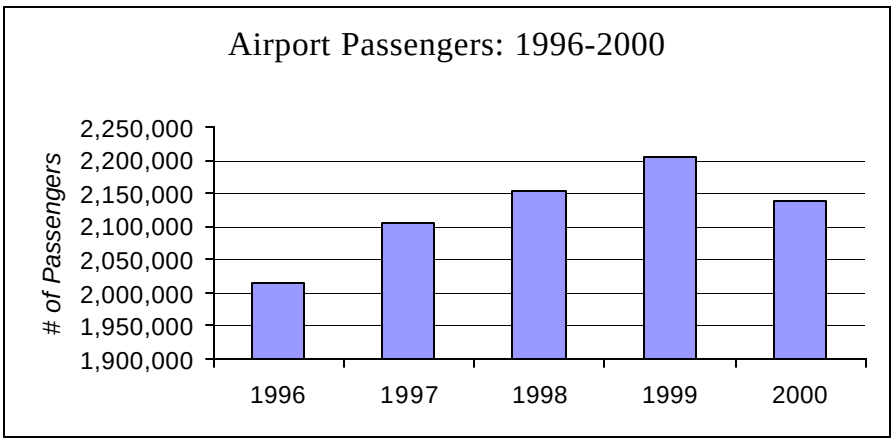
Introduction

Hancock International Airport is the single provider of commercial air passenger service in the SMTC area as well as the four-county Syracuse Metropolitan Statistical Area (MSA). There are five Federal Aviation Administration (FAA)-designated general aviation reliever airports that support Hancock International, one of which is within the SMTC planning area (Michael Airfield), as shown on Map 5-4.

The marketing hinterland of Hancock International extends well beyond the MSA boundaries, with people traveling an hour or more from Watertown, Utica, Cortland and Ithaca for specific flight destinations. The airport is served by major and regional carriers, including but not limited to American, Continental, Delta, Northwest, United and US Airways.

Total enplaned and deplaned passengers have fluctuated over the past 30 years, as shown in Figure 5-5, and Table 5-1. The current passenger traffic levels are rebuilding toward earlier higher levels following the economic downturn of the early 1990s and the job losses experienced in Central New York. These losses amounted to 15,000 jobs between 1990 and 1995 in the SMTC study area, according to the Greater Syracuse Chamber of Commerce. While there has been a gradual strengthening of the area economy and a return to earlier air passenger traffic volumes, full utilization of Hancock International has been hampered by inordinately high airfares charged by airlines, which has caused passenger diversion to other airports and other modes of transportation. The City of Syracuse Common Council established the Air Service Task Force in January 2001, the purpose of which is to bring more airlines to Hancock International Airport in order to make the air fares more competitive.

Figure 5-5



Source: City of Syracuse Department of Aviation – Passenger Traffic Reports

Table 5-1

Total Enplaned and Deplaned Passengers at Hancock International Airport					
1967	1975	1980	1990	1997	1999
1,138,800	1,381,700	1,663,200	2,638,803	2,106,328	2,205,521
Source: Central New York Regional Aviation System Plan and the City of Syracuse Department of Aviation, Aircraft Activity Reports.					

Airport Improvements

The City of Syracuse has been proceeding for many years with airside and landside improvements at Hancock International in order to help support economic growth in the area by making the Central New York Region more economically competitive with other metropolitan regions. The new facilities make air travel safer and more attractive while at the same time positioning the airport and the community at large for future growth in the new century. Prominent among these new facilities are a new air traffic control tower, a modern and expanded terminal with extensive visitor attractions and facilities for use while at the terminal, improved and expanded parking and car rental facilities and additional runway surface and taxiways, among others.

Continuing with these improvements, the City of Syracuse is currently working on the environmental assessment for lengthening the existing main runway (10R-28L) for a 2000-foot extension, to 11,000 feet. The extension will reduce arrival and departure delays, provide for a longer runway surface to enhance safety under varied weather conditions and allow for the use of heavier aircraft for international air travel. At some point in the future, the City may also proceed with the design and construction of a new parallel Runway (10L-28R) to further enhance safety and capacity.

Forecasts

Air traffic forecasts for total operations (commercial service, general aviation and military) tend to vary depending on the source as well as the point in time when made. Early in this century, expectations are for 250,000 operations annually, compared with approximately 166,000 operations during 1999. [4]

[4] Estimates are intended for indicative purposes only and are derived from the *Central New York Regional Aviation System Plan*, using KPMG Peat Marwick indications.

Intermodal Aspects

From an intermodal perspective, Hancock International Airport is located approximately five miles north of the City of Syracuse and has excellent highway access from Interstate 81 and the New York State Thruway (Interstate Route 90). Recent improvements to highway intermodal connectivity include installation of numerous signs directing motorists to both the air passenger terminal and the South Side general aviation and military facilities. Additional rail and bus connectivity improvements have also been implemented with the opening of the William F. Walsh Regional Transportation Center.

General Aviation

From a general aviation perspective, Michael Airfield and other non-system public use airports (see Map 5-3) offer the potential for air transportation alternatives for privately owned business aircraft. The general aviation airports each have a variety of improvements planned for implementation over the next 20 years as funding from the FAA and/or other sources becomes available.

RAIL PASSENGER

Introduction

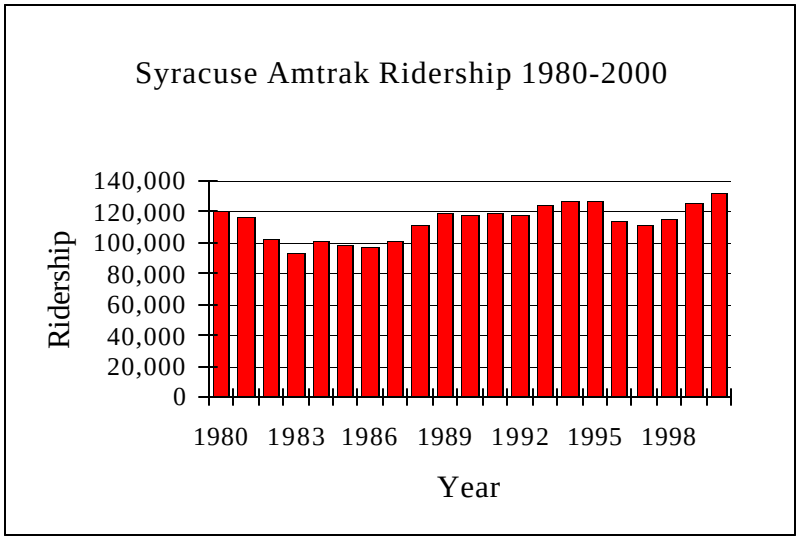
Rail passenger service in the SMTC area (see Map 5-3) is provided through two companies. The National Railroad Passenger Corporation (Amtrak) provides intercity rail passenger service in the Central New York Region. The Ontrack shuttle trains operate over trackage owned by the Syracuse, Binghamton & New York Railway (a subsidiary of New York, Susquehanna & Western).

Amtrak

Syracuse rail passenger traffic on Amtrak is substantial, traditionally ranking third behind New York City (NYC) and Albany in ridership. This has changed over the last several years as the population in the Hudson Valley has increased and Amtrak service south of the Capital District to NYC has evolved into hourly frequencies. Syracuse ridership however, has seen significant growth with the opening of the William F. Walsh Regional Transportation Center in 1998. This facility provides greater interconnectivity between bus and rail transportation modes, as well as a greater presence for Amtrak in the Syracuse metropolitan area.

Ridership increases (see Figure 5-6) for 2000 over 1999 have been approximately 21 percent for the Maple Leaf line (New York City to Toronto via Syracuse) and 20 percent overall for the Empire Service corridor trains. In the Upstate segment of the corridor, Syracuse is the strongest station in ridership performance outside of Albany. During 2000 Amtrak Empire Service was merged into the new Acela Regional Service, which was created in anticipation of the launch of high speed Acela service in the Northeast Corridor.

Figure 5-6



Source: Amtrak -- "State of New York Amtrak Facts"

Locally, 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. This has directly resulted in the formation of an Advisory Council to the Governor to develop a State High Speed Rail Plan which, when fully implemented, will increase frequencies and reduce travel times in our region. As part of that plan, the State and Amtrak are rebuilding seven high-speed train sets with new energy efficient turbine powered engines. These are currently the only fossil-fueled engines capable of 125 mile-per-hour speeds.

Ontrack

The Syracuse, Binghamton & New York Railway began operation of Ontrack in 1994 with a recreational rail shuttle service. The service connects the hamlet of Jamesville to the Carousel Center with stops in between serving Syracuse University and Downtown locations. 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 the Central New York Regional Market. Service is currently limited to eight trains in each direction, Wednesday through Sunday, on a seasonal basis.

WATER TRANSPORTATION

Introduction

The New York State Canal System (see Map 5-3) is undergoing a statewide revitalization program pursuant to seven regional canal plans and the New York State Canal Recreationway Plan. The SMTC area is included in the Central New York Canal Plan, which covers the entire Syracuse MSA of Cayuga, Madison, Onondaga and Oswego Counties. The Syracuse MSA accounts for approximately 19% of the entire State system, with all or parts of the Cayuga-Seneca Canal, Erie Canal and Oswego Canal.

Canal System Revitalization

Within the SMTC area, the State system has identified the Syracuse Canal Harbor as one of eight major canal harbors serving the entire state. In addition, the SMTC area includes four Canal Service Ports and Locks, out of 92 statewide. These four are located in the Village of Baldwinsville, Three Rivers in the Town of Clay, Lock E-23 State Canal Park in the Town of Clay

and in the Hamlet of Brewerton in the Town of Cicero. All of these locations within the SMTC area are on the Erie Canal.

Data on the total passengers carried through the area is not currently available in a consistent manner since the data on number of crew and passengers is collected only at the first lock through which a cruise boat passes. In the case of the SMTC area, this would reflect only a small portion of total passengers. However, data does exist on the number of pleasure boats, as reflected in the table below. Lock E-23 is the busiest lock, and Lock E-24 the second busiest, on the entire NYS Canal System (see Table 5-2). There are no estimates available for future years.

Table 5-2

Number Of Pleasure Craft Lockings
(LOWERED OR RAISED FROM ONE LEVEL TO ANOTHER)

Location	1994	1995	1996	1997
Lock E-23 State Canal Park, Town of Clay	7,598	8,924	7,372	7,553
Lock E-24 Village of Baldwinsville	3,973	4,484	3,426	3,746
Total NYS Canal System	67,795	74,337	67,809	72,049

Source: New York State Canal Corporation, New York State Canal System Traffic Reports, 1996 and 1997.

New Congressional Initiatives

On December 21, 2000, the Erie Canalway National Heritage Corridor Act was signed into law and is anticipated to have a considerable beneficial impact on the Canal System. The legislation has three major goals: (1) preserve, promote and interpret the Erie Canalway; (2) Build partnerships among state and federal governments and the canal communities; and (3) provide federal financial aid and technical assistance to enhance the canal corridor. A 27 member commission, headed by the Secretary of the Interior, will be responsible for preparing and implementing plans that support public and private efforts to preserve cultural and natural resources, as well as encourage economic revitalization.

MAP 5-4
Air, Water and Rail PASSENGER Movement Facilities

Click here to view the map.

CHAPTER 6
FREIGHT MOVEMENT

RAIL FREIGHT

Introduction

With a trend toward mergers and the creation of rail mega-carriers (such as Union Pacific/Southern Pacific and Burlington Northern/Santa Fe), as well as the growth of the shortline and regional railroads as links and feeders to the larger carriers, railroad business in the United States has become a growing industry. In the Central New York Region, there is one major (Class 1) carrier, one shortline and one regional railroad (see Map 6-1). The major carrier is CSX Transportation.

CSX Transportation

CSX operates over the Chicago Main line linking 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. CSX has seen a three percent increase in local traffic annually over the last several years and currently handles about 800 carloads of local traffic weekly. Another significant segment of CSX business is the intermodal freight terminal located in the DeWitt rail yard. CSX handles approximately 50,000 containers annually at the DeWitt facility and this number is expected to increase significantly as former Conrail routes are integrated into the CSX Service Lanes. The DeWitt yard is a major intermodal connection serving the entire state and is the only terminal of its type between New York City and Buffalo.

New York, Susquehanna & Western Railway (NYS&W)

The New York, Susquehanna & Western Railway (NYS&W), the area's regional carrier, currently handles several automobile trains per week between Little Ferry, N.J., and Syracuse for interchange with CSX, as well as local trains. The railway serves local industries between Syracuse and Binghamton and is also the interchange with CSX for Utica traffic (via Binghamton). The NYS&W has access to both Norfolk Southern (NS) and CSX in Binghamton, allowing customers competitive rail freight rates.

Finger Lakes Railway

The Finger Lakes Railway, operating between Solvay and Geneva, has produced significant results since taking ownership of the Auburn rail line. The Finger Lakes Railway has been able to stop the decline of rail traffic in its service area and has increased its business significantly. Carloads have increased over the last several years from approximately 5,600 in 1994 to 7,800 annually in 1996 and are anticipated to increase to over 10,000 carloads per year in 2000. The Finger Lakes Railway customers will also see benefits due to the interchange rights with two Class 1 railroads (CSX and NS) instead of one. Interchange with CSX occurs in Solvay and Lyons, while interchange with the NS occurs in Geneva.

AIR CARGO SERVICE

Hancock International Airport

Hancock International Airport (see Map 6-1) has in recent years undergone a substantial expansion in the capacity to handle air cargo. A highly successful effort has been made by the private sector and the airport to expand and modernize air cargo facilities and services during the last several years. At the present time, eight freight carriers are active, including but not limited to Airborne, Business Air, Emery, Federal Express, Mountain Air, UPS and Wiggins. Over the past 30 years, the tonnage of air cargo has increased from 5,000 in 1967 to 26,099 for 1997. [5]

Prospects for the future are very positive because Hancock International Airport has the land area available for expanding ground facilities, which will accommodate future growth opportunities. In addition, expansion of runway and taxiway facilities serves not only air passenger needs but those of air cargo carriers as well, offering greater capacity and flexibility to meet changing circumstances.

General Aviation Airports

With respect to general aviation airports, there are currently no airfreight services available at general aviation airports within the Syracuse Metropolitan Transportation Council (SMTC) area or the larger Syracuse Metropolitan Statistical Area (MSA).

[5] The 1967 data is from the Central New York Regional Aviation System Plan. The 1997 data is from the City of Syracuse Department of Aviation Activity Reports.

HIGHWAY FREIGHT

Introduction

Most products utilized by industry or sold in retail outlets at some point move by truck. Rail, air 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.

Trucking Characteristics

In the SMTC area, there is a system of Qualifying Highways (national network) and Access Highways designated for use by Special Dimension Vehicles in New York State. Although this network 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 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. Map 6-2 shows the proposed truck routes.

Freight Data Training

The SMTC, beginning in 2001, will be sponsoring a Statewide Shared Cost Initiative intended to train New York State Metropolitan Planning Organization (NYSMPO) and NYSDOT staffs on how to use Reebie data for analysis of freight movement within and through their respective regions. The New York Metropolitan Transportation Council (NYMTC) recently concluded a freight movement study in the NYMTC region that used the Transearch database, a proprietary database updated and maintained by Reebie Associates. The analysis in the study report provides a general idea about the overall patterns of freight movement in the NYMTC region but also provides specific details about freight flows to and from some 41 markets including the immediate region, individual states, and groups of states within the United States. The NYSDOT has provided each MPO with the Reebie data for their respective regions. However, not all MPO's or NYSDOT staffs are adequately trained on how to use the data. This project, which will provide the necessary training, would facilitate improved planning for freight movement and would assist NYSMPO staffs in better understanding the freight flows within each of the metropolitan areas, their impacts on the economy, and on the transportation system. The SMTC Staff will act as Consultant Project Manager for this project which includes two key Consultant components: (1) the development of a training course for the NYSMPO and NYSDOT; and (2) to teach the course to MPO and NYSDOT staffs in three agreed upon locations throughout New York State.

Map 6-1
Air, Water and Rail FREIGHT Movement Facilities

Click here to view the map.

Map 6-2
Proposed Truck Routes

Click here to view the map.

CHAPTER 7
BRIDGES

Introduction

The condition of bridges in the Syracuse Metropolitan Transportation Council (SMTC) area has been a critical issue for a number of years. The large number of bridges in Onondaga County, the generally poor condition of many of these bridges and the shortage of money available for funding improvements has caused this situation. There are a large number of interstate bridges that need repair within the same time frame because many are of the same age. While a significant effort has been made in the last decade to remedy this problem, many bridges still have to be closed before they are a high enough priority for funding with federal and state money. 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 the rural areas of the County (see Map 7-1 for bridge conditions).

Bridge Maintenance System (BMS)

Onondaga County has 475 bridges on the various state, county and local roads, as well as on or over the New York State Thruway. The New York State Department of Transportation (NYSDOT) maintains a bridge management system (BMS) for all of these bridges. The 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, it 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 between 3.0 and less than 4.0, with an average annual 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. All state and local bridges that are either posted, have a condition rating of less than 3.0, have a general recommendation equal to or less than 3.0 or have a structural flag are inspected every year. The condition ratings for all the state, local and Thruway Authority bridges in Onondaga County are presented in Table 7-1. The local bridges are further divided into county bridges as well as town, village and city bridges for 2000, as shown in Table 7-2. Future conditions are based on a tradeoff between an additional five years' worth of further deterioration and programmed work on some of the bridges.

Map 7-1
Bridge Ratings in Onondaga County

Click here to view the map.

In 2000, approximately 43 percent of all bridges within the county were considered deficient or priority deficient (see Table 7-1). This percentage has remained constant, as it was 44 percent in 1997. Without the 2001-2006 Transportation Improvement Program (TIP) and maintenance projects, the NYSDOT predicts that 49.1 percent of all bridges may become deficient. With the 2001-2006 TIP, but excluding any locally funded projects, the percentage of deficient bridges is predicted drop to 44.2 percent.

In 2000, approximately 69.4 percent of all state bridges within Onondaga County were considered non-deficient, compared to 63.9 percent in 1997. Therefore, the number of state deficient bridges is increasing in Onondaga County. The long-range goal for all bridges in New York State is 80 percent non-deficient by 2020.

Bridges are also rated by deck area. The long-range goal for deck area of all bridges in New York is 83 percent non-deficient by 2020. In 2000, approximately 70.5 percent of all state bridges in Onondaga County were non-deficient by deck area (see Table 7-1). Additionally, approximately 58.8 percent of all local and Thruway bridges were non-deficient by deck area in 2000 (see Table 7-2).

The reason that the SMTC LRTP has bridge goals by number of bridges and deck area is that the state owns several very large multiple-span bridges on the Interstate system, which could skew the measure of deficiency based on the condition of a single bridge. For example, the I-81 mainline viaduct over Almond Street in Downtown Syracuse is one bridge in the system but is made up of 36 spans. Local bridges usually have smaller bridge deck areas. Therefore, measuring the deficiency by deck area takes this into account.

Recently, guidelines have been approved for increasing funding options available through the NYSDOT Region 3, Transportation Advisory Committee (TAC), that allows for element-specific bridge work (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 maintenance activity was bridge painting for local bridges.

Table 7-1

2000 Bridge Conditions in Onondaga County								
Bridge Jurisdiction	Rating Category	2000		2006 (Not in TIP; not including Maintenance Funding)		2006 TIP (Excluding locally funded projects)		Percent Non-Deficient by Deck Area in 2000
All Bridges	Total	475		475		475		68.4 %
	Deficient	179	37.7%	233	49.1%	211	44.2%	
	Priority Deficient	23	4.8%	57	12.0%	50	10.5%	
State Bridges	Total	288		288		288		70.5%
	Deficient	88	30.6%	116	40.2%	101	35.1%	
	Priority Deficient	12	4.2%	34	11.8%	28	9.7%	
Local and Thruway Bridges	Total	187		187		187		58.8%
	Deficient	91	48.7%	117	62.6%	110	58.8%	
	Priority Deficient	11	5.9%	23	12.3%	22	11.8%	
Source: New York State Department of Transportation.								

Table 7-2

2000 Local Bridge Conditions in Onondaga County						
Jurisdiction	Total Number of Bridges	Number of Non-Deficient Bridges	Percent Non-Deficient Bridges	Number of Deficient and Priority Deficient Bridges	Percent Deficient and Priority Deficient Bridges	Percent Non-Deficient Bridges by Deck Area
Onondaga County	96	57	59.4 %	39	40.6 %	57.0%
Towns	14	6	42.9 %	8	57.1 %	66.8%
Villages	7	2	28.6 %	5	71.4 %	15.2%
City of Syracuse	32	21	65.6 %	11	34.4 %	62.7%
Thruway	38	10	26.3%	28	73.7%	61.2%
Source: New York State Department of Transportation.						

CHAPTER 8
PAVEMENT

Introduction

One of the New York State Department of Transportation's (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 life cycle. 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 Map 8-1 for pavement conditions).

Assessing Pavement Conditions

The NYSDOT system uses a visual rating with a scale of 1 to 10 for surface conditions, which are categorized as follows: below 5 is considered poor, 6 is fair, 7-8 are good, and 9-10 are excellent condition. Table 8-1 shows the average pavement rating of state roadways within Onondaga County and the percent of pavement that is considered in poor condition.

Table 8-1

State Pavement Conditions in Onondaga County

Year	Average Condition	Percent Poor
1997	6.60	12.0%
1998	7.09	8.3%
1999	7.31	4.0%
2000	7.28	2.3%

Source: New York State Department of Transportation.

Map 8-1
Pavement Condition Ratings for Federal-Aid Eligible Roads

Click here to view the map.

As reflected in Table 8-1, the average pavement conditions on the state highway system have improved slightly since 1997 and the percent of poor pavement has decreased significantly. The 1999 ratings show that Onondaga County's state route pavement average condition ranks 10th best out of 62 counties in the state. State roads are currently exceeding the 2020 goals of no more than 11 percent having poor pavement conditions and 26 percent having fair pavement conditions. Additionally, the state roads are 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. However, these systems are not equivalent to the NYSDOT system. The OCDOT has three different paving programs: a hot mix, a cold mix and an oil and stone treatment. Onondaga County currently paves approximately 36 miles of roadway per year using hot mix, 15 miles per year using cold mix and 55 miles per year using oil and stone. To adequately maintain system condition, the OCDOT anticipates that approximately 48 miles of highway per year need to be paved using hot mix, 18 miles per year using cold mix and 75 miles per year using oil and stone. Using year 2000 costs per mile for each type of paving program, the total costs amount to almost $9.5 million per year for paving, compared to the $6.9 million spent for the year 2000.

CHAPTER 9
SAFETY

Introduction

Strategies to improve the safety of highway systems are often grouped in 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. National fatality rates have declined from a high of 5.5 fatalities per 100 million vehicle miles traveled (VMT) in 1966 to 1.6 fatalities per 100 million VMT in 1998. Statewide, the number of fatalities has decreased from 1,670 in 1995 to 1,585 in 1999. 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 9-1 for high accident locations).

Accident Reduction

The Syracuse Metropolitan Transportation Council (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. The ten highest accident locations for state roads, county roads and city roads in the SMTC study area are shown in Tables 9-1, 9-2, and 9-3. 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.

The following tables list the most recent data for the number of reported accidents for state, county and city owned roads. The state owned roads (Table 9-1) are listed by rank instead of total number of reported accidents. The rank is determined by a calculation for severity index, not the number of accidents, that takes into account such data as fatalities and personal injury accident statistics, in addition to the number of accidents. The county and city ten highest accident locations (Tables 9-2 and 9-3) are identified through a different process based on the total number of accidents that occurred during the most recent period for which data is available. The accompanying map portrays geographically the accident locations highlighted in Tables 9-1, 9-2, and 9-3.

Map 9-1
High accident locations in Onondaga County (by jurisdiction)

Click here to view the map.

Table 9-1

Ten Highest Vehicular Accident Locations
New York State Owned Roads
1999-2000

Rank	Location	Total Number of Accidents
1	Route 11 between Concourse Road and Bailey Road	57
2	Route 11 at Elbow Road	29
3	Route 298 at Carrier Circle	149
4	Route 31 between Crabtree Road and Interstate 81	69
5	Route 11 between Malden Road and South Bay Road	199
6	Route 11 between East Circle Road and Hogan Road	86
7	Route 31 near Wegmans at Soule Road/ Interstate 481	88
8	Interstate 81 between Spencer Street and Court Street	79
9	Interstate 81 between Interstate 690 and Pearl Street	66
10	Interstate 81 at Spencer Street	74

Table 9-2

Ten Highest Vehicular Accident Locations on Onondaga County Owned Roads
January 1996 – December 1998

Location	Total Number of Accidents	Included in SMTC Accident Analysis Program
Route 57 at John Glenn Boulevard	77	*
Northern Boulevard at East Taft Road	55	
Route 57 at Wetzel Road	52	
Buckley Road at West Taft Road	49	*
West Taft Road at Bear Road	47	*
Old Liverpool Road at Electronics Parkway	46	
West Taft Road between Buckley Road and Allen Road	40	*
Morgan Road at Buckley Road	40	
South Bay Road at East Taft Road	39	*
Morgan Road at Wetzel Road	39	*

Source: New York State Department of Transportation.

Note: The direction of the accident is unknown. The accidents listed may include bicycle and pedestrian accidents. Locations that are included in the accident analysis program are determined by Onondaga County. There are particular reasons why a given location may not be included in the accident analysis program.

Table 9-3

Ten Highest Vehicular Accident Locations on the City of Syracuse Owned Roads
January 1996 – December 1998

Location	Total Number of Accidents	Included in SMTC Accident Analysis Program
Erie Boulevard at North Geddes Street	71	
Erie Boulevard at McBride Street	58	
East Seneca Turnpike at South Salina Street	58	
Erie Boulevard at North Townsend Street	54	*
James Street at Lodi Street	51	*
James Street at Teall Avenue	49	
James Street at Oak Street	48	
James Street at North State Street	47	
Milton Avenue at West Genesee Street	38	*
East Brighton Avenue at South Salina Street	38	

Source: New York State Department of Transportation.

Note: The direction of the accident is unknown. The accidents listed may include bicycle and pedestrian accidents. Locations that are included in the accident analysis program are determined by the City of Syracuse. There are particular reasons why a given location may not be included in the accident analysis program.

As part of the annual work program, the SMTC assists Onondaga County and the City of Syracuse in an accident surveillance analysis. The analysis is based on existing conditions rather than future conditions because it is virtually impossible to predict where future problems may be located. The analysis consists of identifying high accident locations on county or city streets, calculating accident rates by relating the number of accidents to traffic volumes and selecting the priority locations for more detailed study. The more detailed study looks at the history of accidents at a location and attempts to determine if the problem is correctable. Recommendations are then made to Onondaga County or the City of Syracuse for a given location.

CHAPTER 10
CONGESTION MANAGEMENT SYSTEM

Introduction

The Code of Federal Regulations (CFR) defines congestion in 23 CFR Part 500.109 as "the level [of congestion] at which transportation system performance is no longer acceptable due to traffic interference." Relatively speaking, the Syracuse Metropolitan Transportation Council (SMTC) area is not adversely affected by congestion. Other areas of the nation have serious difficulties not experienced here locally. Nevertheless, there are areas in need of improvement to reduce congestion and ease traffic flow.

SMTC Congestion Management System

The SMTC's Congestion Management System (CMS) is a process for managing congestion that provides information on the performance of the transportation system. The CMS is designed to identify and monitor congestion annually at selected locations throughout Onondaga County and is required by federal legislation. This process aids in identifying locations that need improvements to relieve congestion.

The specific locations to be analyzed through the CMS were selected in the fall of 1997 by the CMS Working Group, which consisted of the following agencies:

- City of Syracuse Department of Public Works (DPW);
- Onondaga County Department of Transportation (OCDOT);
- Syracuse-Onondaga County Planning Agency (SOCPA);
- Central New York Regional Transportation Authority (CNYRTA);
- New York State Department of Transportation (NYSDOT); and
- New York State Thruway Authority (NYSTA).

Data collected for the CMS consisted of Average Annual Daily Traffic (AADT) counts at approximately one hundred road segment locations and turning movement counts at nineteen intersections. All counts will be collected on a recurring three-year cycle. The locations of the road segment and intersection traffic counts are found in Maps 10-1 and 10-2, respectively.

Map 10-1
Road Segment Traffic Count Locations

Click here to view the map.

Map 10-2
Intersection Count Locations

Click here to view the map.

CMS Process

Two tiers of analysis utilizing mathematical models are employed in the CMS process. The first level of analysis, Tier 1, consists of performance measures that are used to determine the volume to capacity (v/c) ratios at peak one-hour intervals. The CMS Working Group determined that if the v/c ratio was greater than (>) 0.90, the location was considered to be congested.

The second level of analysis, Tier 2, consists of a more detailed performance measure, called excess delay. The Transportation Research Board defines excess delay as "the amount of time spent at a given location that exceeds the maximum amount of time that is generally considered acceptable." Excess delay incorporates such variables as speed, volume, and directional capacity within its calculation.

CMS Analysis Results

For the 2000-2001 Unified Planning Work Program (UPWP) year, the two-tiered CMS analysis revealed that the following seven intersections, shown in Map 10-3, were congested:

- State Route 370/County Route 57/Old Liverpool Road;
- County Route 57/Tulip Street;
- Midler Avenue/James Street;
- Butternut Street/Lodi Street;
- Genesee Street/Erie Boulevard West;
- State Route 173 (East)/State Route 175; and
- Colvin Street/Comstock Avenue.

The same seven intersections were also determined to be congested in the 1999-2000 CMS report. This may change next year, when new traffic counts are utilized.

The CMS analysis also revealed that twenty-five road segments were congested (see Map 10-4). The three road segments with the highest level of congestion, known as excess delay, are shown in Map 10-5, and are listed below:

- I-690 from Access I-81 northbound to Access McBride St. eastbound
- I-81 from Junction Route 298 Bear St. to Route 370
- I-81 from Junction E. Adams St. to Access I-690

The same three locations were identified as experiencing excess delay in the 1999-2000 CMS report, which had noted that excess delay existed at four locations (the fourth location, State Route 92 from the end of the Route 5 overlap to Woodchuck Hill Road) no longer experiences excess delay). Again, when the traffic counts are updated for these road segments, this could change.

Map 10-3
Congested Intersection Locations

Click here to view the map.

Map 10-4
Congested Road Segment Locations

Click here to view the map.

Map 10-5
Road Segments with Excess Delay

Click here to view the map.

Improvement Projects

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 Transportation Improvement Program (TIP) or the SMTC 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. Table 10-1 identifies the projects which are located in close proximity to CMS identified congested locations that are programmed in the 1999-2004 SMTC TIP. Once completed, these projects should help to alleviate some of the congestion that has been identified through the CMS.

Table 10-1

Improvement Projects Programmed in the 1999-2004 SMTC TIP

Route Number	Project Identification Number (PIN)	Project Name
5/92	303472	Routes 5 & 92 Demonstration Project
31	303753	Route 31, Route 481 to Henry Clay Boulevard, Part 1
31	303756	Route 31 over Seneca River (Belgium Bridge)
I-81	350138	I-81 Intelligent Transportation System Downtown
173	301912	Route 173 (West Genesee Street–Syracuse City Line)
173/175	301921	Route 173, Onondaga Community College (OCC) to Broad Street; Route 175, OCC to Route 173
631	380414	Baldwinsville Bypass, Phase 2

Source: SMTC 1999-2004 Transportation Improvement Program.

The recently completed Liverpool Area – Onondaga Lake Parkway Transportation Study, a 1999-2000 SMTC UPWP task, analyzed transportation and mobility issues within and surrounding the Village of Liverpool. Many of the congested road segment locations and intersections listed in the CMS for the Liverpool area were included as part of the study area for the Liverpool Area – Onondaga Lake Parkway Transportation Study. The SMTC's consultant for this project analyzed

various alternatives and recommended that the following would be effective in addressing the needs presented in the Liverpool Area – Onondaga Lake Parkway Transportation Study:

- Alternative 6 – Onondaga County Settlement Plan with an effective Liverpool Bypass from NYS Route 370 to Electronics Parkway;
- traffic calming;
- pedestrian signal timings; and
- reduced speed limit on Onondaga Lake Parkway.

Alternative 6 meets all the needs of the Liverpool Area–Onondaga Lake Parkway Transportation Study by combining the benefits of the Onondaga County Settlement Plan along with the proposed bypass. The Onondaga County Settlement Plan, prepared by a consultant to Onondaga County, addresses the Village of Liverpool issues such as reducing congestion, strengthening the businesses and providing a pedestrian and bicycle friendly environment, while the proposed bypass will provide alternative commuter and truck routes. In addition to Alternative 6, traffic calming measures and accommodating pedestrians through the traffic signal timings will further meet the needs of the Village issues. The modifications proposed by the Onondaga County Settlement Plan for Onondaga Lake Parkway will also make the Parkway more conducive to a lower speed limit, which was also recommended.

If implemented, the recommendations listed above should assist in reducing congestion in the Liverpool area. Already, in late fall of 2000, the NYSDOT reduced the speed limit along Onondaga Lake Parkway from 55 miles per hour to 45 miles per hour from November 1st to April 1st.

Plans for the Future

The CMS is an ongoing project that is completed annually. Through this process, the SMTC will continue to collect and analyze data for the monitoring of congestion in the SMTC Metropolitan Planning Organization (MPO) area.

As there are some limitations to the current CMS process and product, the SMTC will be reexamining the CMS report with the assistance of its member agencies, particularly the NYSDOT, during the 2001-2002 UPWP year.

CHAPTER 11
FINANCIAL PLAN

Resources Available

The 2020 Long-Range Transportation Plan (LRTP), when published in 1995, anticipated a total of $3.050 billion in funding over the 25-year planning period. This 2001 Update anticipates a total of $2.586 billion in funding over the remaining 19-year term of the original 25-year planning period. The major sources of funding, shown in Tables 11-1 and 11-2, include the federal government at 42% ($1.09 billion) of the total, the State Dedicated Fund at 29% ($753.0 million), Onondaga County at 9% ($223.0 million) and the City of Syracuse at 2% ($64.0 million). The balance is comprised of other State and local sources at 12% ($300.9 million) and Centro operating revenue at 6% ($154.0 million). It is anticipated that all traditional funding mechanisms will be exhausted in the implementation of this 2001 Update.

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. The original allocations were based on a public participation process involving visioning workshops. Although Table 11-2 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.

For this 2001 Update, the 1998 cost of each objective has been prorated using the new 19-year resource base of $2.586 billion. The results show that maintenance of existing bridges and pavement (Facilities 1-3 in Table 11-3) will absorb 64 % of the budget ($1.65 billion). An additional 17 % ($441.0 million) will be allocated to support the area transit system; 12 % ($301.0 million) will be used to improve congested locations, reduce single occupancy vehicles (SOV) and compliance with the Americans with Disabilities Act (ADA); and, 4 % ($109.0 million) will be spent for efforts to increase safety at high accident locations. The remaining 3 % ($76.0 million) of the budget will support transportation projects, which enhance economic development, environmental quality and efforts to coordinate land use and transportation planning decisions in the study area. The 2001 Update also supports a number of innovative initiatives new to this area. Examples of the latter include funds, which have been allocated to encourage application of Intelligent Transportation System (ITS) technology in the Syracuse region and to an effort to devise a cost/benefit methodology for application to future Transportation Improvement Programs (TIP).

Evaluation of the Project Financial Tracking Process

A review of the LRTP section on Goals, Objectives and Action Plans for this 2001 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 Syracuse Metropolitan Transportation Council (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.

Table 11-1

Estimated Resources Available for Highway Capital Funding

Highway Funding Sources	1995 – 2020 (Millions of Dollars)	1998 – 2020 (Millions of Dollars)	2001-2020 (Millions of Dollars)
Federal – FHWA	$1095 M	$1087 M	$1000 M
State Dedicated Funds	$1010 M	$801 M	$738 M
Onondaga County – Capital Program	$225 M	$242 M	$223 M
City of Syracuse – Capital Program	$50 M	$70 M	$64 M
Other Municipalities in the SMTC Area	Not Included	Not Included	Not Included
Total Highway Funding	$2.380 Billion	$2.200 Billion	$2.025 Billion

Source: New York State Department of Transportation.

Table 11-2

Estimated Resources Available for Transit Operations and Capital Funding			
Transit Funding Sources	1995 – 2020 (Millions of Dollars)	1998 – 2020 (Millions of Dollars)	2001-2020 (Millions of Dollars)
Federal – FTA	$180 M	$99 M	$91 M
State Dedicated Funds	$30 M	$16 M	$15 M
Other State and Local Funds	$290 M	$327 M	$301 M
Operating Revenue	$170 M	$167 M	$154 M
Total Transit Funding	$670 M	$609 M	$561 M
Total Highway and Capital Funding	$3.050 Billion	$2.809 Billion	$2.586 Billion
Source: New York State Department of Transportation.			

Table 11-3

Allocation of Resources by Long-Range Transportation Plan Objective

OBJECTIVE	1995 – 2020	1998 – 2020	2001-2020
Mobility 1 – Transit service	$520 M	$479 M	$441 M
Mobility 2 – Improve LOS at congested locations	$300 M	$276 M	$254 M
Mobility 3 – Decrease the number of SOVs	$25 M	$23 M	$21 M
Mobility 4 – Comply with ADA	$30 M	$28 M	$26 M
Mobility 5 – Greater utilization of electronic communication	$0	$0	$0
Land Use 1-4 – Assist local communities in planning	$1 M	$0.9 M	$0.8 M
Environment 1 – Implement programs that improve air quality	$15 M	$14 M	$13 M
Environment 2 – Implement carbon monoxide SIP	$14 M	$13 M	$12 M
Environment 3 – Decrease use of road salt	$5 M	$5 M	$4 M
Economy 1 – Support access to economic development	$50 M	$46 M	$42 M
Economy 2 – Maintain operation/condition standard on principal arterials	$0	$0	$0
Economy 3 – Employer coordination of employee travel	$12 M	$11 M	$10 M
Facilities 1 – Bridge maintenance	$776 M	$715 M	$659 M
Facilities 2 – Pavement maintenance	$1172 M	$1079 M	$994 M
Facilities 3 – Maintain sidewalks & other pedestrian/bike facilities	$10 M	$9 M	$8 M
Safety 1 – Reduce accident rates at highest accident locations	$95 M	$87 M	$80 M
Safety 2 – Reduce the highest intermodal accident locations	$25 M	$23 M	$21 M
Safety 3 – Assist planning officials and developers in accommodating travel in new developments	$0	$0	$0
Total	$3.050 Billion	$2.809 Billion	$2.586 Billion

Source: New York State Department of Transportation.

CHAPTER 12
CONFORMITY DETERMINATION

Introduction

The analysis of the Syracuse Metropolitan Transportation Council's (SMTC) 2020 Long-Range Transportation Plan (LRTP) indicates that the emission levels for the analysis year 2020 are less than the emission levels for the base year. [6] The policies contained in the LRTP support the intentions of the Clean Air Act in maintaining the National Ambient Air Quality Standards (NAAQS). The LRTP goals, directives, recommendations and policies are in conformance with the State Implementation Plan (SIP) requirements.

Background and Conformity Requirements

The SMTC area consists of Onondaga County, which is a maintenance area for carbon monoxide. In 1991, the SMTC nonattainment area was redesignated from the Syracuse Metropolitan Statistical Area (MSA), consisting of the four counties of Cayuga, Madison, Onondaga and Oswego, to Onondaga County alone. Onondaga County will remain a maintenance area until the year 2013. [6] The conformity analysis performed by the SMTC, in cooperation with the New York State Department of Transportation (NYSDOT), indicates that the SMTC area will continue to attain emission levels in conformance with requirements. The conformity test for the SMTC maintenance area must demonstrate that, once a project is built, the emissions impacts of a proposed project will be less than the emissions in SMTC's base year and that Transportation Control Measures (TCMs) are being implemented in a timely manner. [6] The conformity analysis prepared during 2001 for the SMTC area is included in this 2001 Update as an Appendix.

Generation of Vehicle Miles Traveled and Average Speed Forecasts

The SMTC uses the Syracuse Intermodal Model (SIM) to estimate the study area peak hour transportation demand. The SIM is a stand-alone package that adds bicycle, pedestrian and transit travel to the T-Model, thereby giving the traffic modeling process a multi-modal character instead of a straight traffic model. The data forecasts used in the model are derived from several sources. The population estimates are obtained from US Census data. The future population and growth estimates were prepared by the Syracuse-Onondaga County Planning Agency (SOCPA). The employment data was obtained from the New York State Department of Labor. Travel data for

[6] Although the base year was theoretically 1991, the 20-year maintenance area designation started two years later, as of September 1993. Consequently, the Onondaga County maintenance area designation remains in force until 2013.

transit was included in the modeling, taking into account CENTRO's fixed route service, as well as bicycling and walking. CENTRO's paratransit service is treated as shared ride trips.

Projects Included in the Analysis

Transportation projects that will not change the operating characteristics of a roadway are exempt from the Transportation Improvement Program (TIP) conformity analysis. Conformity analysis must be performed on those non-exempt projects which effect the distance, speed or capacity of a roadway. All non-exempt projects that could be modeled were included in the 2020 scenario. Table 12-1 lists the non-exempt projects included in the conformity determination analysis.

Table 12-1

Non-Exempt Projects Included in the Analysis

PIN	Project	General Scope	In TCM?
3035.19	County Route 57 Improvements – Phase IV	Reconstruction to add turning lanes at intersection of SR 31 and CR 57.	
3037.56	Route 31 bridge at Belgium over the Seneca River	Widening of Route 31 to reduce vehicle hours of delay and safety deficiencies.	
3752.81	Kirkpatrick/Court/Solar	Realign Court/Kirkpatrick, expand Kirkpatrick to 4 lanes, rehabilitate Solar Street.	
3034.72	Overlap of Routes 5 and 92 from Erie Blvd. Through Lyndon Corners	Final scope undetermined; widening and signal improvements at intersections over a one-mile stretch of Route 5.	
3037.53	Route 31 – Soule Road to Henry Clay Blvd.	Widening of Route 31 to reduce vehicle hours of delay and safety deficiencies	
3037.59	Route 31 – CR 57 to Soule Road	Widening of Route 31 to reduce vehicle hours of delay and safety deficiencies	
3802.10	Baldwinsville By-Pass	Roadway from Route 31 in Lysander to Route 48 in Van Buren, including the bridge over river	
3802.75	Syracuse Signal System Interconnect	Improvement, interconnection, and computerization of up to 145 signal controllers in downtown Syracuse; includes Downtown and University Hill area.	✔
3803.79	Clinton Square	Closure of Erie Boulevard, new traffic pattern and subsequent pedestrian improvements.	

Source: Syracuse Metropolitan Transportation Council, 1999-2004 Transportation Improvement Program. "PIN" stands for project identification number; "TCM" indicates whether the project is a Transportation Control Measure.

Emissions Modeling

The emissions analysis was based upon the most recent emission estimates from the MOBILE 5B model. The results of the model are an estimate of the total daily carbon monoxide (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 analysis includes implementation of the enhanced Inspection/Maintenance (I/M) Program and the Low Emission Vehicle (LEV) Program. The I/M Program includes an inspection for tampering with emission controls or misfueling, use of computerized emission analyzers and inspection of on-board diagnostic systems. The LEV Program is a voluntary program between auto manufacturers, the United States Environmental Protection Agency (USEPA), and the states, whereby manufacturers agree to comply with tailpipe standards more stringent than USEPA can mandate prior to model year 2004.

Results of the Emissions Modeling

The modeling output shows that carbon monoxide emissions are projected to be reduced by 47.46% between the forecast year of 2020 and the base year of 1991. The analysis indicates the completion of construction or implementation of projects on the TIP, and which are consistent with the LRTP, will result in emission levels that are lower than the 1991 base year.

In addition to the required emissions level conformity test, the SMTC staff and the NYSDOT analyzed several milestone years between the 1991 base year and the 2020 plan year. The results of these analyses demonstrate the gradual reductions in carbon monoxide emissions over time for the milestone years.

Timely Implementation of Transportation Control Measures (TCMs)

The LRTP provides for the implementation of all remaining TCMs in the SIP. The status of the six TCMs, which are the basis of the Syracuse Onondaga Air Quality Maintenance Plan, is shown in Table 12-2.

Table 12-2

Status of Transportation Control Measures (TCMs)

TCM	Purpose	Status
Central Business District Signal System Interconnect	To interconnect traffic signals with a centralized computer-based master control system that helps to reduce stops and delays at the intersection and thereby increase travel speeds on the road network.	Complete.
Traffic Operation Improvements	To improve traffic flow through intersections and along corridors by applying operational improvements.	Complete. PIN 3104.13, Route 298, Syracuse to Carrier Circle is on the 1999-2004 TIP for construction in May 2001.
Special Event Traffic Management Plan	To reduce major event or multiple events-related traffic impacts on the surrounding roadways and on the air quality	Complete.
Transportation Demand Management (Connections)	To increase the number of people who share rides to work, thereby increasing automobile occupancy and reducing the number of single occupant automobiles and the extent of congestion.	Complete.
Transit Service Expansion/Improvement	To increase transit ridership and reduce single occupant vehicle trips.	Complete.
Alternative Fuel Vehicles Project	To examine the use of natural gas fueled buses for CNYRTA.	Complete. CNYRTA continues to purchase natural gas buses when replacing old buses.

Source: New York State Department of Environmental Conservation, New York State Implementation Plan Redesignation Request of Onondaga County as Attainment for Carbon Monoxide, Revision, November 1992.

Table 12-3

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	To be implemented 4/02
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	CNYRTA receives Connections funding every year for their ongoing Ride Share work.		
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.

As shown in Table 12-3, of the 11 specific projects listed in the Onondaga County portion of the SIP as TCMs, ten have been implemented and one is progressing although slightly behind schedule. One project is programmed in the TIP for construction later this year. One TCM project, pavement rehabilitation and traffic operation improvements, scheduled for Route 298 west of Carrier Circle (PIN 3104.13) has experienced a delay from the original schedule. The delay in this project results from some project implementation issues and funding constraints. The project is programmed in the 1999-2004 TIP for implementation, with construction in 2002.

APPENDIX NO. 1
CONFORMITY ANALYSIS

SYRACUSE METROPOLITAN TRANSPORTATION COUNCIL

Regional Emissions Analysis

for

SMTC Long-Range Transportation Plan – 2001 Update
Air Quality Conformity Determination

Using the U.S. Environmental Protection Agency's (EPA)
MOBILE 5B Emissions Model

and

The Latest Emissions Control Programs
for Onondaga County per the
New York State Department of Environmental Conservation (NYSDEC)

Prepared by:

The New York State Department of Transportation (NYSDOT)
Environmental Analysis Bureau

and

The Syracuse Metropolitan Transportation Council (SMTC)

April 2001

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SMTC Long-Range Transportation Plan – 2001 Update
Conformity Determination

SMTC Long-Range Transportation Plan – 2001 Update
Conformity Analysis:
April 2001

Introduction

This regional emissions analysis is prepared to comply with the requirements of the Federal Clean Air Act Amendments of 1990 and the associated Federal and State Transportation conformity regulations. The regulations, both the U.S. Environmental Protection Agency's (EPA) transportation conformity rule (40 CFR Parts 51 and 93) and the New York State Department of Environmental Conservation's (NYSDEC) transportation conformity regulation (6 NYCRR Part 240) require that each time the Syracuse Metropolitan Transportation Council (SMTC) adopts or approves a Transportation Improvement Program (TIP), Long-Range Transportation Plan (LRTP) or an amendment/update to the TIP or LRTP, it be determined that the proposed action is in conformity with the applicable State Implementation Plan (SIP) for air quality prepared by NYSDEC.

The remainder of this report presents the results and documentation of the regional emissions analysis and the air quality conformity determination conducted for the proposed 2001 Update to SMTC's Long-Range Transportation Plan.

Status of Applicable SIP

The existing State Implementation Plan (SIP) for air quality for Onondaga County contains estimated existing and future emissions of carbon monoxide (CO) as part of the Clean Air Act requirement to produce a "Maintenance Plan" when the NYSDEC demonstrated to the EPA that Syracuse and Onondaga County had attained the National Ambient Air Quality Standards (NAAQS). This Maintenance Plan establishes a comparison between existing "base year" emissions, (per the Clean Air Act this year is either 1990 or another year as established by the SIP: 1991 for Onondaga) and future estimated emissions. The Maintenance Plan must demonstrate that emissions of CO in future years will remain below the levels established in the base year when the standards are first attained, therefore assuring the continued maintenance of the standards, or NAAQS.

The Onondaga County SIP of 1992, that established the Maintenance Plan referenced above, used a now outdated version of the EPA's emissions model, "MOBILE" version 4.1. In addition, the NYSDEC has changed some of the proposed future emission control programs, most notably the vehicle inspection and maintenance program that was anticipated in the Maintenance Plan. It has now been changed to a "gas-cap integrity test" to check for emissions leaks, as part of the New York State annual vehicle safety and emissions inspection program. It includes testing of the vehicle's emissions control

equipment for evidence of tampering, and will include testing of new vehicle on-board diagnostic systems related to the vehicle's emissions control system.

These differences between the previous SIP assumptions and those required for a proper air quality conformity analysis according to the EPA's transportation conformity rule have resulted in difficulties in directly comparing the updated regional emissions analysis for the SMTC TIP and LRTP updates with the CO emissions budget of the SIP. The conformity analysis must use the latest planning assumptions and the latest emissions model, both of which have changed significantly since the SIP's on-road mobile source emissions budget for Onondaga County was prepared.

In order to produce a process to appropriately determine transportation conformity while the NYSDEC prepared the next version of the SIP Maintenance Plan, interagency consultation was initiated during SMTC's previous LRTP conformity determination. The involved State, local and Federal agencies have agreed that the updated regional emissions analysis that incorporates the latest planning assumptions, latest future emissions control programs estimated by the NYSDEC, and the latest EPA emissions model could be used to demonstrate conformity of the SMTC TIP and LRTP with the SIP.

Results of the Regional Emissions Analysis

The following pages show the complete results of the regional emissions analysis, using the EPA's MOBILE 5B model and the latest SMTC transportation demand model results. The existing and future estimated emissions are presented in the table on page 6, and the non-exempt transportation projects included in the analysis are presented on page 7. This analysis demonstrates that with the adopted 2001 Update to the SMTC LRTP, CO emissions in future years will remain below the levels established by the SIP base year. Therefore, since on-road mobile source emissions will remain under the levels when the region first attained the Federal CO standard, continued maintenance of the CO NAAQS is assured, and the SMTC 2001 Update and the existing LRTP remain in conformity with the SIP.

As an additional measure of the future CO emissions in Onondaga County, the preliminary updated on-road mobile source emission levels developed by the NYSDEC were analyzed for comparison purposes. These updated emissions estimates have not yet been submitted to the EPA as part of a new SIP Revision/Maintenance Plan, so they do not represent and official emissions budget, but they are the latest estimated future year targets that are expected to be submitted to EPA, once the other tasks required for the new Maintenance Plan SIP are completed. The new CO emissions estimates for Onondaga County were developed by the NYSDEC using the latest EPA emissions model, MOBILE 5B, and the referenced changes to the planned emission control programs that have been made since NYSDEC produced the original Maintenance Plan SIP in November 1992. In addition, the new estimates (provided by the NYSDEC) include an updated inventory of Daily Vehicle Miles Traveled (DVMT) produced by the NYSDOT, based on the Highway Performance Monitoring System (HPMS) data produced for the USDOT Federal Highway

Administration (FHWA), and updated future forecasts of DVMT produced for the historical trend of existing HPMS traffic counts. The comparisons made show that for each future year, emissions with the proposed SMTC 2001 LRTP Update will be below the draft target levels for on-road mobile source emissions in Onondaga County that the NYSDEC expects to eventually include in the updated Maintenance Plan SIP.

Status of Required SIP TCMs

The table on the following page presents the current status and schedule of the official Transportation Control Measures (TCMs) contained in the SIP for Syracuse and Onondaga County. The referenced Federal and State air quality conformity regulations require that each time the SMTC adopts or approves a new TIP or LRTP, a determination that all required TCMs are being implemented in a timely fashion be made. As the TCM table shows, all of the required TCMs have been completed with the exception of one and this single remaining project is on the TIP and on schedule.

Conclusions

In conclusion, the proposed 2001 Update to the SMTC's LRTP has complied with the requirements of the Clean Air Act, and is in conformity with the New York State Implementation Plan (SIP) for air quality.

The following pages provide the documentation of the required regional emissions analysis conducted to determine air quality conformity. The analysis demonstrates that with the adopted 2001 Update to the SMTC's LRTP, emissions of carbon monoxide will remain below the levels established in the base year when Syracuse and Onondaga County first attained the Federal CO standards. Therefore, continued maintenance of the CO NAAQS is assured, and the SMTC TIP and LRTP remain in conformity with the SIP.

SMTC 2001 LRTP Update, April 2001

Summary of Regional Emissions Analysis Results
MOBILE 5B With Updated SMTC TModel 2

	Base Year 1990	
	VMT	CO Emissions g/day
Peak	3902845	144135328
Off-Peak	8596519	311796030
Total	12499364	455931358
Total tons/day CO=		502.58

	Forecast Year 2003	
	VMT	CO Emissions g/day
Peak	4196595	97967586
Off-Peak	9240875	209608961
Total	13437470	307576547
Total tons/day CO=		339.05

	Forecast Year 2005	
	VMT	CO Emissions g/day
Peak	4338176	89204210
Off-Peak	9552721	190489551
Total	13890897	279693761
Total tons/day CO=		308.31

	Forecast year 2015	
	VMT	CO Emissions g/day
Peak	4636311	41353453
Off-Peak	10214608	87650501
Total	14850919	129003954
Total tons/day CO=		142.2

	Forecast Year 2020	
	VMT	CO Emissions g/day
Peak	4692666	34416170
Off-Peak	10333591	72719541
Total	15026257	107135711
Total tons/day CO=		118.1

Non-Exempt Projects
Included in Modeling for Conformity Analysis

PIN	PROJECT	GENERAL SCOPE	TCM?
3035.19	County Route 57 Improvements – Phase IV	Reconstruction to add turning lanes at intersection of SR 31 and CR 57.	
3037.56	Route 31 Bridge at Belgium Over the Seneca River	Widening of Route 31 to reduce vehicle hours of delay and safety deficiencies.	
3752.81	Kirkpatrick/Court/Solar	Realign Court/Kirkpatrick, expand Kirkpatrick to 4 lanes, rehabilitate Solar Street	
3034.72	Overlap of Routes 5 and 92 from Erie Blvd. Through Lyndon Corners	Final scope undetermined; widening and signal improvements at intersections over a one-mile stretch of Route 5.	
3037.53	Route 31 – Soule Road to Henry Clay Blvd.	Widening of Route 31 to reduce vehicle hours of delay and safety deficiencies	
3037.59	Route 31 – CR 57 to Soule Road	Widening of Route 31 to reduce vehicle hours of delay and safety deficiencies	
3802.10	Baldwinsville By-Pass	Roadway from Rt. 31 in Lysander to Rt. 48 in Van Buren – including the bridge over river	
3802.75	Syracuse Signal System Interconnect	Improvement, interconnection, and computerization of up to 145 signal controllers in downtown Syracuse, includes downtown and University Hill area.	✔
3803.79	Clinton Square	Closure of Erie Boulevard, new traffic pattern and subsequent pedestrian improvements.	

Transportation Control Measures (TCMs) Update

PIN	PROJECT	1994-1999	2001-2006	COMMENTS
3035.19	RT 57, phase IV, Gaskin to RT 31	Construction - 11/96		Implemented
3104.12	RT 635, RT 5 to RT 298	Construction - 11/94		Implemented
3104.13	RT 298, Syracuse to Carrier Circle	Construction - 11/98	Construction – 4/02	To be implemented 4/02
3752.06	Harrison Street Traffic Signal	Construction - 9/95		Implemented
3752.07	Buckley Road Improvements at Bear Road	Construction - 11/95		Implemented
3802.72	OnCenter Signs	Construction - 1/94		Implemented
3802.75	Downtown Syracuse Signal Interconnect System	Engineering - 11/96		Implemented
3803.07	Connections Ride Sharing Program	CNYRTA receives Connections funding every year for their ongoing Ride Share work.		
3803.12	AVL System	Construction - 10/96		Implemented
3820.74	Fare Collection System	Construction - 10/96		Implemented
3820.89	Shelter Schedule Panels	Construction - 10/94		Implemented

Of 11 specific projects listed in the Onondaga County's State Implementation Plan (SIP) as Transportation Control Measures (TCMs), ten have been implemented. One TCM project, pavement rehabilitation and traffic operation improvements, scheduled for State Route 298, Syracuse to Carrier Circle (PIN 310413) has experienced a delay in schedule. The project was originally programmed on the 1998-2002 Transportation Improvement Program (TIP) for construction in 2001. The project will be carried over on the 2001-2006 TIP for letting of the construction phase in April of 2002. It is anticipated that all TCM projects will be fully implemented during the 2001-2006 TIP.

Off Peak Period CO Emissions From MOBILE5B
SYRACUSE-ONONDAGA

1990

Class	Speed	CO	VMT	CO SUM
11	44.2	19.81	199469.00	3951052.00
14	37.7	41.52	174618.00	7250902.50
19	33.1	52.04	150091.00	7809998.50
TOTAL OFF PEAK HOUR :			524178.00	19011953.07
TOTAL OFF PEAK PERIOD:			8596519.20	311796030.33

2003 LRTP

Class	Speed	CO	VMT	CO SUM
11	44.2	16.29	219469.00	3575033.75
14	37.7	23.89	183456.00	4381980.50
19	33.1	30.05	160543.00	4824020.00
TOTAL OFF PEAK HOUR :			563468.00	12781034.24
TOTAL OFF PEAK PERIOD:			9240875.20	209608961.49

2005 LRTP

Class	Speed	CO	VMT	CO SUM
11	44.1	14.74	225709.00	3327250.75
14	37.6	20.84	190654.00	3973980.50
19	33.1	25.97	166120.00	4313985.00
TOTAL OFF PEAK HOUR :			582483.00	11615216.54
TOTAL OFF PEAK PERIOD:			9552721.20	190489551.32

2015 LRTP

Class	Speed	CO	VMT	CO SUM
11	44.0	5.45	250582.00	1364972.75
14	37.6	9.31	196116.00	1826010.63
19	33.1	12.23	176144.00	2153559.50
TOTAL OFF PEAK HOUR :			622842.00	5344542.76
TOTAL OFF PEAK PERIOD:			10214608.80	87650501.31

2020 LRTP

Class	Speed	CO	VMT	CO SUM
11	44.0	4.12	252846.00	1042387.94
14	37.6	7.76	199286.00	1547224.63
19	33.1	10.36	177965.00	1844505.75
TOTAL OFF PEAK HOUR :			630097.00	4434118.35
TOTAL OFF PEAK PERIOD:			10333590.80	72719540.98

Peak Period CO Emissions From MOBILE5B
SYRACUSE-ONONDAGA

1990

Class	Speed	CO	VMT	CO SUM
11	42.7	20.16	388406.00	7830956.00
14	37.2	41.92	362331.00	15188680.00
19	32.8	52.41	304086.00	15935858.00
TOTAL PEAK HOUR :			1054823.00	38955494.07
TOTAL PEAK PERIOD:			3902845.10	144135328.04

2003 LRTP

Class	Speed	CO	VMT	CO SUM
11	42.4	17.09	426395.00	7286101.00
14	37.1	24.33	381266.00	9277586.00
19	32.8	30.36	326554.00	9914039.00
TOTAL PEAK HOUR :			1134215.00	26477725.94
TOTAL PEAK PERIOD:			4196595.50	97967585.98

2005 LRTP

Class	Speed	CO	VMT	CO SUM
11	42.2	15.51	438406.00	6799712.00
14	37.0	21.24	396460.00	8419665.00
19	32.7	26.33	337614.00	8889870.00
TOTAL PEAK HOUR :			1172480.00	24109246.14
TOTAL PEAK PERIOD:			4338176.00	89204210.72

2015 LRTP

Class	Speed	CO	VMT	CO SUM
11	41.6	5.84	485926.00	2839387.00
14	37.0	9.51	408287.00	3883487.00
19	32.7	12.41	358844.00	4453735.00
TOTAL PEAK HOUR :			1253057.00	11176609.04
TOTAL PEAK PERIOD:			4636310.90	41353453.44

2020 LRTP

Class	Speed	CO	VMT	CO SUM
11	41.5	4.43	489580.00	2167170.00
14	37.0	7.93	415246.00	3291588.50
19	32.6	10.57	363462.00	3842909.25
TOTAL PEAK HOUR :			1268288.00	9301667.65
TOTAL PEAK PERIOD:			4692665.60	34416170.29

CONFORMITY ANALYSIS DATA TABLE

Click here to view the map.

SMTC/NFTC

Expansion Factors For "EMCAL" Peak Runs 1993

Urban	Weighted Ave	Rural
Peak Period 3.7	3.7	Peak Period = 3.8
Off Peak Period = 8.5	16.4	Off Peak Period = 7.5

Based on Table 3.2-16 "**Summary Of Speed Regimes For New York City And Upstate Areas**"

Peak: 0.06761 = Peak Hour #1
0.07644 = Peak Hour #2
0.08218 = Peak Hour #3
0.0753 = Peak Hour #4
0.30153 = Peak Hours
Total: 3.669141= Total Divided By Highest Hour
3.7 = Peak Factor (Urban)

Peak: 1.0
-.30153 = Total Peak
=.69847 = Total Off Peak
8.5 = Total Divided By ½ The Highest Hour
(To Represent An Off Peak Hour)
16.4 = Off Peak Factor (Urban)

2 X Off Peak VMT/Hour = Peak Hour VMT

$$\text{Off Peak Urban} = \frac{[(2 \times 8.5) \times 206780^*] + [(2 \times 7.5) \times 85917^{**}]}{292697^{***}} = 16.4$$

* Urban VMT (Statewide)
** Rural VMT (Statewide)
***Total VMT (Urban/Rural)

MOBILE5B Input File for 1990

```
5          PROMPT - vertical flag input, no prompting
UPSTATE -- No IM     or STAGE II                        ATP only
1          TAMFLG - default tampering rates
1          SPDFLG - one speed per scenario for all IV
1          VMFLAG - NOTE vmt mix modeled by other analysis programs
3          MYMRFG - Upstate registration rates to be used
1          NEWFLG - default exhaust emission rates
1          IMFLAG - No I/M program
1          ALHFLG - no additional correction factor inputs
2          ATPFLG -    Anti-Tampering Program
1          RLFLAG - No refueling loss controls
2          LOCFLG - read in local area parameters as 2nd req sc rec
2          TEMFLG - calculate exhaust temperatures from ambient T
4          OUTFMT - portrait 80 column descriptive output format
4          PRTFLG - print exhaust HC, CO and NOx emission factor results
1          IDLFLG - do not print idle emissions results
3          NMHFLG - print VOC
1          HCFLAG - do not print HC components
.0486.0893.0956.0987.0979.0909.0856.0602.0528.0505
.0484.0480.0384.0281.0149.0082.0063.0061.0053.0038
.0035.0030.0026.0022.0111          Upstate  LDG
.0392.0787.0986.0977.1045.0837.0767.0568.0451.0351
.0340.0576.0487.0356.0204.0128.0133.0109.0101.0067
.0059.0051.0041.0033.0154          Upstate  LT1
.0523.0929.0995.0755.0834.0672.0535.0378.0328.0313
.0345.0748.0663.0497.0301.0190.0190.0172.0141.0095
.0081.0067.0056.0043.0149          Upstate  LT2
.0322.0683.0739.0633.0632.0538.0455.0320.0282.0303
.0320.0558.0455.0409.0292.0372.0316.0358.0288.0228
.0222.0207.0188.0166.0714          Upstate  HDG
.0486.0893.0956.0987.0979.0909.0856.0602.0528.0505
.0484.0480.0384.0281.0149.0082.0063.0061.0053.0038
.0035.0030.0026.0022.0111          Upstate  LDD ( LDG Used)
.0392.0787.0986.0977.1045.0837.0767.0568.0451.0351
.0340.0576.0487.0356.0204.0128.0133.0109.0101.0067
.0059.0051.0041.0033.0154          Upstate  LTD ( LT1 Used)
.0667.0936.0972.1032.0846.0811.0679.0406.0376.0401
.0393.0451.0343.0255.0153.0212.0226.0212.0138.0104
.0099.0073.0051.0041.0123          Upstate  HDD
.0154.0283.0355.0533.0808.0753.0537.0775.1172.0886
.0847.2897.0000.0000.0000.0000.0000.0000.0000.0000
.0000.0000.0000.0000.0000          Upstate  MCY
84 84 20 2222 21 075. 22112221        Upstate ATP, Compliance Rate = 75%
90WIN_23 SYR 23U E 16.4 30.2 15.0 15.0 90 1 1 1
1 90 42.7 24.9  3.8  2.2  3.8  1               23U 3 11 ONONDAGA 388406.00
1 90 37.2 24.9 36.7 15.5 36.7  1               23U 3 14 ONONDAGA 362331.00
1 90 32.8 24.9 44.0 21.9 44.0  1               23U 3 19 ONONDAGA 304086.00
1 90 44.2 24.9  3.8  2.2  3.8  1               23U 3 11 ONONDAGA 199469.00
1 90 37.7 24.9 36.7 15.5 36.7  1               23U 3 14 ONONDAGA 174618.00
1 90 33.1 24.9 44.0 21.9 44.0  1               23U 3 19 ONONDAGA 150091.00
```

MOBILE5B Input File for 2003 - 2020

```
5          PROMPT - vertical flag input, no prompting
UPS NOx -- No IM     or STAGE II    Upstate ATP with GasCap Check, CR=98%
1          TAMFLG - default tampering rates
1          SPDFLG - one speed per scenario for all IV
1          VMFLAG - NOTE vmt mix modeled by other analysis programs
4          MYMRFG - Upstate registration rates to be used
2          NEWFLG - default exhaust emission rates
1          IMFLAG - No I/M program
1          ALHFLG - no additional correction factor inputs
2          ATPFLG -    Anti-Tampering Program
1          RLFLAG - No refueling loss controls
2          LOCFLG - read in local area parameters as 2nd req sc rec
2          TEMFLG - calculate exhaust temperatures from ambient T
4          OUTFMT - portrait 80 column descriptive output format
4          PRTFLG - print exhaust HC, CO and NOx emission factor results
1          IDLFLG - do not print idle emissions results
3          NMHFLG - print VOC
1          HCFLAG - do not print HC components
 .13531 .13172 .12823 .12483 .12152 .11830 .11516 .11210 .10912 .10622
 .10339 .10064 .09796 .09535 .09281 .09033 .08792 .08557 .08329 .08106
 .07889 .07678 .07473 .07273 .07078       LDGV 96 Mile Accum
 .15810 .15281 .14769 .14274 .13796 .13333 .12885 .12453 .12035 .11630
 .11239 .10861 .10495 .10142 .09800 .09470 .09151 .08842 .08543 .08255
 .07976 .07706 .07445 .07194 .06950       LT1 96 Mile Accum
 .21331 .19865 .18500 .17228 .16044 .14942 .13915 .12959 .12068 .11239
 .10466 .09747 .09077 .08453 .07872 .07331 .06828 .06358 .05921 .05514
 .05135 .04782 .04454 .04184 .03863       LT2 96 Mile Accum
 .19977 .18779 .17654 .16596 .15601 .14666 .13787 .12961 .12184 .11454
 .10768 .10122 .09516 .08946 .08409 .07905 .07432 .06986 .06568 .06174
 .05804 .05456 .05129 .04822 .04533       HDG 96 Mile Accum
 .14910 .14174 .13475 .12810 .12178 .11577 .11006 .10463 .09947 .09456
 .08989 .08546 .08124 .07723 .07342 .06980 .06636 .06308 .05997 .05701
 .05420 .05152 .04898 .04656 .04427       LDD 96 Mile Accum
 .26040 .24018 .22154 .20434 .18848 .17385 .16036 .14791 .13643 .12584
 .11607 .10706 .09875 .09109 .08402 .07749 .07148 .06593 .06081 .05609
 .05174 .04772 .04402 .04060 .03745       LTD 96 Mile Accum
 .66163 .59308 .51961 .50311 .45253 .38585 .34578 .31591 .30813 .28162
 .26196 .22553 .22172 .19327 .16630 .15266 .14115 .13862 .12977 .11962
 .10467 .09049 .08229 .07903 .06638       HDD 96 Mile Accum
 .05255 .04943 .04631 .04319 .04009 .03698 .03387 .03077 .02766 .02455
 .02145 .01833 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .00000
 .00000 .00000 .00000 .00000 .00000       MCY  96 Mile Accum
.0451.0693.0825.0736.0771.0736.0721.0706.0753.0733
.0673.0580.0444.0326.0175.0103.0081.0065.0068.0050
.0038.0026.0018.0018.0210  UpstateLDG 96Reg
.0383.0478.0652.0725.0654.0570.0583.0569.0695.0797
.0727.0734.0550.0425.0264.0185.0137.0107.0176.0136
.0091.0049.0034.0036.0243  UpstateLT1 96Reg
.0600.0747.0922.0813.0662.0559.0464.0542.0607.0633
.0468.0552.0444.0335.0208.0159.0133.0125.0221.0186
.0138.0084.0058.0057.0283  UpstateLT2 96Reg
.0320.0467.0613.0462.0386.0308.0299.0369.0451.0513
.0440.0455.0392.0335.0229.0217.0223.0229.0339.0268
.0261.0195.0270.0197.1762  UpstateHDG 96Reg
.0451.0693.0825.0736.0771.0736.0721.0706.0753.0733
.0673.0580.0444.0326.0175.0103.0081.0065.0068.0050
.0038.0026.0018.0018.0210    UpstateLDD(LDG Used)
.0383.0478.0652.0725.0654.0570.0583.0569.0695.0797
.0727.0734.0550.0425.0264.0185.0137.0107.0176.0136
.0091.0049.0034.0036.0243  UpstateLTD(LT1 Used)
.0565.0740.0879.0710.0669.0543.0550.0589.0561.0558
.0558.0472.0411.0326.0192.0174.0191.0187.0189.0145
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.0103.0069.0095.0091.0433    UpstateHDD 96Reg
.0295.0421.0400.0379.0415.0358.0258.0310.0404.0370
.0456.5934.0000.0000.0000.0000.0000.0000.0000.0000



.0000.0000.0000.0000.0000  UpstateMCY 96Reg
001                                              Revised HDDV NOx
1 7 3 04 50 01.840 00.000                        2004 = 3.75 g/mi

84 84 50 2222 21 098. 22112222        Upstate ATP with GasCap Check, CR=98%
99WIN_23 SYR 23U E 16.4 30.2 15.0 15.0 90 1 1 1
5 03 42.4 24.9  3.8  2.2  3.8  1                23U 3 11 ONONDAGA 426395.00
5 03 37.1 24.9 36.7 15.5 36.7  1                23U 3 14 ONONDAGA 381266.00
5 03 32.8 24.9 44.0 21.9 44.0  1                23U 3 19 ONONDAGA 326554.00
5 03 44.2 24.9  3.8  2.2  3.8  1                23U 3 11 ONONDAGA 219469.00
5 03 37.7 24.9 36.7 15.5 36.7  1                23U 3 14 ONONDAGA 183456.00
5 03 33.1 24.9 44.0 21.9 44.0  1                23U 3 19 ONONDAGA 160543.00
5 05 42.2 24.9  3.8  2.2  3.8  1                23U 3 11 ONONDAGA 438406.00
5 05 37.0 24.9 36.7 15.5 36.7  1                23U 3 14 ONONDAGA 396460.00
5 05 32.7 24.9 44.0 21.9 44.0  1                23U 3 19 ONONDAGA 337614.00
5 05 44.1 24.9  3.8  2.2  3.8  1                23U 3 11 ONONDAGA 225709.00
5 05 37.6 24.9 36.7 15.5 36.7  1                23U 3 14 ONONDAGA 190654.00
5 05 33.1 24.9 44.0 21.9 44.0  1                23U 3 19 ONONDAGA 166120.00
5 15 41.6 24.9  3.8  2.2  3.8  1                23U 3 11 ONONDAGA 485926.00
5 15 37.0 24.9 36.7 15.5 36.7  1                23U 3 14 ONONDAGA 408287.00
5 15 32.7 24.9 44.0 21.9 44.0  1                23U 3 19 ONONDAGA 358844.00
5 15 44.0 24.9  3.8  2.2  3.8  1                23U 3 11 ONONDAGA 250582.00
5 15 37.6 24.9 36.7 15.5 36.7  1                23U 3 14 ONONDAGA 196116.00
5 15 33.1 24.9 44.0 21.9 44.0  1                23U 3 19 ONONDAGA 176144.00
5 20 41.5 24.9  3.8  2.2  3.8  1                23U 3 11 ONONDAGA 489580.00
5 20 37.0 24.9 36.7 15.5 36.7  1                23U 3 14 ONONDAGA 415246.00
5 20 32.6 24.9 44.0 21.9 44.0  1                23U 3 19 ONONDAGA 363462.00
5 20 44.0 24.9  3.8  2.2  3.8  1                23U 3 11 ONONDAGA 252846.00
5 20 37.6 24.9 36.7 15.5 36.7  1                23U 3 14 ONONDAGA 199286.00
5 20 33.1 24.9 44.0 21.9 44.0  1                23U 3 19 ONONDAGA 177965.00
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APPENDIX NO. 2

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APPENDIX NO. 3
COMMONLY USED ACRONYMS

AADT: Average Annual Daily Traffic

ADA: Americans with Disabilities Act

ADVMT: Average Daily Vehicle Miles of Travel

AFV: Alternative Fuel Vehichle

BMS: Bridge Management System

CAAA: Clean Air Act Amendments of 1990

CCCNY: Clean Communities of Central New York

CFR: Code of Federal Regulations

CMAQ: Congestion Mitigation Air Quality

CMS: Congestion Management System

CNG: Compressed Natural Gas

CNYRTA: Central New York Regional Transportation Authority

EAB: Environmental Analysis Bureau

FAA: Federal Aviation Administration

GIS: Geographical Information System

GOP: Goal Oriented Program

HPMS: Highway Performance Monitoring System

ISTEA: Intermodal Transportation Efficiency Act

ITS: Intelligent Transportation Systems

LEV: Low Emission Vehicle

LRTP: Long-Range Transportation Plan

MACNY: Manufacturer's Association of Central New York

MPO: Metropolitan Planning Organization

MOU: Memorandum of Understanding

MSA: Metropolitan Statistical Area

NS: Norfolk Southern

NYMTC: New York Metropolitan Transportation Council

NYSDEC: New York State Department of Environmental Conservation

NYSERDA: New York State Energy Research and Development Authority

NYSDOT: New York State Department of Transportation

NYSMPO: New York State Metropolitan Transportation Councils

NYSTA: New York State Thruway Authority

NYS&W: New York, Susquehanna & Western Railway

OCDOT: Onondaga County Department of Transportation

PIP: Public Involvement Plan

PMS: Pavement Management System

ReMAP: Regional Mobility Action Plan

ROW: Right-of-Way

SAC: Study Advisory Committee

SIM: Syracuse Intermodal Model

SIP: State Implementation Plan

SMTC: Syracuse Metropolitan Transportation Council

SOCPA: Syracuse-Onondaga County Planning Agency

SOV: Single Occupancy Vehicle

TAC: Transportation Advisory Committee

TCMs: Transportation Control Measures

TEA-21: Transportation Equity Act for the 21st Century

TIP: Transportation Improvement Program

UPWP: Unified Planning Work Program

USDOE: United States Department of Energy

USEPA: United States Environmental Protection Agency

VMT: Vehicle Miles Traveled