

2040 MTP

METROPOLITAN TRANSPORTATION PLAN
UPDATE



MAY 2014



GREATER BUFFALO NIAGARA REGIONAL TRANSPORTATION COUNCIL
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**GREATER BUFFALO-NIAGARA
REGIONAL TRANSPORTATION COUNCIL**

City of Buffalo
City of Niagara Falls
County of Erie
County of Niagara
New York State Thruway Authority
Niagara Frontier Transportation Authority
New York State Department of Transportation

RESOLUTION NUMBER 2014-14

2040 METROPOLITAN TRANSPORTATION PLAN UPDATE

WHEREAS, the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) has been designated by the Governor of New York State as the Metropolitan Planning Organization responsible, together with the State, for the continuous, cooperative, and comprehensive transportation planning and programming processes for the Buffalo Niagara region, and

WHEREAS, federal regulations require that each Metropolitan Planning Organization shall develop a long-range Metropolitan Transportation Systems Plan as a product of that planning process from which Transportation Improvement Programs shall be derived, and

WHEREAS, as part of these responsibilities, the Greater Buffalo-Niagara Regional Transportation Council last developed a Long Range Transportation Plan to the Year 2035 planning horizon which was endorsed by the GBNRTC on May 17, 2010, and

WHEREAS, federal regulations require that long-range transportation plans be updated at least every four years to retain consistency with current trends and conditions and to maintain no less than a 20-year planning horizon, and

WHEREAS, on February 14, 2014 the GBNRTC endorsed expected revenue and demographic forecasts for a Year 2040 planning horizon, and

WHEREAS, the GBNRTC has prepared a long-range transportation plan update to the Year 2040 planning horizon based upon those endorsed data sets and subsequently documented in the *Plan* titled the 2040 Metropolitan Transportation Plan Update, and

WHEREAS, GBNRTC in cooperation with the New York State Department of Transportation, has reviewed and documented compliance of the GBNRTC planning process with all existing federal rules and regulations, including Moving Ahead for Progress in the 21st Century (MAP-21) requirements; and

WHEREAS, said Plan has been found to address the critical issues likely to be impacting in the Greater Buffalo-Niagara region during the planning period, and

WHEREAS, the United States Environmental Protection Agency promulgated a new rule on July 20, 2012 revoking the Transportation Conformity requirements for 1997 8-Hour Ozone National Ambient Air Quality Standards (NAAQS) effective on July 20, 2013; and

WHEREAS, as a result the Buffalo-Niagara Falls metropolitan statistical area has been classified as in attainment for the 2008-ozone standard and is no longer required to make a transportation conformity determination under the new 2008 8-Hour Ozone NAAQS, and

WHEREAS, said Plan demonstrates fiscal constraint with endorsed revenue forecasts, and

WHEREAS, said Plan has been subjected to an extended public review and comment period.

NOW, THEREFORE BE IT RESOLVED, the GBNRTC does hereby adopt the 2040 Metropolitan Transportation Plan Update as the official long-range transportation plan for the Buffalo Niagara region, and

BE IT FURTHER RESOLVED, that future work plans and projects for further study and/or capital project action will be based upon the Plan's recommendations and priorities, and

BE IT FURTHER RESOLVED, that the development of the Transportation Improvement Program (TIP) shall reflect the Plan's recommendations and priorities, and

BE IT FURTHER RESOLVED, that the Plan's relevance and currency shall be maintained through a comprehensive update of this Plan to be completed no later than four years from this Plan's adoption, and

BE IT FURTHER RESOLVED, that the GBNRTC requests the New York State Department of Transportation, acting on its behalf, forward this 2040 Metropolitan Transportation Plan Update to the Federal Highway Administration, Federal Transit Administration, and other appropriate Federal and State agencies to satisfy all current reporting requirements.

Resolved this day, May 12, 2014

BY: 
Chairman, GBNRTC Policy Committee

Recommended by the Greater Buffalo-Niagara Regional Transportation Council Planning and Coordinating Committee (GBNRTC-PCC) on May 7, 2014.

BY: 
Chairman, GBNRTC-PCC

2040 MTP

Metropolitan Transportation Plan Update



TABLE OF CONTENTS

Chapter 1 INTRODUCTION

- 2040 Metropolitan Transportation Plan Update..... 1
- Federal and State Requirements 2
- Air Quality Standards..... 4

Chapter 2 THE REGION’S TRANSPORTATION SYSTEM

- Highways and Roadways 5
- Vehicle Miles of Travel (VMT)..... 5
- Highway Conditions Infrastructure Assessment 6
- Roadway Performance 6
- Bi-national Transportation 9
- Bicycle and Pedestrian 10
 - Bicycle Level of Service (BLOS) 11
 - Bicycle and Pedestrian Activities 11
- Public Transportation 14
- Freight 17
 - Regional Freight Assets 18
- Other Transportation 22

Chapter 3 STUDIES DONE OR PROGRESS SUMMARY

- Regional Freeway and Arterial Studies 23
- Sub regional and Local Studies 24
- Public Transportation Studies 24
- System Operations Studies 25
- Bicycle and Pedestrian 26

Chapter 4 VISION, GOALS, OBJECTIVES AND PERFORMANCE MEASURES

- Regional Vision 27
- Goals, Objectives, and Performance Measures 27
 - Prioritized Preservation 27
 - Economic Development 28
 - Mobility and Accessibility 28

2040 MTP



Metropolitan Transportation Plan Update

- Land Use and Transportation Connection 29
- Environment and Climate Change 29
- Chapter 5 LAND USE AND THE FRAMEWORK FOR REGIONAL GROWTH**
- The Framework for Regional Growth – Setting a New Direction 31
- Regional Growth and Development Principles 31
- Future Development Strategies 32
- Centers and Corridors: Regional Centers, Growth Corridors, and Rural Centers 33
- One Region Forward – A Regional Plan for Sustainable Development 36
- Livability Principles..... 36
- Scenario Planning 37
- Regional Demographic Projections 38
- 2030 Demographic Forecasts 38
- 2035 Demographic Forecasts 39
- 2040 Demographic Forecasts 39
- Population and Household Forecasting Methodology 40
- Employment Forecasting Methodology 40
- Forecast Assumptions and Analyses..... 41
- Regional Development Patterns 43
- Chapter 6 TRANSPORTATION SECURITY**
- State-Level Initiatives 45
- Border Security 46
- Port and Waterways 46
- Airports 46
- Regional, County, and Local Initiatives 47
- Erie County..... 47
- Niagara County 48
- Niagara Frontier Transportation Authority (NFTA)..... 49
- Niagara International Transportation Technology Coalition (NITTEC) 49
- Transportation Inventory 50
- Possible Role of the MPO 50

2040 MTP

Metropolitan Transportation Plan Update



Chapter 7 TRANSPORTATION SAFETY

- National Policy 53
- MAP-21 Safety Performance Management 53
- Existing Safety Performance Measures 54
- Incorporating Safety Performance Measures and Target Setting 55

Chapter 8 CONGESTION MANAGEMENT AND SYSTEMS OPERATIONS

- Congestion Management Process 57
- Identification of Strategies 60
- Operational Integration and Planning 62
- CMP Strategies 62

Chapter 9 ENVIRONMENTAL PLANNING CONSIDERATIONS

- Framework for Regional Growth 64
- One Region Forward: Creating a Regional Plan for Sustainable Development 68
- New York State Open Space Plan 68
- Storm Water Management Plan 69
- WNY Regional Sustainability Plan 70
- Air Quality and Freight Initiatives 72
- Resource Agency Consultation 73

Chapter 10 THE CONSTRAINED PLAN

- Revenue Forecasts 75
- Anticipated Funding Resource Estimates 75
- Additional Funding Sources 77
- Trending in Federal Funding 78
- Project Cost Estimates 78
- Identified Plan Improvements 79
- 2040 Long-Range Metropolitan Transportation Plan Update 79
- Basic Assumptions 80
 - Revenue Forecasts 2016-2040 80
 - Project Costs 80
 - Funding Source Limitations 81

2040 MTP



Metropolitan Transportation Plan Update

Transit Program / Constrained Fiscal Plan	81
New York State Thruway Authority Program / Constrained Fiscal Plan.....	82
Local and NY State Department of Transportation / Constrained Fiscal Plan.....	83
The Constrained Plan/ Project Listing (2016-2040)	84
Potential Environmental and Social Impacts of Constrained Plan	85
Title VI and Environmental Justice	87
Illustrative Project Listing	88

APPENDICES:

Appendix 1 - Public Participation Plan

Appendix 2 - 2040 Demographic Tables



CHAPTER 1 - INTRODUCTION

The Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) is a partnership of local and state governments working together to make decisions about transportation planning in the Buffalo-Niagara region. GBNRTC members include: City of Buffalo; City of Niagara Falls; Erie County; Niagara County; Niagara Frontier Transportation Authority (NFTA); New York State Department of Transportation (NYSDOT); and New York State Thruway Authority (NYSTA). The Empire State Development Corporation, the Transportation Council of the Buffalo-Niagara Partnership, and the Seneca Nation of Indians serve formally as Regional Strategic Stakeholders. Working together, GBNRTC members carry out a continuing, cooperative, and comprehensive planning process to develop transportation plans and programs for the Buffalo-Niagara region.

2040 Metropolitan Transportation Plan Update

As the Metropolitan Planning Organization (MPO), the GBNRTC is responsible for developing a long-range metropolitan transportation plan (MTP) for the region that reflects both regional needs and local concerns. The MTP serves a number of purposes. It provides a vision of the region's future growth and development; identifies regional transportation needs for future transportation improvements and services; and provides guidance and direction for infrastructure investments in the region. The plan sets the foundation and priorities for the distribution of federal transportation funds and serves as the framework for the development of the Transportation Improvement Program (TIP), the capital program of all *federally funded* transportation projects in the region.

Federal regulations require that the GBNRTC update the region's long-range metropolitan transportation plan every four years to determine its consistency with current trends and conditions and to maintain at least a 20-year planning horizon. A multi-year and more extensive metropolitan plan for 2050 is currently under way, but will not be finished before the current 2035 Long-Range Transportation Plan expires. This update extends the planning horizon to the year 2040, which keeps our region in compliance with federal legislation and eligible for federal transportation dollars.

This document (2040 MTP Update), is primarily based on the 2035 Long-Range Transportation Plan Update adopted in May 2010, and thereby reaffirms key elements of that plan. While much of the 2035 Plan is unchanged, the 2040 MTP Update has allowed for the incorporation of 2050 work accomplished-to-date, thus improving the consistency of the plans and evolving visions for the region. In addition to this, the demographics and traffic conditions in the 2040 MTP reflect the most current data. Some key changes to the 2040 MTP are as follows:

- Integration of One Region Forward Goals and Objectives, which guide the development and implementation of the Metropolitan Transportation Plan;
- 2040 demographic projections for population, households, and employment based on recently released 2010 US Census data;
- Update of financial resources available to the region to implement the Metropolitan Transportation Plan projects based on new federal transportation legislation (MAP-21) and current NYSDOT forecasted apportionments;

- Updated status of significant planning studies and projects that could impact future transportation investments in the region;
- Update on resource agency consultation and potential mitigation activities;
- Revised Congestion Management and Systems Operations section; and
- Feedback from public involvement activities.

Federal and State Requirements

The GBNRTC's planning process must be consistent with federal transportation law. Since adoption of the previous MTP, new federal reauthorization legislation for federal highway and transit programs was passed known as **Moving Ahead for Progress in the 21st Century Act (MAP-21)**. MAP-21 was signed into law on July 6, 2012 and is the current federal authorization for federal highway and transit programs.

MAP-21 was developed as a streamlined, performance-based, and multimodal program to address the many challenges facing the US transportation system including:

- Job creation & economic growth
- Slow/long project delivery & lack of innovation
- Hazardous road locations or features
- Lack of performance measures needed to measure the effectiveness of investments

In addition MAP-21 instituted the following programmatic changes:

- Expansion of the National Highway System to incorporate principal arterials not previously included. Highway formula programs were subsequently revised to target a significant portion of funding to preserving and improving this *enhanced* National Highway System.
- Combines the current Transportation Enhancements, Safe Routes to Schools, and Recreational Trails Programs into a new "Transportation Alternatives" Program

The Metropolitan Planning program under MAP-21 provides funding for the integration of transportation planning culminating in the preparation of a multimodal transportation plan for the MPO. Title 23 of the United States Code, section 134(f) describes Federal Planning Factors issued by Congress to emphasize planning factors from a national perspective. The eight planning factors (for both metro and statewide planning) are as follows:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase accessibility and mobility options available for people and freight.
5. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state- and locally- planned growth and economic development patterns.

2040 MTP



Metropolitan Transportation Plan Update

- 6. Enhance integration and connectivity of the transportation system, across and between modes for people and freight.
- 7. Promote efficient system management and operation.
- 8. Emphasize the preservation of the existing transportation system.

The New York State Department of Transportation embodied the tenants of MAP-21 in their Comprehensive Program Update. The purpose was to ensure that good decisions are being made to preserve, maintain, operate, and enhance the safety and condition of our transportation system. This is to be accomplished by establishing a statewide focus on economic competitiveness, social equity, and environmental stewardship. NYSDOT furthermore directed all investment decisions be guided by the following “Forward Four” guiding principles:

- 1. Preservation First - Expected resources will not support a “build new” or “worst first” approach but must have a “preserve what we have” approach.
- 2. System Not Projects - When looking at an individual project, we must look at it in the context of the larger transportation system.
- 3. Maximize Return on Investment - Establish a strategy to invest constrained resources in a way that produces the greatest possible return on investment.
- 4. Make It Sustainable - Focus on ways to preserve our existing transportation system; incorporate sustainability considerations into our decisions and actions; and support opportunities for innovation, economic growth and development.

To keep our current transportation system functioning in a safe and reliable manner, while at the same time recognizing our current fiscal constraints, it is essential that a deliberate and strategic approach is used to best manage our assets. By necessity, that includes setting priorities that will allow us to meet our long-term goals and short-term objectives.



2040 MTP



Metropolitan Transportation Plan Update

Air Quality Standards

One other major change occurred since the previous 2035 LRTP Update was approved. The United States Environmental Protection Agency (USEPA) promulgated the 2008 8-Hour Ozone National Ambient Air Quality Standards (NAAQS) on May 21, 2012 to be effective on July 20, 2012, classifying the Buffalo-Niagara Falls metropolitan statistical area as *in attainment for the 2008-ozone standard*. The USEPA also promulgated a new rule on July 20, 2012 revoking the transportation conformity requirements for 1997 8-Hour Ozone NAAQS effective on July 20, 2013. As a result, the GBNRTC is no longer required to make a transportation conformity determination under the new 2008 8-Hour Ozone NAAQS. It should be noted that one disadvantage of the region becoming an attainment area for ozone standards is that it is anticipated the GBNRTC will no longer be eligible to receive a direct allocation of Congestion Mitigation and Air Quality (CMAQ) funding after September 30, 2014.



CHAPTER 2 - THE REGION'S TRANSPORTATION SYSTEM

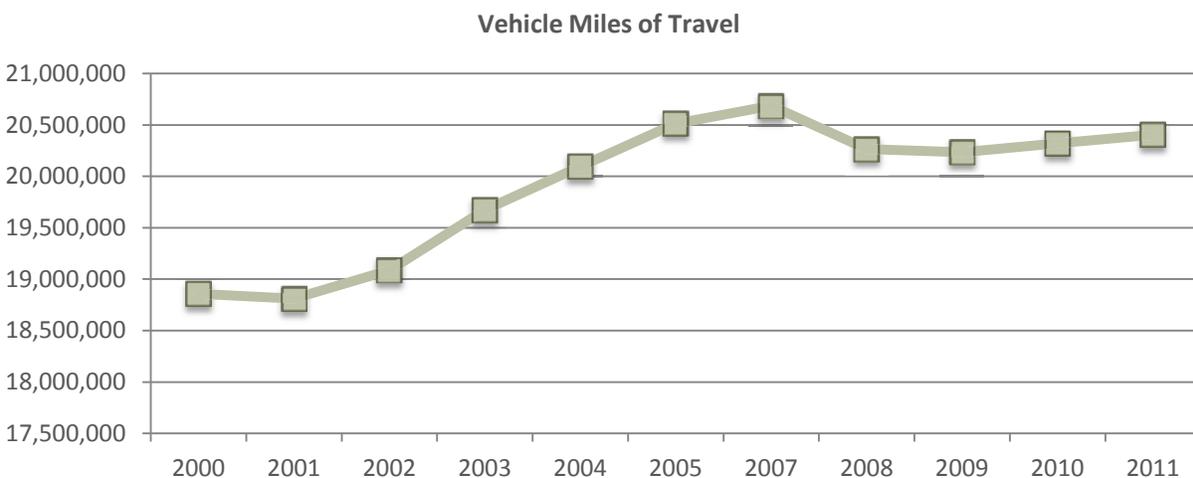
Highways and Roadways

The GBNRTC monitors approximately 1,950 centerline miles of federal-aid eligible highways. Major highway facilities in the region include the mainline of the New York State Thruway (Interstate 90) and local Interstates 190 and 290. Interstate 190 runs from the I-90 near Buffalo to Lewiston via Niagara Falls. Interstate 290 forms an outer ring around the City of Buffalo, linking I-190 to the mainline NYS Thruway (I-90). Route 198 (the Scajaquada Expressway) connects NY 33 (the Kensington Expressway) on Buffalo's east side with the Niagara Section of the I-190 in the Black Rock neighborhood of Buffalo. Route 33 is one of the major expressways leading in and out of downtown and provides direct access to the Buffalo-Niagara Falls International Airport (BNIA). Interstate 990 runs in a roughly north-south direction through the southwest and central part of Amherst, northeast of Buffalo.

Vehicle Miles of Travel (VMT)

Vehicle Miles of Travel (VMT) is a measure that is commonly used to describe vehicle use on a daily or annual basis. It incorporates both the number of vehicle trips and the length of those trips. VMT is useful as a descriptor of changes in travel demand in an urban area. As trip lengths increase, VMT grows. Trip lengths are a function of the relative locations of residences, jobs, schools, and retail. As the number of vehicle trips increase, VMT again rises. VMT is influenced by factors such as population, age distribution, number of vehicles per household, and regional development patterns.

After steadily increasing over several years VMT in the Buffalo-Niagara region has remained relatively flat. The overall VMT from 2007 to 2011 has shown an approximate decline of 1.5%. Data collected from 2000 to 2011 is summarized in the line graph below.



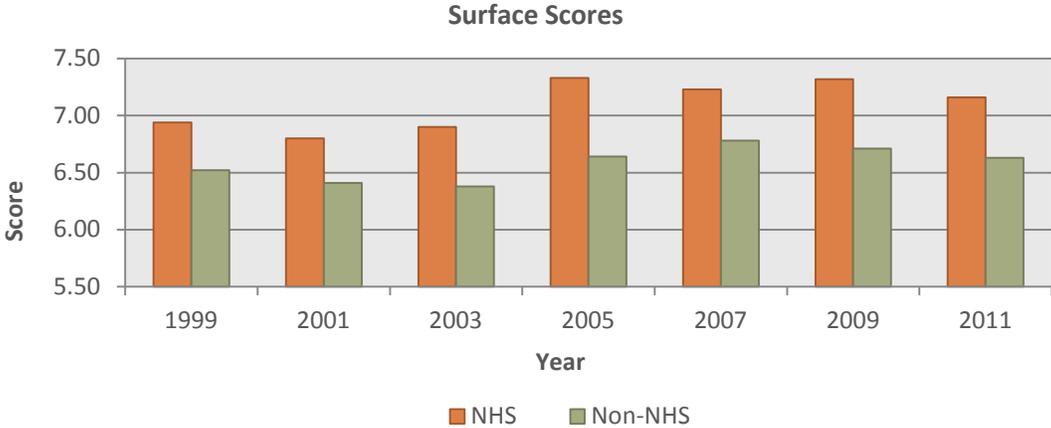


Highway Conditions Infrastructure Assessment

The GBNRTC conducts a biennial evaluation of roadway physical and operating characteristics. This is a comprehensive inventory of the entire federal-aid eligible local highway system which, when combined with similar data from the NYSDOT’s annual highway surface condition survey, provides a key measurement of the region’s highway infrastructure and provides information critical to making sound and consistent investment planning decisions.

One key indicator related to highway infrastructure is the number of lane miles that are considered deficient. With a newly built road having a score of ten, the performance measure established for surface scores was that all NHS roads are a 7 or higher and all non-NHS roads no lower than 6. This definition acknowledges when a surface score drops below a six the roadway deterioration has typically reached a point where preventive maintenance is no longer feasible and more costly solutions are required (e.g. complete reconstruction).

Overall surface scores in the region have remained steady. In 2011 the average score for the entire system was 6.69 compared to 6.77 in 2009. Approximately 6% of roadways were rated excellent; 62% good; 22% fair; and 9% poor. The bar graph below summarizes surface score data on non-NHS and NHS roadways from 2001 to 2011. The map on the following page shows 2011 surface scores on all federal-aid eligible roadways in the region. On the average the regional performance measure has been maintained since 2005, though over time preventive maintenance will no longer be a viable treatment.



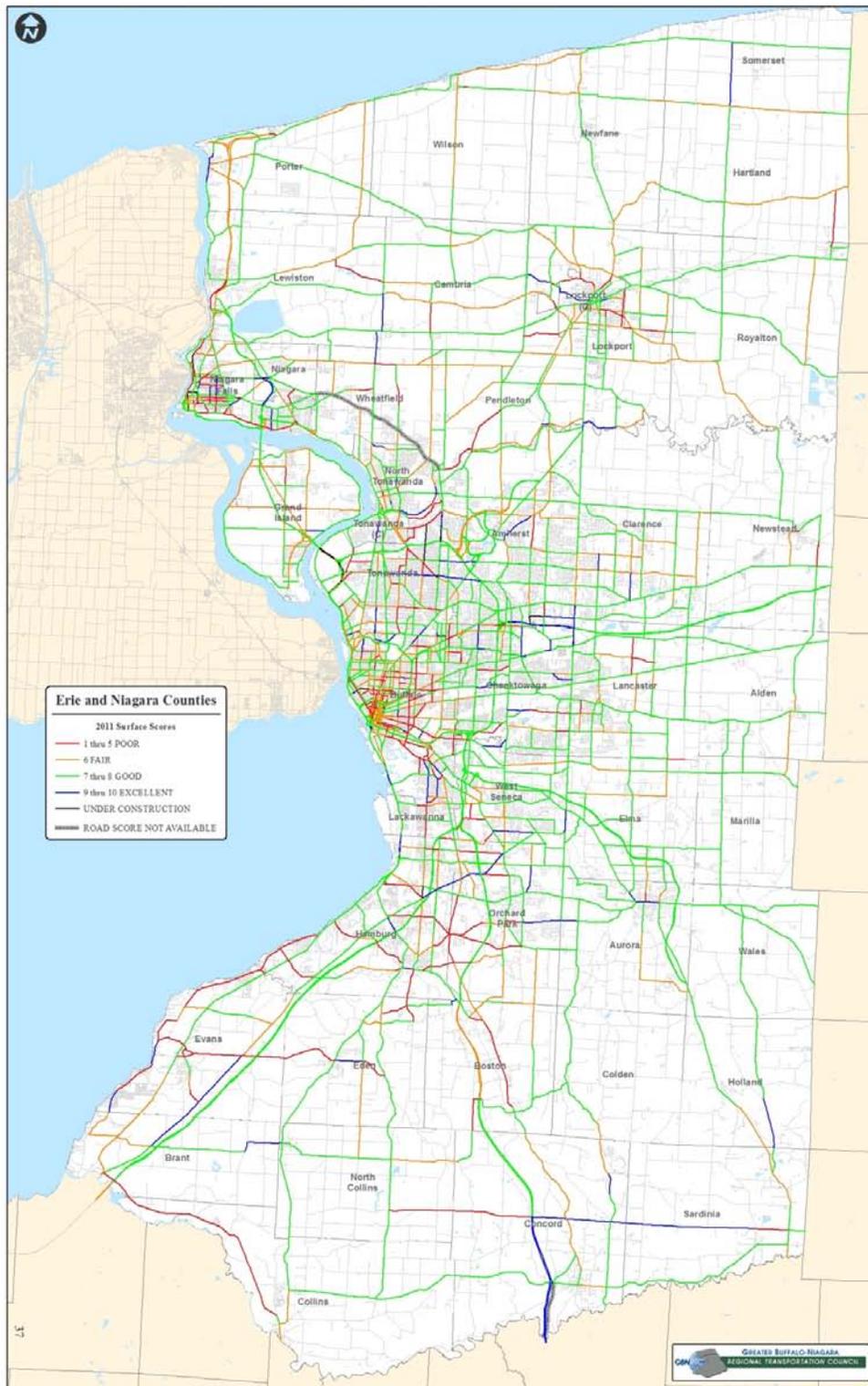
Roadway Performance

The Level of Service map on page 8 identifies the current highway capacity deficiencies in the region using recent traffic count data. Currently, the GBNRTC defines a highway as deficient when its volume to capacity ratio, as defined using the most recent Highway Capacity Manual standards, reaches the breakpoint between Level of Service (LOS) D and LOS E and then allows an additional 10% traffic in LOS E operations before needs identification status is reached. The most significant capacity problems in the region are occurring on the main line Thruway (I-90), the Youngmann (I-290), and Grand Island Bridges.

2040 MTP



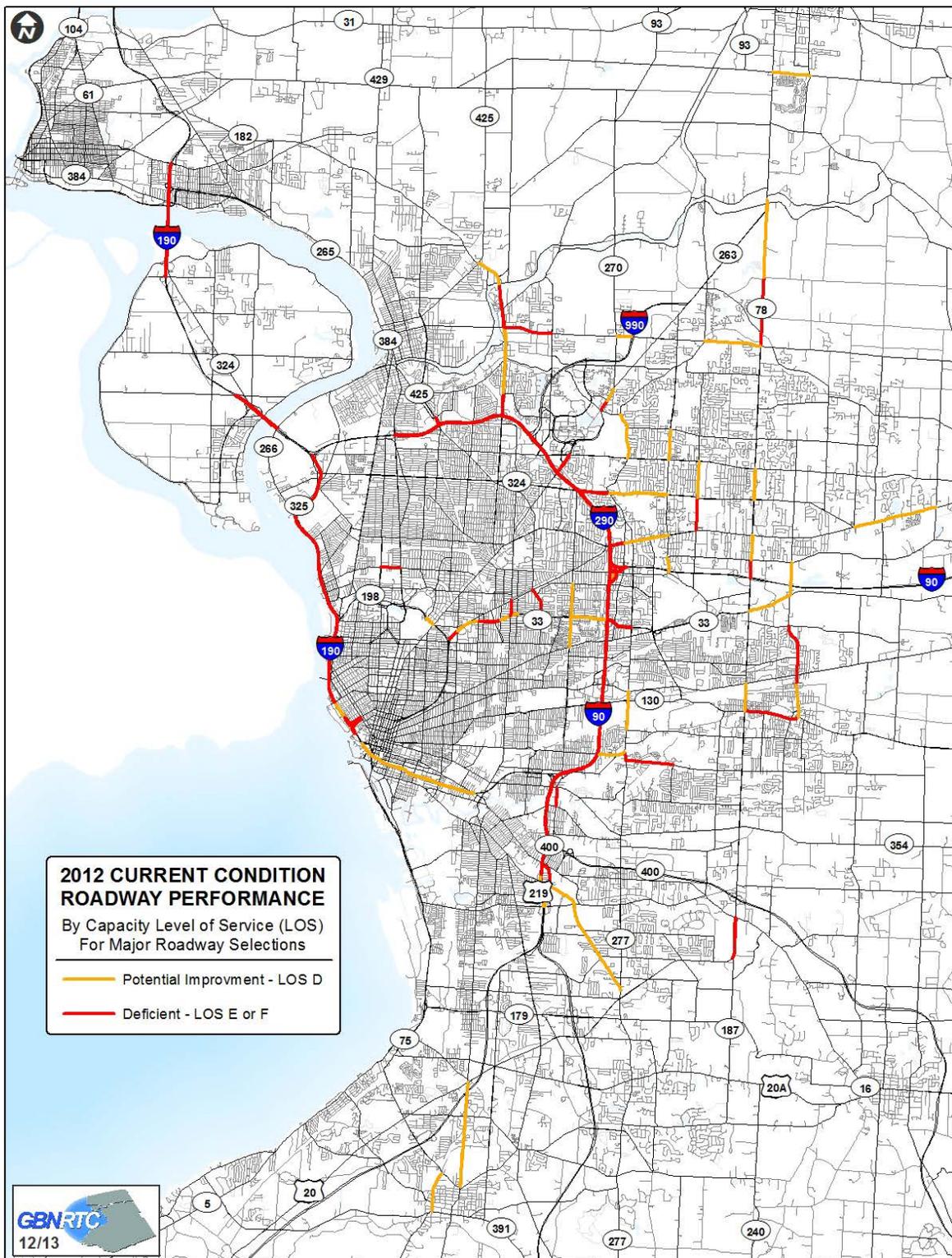
Metropolitan Transportation Plan Update



2040 MTP



Metropolitan Transportation Plan Update



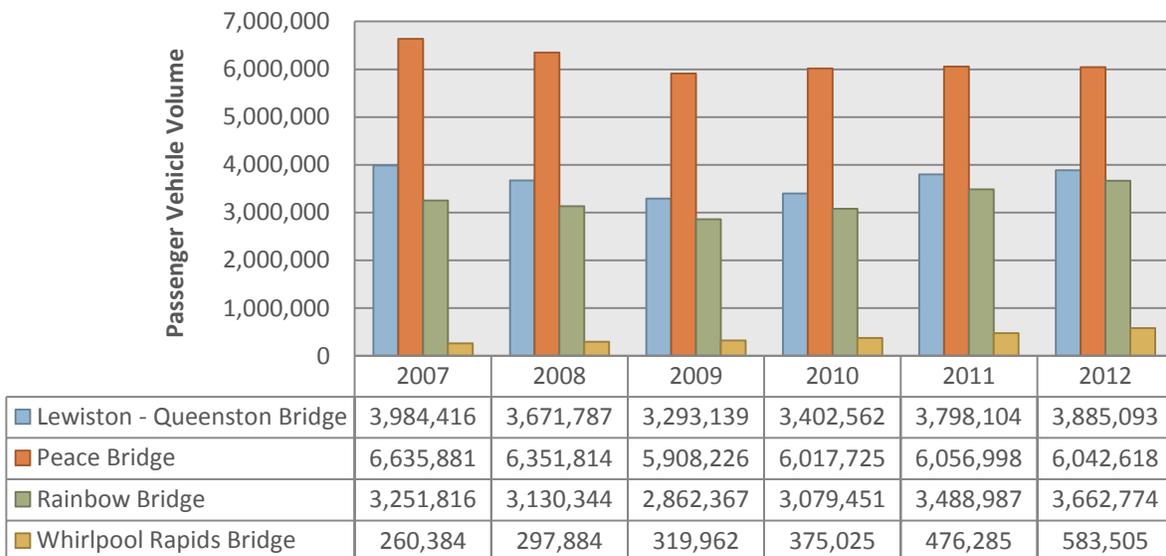
Bi-National Transportation

In the Buffalo-Niagara region, the US and Canada are separated by the Niagara River, which is crossed by four international bridges and three railroad bridges.

In Buffalo, the Peace Bridge provides access to and from Fort Erie, Ontario. This structure is under the control of the Buffalo and Fort Erie Public Bridge Authority. Farther north are three additional bridges, all under the control of the Niagara Falls Bridge Commission. These are the Rainbow, Whirlpool, and Lewiston-Queenston Bridges. The first railroad crossing is just north of the Peace Bridge (Buffalo) and is called the International Railroad Bridge. The upper deck of the Whirlpool Bridge in Niagara Falls provides the second railroad crossing. A third railroad crossing of the Niagara River, known as the Michigan Central Bridge, is located just south of the Whirlpool Bridge and is no longer operational.

In 2012, three out of the four international bridges saw an increase in vehicle crossings with the exception of the Peace Bridge. 14.2 million motor vehicles traveled between the US and Canada through the Buffalo-Niagara Gateway in 2012, which is up from 13.8 million in 2011. Of the four international crossings, the Peace Bridge is by far the busiest with over 6.0 million crossings last year. 4.7 million automobiles and 1.3 million trucks crossed this facility. The Lewiston-Queenston Bridge is second in overall traffic volume with almost 3.9 million vehicles using the bridge in 2012. Approximately 3.2 million autos and 689,170 trucks crossed this facility. Commercial traffic is not permitted to use the Whirlpool and Rainbow Bridges, and annual automobile crossings at these bridges were 583,505 and 3.6 million respectively. The bar graph below shows historical total passenger vehicle crossings from 2007-2012.

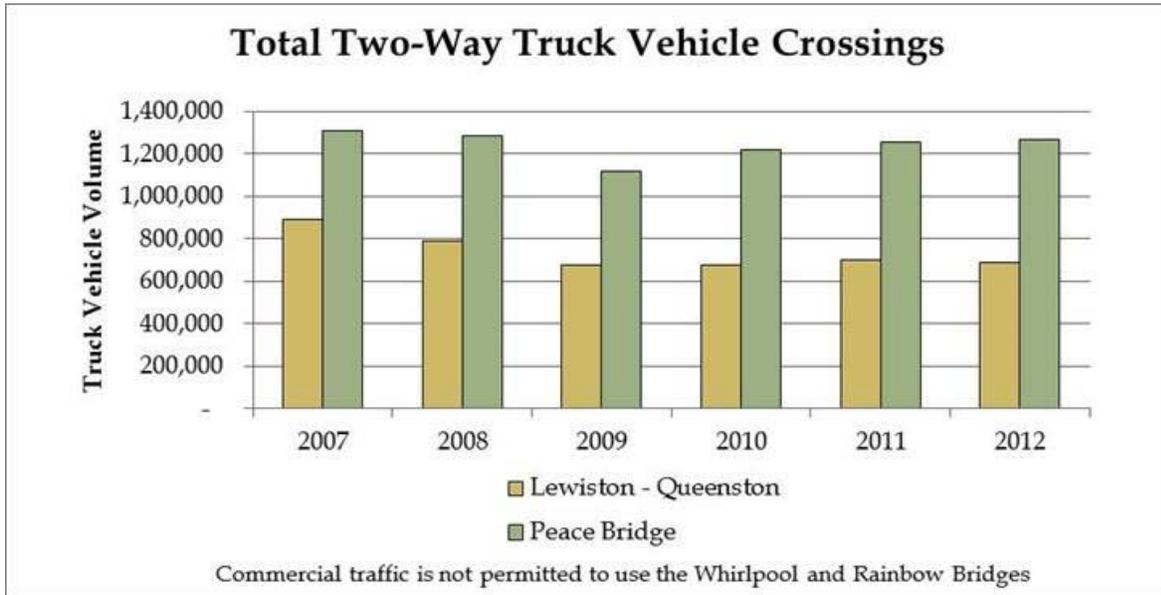
Total Two-Way Passenger Vehicle Crossings



2040 MTP

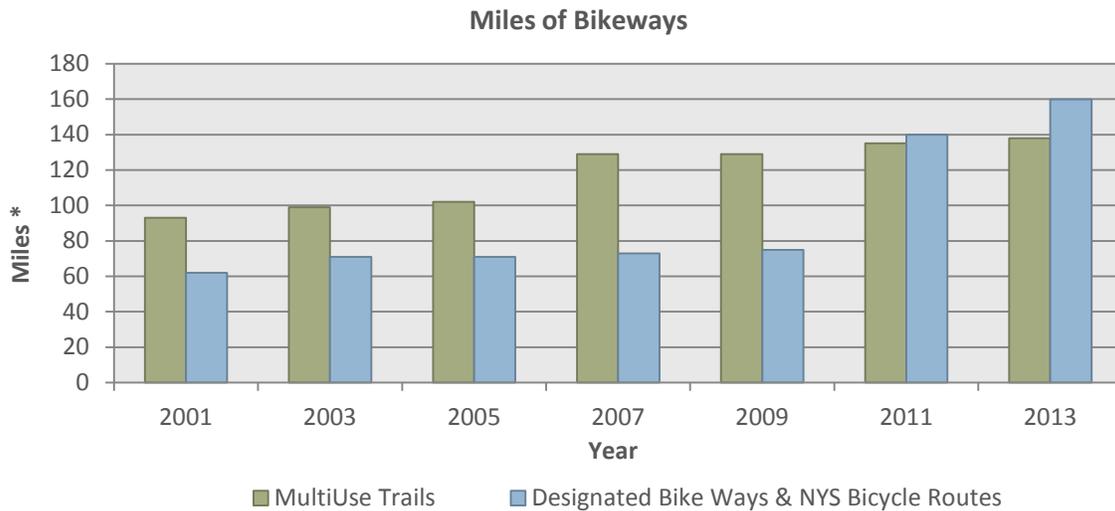


Metropolitan Transportation Plan Update



Bicycle and Pedestrian

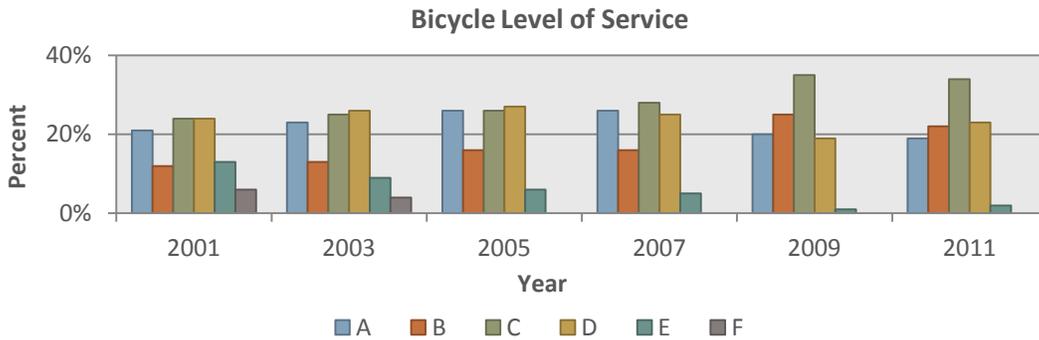
The regional bicycle and pedestrian network includes shared roadways, designated bikeways, multiuse trails, and sidewalks. The number of miles of bikeways and multiuse trails has steadily increased over the years (see bar graph below). In total, there are approximately 160* miles of designated bikeways and 138* miles of multiuse trails in the Buffalo-Niagara region. With the City of Buffalo Complete Streets Ordinance, the City of Buffalo has installed over 20* new miles of bike lanes. Over 7* additional miles of bike lanes are in the planning stages for installation. The performance measure was to increase the miles of bikeways by 15%. Since 2001 there has been a 50% increase in the number of miles of multiuse trails and a 167% increase in the number of miles of designated bikeways.



* Mileage Calculated using Centerline Miles

Bicycle Level of Service (BLOS)

For the regional bicycle network, the GBNRTC collects Bicycle Level of Service (BLOS) data biennially. This measure is a method of evaluating the bicycling conditions of shared roadway environments and indicates an average bicycle’s comfort level when riding a given roadway. It uses the same measurable traffic and roadway factors that are used for other travel modes. It reflects the effect on bicycling suitability or “comfortably” based on factors such as the roadway width, the shoulder width, the speed of adjacent traffic, traffic volumes and the condition of the pavement (i.e. surface score). Scores range from A (very comfortable) to F (extremely uncomfortable). Overall BLOS in the region has continued to improve. The regional performance measure was to improve the BLOS by 10%. Data collected from 2001 to 2011 is summarized in the bar graph below. It indicates that since 2003 practically all ‘F’ BLOS situations have been mitigated and ‘E’ BLOS locations are gradually being addressed and disappearing from the graphs below.

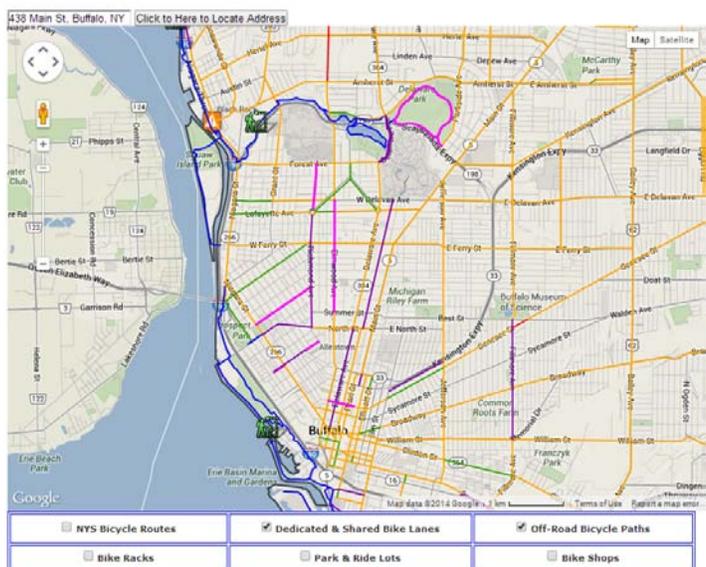


Bicycle and Pedestrian Activities

Online Bicycle Route Guide: As of 2012 the GBNRTC has been supporting a web-based interactive Bicycle Route Guide using Google Maps as its foundation. It helps bicyclists locate and navigate bicycle routes throughout the region using Google Map options, such as “street-view”. The Online Bicycle Route Guide links the region’s street and bike path networks to produce a continuous bicycle route system. Most of the on-road selections are those preferred by local bike clubs for their own rides.

The Online Bicycle Route Guide promotes and encourages bicycling in the Buffalo-Niagara Falls area. The service incorporates a rating system that defines the comfort

Online Bicycle Route Guide



2040 MTP



Metropolitan Transportation Plan Update

and quality of many roads in the urban, suburban, and rural areas of this region and allows printing of personalized maps. Several popular attractions are indicated on the maps - both as points of interest and as visual landmarks when traveling throughout the region. The online Guide also provides an overview of a bicyclist's legal responsibilities, the location of local bike shops and some general equipment issues and riding tips. For more information visit <http://www.gbnrtc.org/planning/bike-ped/route-guide/online-bicycle-guide/>

Bikes on Rail and Bikes on Buses: The NFTA has shown a commitment to providing accommodations for bicyclists on the transit system. Presently bicycles are permitted on rail cars at all times and access to buses is constantly improving. As of 2013 about 88% of the NFTA's bus fleet has been equipped with bicycle racks.

Gobike Buffalo: Gobike Buffalo is a community organization working to create healthy, environmentally sustainable, community friendly transportation options in the City of Buffalo. Gobike Buffalo also participates in several programs in the area, including Safe Routes to School and City of Buffalo Complete Streets. Gobike Buffalo has been instrumental in establishing bicycle parking racks throughout Buffalo. For more information on Gobike Buffalo visit <http://gobikebuffalo.org/>



GoodGoingWNY.com → GoBuffaloNiagara.org: Since 2006, GoodGoingWNY has been helping individuals discover alternative local transportation choices for everyday travel. The GoodGoingWNY website assists travelers in finding potential carpool partners with similar commuting preferences and provides the location of park-n-ride lots, available bus and rail services, and the local bicycling road ratings (comfort index) for routes between the trip makers origin and destination.

In 2014 GoodGoingWNY partnered with New York State's 511NY network and rebranded the service as **GoBuffaloNiagara.org**. GoBuffaloNiagara now offers enhanced features for ride matching and traveler services including 511NY's real time travel, transit and traffic network. In addition users can personalize their travel information using *MY511* to receive customized alerts that help them quickly access traffic and transit conditions before their daily commute. For more information visit <http://www.gobuffaloniagara.org>

Buffalo CarShare: Buffalo CarShare is a service that offers the piece-of-mind of the automobile without the up-front costs, hassles, or environmental impacts of private vehicle ownership. Members rent vehicles on an hourly basis for errands or irregular trips, while relying on other modes of transportation (such as walking, bicycling, public transit, or carpooling) for their daily commute. For more information on Buffalo CarShare visit <http://www.buffalocarshare.org>.

2040 MTP



Metropolitan Transportation Plan Update

Buffalo BikeShare: Buffalo BikeShare is a new program in Buffalo which rents GPS trackable bikes to help travelers get around Buffalo conveniently and affordably. Bikes can be reserved on the spot or on-line. A bike can be taken wherever the traveler needs to go, and simply locked up when they're done. For more information on Buffalo BikeShare visit <http://www.buffalobikeshare.org/>

Safe Route to School: Safe Routes to School (SRTS) programs are sustained efforts by parents, schools, community leaders, and local; state; and federal governments to improve the health and well-being of children by enabling and encouraging them to walk and bicycle to school. SRTS programs examine conditions around schools and conduct projects and activities that improve safety and reduce traffic and air pollution in the vicinity of schools. As a result, these programs make bicycling and walking to school a safer and more appealing transportation choice encouraging a healthy and active lifestyle from an early age.

Buffalo Complete Streets: Buffalo Complete Streets is the City of Buffalo's transportation policy that requires streets to be planned, designed, operated, and maintained to enable safe travel for all users. This policy was enacted for all modes of travel, including walking, biking, driving, and riding public transit.

Public Transportation

Public transportation plays an important and growing role in helping the Buffalo-Niagara region meet environmental, economic, and mobility goals. The NFTA is the region's primary provider of public transportation carrying about 103,000 people a day and traveling 11.3 million miles a year. The NFTA offers a variety of services including:

- Fixed-route local and express bus services
- Metrolink Van Service
- Seasonal/tourist service
- Light rail rapid transit service
- Paratransit service
- Park and Ride and Transit Centers
- Non-Stop Shuttle Service to the Buffalo-Niagara International Airport (BNIA)

Fixed-Route Local and Express Bus Services

NFTA Metro operates 332 standard buses serving 45 local transit routes within the City of Buffalo, with some local services extending to the surrounding suburban ring cities, towns, and rural villages. Twenty express routes provide peak service to downtown from suburban and rural communities.

Current express bus service includes:

Route #60 Niagara Falls
Route #61 North Tonawanda
Route #64 Lockport
Route #66 Williamsville
Route #67 Cleveland Hill
Route #68 George Urban
Route #69 Alden

Route #70 East Aurora
Route #72 Orchard Park
Route #74 Hamburg
Route #75 West Seneca
Route #76 Lotus Bay
Route #79 Tonawanda
Route #81 Eastside

Light Rail Service

The Metro Rail is a 6.4-mile long line with 14 stations. It's formed by a combination of subway and surface alignments that link the University at Buffalo South Campus to Downtown Buffalo. Currently, there are 27 light rail vehicles in operation.

Metrolink Van Shuttles

Metrolink van routes provide dedicated service for 2 routes in selected suburban and rural communities.

Park and Ride Transportation Centers

The NFTA operates Park and Ride and transit centers throughout the region to serve as intermodal facilities allowing commuters to drive to a nearby-designated location and complete the remainder of their trip by bus, shuttle, or rail.

2040 MTP



Metropolitan Transportation Plan Update

Current Park and Ride and Transit Centers

Appletree Business Park

Athol Springs

Boston State Road

City of Tonawanda

Crosspoint Business Park

Eastern Hills Mall

Erie Community College South Campus

Highland Elementary School

Holtz Drive

LaSalle Station

Main and Union

McKinley Mall

Route 20A and 219

University Station

Niagara Falls Transportation Center

Southgate Plaza

Thruway Mall

Village of Angola

West Seneca Municipal Parking

Zion United Church of Christ

Paratransit

A curb-to-curb, lift-equipped van service called Paratransit Access Line (PAL) is available for qualifying individuals. PAL's service area extends three-quarters of a mile on either side of, or from the end of, Metro's bus and rail fixed-route service. Trips are made on a reservation basis. The NFTA currently operates 75 vans serving two Metrolink and paratransit services.

Non-Stop Service to the Buffalo Niagara International Airport (BNIA)

This shuttle runs non-stop service between the airport and Buffalo's central business district, including the Metro Bus station downtown (Metropolitan Transportation Center.) Service runs weekdays, approximately every 30 minutes, during peak drive time.



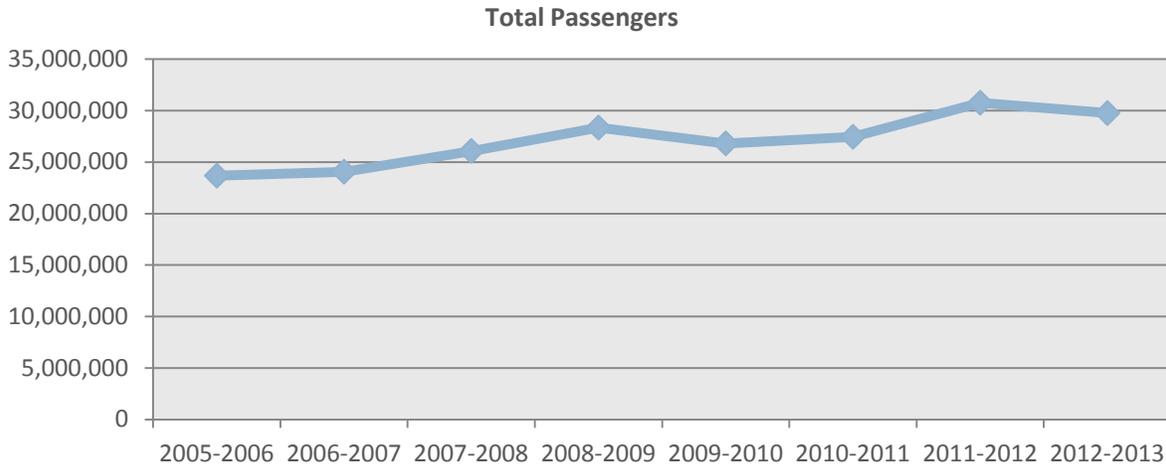
2040 MTP



Metropolitan Transportation Plan Update

Transit Ridership

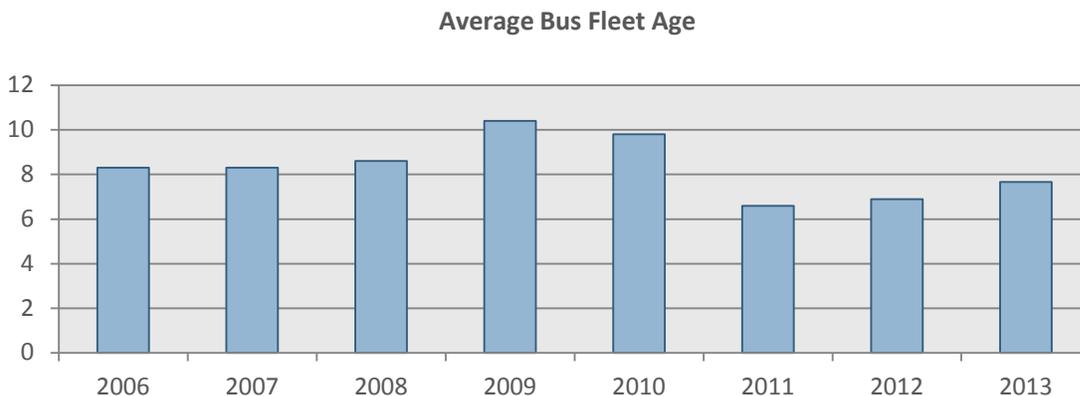
After years of steady growth, ridership increased significantly in 2008 due to a summer spike in gas prices. However, preliminary ridership numbers for 2012-2013 showed a decline from the previous year. The regional performance measure was to increase transit ridership by 5%. This was attained in some years but has proved to be a challenge to maintain.



Note: Dual years represent NFTA's fiscal year, April 1 to March 31. Ridership numbers include total passengers on all modes (e.g. bus, rail, and paratransit).

Bus Fleet Age

The average bus fleet age statistic is important, as older buses tend to require a higher level of maintenance to keep them operating efficiently and reliably. The average bus fleet age for fiscal year 12/13 was approximately 7.6 years. This is above the regional performance measure which seeks an average fleet age of 6 years. The expected bus fleet age will continue to improve once older buses are replaced with new ones.



Freight

The Niagara Frontier region continues to be a critical freight transportation hub that is well served by an extensive highway, rail, port, and aviation network.

Goods movement involves the distribution of freight, which includes raw materials and finished products. Freight is handled by truck, train, ship, and aircraft. The scale, types, and patterns of goods movement vary greatly. The trading of physical goods is a major component of the US economy. In 2010, the United States moved more than \$3 trillion in goods internationally, or nearly \$8.8 billion on average each day. The GBNRTC-region handled \$82.5 billion of trade in 2010, which is 11.9% of the international trade share.

National and Regional Freight Trends

- Freight volume moved by all modes of transportation is predicted to nearly double by 2020.
- Many of our highways, railroads, and intermodal facilities are running out of capacity to accommodate anticipated volumes of freight.
- The regional highway system needs better connections to the south.
- Emphasis on preservation may limit future weight capacity of bridges.
- The increased use of standardized containers makes intermodal shipping more efficient.
- Congestion impedes timely and reliable freight movements and threatens business productivity.
- High fuel costs are pushing increased efficiency.
- Global logistics make the use of multiple modes based on time and cost constraints.
- Long haul trucking is hampered by fuel costs, driver shortages, and limits on driver service time.
- Short sea shipping is now being seen as a viable option in the United States with the creation of the Marine Highway System.
- After years of decline and consolidation, rail popularity and use is growing at a very fast pace.
- Backhaul remains an impediment to the efficiency of rail and air-cargo movements.
- Environmental externalities of freight such as noise and emissions are of high concern.
- Security and safety concerns now compete with the need for efficiency.
- The Panama Canal expansion in 2015 and the raising of Bayonne Bridge in New Jersey will bring larger ships with more containers to PANYNJ generating demand for an inland port to relieve congestion.
- The Portage Bridge replacement will allow Norfolk Southern to greatly increase their intermodal service to the region.
- Greater Toronto Area's continued growth will increase their demand for freight, which could be served through the Buffalo market.
- CP Draw and Portage Bridge continue to be identified as rail bottlenecks by freight stakeholders.
- Reliability is becoming more important than speed in logistics.
- Competition in air-cargo industry continues to be fierce, which limits growth opportunities.
- Manufacturers seeking smaller, "just-in-time" distribution centers to relieve shortages.
- Canadian and Chinese manufacturers are looking to establish a physical presence in the United States.
- Free trade zones provide opportunities for US/Canada manufacturing and assembly operations.
- MAP-21 requires states and MPOs to develop and monitor freight performance metrics.
- The USDOT will encourage each state to develop a comprehensive plan for its immediate and long-range, freight-related planning and investment.

Regional Freight Assets

The following is a brief summary of the region's freight infrastructure by mode.

Air

Integrated express and commercial passenger carrier (belly-space) air-cargo activity within the region is concentrated at the Buffalo-Niagara International Airport (BNIA) with additional all-cargo service provided at the Niagara Falls International Airport (NFIA). Both airports offer excellent access to Interstate and State highways and are near US-Canada border crossings. These border crossings provide both the Buffalo-Niagara and Niagara Falls International Airports with excellent access to Canadian air-cargo markets, and effectively extend their catchment area (geographic reach) into Ontario, Canada.

Through a combination of commercial passenger carriers, all-cargo and integrated express carriers, and scheduled road feeder service, these airports provide air connectivity to primary national air-cargo hubs, international gateways, and major metropolitan areas.



Highway

Approximately 75 percent of the region's freight travels by truck, while the US average for freight movement by truck is 70 percent. Due to the region's heavy reliance on truck transportation, the highway system is paramount in the efficient movement of freight as motor carriers utilize the highway system to transport freight to consolidation points and intermodal freight facilities. Therefore, the region's 3,675-mile highway network of major interstates, state routes, and local arterial roads is a critical factor in enabling effective connections for the region's economy.

Approximately 50 percent of the region's inbound freight is from New York State and over 70 percent of the outbound freight is destined for markets within New York State. Specific highway segments represent strategic freight routes that support movements to and from markets within the State.

The Primary Freight System tends to consist of major interstates or key state routes that carry the most amount of truck traffic compared to other routes in the State. These routes are most likely to be

2040 MTP



Metropolitan Transportation Plan Update

classified as either rural or urban arterials, and they provide connectivity across the region and typically extend beyond the study area to other states and key markets.

- Interstate 90 (NYS Thruway)
- Interstate 290 (Youngmann Expwy)
- Interstate 190 (Niagara Expwy)
- Interstate 990 (Lockport Expwy)



The secondary freight system consists of major state routes and local loads that support a high amount of truck traffic compared to other routes. Typically, these are non-interstate routes and they provide direct access to major freight terminals and key industrial and commercial areas.

- US Route 219
- US Route 62
- State Route 78
- State Route 33
- State Route 324
- State Route 5
- State Route 266
- State Route 198
- State Route 384
- State Route 400
- State Route 31
- State Route 77
- State Route 104
- State Route 16

Rail

The Buffalo-Niagara region is currently served by four Class I railroads, one Class II (or Regional) railroad, and three Class III (or Short Line) railroads.

Class I Railroads are line-haul railroads earning revenues of more than \$319.3 million. Four of the seven US Class I Railroads operate in this region, including CSX Transportation (CSX), Norfolk Southern (NS), Canadian Pacific Railway (CP), and Canadian National Railway (CN).

2040 MTP



Metropolitan Transportation Plan Update

Regional railroads, often referred to as Class II railroads, are defined by the American Short Line and Regional Railroad Association as operating over at least 350 miles or earning revenue between \$40 million and the \$319.3 million Class I threshold. The Buffalo & Pittsburg Railroad (BPRR), a subsidiary of the Genesee & Wyoming Railroad (GWRR) is the only Regional/Class II Railroad in the area.



Short Line railroads, are often referred to as Class III railroads, and are comprised of local line-haul railroads (earning revenue below Regional Railroad criteria) or switching and terminal railroads, which join two railroads for the purpose of transferring cars between railroads or solely within a facility or group of facilities. In the Buffalo-Niagara region, the Somerset Railroad (SOM), Buffalo Southern Railroad (SBOR), Falls Road Railroad (FRR), Depew Lancaster & Western Railroad (DLWR), and South Buffalo Railway (SB) are the five Short Line or Terminal Railroads operating in the region. The Somerset Railroad is owned by AES Corporation, the South Buffalo Railway (SBOR) is owned by GWRR, the Falls Road Railroad (FRR) is owned by Genesee Valley Transportation (GVT), and the Buffalo Southern and Depew, Lancaster, and Western Railroads are owned by Erie County Industrial Development Agency (ECIDA).

Water

The Port of Buffalo, as defined by the Army Corps of Engineers, encompasses the Outer Harbor, Lackawanna Canal, Union Canal, Buffalo River (from its mouth to the CSX Drawbridge), Buffalo Ship Canal, Black Rock Lock, Black Rock Channel, and Tonawanda. It consists of 28 terminals, including the three terminals of the Gateway Trade Center – Metroport. Unlike nearly all other terminals in the Port, which are private facilities serving the owning company's business, the Gateway Metroport is a third-party operated terminal



International Freight Connections

The Niagara Peninsula connects the Niagara Frontier to southeastern Michigan. It also serves as a major access point to and from freight generators in Canada such as southern Ontario, Canada's economic engine, including the Greater Toronto Area (GTA), which is the largest urban market in the entire region. The Queen Elizabeth Way (QEW) is the primary expressway that connects the Greater Toronto Area (GTA) to the entire Niagara Frontier, including the four border crossings. The QEW connects directly to the Peace Bridge and indirectly, via Highway 405, to the Lewiston-Queenston Bridge, and via Highway 420, to the Rainbow and Whirlpool Bridges in Niagara Falls.

Both the Canadian Pacific Railway (CP) and Canadian National Railway (CN) operate rail-truck intermodal facilities in southern Ontario, but not in the Niagara Peninsula.



Other Transportation

Passenger Air

Two major airports located in Buffalo and Niagara Falls service the region. The Buffalo-Niagara International Airport (BNIA) averages approximately 110 daily flights with nonstop service to 19 cities. In addition to commercial flights, the BNIA serves as a major distribution center for air-cargo traffic through four major operators, including United Parcel Service (UPS), Southwest Cargo, FedEx, and Worldwide Flight Services.

The Niagara Falls International Airport (NFIA) has three active runways, which serve general aviation, military, and commercial flights. The facility handles international charter and cargo flights and direct passenger flights to Myrtle Beach; South Carolina; Fort Myers, Florida; and Melbourne, Florida. The new state-of-the-art terminal at the NFIA opened in 2009.

Passenger Rail

Amtrak is the sole provider of passenger service in the area. There are three rail passenger stations in the area located in Buffalo, Depew, and Niagara Falls with service to Toronto, the Northeast, and Midwest via their Maple Leaf, Empire, and Lake Shore Limited routes.



AMTRAK Northeast Routes

On behalf of the Government of Canada, VIA Rail Canada operates the country's national passenger rail service. VIA provides intercity passengers with fast, convenient, and affordable service, downtown-to-downtown between Canada's largest business centers. Each day, VIA Rail/AMTRAK service operates service between Buffalo and Toronto with stops in Oakville, Aldershot, Grimsby, St. Catharines, and Niagara Falls.

GO Transit is an inter-regional public transit system in Southern Ontario, Canada. GO Transit (GO Train and GO Bus) provides multiple departures between Niagara Falls, Ontario, and Toronto each day using bus/train combination service or all-train service.

Rail travel between Buffalo and Toronto involves a US/Canadian border crossing and may be subject to delays due to customs and immigration procedures.

Intermodal Facilities

In this area, intermodal facility locations include the Buffalo-Niagara and Niagara Falls airports, Gateway Metroport and corporate ports, and rail yards. Discussions with users of these facilities will identify transportation infrastructure projects to improve system connections to and from these locations.

CHAPTER 3 - STUDIES DONE OR IN PROGRESS SUMMARY



Regional Freeway and Arterial Studies

Buffalo Corridor Study/I-290

This study is underway. It will result in a series of short-term operational and capital improvements that will address needs in the corridor. It will have an impact on the Village of Williamsville plans for Main Street. The results will also help to refine future capital projects contained in the existing 2035 MTP.

Scajaquada Corridor

This study resulted in alternative design configurations to lower travel speed and enhance aesthetics in the Route 198 Corridor. Binding cost estimates available for MTP consideration.

Robert Moses Parkway

There are currently several studies underway in this area. Study results on the Southern section of Robert Moses Parkway have been finalized and the project is ready to proceed to construction. Study progress on the Northern section of Robert Moses Parkway led to an agreement on the scope from Rainbow Bridge to Findlay Drive. Finally, study of the remaining portion of the facility to Lewiston resulted in three alternatives that are currently under public consideration. The results of the studies can help replace conceptual projects in the current 2035 MTP.

Buffalo Central Business District (CBD)

Access

This study analyzed alternative access opportunities for travel from southern locations to the CBD, with Route 5 and the Skyway in place, as well as alternative roadway configurations. The decision process is underway at the New York Department of Transportation (NYSDOT).

Buffalo Harbor Bridge

This study simulated several alternative new bridge-crossing locations between the Buffalo inner and outer harbor for comprehensive study by the Erie Canal Harbor Development Corporation (ECHDC). A decision is still pending, and the project is identified in the current 2035 MTP.

Gateway Connection Improvement Project

Plans for a redesign of the US-side plaza entrance to the Peace Bridge are currently under public review. Highway reconfiguration needs to be interfaced with local roads (Porter Avenue).

Regional Freight and Logistics Studies

This comprehensive, full set of studies analyzed freight movements in the region on all modes. The study resulted in the formation of a separate public/private group to further analyze the logistics component, including capital improvements for consideration in the MTP.



Sub regional and Local Studies

Lockport Area Study

This study focused on land use and development in the towns south of Lockport, especially as related to transportation needs. It resulted in a matrix of proposed transportation improvements, both operational and capital for near- and longer-term implementation. It is available for consideration in the current 2035 MTP.

Niagara Street Study

This study provided analyses and project coordination for a phased corridor project to reconfigure and upgrade Niagara Street from Niagara Square to Ontario Street. The project also includes a major transit component and operational aspects of signal management and emergency evacuation. The project is currently funded, follow-up on aspects may be appropriate for current 2035 MTP.

Lancaster Area Studies

This study assessed traffic issues related to a complete portfolio of proposed residential and commercial developments in the Lancaster

area. It resulted in primarily short-term and operational improvement recommendations, and should be considered in the current 2035 MTP in regard to overall development and longer-term needs in the subarea.

Main Street Williamsville

This study produced traffic analysis and a review of proposed improvements in several contexts related to the Village of Williamsville. MTP implications relate to traffic in the subregion, as affected by (Buffalo Corridor Study) BCS results, as well as future development in the area, and Main Street proposals by the local community.

Buffalo Niagara Medical Campus (BNMC) – CBD North

This study is in the startup phase, and will be completed in 2014. It will determine the full buildout of BNMC, as well as peripheral development and multimodal transportation implications. Final recommendations can be drawn directly into the current 2035 MTP.



Public Transportation Studies

Metro Amherst Buffalo Corridor Study

Positioned as an alternative analysis and a Draft Environmental Impact Statement (DEIS), this study is now in progress with a 2014 completion forecast. This study will examine public transportation needs in the corridor, particularly related to UB2020, BNMC buildout, Amherst growth and development, and other related aspects of regional planning. Several service types will be considered. A major corridor improvement is included in the current

2035 MTP; this will provide documentation on feasibility, cost, and schedule for inclusion.

Transit On Board Survey

This study completed a comprehensive survey of all NFTA bus and rail lines to determine the dynamics of system ridership. The results are incorporated in the regional models and are being used in peripheral studies. Data from the study was input directly to predict future

2040 MTP

Metropolitan Transportation Plan Update



forecasts of public transportation needs in the 2035 MTP.

NFTA Strategic Analysis

This study was performed for the NFTA by a consultant team. The study assessed system characteristics, dynamics of ridership, land use and development, and revenue implications. The results were considered in near-term system adjustments and are usable in longer-term MTP development.

Human Services Transportation – The GBNRTC has adopted and updated a Human Services Transportation Plan (HSTP). The plan reviews needs for human services in the region,



Systems Operational Studies

Corridor Signalization Upgrades

Coordinated timing plans have been developed for six major corridors in the region. Most are fully operational and before/after studies have been prepared to analyze their effectiveness. A similar initiative with the Niagara Street project includes transit-signal prioritization and emergency evacuation timing plans. Under the Niagara International Transportation Technology Coalition (NITTEC) committee, the next steps in area-wide deployment are under development. This information is included in the current 2035 MTP, and more specifics will be available upon completion of current work that will be included in the plan.

Detour Routes and Emergency Scenarios

Several studies for NITTEC and the New York State Thruway Authority (NYSTA) simulated various scenarios for construction traffic management, incident response, weather

emergencies, and closures to determine traffic impacts and range of responses. These typically do not result in capital projects, but will engage the MTP in terms of Intelligent Transportation Systems (ITS) buildout and deployment, and facilities maintenance and management.

Inter/Intracity Rail Passenger Studies

Phase I studies of New York State High Speed Rail studies were completed. The next phase will be to examine project specifics. In addition, there will be some regional analysis of Buffalo – Niagara Falls service, as identified in the current 2035 MTP. Related infrastructure needs continue to evolve which may affect the MTP development.

emergencies, and closures to determine traffic impacts and range of responses. These typically do not result in capital projects, but will engage the MTP in terms of Intelligent Transportation Systems (ITS) buildout and deployment, and facilities maintenance and management.

Congestion Management

Within Congestion Management Planning (CMP) activities, travel times in major corridors have been plotted for time and location and are being examined for structural- versus incident-based congestion reasons. The Federal Highway Administration (FHWA) is implementing a collection of better data, which would be extremely helpful in refining this further. This will be extremely useful in the current 2035 MTP as MAP-21 Performance requirements will drive both the identification of these issues and the response to targets established for improvement.



Bicycle and Pedestrian

Bicycle Master Plan

This plan, fully adopted by the GBNRTC, establishes a system of trails and bicycle facilities throughout the region. It furthermore seeks to fully integrate bicycling within the existing transportation network and implement safety projects to reduce accidents. These objectives should be incorporated directly into the 2040 MTP Update. Projects emanating from the plan could become eligible for several funding sources.

Pedestrian Master Plan

This plan, also adopted by the GBNRTC, looks to identify breaks in sidewalk continuity, barriers or obstacles to pedestrian usage and insufficient or missing of multimodal support. In addition, existing pedestrian accident data would be analyzed to identify sites for potential remedial and/or corrective projects. Again, projects emanating from this plan could become eligible for several funding sources.

Shoreline Trail

An updated plan for the Shoreline Trail and project identification has been completed. This will be used immediately in the Niagara Greenway initiative and will serve as the template for project development in upcoming rounds of project funding. This should also be incorporated directly into the 2040 MTP Update.

Localized Analyses/Complete Street

Several near-term Complete Street project approaches were analyzed, such as Delaware Avenue, to determine traffic impacts and optimal design. Work with the Town of Amherst also helped develop a context-sensitive approach to street configuration in various neighborhood types. These studies and documents should be referenced in the 2040 MTP Update in the context of improvement typology for continuous consideration.



CHAPTER 4 - VISION, GOALS, OBJECTIVES AND PERFORMANCE MEASURES

The many planning and policy efforts designed to make Buffalo Niagara a more prosperous, resilient region are coming into alignment. The *Western New York Regional Economic Development Council's Plan, A Strategy for Prosperity*, the *Buffalo Billion Plan*, the *One Region Forward* initiative, and the *New York State Smart Growth Public Infrastructure Policy Act*, along with other efforts, are making strides to reverse the costly impacts of sprawl without growth in our region over the past several decades.

In building upon these important regional planning and policy efforts, the MTP 2040 Update serves to ensure that future infrastructure projects and programs work concurrently to help achieve the vision for Buffalo Niagara. The vision for the region and subsequent goals and objectives reflect both federal priorities outlined in the MAP-21 planning factors and address issues specific to the Buffalo-Niagara region. The following goals and objectives were reaffirmed as part of the 2040 MTP update process.

Regional Vision

Promote smart growth through transportation investment in priority development areas and areas with existing infrastructure.

Foster regional economic competitiveness through targeted transportation investment.

Create an environmentally healthy, resilient region.

Promote safe, equitable regional service for all residents.

Goals, Objectives, and Performance Measures

PRIORITIZED PRESERVATION

Goal: The Buffalo-Niagara region will focus on transportation projects that preserve and enhance existing transportation facilities, with preference given to those projects located within priority development areas.

- Achieve and maintain adequate pavement conditions on roadway facilities based on functional class.
- Achieve and maintain adequate transit infrastructure and maintain the system vehicle fleet on a responsible replacement cycle.
- Achieve and maintain adequate bridge conditions based on functional class.
- Ensure funding for regional transportation improvements will be based on the function and condition of facilities – not ownership.

PRIORITIZED PRESERVATION PERFORMANCE MEASURES	2040 GOAL
1) Surface Score	NHS roads no lower than 7; non-NHS roads no lower than 6
2) Bridge Score	NYS DOT Goal
3) Transit Fleet Age	Average Bus Fleet Age of 6 Years
4) Bicycle Route Level of Service	Improve Bicycle Level of Service (BLOS) by 10%

ECONOMIC DEVELOPMENT

Goal: The Buffalo-Niagara region’s transportation system will improve the region’s economic competitiveness by providing transportation options that will enhance mobility, promote access to jobs, and support sustainable development patterns.

- Focus transportation investments and projects to work in coordination with the efforts of the WNY Regional Economic Development Council.
- Improve the accessibility of the transit-dependent, low-income individuals to employment opportunities.
- Maintain the existing transportation system to support current and future development through the reuse of existing facilities and sites.
- Provide transportation services to promote higher density urban redevelopment and infill development projects in, and adjacent to, existing neighborhoods.
- Encourage the concentration of employment and activity sites within transit corridors with multi-modal access to maximize transportation efficiency.
- Promote the efficiency and reliability of freight movement (truck and rail) within and through the region, and improve multi-modal facilities and system connectivity to capitalize on growing international and trans-border trade opportunities.
- Focus transportation system improvements to support and promote tourism.

ECONOMIC DEVELOPMENT PERFORMANCE MEASURES	2040 GOAL
1) Unemployment rate	Undefined
2) Per capita income	Undefined

MOBILITY AND ACCESSIBILITY

Goal: The Buffalo-Niagara region’s transportation system will improve user mobility and accessibility.

- Create a more balanced transportation system that enhances modal choices by efficiently connecting regional centers and corridors.
- Enhance mobility for all members of the community including the transportation disadvantaged.
- Provide an integrated multi-modal transportation system that offers the efficient and safe mobility of people, seamless and overlapping networks for goods movement, and a variety of accessible mode choices to regional activity sites.
- Provide a regional system that will minimize delay times by implementing effective congestion relief techniques, such as transportation system management (TSM), transportation demand management (TDM), intelligent transportation systems (ITS), and selected linear capacity expansion projects emphasizing areas with existing infrastructure.
- Emphasize the development of effective alternatives to single occupant vehicle (SOV) travel to reduce vehicle miles traveled (VMT).
- Enhance highway safety techniques, incident management plans, and access management techniques.
- Promote increased security of transportation facilities and activities to enhance the region’s ability to protect and respond to potential threats and hazards.

MOBILITY AND ACCESSIBILITY PERFORMANCE MEASURES	2040 GOAL
1) Mean travel time to work	Reduce travel time to work by 5%
2) Designated miles of bikeway	Increase miles of bikeway by 15%
3) Transit ridership	Increase transit ridership by 5%
4) % of population within 0.5 miles of transit service	50%+ of region's population with .5 mile of transit service
5) % of low-income population within 0.5 miles of transit service	80%+ of region's population with .5 mile of transit service

LAND USE AND TRANSPORTATION CONNECTION

Goal: The Buffalo-Niagara region will achieve better inter-jurisdictional coordination of transportation and land use planning.

- Promote consistency between transportation improvements and state and local planned growth and economic development patterns.
- Coordinate the regional transportation plan with municipal plans. Ensure that all municipalities in the region have an adopted master plan (update) or set of planning tools for monitoring or directing physical and economic development in a regionally consistent manner.
- Encourage transit-oriented development to connect mixed-use developments with multi-modal transportation connections.
- Encourage new development to integrate with existing land use and transportation patterns.
- Integrate and strengthen transportation considerations with land use planning by incorporating a land use model within the transportation planning process.
- Establish communication and an informational process with municipalities to emphasize the land use-transportation connection.

LAND USE AND TRANSPORTATION CONNECTION PERFORMANCE MEASURES	2040 GOAL
1) Urban expansion	Undefined
2) Vehicle Miles of Travel (VMT)	Rate increase less than NYS average

ENVIRONMENT AND CLIMATE CHANGE

Goal: The Buffalo-Niagara region will plan and develop a transportation system that enhances and protects the region's natural environment, transportation system, and facilities from potential threats of extreme weather events and climate change.

- Enhance the attractiveness, convenience, safety, and availability of non-motorized transportation systems.
- Mitigate adverse environmental impacts of transportation projects.
- Protect, enhance, and restore the environment.
- Promote ways to reduce energy consumption and expand renewable energy.
- Provide transportation services to those areas with existing infrastructure and thereby limiting sprawl.

ENVIRONMENTAL AND CLIMATE CHANGE PERFORMANCE MEASURES	2040 GOAL
1) Air Quality	Maintain pollutant emissions at base year level
2) Safety	Reduce overall accident rate by 5%
3) Mode choice	Reduce the number of persons who drive alone by 5%

CHAPTER 5 - LAND USE AND THE FRAMEWORK FOR GROWTH

Transportation and land use decisions have a significant impact on the region's development. One of the key regional challenges to cost-effective, sustainable growth in the Buffalo-Niagara region is to better manage the sprawl of residential development and the suburbanization of employment. Currently, numerous public authorities, local government, and private sector actions make decisions regarding area land use, growth, and redevelopment in the region. This has created a development pattern that often causes inefficient infrastructure use, loss of important natural resources, abandonment of urban/village centers, and sprawling growth.

The Framework for Regional Growth – Setting a New Direction

The *Framework for Regional Growth*, completed in 2006, continues to provide a common reference point for decision-makers and ensures a coordinated approach to area-wide growth and redevelopment. It was developed in collaboration between Erie and Niagara Counties and established an alternative roadmap to guide the future growth and development of the region.

The fundamental purpose of the Framework Plan was to help all sectors and jurisdictions within the Buffalo-Niagara region make better, more coordinated decisions about growth and redevelopment. It established a regional development vision and outlined policies and programs consistent with that vision. As such, the plan fosters development coordination across political boundaries to help the region grow in smart, sustainable, and efficient ways.

Regional Growth and Development Principles

The *Framework for Regional Growth* outlines a number of growth and development principles that are fully embodied within the goals and guiding principles used to develop the region's long-range Metropolitan Transportation Plan. These principles include:

- **Improved Access & Mobility:** The region's transportation infrastructure should be designed to promote reinvestment in developed areas, improve interstate and cross-border connectivity, strengthen alternative modes of transportation, and enhance the livability of neighborhoods. The counties favor development that supports transit use, walking, ride-sharing, and more efficient commuting patterns.
- **Efficient Systems & Services:** The location, quality, and capacity of the region's public infrastructure and facilities have a powerful influence on the pattern and pace of development. Erie and Niagara Counties support public investment to maximize the use of existing infrastructure and facilities, improve the competitive position of underutilized lands and buildings, promote the reuse of brownfield and grayfield sites, and encourage the preservation and adaptive reuse of historic sites and buildings.
- **Effective Regional Stewardship:** Erie and Niagara Counties recognize, as a liability, the absence of a forum for addressing the pace and quality of regional development, the fiscal health of county government, the efficiency and effectiveness of infrastructure investment and service delivery, and

the conservation of sensitive resources. County and local governments; federal, state, and regional agencies and authorities; property owners and developers; interest groups; and residents are encouraged to work together to support actions consistent with the Framework.

- **Conserved Natural & Cultural Assets:** Erie and Niagara Counties support efforts to preserve historic sites and landscapes, conserve and improve access (as appropriate) to natural systems and resources, interpret history, and celebrate regional culture. The counties encourage the conservation and protection of the region’s most sensitive natural systems—the lakefronts and escarpments; rivers, creeks, and streams; wetlands and floodways; and forested lands. All of these areas are recognized as regionally significant resources worthy of protection and conservation.
- **A Vital Economy:** Improving the competitive position of the region’s centers of commerce, industry, and education is among the highest priorities of Erie and Niagara Counties. The region’s prosperity is dependent on the vitality of its downtowns and urban waterfronts; commercial, industrial, and institutional districts; and emerging centers of employment and commerce.
- **Sustainable Neighborhoods:** To serve the increasingly diverse needs of the region’s households, Erie and Niagara Counties promote efforts to improve the livability of the region’s urban neighborhoods and create more compact, walkable communities in developing areas. Through carefully planned reinvestment, infill development, and new compact development, the region can accommodate anticipated growth on a smaller “footprint”, slow the pace of rural land conversion, ease pressure on the road network, lessen demand for new public infrastructure and facilities, and reduce long-term infrastructure operation and maintenance costs.

Future Development Strategies

In addition to the growth and development principles, the *Framework Plan* identifies future growth and development strategies when dealing with *developed*, *developing*, and *rural* areas. The long-range Metropolitan Transportation Plan is again consistent with the *Framework Plan’s* strategies for future growth by focusing transportation investment in areas already served by existing infrastructure. The following descriptions of the primary policy areas are documented in the *Framework Plan*:

- **Developed Areas:** Spark reinvestment, attract new households and businesses, and improve the livability and economic vitality of the region’s existing communities. Additionally, they support a) the conservation and stabilization of existing neighborhoods; b) new compact, pedestrian-oriented, mixed-use development on vacant and underutilized sites; and c) higher-density, employment-intensive, mixed-use development in Regional Centers and Growth Corridors.
- **Developing Areas:** Support a balance of conservation and quality development in the Developing Area. They also align policies and investments to encourage a) the conservation of agricultural and rural lands; b) new compact, pedestrian-oriented, mixed-use development on vacant and underutilized sites and c) higher-density, employment-intensive, mixed-use and transit-oriented development in Regional Centers and Growth Corridors.

- **Rural Areas:** Encourage limited development and reinvestment in Rural Centers and discourage the conversion of rural and agricultural lands. In addition, they align policies and investments to strengthen rural economies, conserve agricultural and rural lands, and revitalize Rural Centers.

Centers and Corridors: Regional Centers, Growth Corridors, and Rural Centers

Within the primary policy areas, the *Framework Plan* defines subareas that are most favored for future development and public investment. For these areas, defined as *Regional Centers*, *Growth Corridors*, and *Rural Centers*, the Counties offer strategies to promote appropriate reinvestment, redevelopment, conservation, adaptive reuse, and infill development. The population distributions and projections included in the *Framework Plan* were prepared by the GBNRTC and again have been incorporated into this plan to help guide transportation investment policies.

Regional Centers: Regional Centers as identified in the *Framework Plan* include the downtowns of the region's major city centers—Buffalo, Niagara Falls, Lockport, and the Tonawandas—along with a number of regionally significant centers of activity in the Developed Area. Regional Centers are recognized for their existing and potential economic vitality, diverse mix of land uses, concentrations of public facilities and services, and potential as locations for higher-intensity, mixed-use development and enhanced transit service.

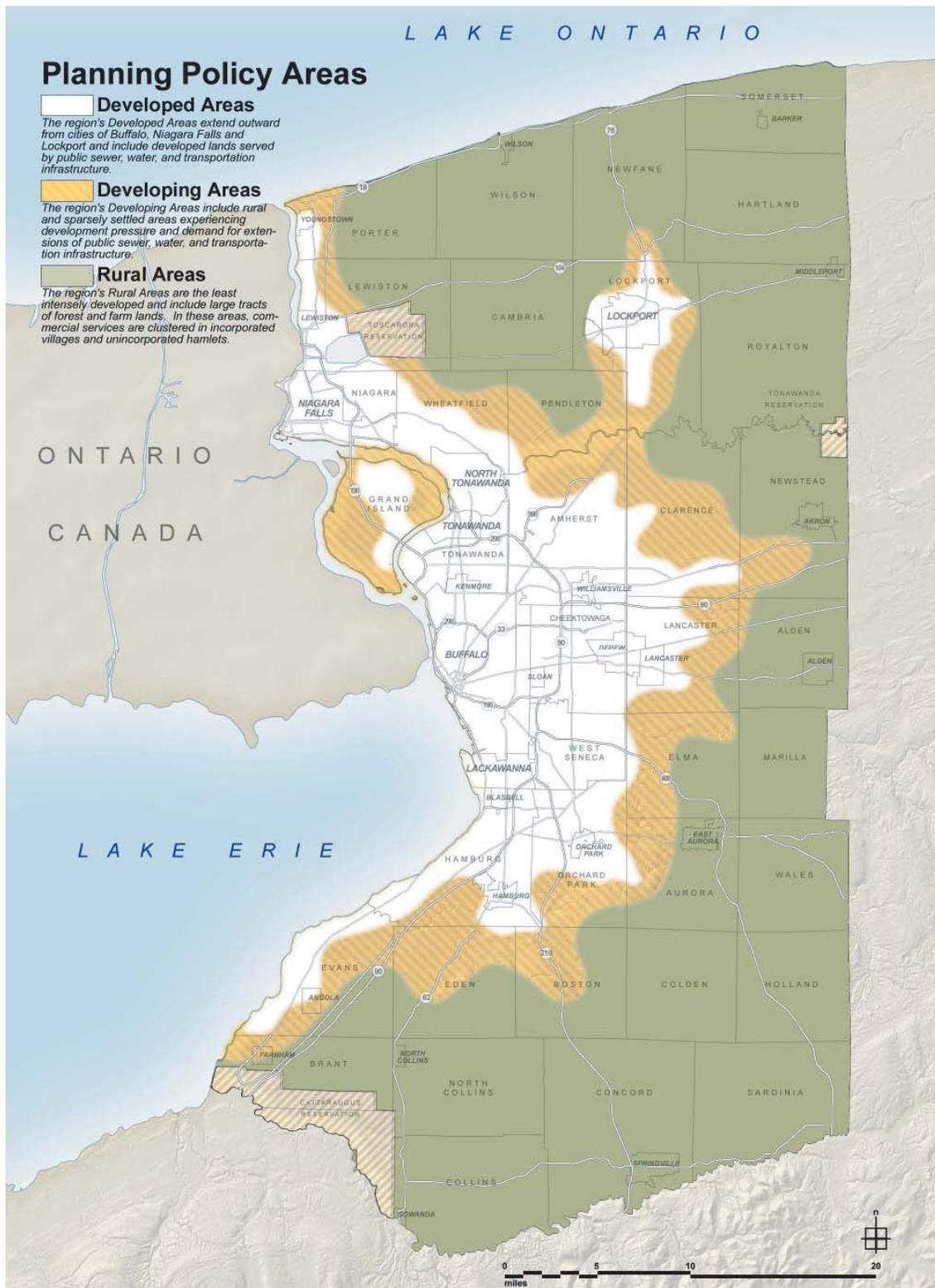
Growth Centers and Corridors: Growth Corridors include the region's existing and emerging areas of commerce and industry. Designated growth corridors have relatively high employment densities; the presence of vacant, underutilized, and shovel-ready sites; concentrations of brownfield property; and good access to regional road and rail networks.

Rural Centers: Rural Centers include the Rural Area's incorporated villages as well as several unincorporated hamlets that serve as the social, cultural, economic, and often historic heart of the region's rural communities. These designated centers provide varying combinations of essential commercial and public services—post offices, bank branches, libraries, schools, and government offices, some level of public infrastructure, and clusters of historic sites and buildings.

2040 MTP



Metropolitan Transportation Plan Update



One Region Forward – A Regional Plan for Sustainable Development



One Region Forward was initiated in 2011 to build on the region’s momentum toward sustainable development, fill key gaps in planning, and set the stage for a more vital future for Buffalo Niagara. Funded through the federal [Partnership for Sustainable Communities](#), it is a highly collaborative, broad-based effort intended to guide and promote more sustainable forms of development. *One Region Forward* builds upon, reinforces, and supports collaborative efforts of the past, such as the *Framework for Regional Growth*, and coordinates with others now underway.

A key deliverable of the *One Region Forward* initiative will be the [Regional Plan for Sustainable Development](#) (RPSD). The RPSD is a federally recognized document that outlines how a region will coordinate federal, state, and local investments for long-term economic, environmental, and social sustainability. The plan will utilize community-wide conversations, reams of regional research analyses, and the knowledge of subject-matter experts to produce a practical roadmap that will promote more efficient land use patterns, improve mobility, strengthen our basic infrastructure, grow a 21st century economy, protect housing and neighborhoods, ensure broad access to healthy food, and mount our region’s response to the challenge of global climate change. The current schedule calls for a final draft of the RPSD to be completed by the beginning of 2015.

The GBNRTC is a fully engaged partner of the *One Region Forward* effort and when completed, intends to integrate the results of this effort into the next regional Metropolitan Transportation Plan. Work-to-date on the *One Region Forward* has been incorporated to the extent possible. These include the six “livability principles”, which serve as a critical foundation for the *One Region Forward* initiative:

Livability Principles

- 1. Provide more transportation choices.** Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.
- 2. Promote equitable, affordable housing.** Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- 3. Enhance economic competitiveness.** Improve economic competitiveness through reliable, timely access to employment centers, educational opportunities, services, and other basic needs by workers, as well as through expanded business access to markets.
- 4. Support existing communities.** Target federal funding toward existing communities through strategies such as transit-oriented, mixed-use development, and land recycling to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.

5. Coordinate policies and leverage investment. Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

6. Value communities and neighborhoods. Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods – rural, urban, or suburban.

Scenario Planning

As one activity in an extensive series of outreach efforts, the *One Region Forward* team led community participants through several sessions of scenario planning conducted throughout the region. Utilizing highly interactive, hands-on workshops during the month of November 2013, concerned citizens, community leaders, representatives from our business community, and the region’s elected officials were afforded an opportunity to weigh in on where and how they think Buffalo Niagara should grow between now and the mid-21st century. The following recommendations from the *Erie Niagara Framework for Regional Growth* for where to build new housing formed the basis for the scenario model used in the workshops:

- 70 percent in urbanized areas
- 15 percent in developing areas
- 15 percent in rural areas

After a brief introductory video and presentation, citizens were asked to get specific about what they wanted to keep and what they wanted to change – in their neighborhood; in their town, city, or village; and all across both counties. Working in small groups with large scale maps of the two counties, citizens showed graphically where they think housing, jobs, and transportation facilities should go and what forms they should take.

Over fifty maps were created by citizens across the two counties and are currently being consolidated by the *One Region Forward* research team into several alternative scenarios for the future. When completed, these scenarios and their forecasted impacts on our agriculture, transportation systems, economy, and fiscal health will offer intriguing insights on community-driven development and future transportation investments. The GBNRTC intends to integrate these results into the next regional Metropolitan Transportation Plan update scheduled for 2015.



REGIONAL DEMOGRAPHIC PROJECTIONS

A critical piece of any long-range Metropolitan Transportation Plan is the development of regional demographic forecasts (i.e. population, households, and employment) for use in systems-level transportation planning. Demographic forecasts for the MTP 2040 Update were originally developed by the GBNRTC as 2030 projections using the resources of an *Economic/Demographic Review Team*. Those were initially approved on April 1, 2006 and subsequently reclassified as official 2035 forecasts on December 2, 2009. An explanation of the dynamics behind development of the 2030 and 2035 demographics is helpful in understanding how the 2040 forecasts were derived.

2030 Demographic Forecasts

The 2030 forecasts were based on previous demographic forecast work documented in two NFTC/GBNRTC reports; “Employment, Population, and Household Forecasts for the Year 2020 for the NFTC” (Phase 1) and “Phase 2 Economic/Demographic Overview Study Final Report”. The demographic update to Year 2030 included discussions regarding the validity of development assumptions from those reports and an update of previous 2020/2025 forecasts to reflect 2000 Census data. The methodology was performed as follows:

1. Regional employment was generated first. It was derived by applying the same growth rate as utilized in prior forecasting – an annual growth rate of 0.2558%.
2. County specific employment distributions were assumed to remain relatively the same (84% for Erie County, 16% for Niagara), based on 1980 through 2000 Census data.
3. In developing municipal employment forecasts, the Review Team considered a variety of development scenarios:
 - Urban Revitalization (emphasis on urban revitalization activities, with figures derived from the previously mentioned Phase 2 report);
 - Trend (growth rate from 1990 to 2000 assumed to continue from 2000 to 2030);
 - Mixed (growth rate assumed to be a 50/50 split of Urban Revitalization and Trend; and
 - Urban Focus (growth rate assumed to be a 90/10 split of Urban Revitalization and Trend).

The Review Team selected the Urban Focus Scenario as most indicative of regional planning objectives and expected development.

4. The County employment totals were then allocated to municipalities, using an average growth rate for each municipality based on the Urban Focus assumptions. Minor adjustments were made to the results to reflect Review Team comments.
5. A regional population forecast was developed based on the formula first used in the Phase 1 report, which applied employment-driven factors to the employment total to yield a level of population needed to support a given employment number. The regional population, utilizing that formula, increases from 1,278,000 in 2025 to 1,294,370 in 2030.

2040 MTP



Metropolitan Transportation Plan Update

6. A regional household forecast was developed using the same persons per household's ratio (2.35) that was previously utilized in GBNRTC demographic forecasting.
7. County population/household levels were assumed to remain the same (81% for Erie County and 19% for Niagara County).
8. Municipal population/households were distributed based on building permit data for each municipality, with further adjustments coming from Review Team member input.
9. For both employment and population/households, forecast municipal totals were pro-rated to Traffic Analysis Zones (TAZ) based on Year 2000 data. The resultant numbers were reviewed and minor adjustments were made to reflect known, existing, or planned projects.

2035 Demographic Forecasts

In 2009, the need arose for a new 20-year planning horizon and the GBNRTC formulated a rationale for simply reclassifying the 2030 forecasts as 2035. Given that the 2010 Census data were still not available prior to the mandated 2035 Long Range Plan Update, it seemed prudent to hold the forecasts at their current levels until a more detailed analysis could be done using 2010 data.

Moving out regional forecasts another five years (i.e. 2030 to 2035) rather than increasing them, meant those projections would take another five years to attain. It reaffirmed the maximum growth potential built into the *Urban Focus Scenario*, but acknowledged another five years may be necessary to reach those projections. It was also pointed out that should the 2030 annualized growth rate be used to generate a 2035 regional forecast, the difference between 2030 and 2035 would be very small and the final disaggregated figures would show little or no change from the current 2030 forecast values. Furthermore, recertifying that maximum growth potential maintained consistency when determining future transportation demand and capacity needs, and idealistically will translate into cost-effective infrastructure design and construction.

The 2035 demographic forecasts were approved December 2, 2009 and reaffirmed the 2030 assumptions that most new households will locate in existing developed areas of the region with modest increases in developing and rural areas. It further assumed moderate density development in developed and rural areas of the counties and anticipates such development will occur in areas currently serviced by public sewer, water, and transportation infrastructure. The development in these developing and rural areas of the counties was also assumed to require minimal disturbance of rural and agricultural lands.

2040 Demographic Forecasts

With the release of the US Census 2010 demographic data, a robust analysis was initiated of projected trends and previously approved forecasts. Analyses were performed on the published data for population, households, and employment, first at the regional-level (Erie & Niagara Counties), then separately for each county, and finally for each municipality with their respective county. A fundamental decision was made to retain and reaffirm the *Urban Focus Scenario* as most indicative of regional planning objectives and expected development. As such, the disaggregation of forecast data directly used the proportional shares established in 2035 Metropolitan Transportation Plan.

2040 MTP



Metropolitan Transportation Plan Update

Population and Household Forecasting Methodology

The forecasting methodology for both population and households was formulated as follows:

1. Separately derived annualized growth rates between the Census-released 2010 *regional* population and household totals and the approved 2035 GBNRTC *regional* population and household forecasts.
2. Applied the *regional* annualized growth rates from step 1 to the 2035 GBNRTC *regional* population and household forecasts to produce *regional 2040 population and household forecasts*.
3. Calculated the proportional Erie County and Niagara County shares of the 2035 *regional* population and households.
4. Applied the county proportions from step 3 to the 2040 *regional* totals to produce *2040 county-specific forecasts for both population and households*.
4. Calculated each municipality's proportional share of the 2035 *municipal* population and households within each county.
5. Applied that *municipal* proportion to the 2040 *county-level* population and households totals to produce *2040 municipal population and household forecasts*.
6. Derived the proportion (% share) of the 2035 Traffic Analysis Zone (TAZ) population and households within each municipality.
7. Applied that TAZ proportion to the 2040 municipal population and households totals to produce *2040 TAZ population and household forecasts*.

The forecasts were rounded to reflect their nature as estimates.

Population			
County	2010	2040 Forecast	Difference 2010 to 2040
Erie	919,040	1,076,260	157,220
Niagara	216,469	252,470	36,001
Regional Total	1,135,509	1,328,730	193,221

Households			
County	2010	2040 Forecast	Difference 2010 to 2040
Erie	383,164	442,470	59,306
Niagara	90,556	103,450	12,894
Regional Total	473,720	545,920	72,200

Employment Forecasting Methodology

The GBNRTC employment forecasts have been based on Economic Analysis (BEA) employment values since 1990. BEA data includes all employment categories and therefore all jobs in a region, and is typically higher than what the US Census reports. The 2040 forecasts in the following table used the same proportional share methodology as described above, except that 2010 BEA data was used as the forecast base instead of 2010 census data. The employment forecasts were similarly rounded to reflect their nature as estimates.

2040 MTP



Metropolitan Transportation Plan Update

Employment			
County	2010	2040 Forecast	Difference 2010 to 2040
Erie	551,621	598,380	46,759
Niagara	87,137	115,670	28,533
Regional Total	638,758	714,050	75,292

Forecast Assumptions and Analyses

A comparison of forecast data to previous Census values was undertaken to determine the reasonableness of the estimates. As with previous Metropolitan Transportation Plans, the forecasts represent a growth scenario (e.g. *Urban Focus*), which alters current development trends and seeks to maximize the region’s growth potential. These goals and objectives as reflected in the *Framework for Regional Growth*, and more recently the *One Region Forward* efforts, reflect how the region could change over time based on the choices we make about our land and how we invest our resources. By abandoning development and investment patterns that have characterized the past several decades, it is believed the region can truly grow in smart, sustainable, and efficient ways.

2040 MTP



Metropolitan Transportation Plan Update

MUNICIPALITIES	HOUSEHOLDS			DRAFT MTP Forecast
	1990	2000	2010	2040
ERIE COUNTY:				
ALDEN	3,010	3,278	3,347	3,940
AMHERST	41,252	45,076	48,894	55,130
AURORA	4,919	5,421	5,491	6,690
BOSTON	2,651	2,997	3,221	3,970
BRANT*	1,363	1,413	1,491	1,670
BUFFALO	135,595	122,720	112,579	138,080
CHEEKTOWAGA	39,669	40,045	39,282	44,680
CLARENCE	6,997	9,154	11,282	12,730
COLDEN	1,036	1,262	1,304	1,580
COLLINS	1,656	1,754	1,644	1,910
CONCORD	3,050	3,264	3,403	3,960
EDEN	2,522	2,855	2,951	3,250
ELMA	3,644	4,186	4,462	4,950
EVANS	6,125	6,639	6,669	7,280
GRAND ISLAND	6,300	6,898	7,936	9,330
HAMBURG	20,085	21,999	23,447	26,140
HOLLAND	1,267	1,332	1,369	1,510
LACKAWANNA	8,451	8,192	8,242	8,890
LANCASTER	12,066	15,053	16,559	18,900
MARILLA	1,777	2,021	2,069	2,580
NEWSTEAD	2,863	3,376	3,606	4,160
NORTH COLLINS	1,196	1,254	1,368	1,540
ORCHARD PARK	8,832	10,277	11,398	13,350
SARDINIA	908	944	1,081	1,080
TONAWANDA, CITY	6,869	6,741	6,749	7,130
TONAWANDA, TOWN	33,636	33,278	32,951	35,390
WALES	1,009	1,116	1,218	1,360
WEST SENECA	17,271	18,328	19,151	21,290
ERIE CO. TOTAL:	376,019	380,873	383,164	442,470

MUNICIPALITIES	EMPLOYMENT			DRAFT MTP Forecast
	1990	2000	2010	2040
ERIE COUNTY:				
ALDEN	4,872	5,334	5,215	5,700
AMHERST	70,288	94,393	103,000	110,390
AURORA	8,059	7,899	9,653	8,160
BOSTON	1,343	1,202	1,226	1,300
BRANT*	1,056	1,160	1,735	1,240
BUFFALO	229,455	191,851	193,601	198,200
CHEEKTOWAGA	52,446	56,474	53,482	60,040
CLARENCE	13,964	14,812	13,302	15,670
COLDEN	620	464	395	500
COLLINS	3,554	3,277	2,720	3,330
CONCORD	4,059	4,844	4,717	5,230
EDEN	1,248	2,359	1,773	2,550
ELMA	5,753	7,291	6,976	7,870
EVANS	4,284	5,034	4,474	5,530
GRAND ISLAND	6,181	6,397	6,627	6,830
HAMBURG	25,020	29,248	26,934	32,060
HOLLAND	959	1,069	1,117	1,150
LACKAWANNA	7,276	8,675	6,107	9,590
LANCASTER	13,085	20,369	19,015	23,400
MARILLA	70	507	546	550
NEWSTEAD	2,621	4,756	3,888	5,220
NORTH COLLINS	919	1,397	1,220	1,520
ORCHARD PARK	12,299	16,562	18,498	17,960
SARDINIA	638	1,253	844	1,370
TONAWANDA, CITY	11,274	8,091	8,542	8,280
TONAWANDA, TOWN	36,193	38,528	36,247	40,810
WALES	175	484	449	520
WEST SENECA	20,248	21,826	19,318	23,410
ERIE CO. TOTAL:	537,959	555,556	551,621	598,380

MUNICIPALITIES	HOUSEHOLDS			DRAFT MTP Forecast
	1990	2000	2010	2040
NIAGARA COUNTY:				
CAMBRIA	1,676	1,995	2,181	2,380
HARTLAND	1,341	1,526	1,561	1,740
LEWISTON*	5,483	6,280	6,709	7,450
LOCKPORT, CITY	9,838	9,459	9,153	10,160
LOCKPORT, TOWN	5,925	7,537	8,292	10,820
NEWFANE	3,254	3,597	3,798	4,270
NIAGARA	3,801	3,611	3,605	4,200
NIAGARA FALLS	25,885	24,099	22,603	26,210
NORTH TONAWANDA	13,585	13,671	14,004	15,060
PENDLETON	1,695	2,116	2,344	3,180
PORTER	2,505	2,616	2,782	2,960
ROYALTON	2,618	2,810	2,955	3,240
SOMERSET	940	1,000	988	1,140
WHEATFIELD	4,022	5,305	7,180	8,170
WILSON	2,120	2,224	2,401	2,470
NIAGARA CO. TOTAL:	84,688	87,846	90,556	103,450

MUNICIPALITIES	EMPLOYMENT			DRAFT MTP Forecast
	1990	2000	2010	2040
NIAGARA COUNTY:				
CAMBRIA	1,080	1,575	1,392	1,910
HARTLAND	288	429	376	520
LEWISTON*	6,675	6,322	8,003	7,340
LOCKPORT, CITY	18,792	16,774	10,458	17,110
LOCKPORT, TOWN	6,381	9,009	9,540	12,930
NEWFANE	2,457	3,039	2,479	3,680
NIAGARA	7,102	7,184	6,027	8,470
NIAGARA FALLS	32,559	24,541	26,145	30,810
NORTH TONAWANDA	12,286	9,756	8,736	10,960
PENDLETON	1,082	2,242	1,993	2,830
PORTER	1,066	1,553	1,202	1,880
ROYALTON	2,122	3,385	1,878	3,970
SOMERSET	1,047	1,008	924	1,170
WHEATFIELD	5,952	7,391	7,094	10,810
WILSON	1,218	1,055	890	1,280
NIAGARA CO. TOTAL:	100,107	95,263	87,137	115,670

GRAND TOTAL:	460,707	468,719	473,720	545,920
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* includes Indian Reservation

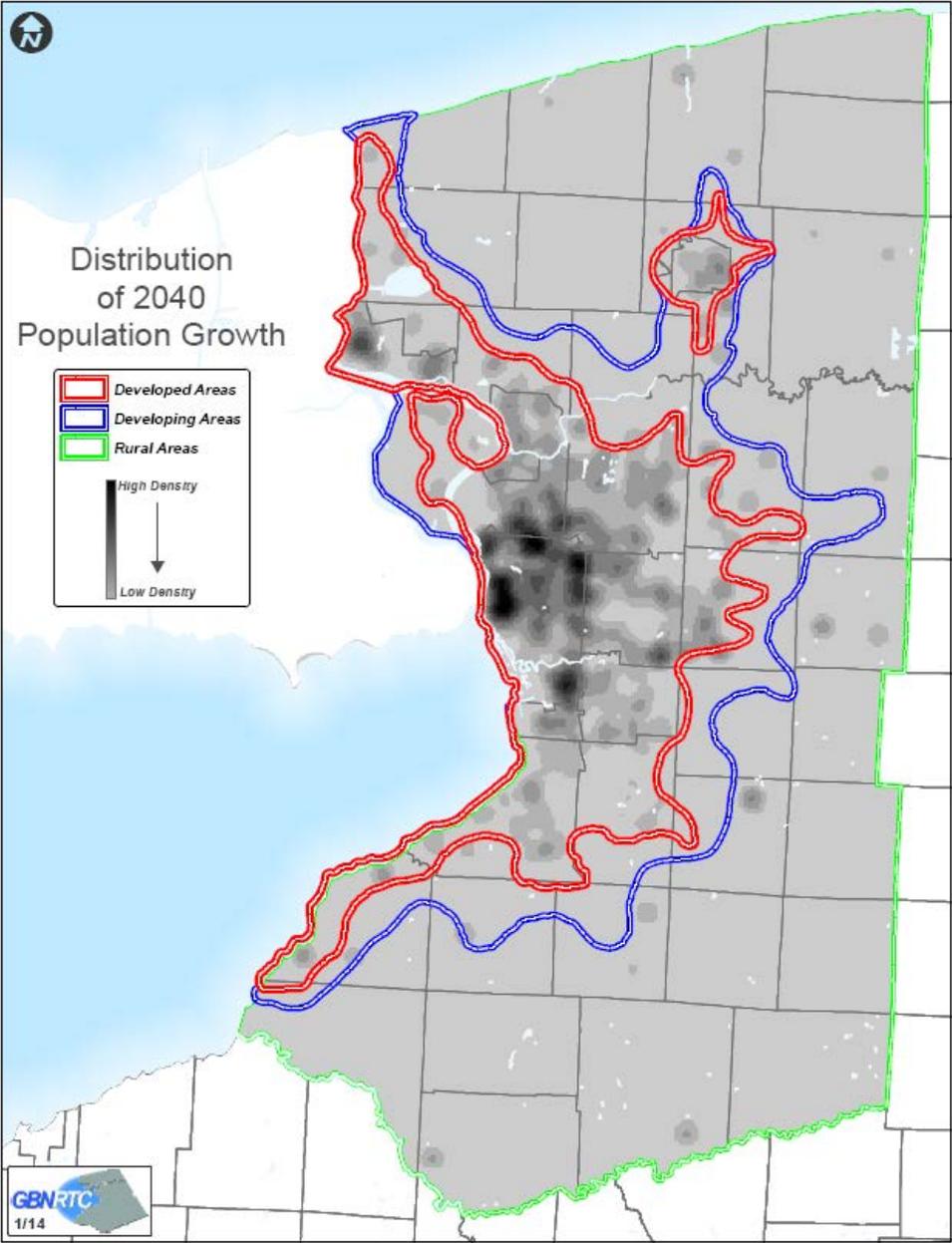
GRAND TOTAL:	638,066	650,819	638,758	714,050
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* includes Indian Reservation

Regional Development Patterns

A mapping exercise was undertaken to illustrate how the 2040 forecasts have been geographically dispersed in the region and to facilitate a comparison with the *Urban Focus Scenario* development patterns endorsed within the *Framework for Regional Growth*.

Using an overlay of the *Framework for Regional Growth's* Planning Policy Areas previously presented in this plan, the forecasted population growth to 2040 was mapped at the Traffic Analysis Zone (TAZ) level to produce the kernel density map below. This was further analyzed to identify the percentage of those population totals falling within each developed, developing, and rural areas.



2040 MTP



Metropolitan Transportation Plan Update

Locations of Future Population Growth	2040	Percentage
Total Growth in Developed Areas	152,736	79%
Total Growth in Developing Areas	15,251	8%
Total Growth in Rural Areas	25,532	13%
Total Regional Population Growth	+193,221	100%

These analyses reaffirm the regional growth assumptions that will guide how we make future land use decisions and how we invest our resources. These 2040 MTP forecasts promote the abandonment of development and investment patterns that have characterized the past several decades and maintain the Metropolitan Transportation Plans in place since 2030, which assume new development patterns of smart, sustainable, and efficient growth.

As stated previously, ongoing efforts by the *One Region Forward* research team are further refining community opinions and desires on alternative growth scenarios. Their results will eventually offer intriguing insights on community-driven development and future transportation investments. The GBNRTC intends to integrate these results into the next regional Metropolitan Transportation Plan update scheduled for 2015.



CHAPTER 6 - TRANSPORTATION SECURITY

Security became a separate planning factor to be considered in transportation plan development by the previous federal transportation enabling legislation, SAFETEA-LU. The 2035 Long Range Transportation Plan Update included a review and discussion of emergency and security plans and initiatives in New York State and the Buffalo-Niagara region. Continuing to recognize that planning has a role in critical elements of transportation security, the 2040 Metropolitan Transportation Plan Update revisits statewide, regional, and local emergency and security plans to ensure the most relevant information is incorporated into the Plan.

State-Level Initiatives

Strategies for a New Age: New York's Transportation Plan for 2030 identifies security as one of five Priority Results Areas. The Plan is centered on users' expectations of the State's transportation system and specifically mentions security for the traveling public, the State's international entry ports, and all cargoes entering or exiting New York State.

NYSDOT's plan identifies a number of strategies related to improving security of the State's transportation system by coordinating emergency preparedness and response strategies to preserve users' ability to efficiently use the transportation system.

- Develop vulnerability and risk assessments for transportation facilities based upon the potential cost of an event (loss of life, property damage, projected cost of clean-up and recovery, projected cost of long-term health or economic consequences).
- Identify specific facilities that are most essential or critical to the functioning of transportation or other crucial infrastructure sectors.
- Mitigation efforts among and between all transportation operators will be undertaken to implement strategies that minimize risk of damage to their at-risk facilities and vehicles.
- Federal and state agencies with security responsibilities will ensure that all transportation operators and local governments coordinate in planning for the response to an event.
- Coordinate and work collaboratively with the New York State Office of Cyber Security and Critical Infrastructure Coordination (CSCIC) and establish other partnerships to ensure cyber readiness, resilience, and response efforts
- Real-time information exchange and collaboration will be promoted between and among transportation operators and the public sector.
- Coordinate and work with the appropriate State and Federal partners to support efforts at all levels so that transportation considerations are addressed where appropriate.

NYSDOT Security Goal

Develop, maintain, and implement effective incident/emergency management practices that will address preparedness, mitigation, response, and recovery for both natural and man-made disasters.

The major transportation facilities at the greatest risk have been identified (airports, ports, border crossings, bridges, railroads, subways and passenger rails/stations). However, all facilities will be considered in the State's security plans. Border crossings with Canada, ports and waterways, and general aviation airports will receive continuous attention. Specific programs to protect high risk facilities will be implemented, continuously monitored for their effectiveness, and improved as necessary. Security responsibilities at the State's border, ports, waterways, and airports are also discussed and are summarized below:

Border Security

Border crossing security is a cooperative and coordinated strategy, including the Canadian and United States federal governments and the owners of the border facilities. Because truck traffic potentially poses a major threat to security, effort will be directed at programs that modernize cargo pre-clearance and freight security procedures. New technology can consolidate and automate rail and truck border processing to enhance security and economic stability.

The security of bridges and tunnels is an ongoing concern. When official security threat levels or intelligence necessitate extra security measures such as additional truck inspections, balancing and mitigating the adverse impacts to traffic flow must be coordinated with State and Federal homeland security and law enforcement agencies. This will help to ensure that cargoes are safe while expediting or eliminating processing delays for haulers who do not present a security threat. Coordination between the State's Department of Transportation and the Office of Homeland Security will also help ensure all transportation operators adopt appropriate security measures for each of their vulnerable facilities. Any reasonable measure that can reduce or eliminate long delays at the crossings for most carriers and still enhance cargo security will be pursued.

Port and Waterways

Although major responsibility for ensuring the security of ports and waterways rests with the federal government, much of the focus on improving security at the ports in the future will be on improved coordination between multiple jurisdictions and ensuring that scarce resources are allocated to the port facilities facing the highest risks. The ports within New York State are in compliance with the Maritime Transportation Security Act which required vulnerability assessments of high risk vessels and port facilities; development of security plans that include passenger, vehicle, and baggage screening procedures; and establishment of security patrols, restricted areas, personnel identification procedures, access control measures, and installation of surveillance equipment. Compliance plans that will draw upon the latest surveillance, screening, and technology strategies to ensure the security of vessels, cargoes, and other vulnerable facilities have also been developed.

Airports

While New York State's major commercial airports are providing enhanced security under the Federal Transportation Security Agency, the State's more than 508 public- and private-use airports (general aviation) are also initiating actions appropriate to their vulnerability to security threats. State law requires that general aviation airports document their security procedures in a written plan that generally follows guidance from the Transportation Security Administration and NYSDOT regarding "best practices". NYSDOT will encourage initiatives that assist municipalities and airport owners in airport

security assessment and will continue to facilitate the development of airport security plans that enhance airport security as an essential element of the Anti-Terrorism Preparedness Act.

Because transportation is vital to the Nation's and the State's well being, New York State will continue to pursue improved security at priority facilities while simultaneously meeting the growing mobility demands of its customers. These efforts require a multifaceted approach in order to incorporate emerging security expertise and technologies. They also need to remain flexible in order to respond to new potential threats. It is essential that all transportation operators support these efforts while continuing to promote improved transportation services for all users. New York State is committed to working in partnership with Federal and local authorities to carry out the necessary security planning and to implement coordinated, prudent actions by all transportation operators.

Regional, County, and Local Initiatives

Locally, emergency management and evacuation planning is led by county, municipal, and local governments that are responsible for preparing evacuation plans for their respective areas in case of natural and man-made disasters. Both Erie and Niagara Counties have updated comprehensive emergency management plans, which outline emergency preparedness activities. These plans are discussed below:

Erie County

In Erie County, the Civil Defense/Disaster Preparedness Division executes the County's plan for civil defense and disaster relief before, during, and after any type of natural disaster, man-made disaster, or war-time situation. The Division's activities are mandated by State Law, with the County maintaining control over certain levels of services.

The Civil Defense/Disaster Preparedness Division goals are to:

- Identify, assess, and prioritize local and regional vulnerabilities to emergencies or disasters and the resources available to mitigate, respond to, or recover from them.
- Provide that the County and local governments will take necessary actions to prevent and mitigate the effects of disasters and be prepared to respond to, and recover from, them when an emergency or disaster occur.
- Provide for the utilization of all available public and private resources to protect against and deal with an emergency or threatening situation.
- Provide for the utilization and coordination of state and federal programs to assist victims of disaster, and prioritize responding to the need of the elderly, disabled, poor, and other groups that may be especially affected.
- Provide for the utilization and coordination of state and federal programs for recovery from emergency or disaster situations with particular attention to the development of a mitigation action program.

In 2001, following the attacks on the World Trade Center and the Pentagon, Erie County established a Response Readiness Emergency Preparedness Team. The Team's mission is to design and implement

plans for training, equipping, and positioning the County's emergency responders, as well as the citizens of Erie County and the surrounding areas, for an effective response to natural or man-made disasters of all types.

Since that time the Erie County Civil Defense/Disaster Preparedness Division developed a Multi Hazard Mitigation Plan which is currently in the update process, marking the first formal update since its inception. A Hazard Mitigation Plan contains an evaluation of the hazards a jurisdiction is susceptible to, and the extent to which these events will occur. The Plan identifies an area's vulnerability to the effects of the natural hazards typically present in a certain area, as well as the goals, objectives, and actions required for minimizing future loss of life and property damage as a result of hazard events. The primary purpose of mitigation planning is to systematically identify policies, actions, and tools that can be used to implement those actions. Erie County recognized the benefits of having a plan in place early on, and took the initiative to prepare its initial Hazard Mitigation Plan. Communities that do not have a FEMA-approved hazard mitigation plan in place would not be eligible to apply for FEMA mitigation project grants under programs such as the Flood Mitigation Assistance Program (FMA), Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Grant Program (PDM). To maintain their eligibility, the plan must be updated and re-approved by FEMA. While disasters cannot be prevented from occurring, continued implementation of the hazard mitigation plan over the long-term will gradually, but steadily, lessen the impacts associated with hazard events across the county.

Niagara County

A comprehensive approach to emergency management has been adopted in Niagara County emphasizing the interrelationship of activities, functions, and expertise necessary to deal with emergencies. The Niagara County Comprehensive Emergency Management Plan (CEMP) was prepared by county officials working cooperatively with state, federal, and private agencies in a planning effort coordinated by the NYS Emergency Management Office. The development of this plan included an analysis of potential hazards and an assessment of the existing capabilities in the county to deal with potential hazards. The Plan outlines the actions to be taken by the county before, during and after emergencies. It provides general all-hazards emergency management guidance, divided according to three major components of emergency management:

1. Prevention and Mitigation - identifying and prioritizing likely hazards as well as response resources at risk and the appropriate measures to take to prevent or mitigate the effects of disasters.
2. Response - stipulating effective processes and policies for responding to potential disasters through the utilization and coordination of all of the County's response capabilities.
3. Recovery - providing processes and policies for recovery and redevelopment after disasters, including the utilization of State and Federal programs for emergency recovery.

The purpose of CEMP is to minimize or prevent the effects of disasters and enhance the efficiency of response and recovery operations. Using existing organizations and lines of authority it provides a framework to help the county meet its responsibilities to prevent, protect against, respond to, and

recover from emergency events. The CEMP defines roles and responsibilities in prevention, response, and recovery, including a detailed chain of command to be followed during an emergency. Emergency management responsibilities for County departments and agencies are outlined in the plan and assignments have been made within the framework of current department and agency capabilities and existing organizational responsibilities. It outlines the policies, procedures, and capabilities, which may be required to coordinate the effective response by an appropriate combination of federal, state, local, tribal, nongovernmental, and/or private sector entities to save lives and minimize damage, and provide the basis for long-term community recovery and mitigation activities.

Niagara County Emergency Services is the coordinating office for all emergency management activities. According to the CEMP, Emergency Services is “responsible for assisting individual towns and villages within Niagara County if they have fully committed their resources and are still unable to cope with any disaster.” When local departments or agencies are unable to adequately respond, Emergency Services may be asked to assume a leadership role. Local government agencies and County departments work together to prevent, respond, and facilitate the recovery process for significant disasters. The CEMP is an ongoing process intended to enhance Niagara County’s ability to manage emergency situations if a local municipality is unable to handle an emergency. The County is committed to reviewing and improving the CEMP periodically in order to better protect the citizens who will rely on it.

Niagara Frontier Transportation Authority (NFTA) Public Transportation Security Plan

The NFTA Public Transportation Security Plan was developed to assess, document, and improve capabilities for responding to emergency situations and to better coordinate these efforts with other emergency response organizations in a manner that best protects both the traveling public and the transit system facilities and equipment.

Niagara International Transportation Technology Coalition (NITTEC)

The Niagara International Transportation Technology Coalition (NITTEC) is an organization of fourteen transportation and international border crossing agencies in Western New York and Southern Ontario. . . NITTEC acts as a Transportation Management Center for the bi-national region, and coordinates the ITS services it provides to agencies, jurisdictions and the general public. Members work together to coordinate transportation facilities and operations, taking advantage of new technologies as appropriate and sharing information with each other and the traveling public. It provides real time traffic and roadway information to improve traffic flows and enhances emergency assistance for motorists using the transportation system. Real time information reduces secondary incidents and improves response time by police and emergency vehicles. NITTEC has been recognized as a model for metropolitan areas in New York State.

The potential for NITTEC to possibly play a role in transportation security is included as an “opportunity” within the NITTEC Strategic Plan organizational self-assessment SWOT (strengths, weaknesses, opportunities, threats) analysis. The Strategic Plan was developed to guide NITTEC toward the realization of a renewed vision of mobility and opportunity in the Buffalo-Niagara region over the next decade of the 21st century and beyond. As the Strategic Plan is implemented, and agencies and the



public respond to its mission and strategies, a continuing dialogue is anticipated on the role NITTEC can play in the region’s transportation future.

Transportation Inventory

The GBNRTC maintains an inventory of the region’s transportation network, including the location of streets and highways, bikeways, transit routes, airports, bridges, railroad lines, docking facilities, and ports.

Possible Role of the MPO

MAP-21 includes security in the scope of the statewide, metropolitan, and nonmetropolitan transportation planning processes to the extent that they will provide for the consideration and implementation of projects, strategies, and services that will “increase the security of the transportation system for motorized and nonmotorized users.” The specific action or actions a particular State or MPO might consider depends on the circumstances unique to the state or region, the transportation system and the level of risk.

The issue paper entitled *The Role of the Metropolitan Planning Organization (MPO) in Preparing for Security Incidents and Transportation System Response* prepared by the Georgia Institute of Technology, tackles the question of what roles MPOs could serve in security/disaster situations. The report was prepared for the USDOT’s Transportation Planning Capacity Building Program and builds upon national research on the subject. The report provides a number of actions an MPO might take to further incorporate transportation security into the planning process at each phase of a security/disaster incident. These actions are included in the following table below:

Stage of Incident	Possible MPO Role
Prevention	<ul style="list-style-type: none"> ■ Fund new strategies/technologies/projects that can help prevent adverse events ■ Conduct vulnerability analyses on regional transportation facilities and services ■ Secure management of data and information on transportation system vulnerabilities ■ Provide a forum for security/safety agencies to coordinate surveillance and prevention strategies ■ Fund (and perhaps coordinate) a regional transportation surveillance system that can identify potential dangers prior to their occurrence ■ Coordinate drills and exercises among transportation providers to practice emergency plans ■ Coordinate with security officials in development of prevention strategies ■ Hazardous route planning ■ Disseminate (and possibly coordinate) research on structural integrity in explosion circumstance and standard designs
Mitigation	<ul style="list-style-type: none"> ■ Analyze the transportation network for redundancies in moving large numbers of people (e.g., modeling person and vehicle flows with major links removed or reversed, accommodating street closures, adaptive signal control strategies, impact of traveler information systems, strategies for dealing with “choke” points such as toll booths) ■ Analyze the transportation network for emergency route planning/strategic gaps in network ■ Provide forum for discussions on coordinating emergency response

	<ul style="list-style-type: none"> Disseminate best practices in incident-specific engineering design and emergency response to agencies Disseminate public information on options available for possible response Fund communications systems and other technology to speed the response to incident
Monitoring	<ul style="list-style-type: none"> Fund surveillance and detection systems Propose protocols for non-security/safety agency response (e.g. local governments) Coordinate public information dissemination strategies Fund communications systems for emergency response teams and agencies
Recovery	<ul style="list-style-type: none"> Conduct transportation network analyses to determine most effective recovery investment strategies Act as a forum for developing appropriate recovery strategies Fund recovery strategies Coordinate stockpiling of strategic road/bridge components for rapid reconstruction
Investigation	<ul style="list-style-type: none"> Provide any data collected as part of surveillance/monitoring that might be useful for the investigation
Institutional Learning	<ul style="list-style-type: none"> Act as forum for regional assessment of organizational and transportation systems response Conduct targeted studies on identified deficiencies and recommending corrective action Coordinate changes to multi-agency actions that will improve future responses Fund new strategies/technologies/projects that will better prepare region for next event

Common themes for possible MPO roles in transportation security in current research continue to be forum building and agency coordination, dissemination of information, funding and network analyses.

Additional research examining similar potential roles can be categorized into seven topic areas related to security. A summary of these areas with sample goals and activities are listed below.

General transportation planning security resource

- Strengthening coordination across a range of professions by fostering communication
- Linking security planning and long-term transportation planning more closely
- Supporting a resilient and well-maintained transportation network, and drawing on the MPO's technical resources
- Preparing emergency planning literature based on the experiences of those participating in emergency preparedness

Providing a forum for interagency coordination to enhance emergency preparedness

- Facilitating development of comprehensive regional/multi-jurisdiction hazard mitigation and emergency coordination plans
- Conducting training and exercises to building region wide consensus on disaster mitigation goals and discuss potential mitigation actions reducing vulnerabilities in the region's response efforts
- Providing a forum for the creation and implementation of new ideas related to homeland security and identification of the appropriate channels for funding regional projects
- Hosting emergency transportation operations preparedness and response workshops

2040 MTP



Metropolitan Transportation Plan Update

- Integrating traffic management centers across regional borders in cooperation with federal intelligence agencies
- Creating public safety committees that focus on homeland security and emergency preparedness
- Modeling Emergency Response and Evacuation – focusing on disaster management and examining the efficiency and effectiveness of public evacuation scenarios in response to natural, technological or man-made disasters and malicious acts
- Planning for recovery, financing and system adaptation – focusing on enhancing resilience and the ability to rapidly recover and restore service after disruptions due to disasters
- Application of community and context sensitive solutions in security design
- Engaging the public on security issues from preparedness to evacuation to recovery
- Border security coordination

CHAPTER 7 - TRANSPORTATION SAFETY



National Policy

The federal funding and authorization bill (MAP-21) that governs United States' federal surface transportation spending requires a performance-based approach be incorporated into long-range planning and short-term programming processes. The law requires the United States Department of Transportation (USDOT) to determine performance measures for seven (7) thematic areas in consultation with individual state's Department of Transportation (DOT), Metropolitan Transportation Organizations (MPOs), and other stakeholders. Performance measures will transform the federal-aid highway program and provide a means to the most efficient investment of federal funds by refocusing on national transportation goals, increasing the accountability and transparency of the federal-aid highway program, and improving project decision-making through performance-based planning and programming. The USDOT was directed to promulgate rulemaking within 18 months of MAP-21 enactment (January 2014). State DOTs must then set performance targets for the measures identified by USDOT within a year of the final rulemaking (January 2015). MPOs must establish performance targets coordinated with state DOTs and transit providers that reflect national performance goals and measures within 180 days of the state DOT's or transit agency's establishment of performance targets (mid 2015).

The American Association of State Highway & Transportation Officials (AASHTO) developed the Standing Committee on Performance Management (SCOPM), which is a task force on national performance measure development, coordination, and reporting. The task force will collaborate with USDOT and the Federal Highway Administration (FHWA) to meet the new federal performance management requirements, develop a strategy for communicating national performance results to Congress and the public, and serve as a single clearinghouse for the recommended national-level performance measures identified by the AASHTO performance management subcommittees for each performance measure area. The subcommittees include AASHTO leaders and representatives with in-depth knowledge of the technical aspects in each area.

MAP-21 Safety Performance Management

Goal – To achieve reduction in fatalities and serious injuries on all public roads.

Requirements – USDOT will promulgate rulemaking and identify performance measures by Jan. 2014.

- State DOTs will set performance targets by January 2015 and the USDOT will evaluate appropriateness.
- Report serious injuries and fatalities per Vehicle Miles Traveled (VMT) and serious injury and fatality counts.
- First Report is due four years after MAP-21 enactment (July 2016) and every two years thereafter; USDOT to evaluate progress.

State and MPO Long-Range Transportation Plans will include System Performance Reports that describe and track the progress made toward achieving performance targets. The State Strategic Highway Safety Plan (SHSP), which is to be submitted to USDOT in FFY2014, must now include the following:

- USDOT-required Performance measures.
- Funding strategies to complete projects and activities that will allow performance targets to be met.
- Data and analysis supporting the effectiveness of proposed countermeasures.
- Description of any federal, state, local, or private funds the State plans to use.
- Report on State's success in meeting safety goals and performance targets set forth in the previous highway safety plans.
- An application for any additional grants available to the State.

The SCOPM has made recommendations to the FHWA on guiding principles regarding national-level performance measure development and implementation, and it has offered guidelines on approaches to rulemaking with respect to determination of "significant progress" for the Highway Safety Improvement Program (HSIP) and National Highway Performance Program (NHPP) program areas. Additionally, SCOPM has identified the need for additional guidance on national-level performance measure target setting. The SCOPM Subcommittee on Safety Management has recommended the development of a limited number of national performance measures, which include:

1. **Number of Fatalities** – Five-year moving average of the count of the number of fatalities on all public roads for a calendar year.
2. **Fatality Rate** – Five-year moving average of the *Number of Fatalities* divided by the *Vehicle Miles Traveled* (VMT) for a calendar year.
3. **Number of Serious Injuries** – Five-year moving average of the count of the number of serious injuries on all public roads for a calendar year.
4. **Serious Injury Rate** – Five-year moving average of the *Number of Serious Injuries* divided by the *Vehicle Miles Traveled* (VMT) for a calendar year.

Existing Safety Performance Measures

The recommended performance measures one through three, listed above, are currently contained (with a three-year moving average) in the New York State Governor's Traffic Safety Committee (GTSC) Highway Safety Strategic Plan (HSSP). These are used to track the overall statewide highway safety program under the Federal Section 402 State and Community Highway Safety Grant Program and the new MAP-21 Section 405 National Priority Safety Program. The HSSP lists a total of 22 performance measures distributed among eight (8) program areas.

The New York State Department of Transportation's Strategic Highway Safety Plan uses the number of fatalities (not a moving average) and the fatal-crash-rate per 100 million VMT for setting statewide performance targets related to the Federal Section 1401 Highway Safety Improvement Program. The

2040 MTP



Metropolitan Transportation Plan Update

SHSP contains a total of 141 performance measures distributed among seven traffic safety emphasis areas.

The National Highway Traffic Safety Administration (NHTSA) and the Governor’s Highway Safety Association (GHSA) developed a set of 14 safety performance measures that, if appropriate, may be adopted by state DOTs, MPOs, and other transportation safety stakeholders for both the state and regional transportation planning processes. They include the recommended performance measures one and two in the list above.

Incorporating Safety Performance Measures and Target Setting

The regional safety performance targets that are relevant to member agencies’ safety issues and policy/strategy initiatives, and that reflect national measures and goals, should be coordinated through a 3C (continuing, cooperative, and comprehensive) planning process by midyear 2015. A review of existing and newly developed regional crash and safety analysis data will support candidate performance measure identification, sharing of feedback, and selection of regional performance measures to be incorporated into the 2050 Metropolitan Transportation Plan scheduled for 2015.

The table below summarizes key considerations of the AASHTO-recommended national safety performance measures.

Consideration	Safety Performance Measures			
	# Fatalities	Fatality Rate/100 Million VMT	# Serious Injuries	Serious Injury Rate
Is measure focused?	Yes		Need a consistent definition of serious injury.	
Has measure been developed in partnership with stakeholders?	AASHTO Standing Committee On Performance Mgt. SCOPM Subcommittee On Safety Mgt. GHSA - Governors Highway Safety Association CVSA - Commercial Vehicle Safety Alliance NACE-National Association of County Engineers			
Is measure maintainable to accommodate changes?	Yes		Yes	
Can measure be used to support investment decisions, policy making & target setting?	Yes		Yes	
Can measure be used to analyze performance trends?	Yes		Yes	
Has the feasibility & practicality to collect, store & report data in support of measure been considered?	Yes		Yes	

The ability to measure safety performance on all public roads will be increasingly facilitated by state and MPO initiatives to improve traffic records systems, files, and programs. These parallel efforts will allow

2040 MTP



Metropolitan Transportation Plan Update

continued and comprehensive regional safety performance measurement to extend beyond the federal-aid network and take non-federal aid facility safety records into consideration.

Improved traffic data collection initiatives and continued collaboration have also laid the groundwork for expanding safety monitoring practices to include systemic approaches for measuring and addressing safety on a system-wide basis.



CHAPTER 8 - CONGESTION MANAGEMENT AND SYSTEMS OPERATIONS

Congestion Management Process

The Congestion Management Process (CMP) is a planning tool used by the GBNRTC to analyze the transportation system, as well as plan and implement travel demand reduction and operational management strategies to reduce or minimize congestion. The purpose of the CMP is to:

- Manage or reduce the existing congestion
- Efficiently utilize existing transportation facilities
- Maximize the mobility of persons and goods
- Keep future congestion problems from occurring

MAP-21 requires that transportation planning processes include a CMP. Following the passage of this legislation, the Federal Highway Administration (FHWA) began work on developing a Notice of Proposed Rulemaking (NPRM) for the provisions of the legislation—including establishment and implementation of national performance measures. The United States Department of Transportation (USDOT) is to identify national-level performance measures for performance management areas related to congestion/system performance, bridges, pavement condition, safety, emissions, and freight. The American Association of State Highway Transportation Officials (AASHTO) has an opportunity to inform the FHWA rulemaking process by providing the USDOT with a clear, defensible, and unifying statement on each performance measure. The AASHTO Standing Committee on Performance Management (SCOPM) created a Task Force on Performance Measure Development, Coordination, and Reporting to assist with the development of a limited number of national performance measures, help prepare AASHTO members to meet new federal performance management requirements, and to serve as a single clearinghouse for national-level performance measures recommended by AASHTO committees with in-depth knowledge of the technical aspects of each performance management area.

For the area congestion/system performance, the Task Force recommended the following performance measures relative to the National Highway Performance Program:

- **Annual Hours of Delay (AHD)** — the travel time above a congestion threshold (defined by State DOTs and MPOs) in units of vehicle -hours of delay on Interstate and NHS corridors.
- **Reliability Index (RI₈₀)** — the ratio of the 80th percentile travel-time to the agency-determined threshold travel-time.

The following table presents key characteristics and considerations for the national-level performance measures recommended for congestion/system performance.

Measure Consideration	Congestion/System Performance	
	<i>Annual Hours of Delay</i>	<i>Reliability Index</i>
<i>Is measure focused?</i>	Yes	Yes
<i>Has measure been developed in partnership with stakeholders?</i>	<ul style="list-style-type: none"> • AASHTO Subcmte. On System Operations & Maintenance • AASHTO Subcmte. On Traffic Engineering • AASHTO Special Committee on Transportation Security & Emergency Management 	
<i>Is measure maintainable to accommodate changes?</i>	Adaptable & can be adjusted to varying needs	
<i>Can measure be used to support investment decisions, policy making & target setting?</i>	Sensitive enough to account for the effects of many types of transportation investments, travel patterns & land use changes	
<i>Can measure be used to analyze performance trends?</i>	Well tested, widely used, robust & scalable in terms of time frames & different spatial & geographic areas	
<i>Has the feasibility & practicality to collect, store & report data in support of measure been considered?</i>	Several federal databases & private sector data can be used to compute both measures	

The SCOPM Task Force also provided additional details related to the definition, data, methodology, threshold setting, target setting, progress assessment, and reporting of each recommended performance measure.

The CMP is intended to place an emphasis on integration of the planning process as well as on the development of effective management and operation strategies. The CMP is intended to operate within, or in conjunction, with the planning process, which is the focal point for consideration of other factors, such as Clean Air Act requirements, transit, funding, land use scenarios, and non-motorized alternatives. The planning process also leads to decisions as to which projects are programmed and implemented.

A CMP is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. The CMP represents one component of the larger regional transportation planning process; it does not operate independently nor does it account for all aspects of planning. Congestion is not the only variable to be considered when determining transportation priorities. The role of the CMP is to provide public agencies and decision-

makers with a tool to examine congestion in greater detail. Additional federal requirements regarding the CMP are necessary in Erie and Niagara Counties, as the region is classified as a non-attainment Transportation Management Area (TMA) for ozone. The requirements include the following:

- All reasonable, multi-modal Transportation Demand Management (TDM)/Operations and Supply Management (OSM) strategies must be analyzed in corridors where capacity increase is proposed.
- If the analysis demonstrates that the TDM/OSM strategies cannot satisfy the need for additional capacity, the CMP should identify all reasonable strategies for managing the single occupancy vehicle (SOV) facility effectively.
- All identified strategies should be incorporated into SOV or committed to by the State and the MPO.
- Federal funds may not be programmed in a non-attainment TMA for any highway or SOV project unless based on approved CMP.

The process of congestion management is reasonably mature in the GBNRTC region, as the MPO specifically allocates resources in the transportation plan for congestion management projects. Additionally, as a demonstration project, an advanced regional simulation framework program is being developed to tier-down from the regional four-step travel model. This will be done through mesoscopic analysis, and all the way to microsimulation. This integrated approach will provide consistent and focused congestion management opportunities and operational analyses. Furthermore, a comprehensive regional operations agency, the Niagara International Transportation Technology Coalition (NITTEC), has been in place and actively functioning to coordinate system operations. This group includes all GBNRTC members as well as Canadian partners in a regional approach to systems operations efficiency. NITTEC has completed a Regional Concept of Transportation Operations (RCTO) document, which is fully embodied in the CMP, and an Integrated Corridor Management (ICM) demonstration to cooperatively put operations management practices in place in a major bi-national corridor.

CMP STEPS

The primary focus areas of the CMP are summarized in the following steps, with a flowchart graphic below.

- **Identify Performance Measures:** Performance measures are determined through a cooperative effort and are consistent with the NITTEC RCTO and ICM.
- **Collect Data:** A coordinated data collection program is in place, using existing data sources when possible as well as emerging and newer technologies.
- **Evaluation of Alternatives:** Expected benefits of the congestion management strategies are identified and evaluated based on the established performance measures.
- **Selection of Projects:** Consideration is given to demand management, traffic operational improvements, public transportation improvements, Intelligent Transportation Systems (ITS) improvements, and where necessary, additional system capacity. Implementation schedules and responsibilities are identified.
- **Monitor Improvements:** Compare before and after conditions using performance measures. Learn from the results and apply the appropriate findings to subsequent projects. Since the CMP is a process rather than a plan or a system, its steps include a feedback loop. The CMP will continually be revised based on findings from the monitoring process and from other planning efforts.

CONGESTION MANAGEMENT PROCESS
Flow Diagram



The GBNRTC has integrated some of the Regional Concept of Transportation Operations (RCTO) goals, objectives, and performance measures into its CMP. The RCTO was cooperatively developed through the member agencies of NITTEC, a comprehensive regional operations agency including all members of the MPO. The purpose of the RCTO is to provide a framework for regional agencies to improve regional transportation system performance by continuous collaboration.

Identification of Strategies

Several strategies have been introduced in the Buffalo-Niagara metropolitan area that will contribute to the more effective use and improved safety of existing and future transportation systems. These strategies are highlighted below:

CMP Operational Target Area Objectives

I Agency Coordination Objective

- Improve inter-agency and cross-jurisdictional coordination and collaboration during highway incidents

II Traveler Information Objective

- Increase accuracy of congestion information (travel time)

III Mobility Objectives

- Minimize travel delay
- Enhance transit operations
- Reduce travel time uncertainty

- Demand management measures include the GoodGoingWNY.com integrated ride-finding initiative that provides a mode-neutral website for transportation options. Two additional initiatives are in place and functioning. They include a car-share program (Buffalo CarShare) and a non-profit organization (Go Bike Buffalo), which identify the benefits of bike traveling in the region.
- Recognition of the need to engage local decision-makers in collaborative growth management led to the creation of the Framework for Regional Growth. This document, and subsequent implementation strategies, is intended to utilize a land use and transportation integrated approach to location decisions that would favorably impact the region in an economically, mobility, and environmentally appropriate manner.

- The potential to manage demand through alternate methods of truck fuel taxing was examined in a federal Value Pricing Pilot Project sponsored by the GBNRTC. This study identified changing truck fuel taxes from per gallon to vehicle miles traveled. The project will design a truck-based VMT fee that will meet multiple objectives:
 - Reduce congestion
 - Save energy
 - Reduce costs to collect truck fees
 - Provide a long-term base for transportation finance
 - Support a regional system and then a national system of congestion-based fees

Results indicated potential as a revenue source with some challenges in deployment in a single state or region. The study also tested opportunity to manage demand in a major corridor in the Buffalo-Niagara region by offering trucks an off-peak discount. The modeled results indicated some shift in demand, but not substantial changes in level of service at this time.

- Traffic operational improvements include a Signal Systems Upgrade and Coordination effort that is consistent with the long-range plan (LRP). This action is providing a longer-term upgrade and coordination approach for signals, as well as completing near-term signal retiming to improve traffic flow. The following corridors have been synchronized and implemented:
 - Clinton Street from Michigan Avenue to Rossler Avenue (22 signals)
 - Elmwood Avenue from Tupper Street to Kenmore Avenue (33 signals)
 - Main Street from Bailey Avenue to I-290 Eastbound Ramps (15 signals)

A comparison of the “before/after” travel studies yielded the following improvements:

	Clinton St	Elmwood Ave	Main St
Average travel time (delay) decreased	up to 36%	up to 28%	up to 26%
Stops decreased	up to 66%	up to 59%	up to 44%
Fuel used decreased	up to 24%	up to 19%	up to 17%
System speed increased	up to 54 %	up to 41 %	up to 35 %

Other corridors that are ready for implementation include:

- Niagara Falls Boulevard from Eggert Road to Erie County Line
 - Sheridan Drive from Grand Island Boulevard to North Forest Road
- Public transportation improvements are a key component to congestion management. Strategic system refinements have been developed for the Niagara Frontier Transportation Authority (NFTA), the region’s primary public transportation provider, and are being incorporated into the system incrementally. A major study is currently examining expansion of services in the Buffalo / Amherst corridor in support of University at Buffalo three-campus expansion plans, and also the need to address traffic congestion in major corridors. Technology advances are being incorporated into a

demonstration corridor (Niagara Street) to integrate next bus notification and transit priority for traffic signal systems to enhance service reliability.

- Intelligent Transportation System (ITS) technologies, as related to the regional ITS architecture, are also an extremely important part in congestion management. The GBNRTC has endorsed the ITS Regional Architecture and it is used to guide project development. Over the next ten years, the Buffalo-Niagara Bi-National Regional ITS Architecture will be a roadmap for transportation systems integration for the metropolitan areas of Buffalo and Niagara Falls, as well as in the surrounding municipalities in New York and in the Niagara region in Ontario, Canada. The Buffalo-Niagara Bi-National Regional ITS Architecture has been developed through a cooperative effort by the region's transportation agencies, covering all surface transportation modes and all roads in the region. The Buffalo-Niagara Bi-National Regional ITS Architecture represents a shared vision of how each agency's systems will work together in the future, sharing information and resources to provide a safer, more efficient, and more effective transportation system for travelers in the region. The Buffalo-Niagara Bi-National Regional ITS Architecture is an important tool that is used by:
 - Planning agencies/organizations to better reflect integration opportunities and operational needs into the transportation planning process.
 - Operating and implementing agencies to recognize and plan for transportation integration opportunities in the region.
 - Other organizations and individuals that use the transportation system in the region.

Operational Integration and Planning

The GBNRTC works closely with NITTEC to integrate planning and operations in the region. The common strategies, objectives, and performance measures are cooperatively reviewed and then appropriate projects are sequenced. Data integration is an important element of the relationship, and the MPO modeling tools can be deployed to test various recommended strategies and scenarios.



The GBNRTC also collaborates with NITTEC to coordinate data needs and to assess costs and benefits of implemented projects. Reports that summarize and track congestion mitigation strategies are typically produced in the annual planning cycle. These documents enumerate projects within the CMP strategy categories listed below. This list of strategies is not meant to be all inclusive, particularly when a package of improvements is combined to address a specific congestion problem that has been identified or when more than one category applies to the components of a single project.

CMP Strategies

- Transportation Demand Management
- Traffic Operational Improvements
- Parking Management Actions
- Promote High Occupancy Vehicle Use
- Promotion of Car and Van Pool Actions

- Transit Capital and Operational Improvements
- Advanced Public Transportation System Applications
- Bicycle and Pedestrian Facility Alternatives
- Growth Management and Congestion Pricing Applications
- Land Use Management Activities
- Access Management Techniques
- Incident Management Techniques
- Intelligent Transportation System (ITS) Applications



CHAPTER 9 - ENVIRONMENTAL PLANNING CONSIDERATIONS

In the development of transportation plans and transportation programs, federal transportation law requires metropolitan planning organizations, like the GBNRTC, to “consult, as appropriate, with state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation...” This important consultation process plays a critical role in establishing a dialogue with environmental agencies and creating a foundation for ongoing consultation and knowledge sharing regarding the potential environmental impacts of transportation planning on a regional, system-wide scale.

To begin the consultation process for the 2040 plan update, the GBNRTC reviewed a number of planning documents related to the region’s environmental resources, including the New York State Open Space Conservation Plan. These planning documents, along with brief descriptions and web links, are provided below. In addition to reviewing these plans, the GBNRTC gathered and mapped inventories of natural, cultural, and historic resources, which will be used to identify environmentally sensitive areas in the region.

Framework for Regional Growth

<http://www2.erie.gov/regionalframework/index.php?q=FrameworkPlan>

The Framework for Regional Growth for the Erie and Niagara Region, completed in 2006, documents an extensive inventory of the natural and cultural resources in the region. The plan defines two kinds of conservation overlays: a Natural Systems and a Heritage Assets Overlay. The Natural Systems Overlay identifies sensitive environmental resources—wetlands, floodplains, streams, and steep slopes—and adjacent lands. The Heritage Assets Overlay provides a preliminary definition of areas with unique concentrations of natural, recreational, scenic, and cultural resources. These areas include major lakefronts and riverfronts, the Erie Canal Corridor, and the Niagara Escarpment.

The following descriptions and maps are documented in the *Framework for Regional Growth*.

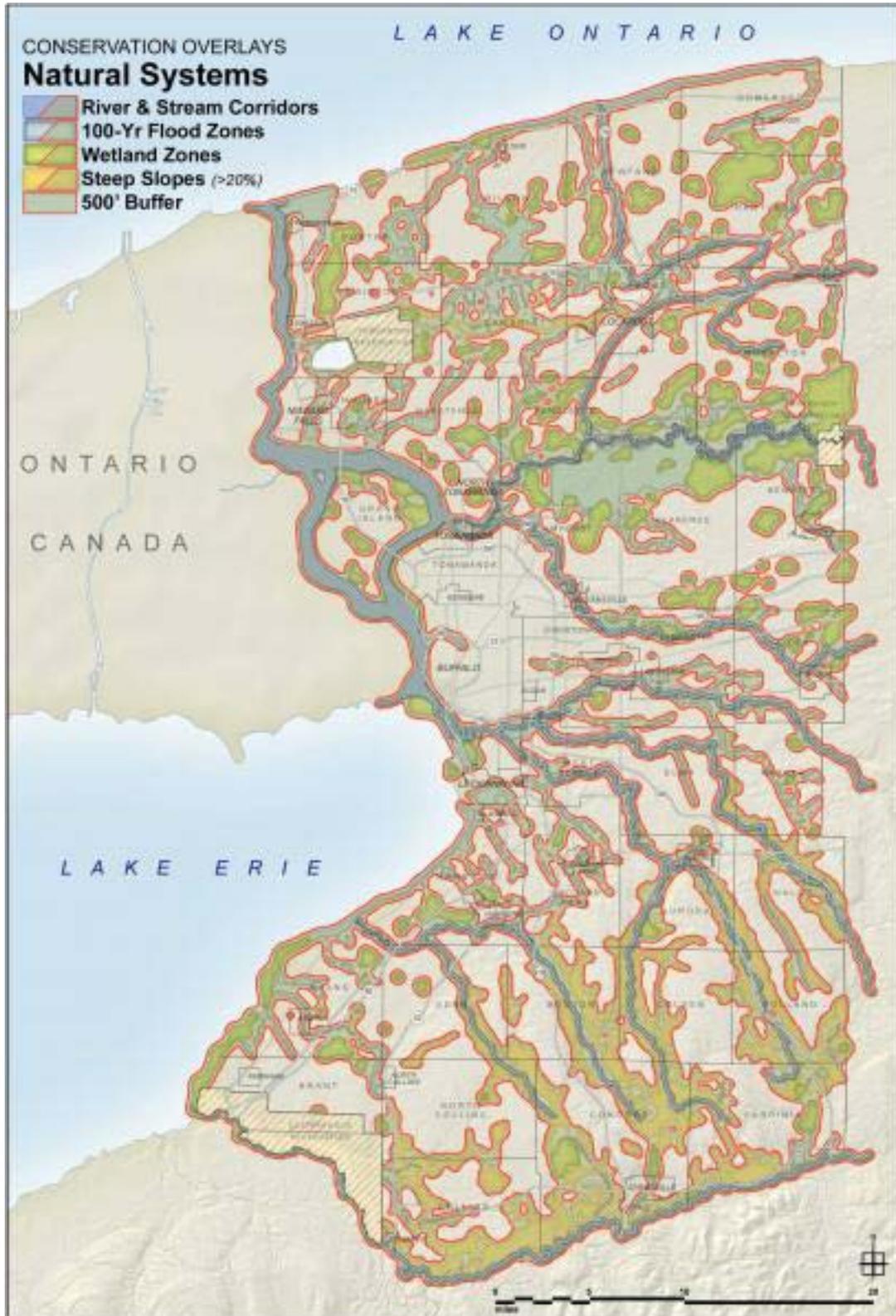
- **Rivers and Streams:** The Niagara River is the most significant river within the region due to its size and its flow to Niagara Falls (the Falls). It flows northward, draining Lake Erie into Lake Ontario, and serves as an international border. Below the Falls, the river has eroded a deep, rocky gorge, which now accommodates hydroelectric power plants on the US and Canadian sides. Cattaraugus Creek bounds Erie County on the south, while Tonawanda Creek separates Erie and Niagara Counties. Generally, the smaller streams and creeks in the region follow one of two patterns. In Erie County, streams and creeks typically originate in the hills to the southeast, begin flowing northward, and then turn west to the Niagara River or Lake Erie. In Niagara County, a series of small streams and creeks flow from above the escarpment, and then continue northward to Lake Ontario. The Erie Canal, which extends from Tonawanda Creek toward the east, is a series of man-made locks which step the canal down the Niagara Escarpment to Lockport. The construction of this canal interrupted the natural flow of numerous small creek and streams.

- **The Great Lakes:** Lake Erie and Lake Ontario are the largest and perhaps the most significant features in the region besides the Falls. They physically define the northern and southwestern features edges of the region and are also international borders between the US and Canada. While there is not great fluctuation in lake water levels, some shorelines are periodically threatened by erosion and wave activity.
- **Floodplains and Riparian Corridors:** Flooding is common along many of the region's rivers and streams. 100-year-old floodplains occur along every river and stream in the region. Large areas along the eastern stretch of the Tonawanda Creek are particularly prone to flooding. The fluctuating water level can be beneficial for wildlife habitats, but it poses significant constraints to development. These waterways are sensitive riparian corridors. There are excessive rates of surface storm water runoff.
- **Steep Slopes:** Following the topography of the southeastern portion of Erie County, the pattern of steep slopes (greater than 20% grade) exists within nearly every valley. The only additional site within the region that has significant and continuous areas of steep slopes is along the western portion of the escarpment.
- **Soils:** Prime agricultural soils are evident throughout much of the region. Particular locations exist along the Lake Ontario Shore, along the escarpment, on Grand Island, and in a very wide band from Tonawanda Creek, both south and west to the foothills in southern Erie County and Lake Erie.
- **Forest Coverage:** Large stands of woods exist in almost every part of the region, with the exception of the most densely urbanized areas, particularly around Buffalo; and throughout rural areas where prime agricultural soils exist. Many flood prone areas and riparian corridors also contain significant areas of forest cover that is greater than a quarter mile.
- **Wetlands:** Large expanses of wetlands exist throughout the region. Low-lying areas along streams and creeks, as well as some shoreline areas of Lake Erie and Lake Ontario, contain large expanses of wetlands designated by the US Fish and Wildlife Service and the New York State Department of Environmental Conservation (NYSDEC). In some locations, large continuous wetlands over 150 acres dominate the landscape. Other significant wetland areas exist where numerous clusters of smaller wetlands occur within 150-acre areas. Wetland areas are especially important for natural flood control and as wildlife habitats.

2040 MTP



Metropolitan Transportation Plan Update



2040 MTP



Metropolitan Transportation Plan Update



One Region Forward: Creating a Regional Plan for Sustainable Development

<http://www.oneregionforward.org/>

One Region Forward: A Regional Plan for Sustainable Development (RPSD) will, in part, advance the Framework for Regional Growth and outline how the Buffalo-Niagara region will coordinate federal, state, and local investments for long-term economic, environmental, and social sustainability.

Led by a broad-based consortium of public and private sector organizations, the effort to develop this federally recognized plan began in late 2012 and is being funded by a \$2 million grant from the US Department of Housing and Urban Development. The plan will produce a practical roadmap for improving transportation, land use, infrastructure, economic development, food access, housing, and our region's response to the challenge of global climate change. Work on the regional plan has been carefully coordinated with the existing and emerging framework of planning for Buffalo Niagara, including the Regional Economic Development Strategy, the "Buffalo Billion", a five-county sustainability plan funded by the New York State Energy Research and Development Authority, and numerous recent planning efforts undertaken at the local and county level.

The Framework for Regional Growth provided a compelling explanation of some of the problems we face in regard to sprawl without growth, inefficiencies in the provision of transportation and utility infrastructure, and issues of mobility and energy consumption in our transportation system. *The Framework* established basic policies and principles to guide the future growth and development of our region. The Regional Plan for Sustainable Development will dig deeper into these issues and provide more focused analysis on areas not fully explored in *The Framework*, specifically issues of housing, food access and justice, and climate change mitigation and adaptation.

The current schedule calls for a final draft plan to be completed by the beginning of 2015.

New York State Open Space Plan

http://www.dec.ny.gov/docs/lands_forests_pdf/osp09complete.pdf

Federal planning regulations require metropolitan planning organizations to compare transportation plans with state conservation plans. New York's Open Space Conservation Plan serves as the blueprint for the State's land conservation efforts and identifies a number of projects throughout the State aimed at protecting and preserving our natural resources. Below is a list of projects and activities identified in the Buffalo-Niagara region:

- **Ecological Communities/Habitat Diversity:** This project is intended to provide protection by easement or acquisition of habitats, which are necessary to maintain the ecological diversity of the area. The need may be to provide for flora or fauna, significant habitats, or geological sites. Specific examples include but are not limited to sites along the Niagara Escarpment; isolated woodlands; wetland, riparian, grassland and flood plain habitats.
- **Inland Lakes:** This project includes protection of undeveloped shoreline, associated wetlands, and critical tributary habitat. It also provides protection of water quality and important fish and wildlife habitats; and secures public access for recreational use.
- **Tonawanda Creek Watershed:** This project would serve to protect one of the major tributaries of the Niagara River, Tonawanda Creek and its four tributaries – Ellicott Creek, Mud Creek, Murder

Creek, and Ransom Creek. The Tonawanda Creek system faces threats from new development, bank erosion, and pollution and storm water runoff.

- **Buffalo/Niagara River Corridors:** This project will not only enhance access to Lake Erie and the Buffalo and Niagara Rivers, but it will also protect the vital wildlife habitats within the corridor.
- **Ecological Corridors:** This project includes the protection of existing lineal corridors and the creation of greenway corridors to link existing public lands, historic sites, and/or protect important fish and wildlife habitats. Examples include the Niagara River Corridor and abandoned railroad corridors.
- **Exceptional Forest Communities:** This acquisition project seeks to preserve the region's remaining forest remnants that exhibit old growth characteristics (e.g. Reinstein Woods).
- **Grassland Preservation and Restoration:** This project will serve to protect existing grassland habitats and also provide for the restoration of native grassland species. Emphasis will be placed on sites where protection of endangered or threatened grassland birds is necessary, as well as where additional nesting habitats could be provided for upland game, birds, and waterfowl.
- **Significant Wetlands:** This project includes the protection of significant natural wetland communities that provide ecological diversity of flora and fauna and protection of water quality. This is important for the recreational, educational, and ecological enhancement opportunities provided (e.g. The Hartland Swamp).
- **Urban Wetlands:** As a result of their size, habitat type, and quality, urban wetlands provide resident and migration habitats for wildlife, which would otherwise be absent from urban landscapes. The protection of wildlife habitats associated with urban wetlands often requires wetland acquisition or easement of adjacent properties (e.g. Tonawanda, North Tonawanda, Amherst, Cheektowaga, Lackawanna, Buffalo, and Niagara Falls).
- **Cultural/Historical:** This project includes the protection and preservation of distinctive properties that contribute to the cultural history of New York State and the inhabitants of the region.

Storm Water Management Plan

http://www2.erie.gov/environment/sites/www2.erie.gov/environment/files/uploads/pdfs/ECS_SWMP_2010.pdf

Stormwater is water from rain or melting snow that does not soak into the ground. It flows from rooftops, over paved areas, bare soil, and sloped lawns. As it flows, stormwater runoff collects and transports soil, animal waste, salt, pesticides, fertilizers, oil and grease, debris, and other potential pollutants. Rain and snowmelt wash pollutants from streets, construction sites, and land into storm sewers and ditches. Eventually, the storm sewers and ditches empty the polluted stormwater directly into streams and rivers with no treatment. This is known as stormwater pollution.

Polluted stormwater degrades our lakes, rivers, wetlands, and other waterways. Nutrients such as phosphorus and nitrogen can cause the overgrowth of algae resulting in oxygen depletion in waterways. Toxic substances from motor vehicles and careless application of pesticides and fertilizers threaten water quality and can kill fish and other aquatic life. Bacteria from animal wastes and improper connections to storm sewer systems can make lakes and waterways unsafe for wading, swimming, and fish consumption. Eroded soil is a pollutant as well. It clouds the waterway and interferes with the habitat of fish and plant life.

A number of communities in Erie and Niagara counties have joined together to develop a stormwater management program to protect our waterways and enhance our quality of life. The Western New York

2040 MTP



Metropolitan Transportation Plan Update

Stormwater Coalition is a forum for these regulated communities to share resources and work in partnership toward compliance with the United States Environmental Protection Agency (US EPA) Phase II Stormwater requirements.

The overall goal of the Coalition is to utilize regional collaboration to identify existing resources and develop programs to reduce the negative impacts of stormwater pollution. Forty-two municipal entities belong to the Western New York Stormwater Coalition.

WNY Regional Sustainability Plan

<http://www.sustainableny.com>

The WNY Regional Sustainability Plan was developed for Erie, Niagara, Chautauqua, Allegany, and Cattaraugus counties by the Regional Planning Consortium with input from key stakeholders and the public. The Plan was developed with a grant from the New York State Energy Research and Development Authority (NYSERDA) under the Cleaner, Greener Communities (CGC) program established by Governor Cuomo in 2011. This program was designed to empower local regions throughout the state to create plans for more sustainable communities that address the diverse needs of the individual region.

The WNY region partnered with public and private experts across a wide range of fields, along with community stakeholders, to lead the development of a regional sustainability plan and to promote projects that will significantly improve the economic and environmental health of our area. This plan is intended as a guide for integrated, sustainable solutions to improve our quality of life. These solutions include ideas for regional decision-making on land use, housing, transportation, infrastructure, energy, and environmental practices.

An important component to the resource agency consultant process is to begin a discussion of the types of potential environmental mitigation activities, and potential areas in which to carry out these activities, that may have the greatest potential to restore and maintain the environmental functions affected by the metropolitan transportation plan. The activities discussed below focus on potential policies, programs, or strategies, rather than on a project-specific level. They were developed as a part of the WNY Sustainability Plan.

2040 MTP



Metropolitan Transportation Plan Update

Land Use	Improve existing transportation infrastructure to better connect people to employment centers, schools, shopping, and transportation options.
Land Use	Connect recreational trails across municipal boundaries through enhanced multi-jurisdictional coordination.
Transportation	Develop new alternative transportation programs through strategic partnerships, particularly programs that increase options for under-served populations.
Transportation	Educate the public on existing transportation options through on-line resources, including regularly updated maps of all regional transportation options.
Transportation	Implement projects such as fueling and charging stations that would increase the number of Compressed Natural Gas (CNG) and electric-powered vehicles through private and public programs.
Transportation	Implement traffic efficiency and optimization projects while encouraging walking and biking.
Transportation	Prioritize transportation infrastructure within main streets and along important corridors.
Transportation	Implement Complete Streets projects throughout the region by providing technical assistance to create or modify comprehensive plans and zoning codes that integrate bike and pedestrian traffic into transportation infrastructure plans and projects by, for example, developing a “Complete Streets” zoning template.
Water Resources	Identify and implement green infrastructure practices (e.g. permeable pavement, raingardens, or bioretention ponds) that reduce excessive stormwater flows and runoff, which are a leading source of non-point source pollution.
Agriculture and Forestry	Develop and maintain links between water quantity and quality infrastructure and local land use planning (e.g. future development and land conservation).

The GBNRTC will continue to research and compile examples of effective practice on mitigation approaches, policy-level mitigation, and strategies for assessing mitigation outcomes, including performance measures.

Air Quality and Freight Initiatives

The ability of our transportation system to provide for and maintain the efficient movement of freight is important to the continuing economic health of the region and the nation. Domestic freight tonnage is anticipated to approximately double – and international freight tonnage expected to nearly triple – by 2035. This has led to a growing need to find new ways to address air quality concerns and greenhouse gas emissions associated with freight movements.

A wide range of strategies is available to mitigate these freight and air quality challenges, ranging from technological strategies such as engine retrofits and alternative fuels, to operations strategies such as congestion mitigation and idling reduction. The GBNRTC is currently working on and supports several freight initiatives to improve air quality in the region. Among these efforts are the following:

- Engaged in the “NY Gateway Connections Improvement Project” for the Peace Bridge and surrounding neighborhoods. The purpose of the project is to reduce the use of the local streets by interstate traffic and provide access to the existing Plaza at its current location. The "Draft Environmental Impact Statement" (DEIS) has been released by NYSDOT for review and describes the proposed design alternatives and examines the potential environmental (CO, particulate, greenhouse, MSAT) effects that may result from the action, and where adverse impacts are identified, it discusses measures to mitigate those effects.
- Support the Peace Bridge pre-clearance pilot program that allows U.S. customs officers stationed in Canada to pre-inspect trucks entering the United States. The project uses advanced technologies to access additional databases to reduce truck wait times (and idling) during inspection. If the pilot is successful, it could mean the number of commercial inspection booths will increase from seven currently on the U.S. side to 12 on the Canadian side.
- Promote and encourage trucking companies to participate in “Smart Way” transport partnership for long haul trucks to mitigate diesel emissions.
- Continue to support “Spare the Air” idle reduction efforts through the Peace Bridge Authority.
- Announce diesel retrofit grant programs as they become available. These programs provide financial assistance (grants/low interest loans) to trucking, shipping and rail operators for retrofitting existing (older) diesel engines to clean diesel standards to reduce emissions and improve fuel economy.
- Support a study of the Portage Bridge replacement project. This project will replace an obsolete and unsafe rail bridge that crosses the Genesee River in Portage NY. Once completed, the bridge will allow Norfolk Southern to increase Intermodal freight to and from PANYNY along their Southern Tier route. One of the major impacts of this project will be the reduction of equivalent trucks traveling the route. The project will also increase competition along the route with CSX, reducing costs and furthering the modal shift from trucking to rail.
- Support a study of the International Rail Bridge which connects Buffalo and Fort Erie. This single span is the sole rail freight connection between Western NY and Canada. Options will include addressing redundancy, allowing higher weights and allowing for double-stacked intermodal cars. The current bridge is old and has size and weight limitations. Permitting double-stacked Intermodal trains may allow Canadian railroads to unload their goods in the USA as opposed to

the current system of unloading in Brompton, Ontario and trucking (dray) across the Peace Bridge. This modal shift could result in substantially less idling - improving air quality.

- Support a study of the current and future rail traffic crossing the CP Draw Bridge. This is the main rail bridge that crosses the Buffalo River. CSX controls the bridge and at times makes non-CSX trains wait to cross. This results in substantial idling (with resulting air pollution), wastes fuel and adds to travel times. Options may include constructing a twin span to relieve congestion, delays and train idling.
- Promote an expansion of operations at the Port of Buffalo and utilize the Marine Highway to transport goods between US/Canadian/European marine ports including initiating Great Lakes Container service. Marine shipping is the cleanest, safest and most efficient way to move goods. However, Great Lakes freighters are ancient and will need retrofits or replacements to accomplish this goal possibly reviving the ship building industry.

Resource Agency Consultation

The list below represents federal, tribal, state, and local agencies the GBNRTC engaged as part of the agency consultation process for the metropolitan transportation plan update.

- | | |
|---|--|
| - US Environmental Protection Agency | - NYS Office of Parks, Recreation, and Historic Preservation |
| - National Park Service | - New York State Department of Health |
| - US Army Corps of Engineers | - Niagara County Sewer Water Conservation District (SWCD) |
| - US Department of Agriculture/Natural Resource Conservation Service | - Erie County SWCD |
| - National Marine Fisheries | - Erie County Environmental Management Council |
| - US Fish and Wildlife Service | - Seneca Nation of Indians |
| - NYS Department of Environmental Conservation | - Buffalo Niagara Riverkeeper |
| - NYS Department of Agriculture and Markets (Agriculture Protection) | - Preservation Buffalo Niagara |
| - NYS Department of Agriculture (NYS Soil and Water Conservation Committee) | - Buffalo Sewer Authority |
| - Department of State Coastal Resources | |

As part of the consultation process, the above agencies were contacted and asked to provide comments on the data resources and planning documents reviewed as part of the 2040 MTP Update. The acquired data was mapped to identify environmentally sensitive areas in the region as shown in the *Environmental Conditions* map on the following page. Among the questions the agencies were asked to comment on included:

- Are there any issues related to environmental conservation, land use and/or historic preservation we should consider when developing transportation plans for the region?
- Are you aware of any plans or initiatives in the Buffalo-Niagara region that should be considered when developing regional transportation plans and programs?

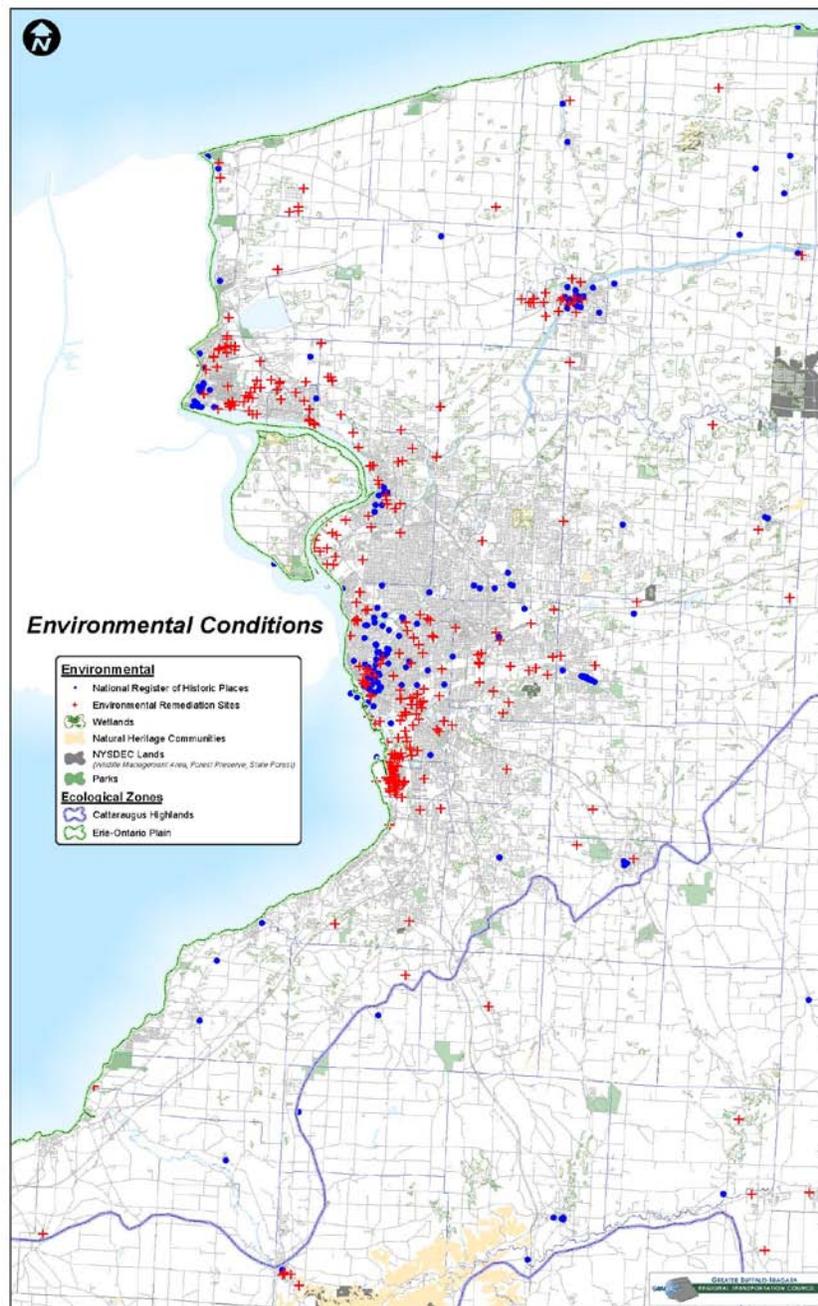
2040 MTP



Metropolitan Transportation Plan Update

- Do we have an accurate inventory of natural and historic resources in the Buffalo-Niagara region? Are there other data sources/inventories available that we should consider?
- Are there other environmental mitigation activities we should consider at a planning and policy level?

The comments received as part of the agency consultant process and responses will be documented in the Public Participation appendix of the 2040 MTP Update document.





CHAPTER 10 - THE CONSTRAINED PLAN

Revenue Forecasts

The availability of funds and related financial constraint is one input into the evaluation of the transportation system, but it is a primary consideration in the development of a realistic long-range metropolitan transportation plan. Fund limitations either define the degree to which objectives can be realized or emphasize the need for alternative or increased financial resources. Funding constraints also establish the need to prioritize actions and impact the time frame and implementation of planned projects. Along with the consideration of fund resources, is the reliability of expected costs produced for the various elements in the regional plan. Only by having consistent and reliable cost estimates for projects, programs, and actions can the plan be developed in a way that is realistic in terms of both resources and costs.

MAP-21 continues to reinforce the fiscal constraint aspect of any long-range metropolitan transportation plan that has been a part of any and all federal legislation since ISTEA. All transportation plans encompass a number of projects that are to be implemented by a variety of organizations, both public and private. All levels of government – federal, state, and local - have a role to play in maintaining and improving the transportation system. The fiscal constraint aspect of a plan requires a financial plan be prepared so that the resulting transportation plan can be used as a tool for the community to realistically establish priorities within the financial resources likely to be available. The plan must be fiscally constrained to the amount projected to be available to a region.

Anticipated Funding Resource Estimates

Projecting future revenues is a difficult undertaking because the revenues are derived primarily from federal, state, and local taxes as well as from programs with some revenues coming from user fees and private developers. Levels of funding from any of these sources fluctuate over time as a result of changing social or economic conditions. Federal and state programs generally depend upon legislative actions that may have higher or lower priority relative to other considerations. Local funds available to address transportation needs depend on local budget constraints that also consider competing needs. While projections of funding availability twenty-plus years into the future are not definite nor can be made with a high degree of probability, certain assumptions can be made to identify reasonable resource estimates needed for long-term planning.

Past plans have assumed that future funding estimates should be guided by a combination of historical trends, current funding program levels established by federal and state legislation, and any dedicated transportation funding programs. *The revenue forecasts updated in this document primarily represent a continuation of authorized funding levels available from federal and state sources.*

Utilizing these assumptions, the table on the following page provides the estimate of resources available for implementation of the 2040 Metropolitan Transportation Plan Update. It is broken up into three time periods, representing:

1. 2015-2018: The current Transportation Improvement Program (TIP) time period.
2. 2019-2025: The time period covering the next 7 years.
3. 2026-2040: The final 15-year time period covering through the Metropolitan Transportation Plan horizon year.

2040 MTP



Metropolitan Transportation Plan Update

The notes associated with the table describe the source for each category. It should be noted that for this 2040 Metropolitan Transportation Plan Update, both the revenues and costs begin in current dollars. The update of revenue forecasts started with NYSDOT-supplied federal/state revenue allocations for the first 5 years (TIP period) and historic trends for the other fund sources. Future year revenue forecasts used the level for the last year of the current TIP period (2018) and carried it forward with no escalation whatsoever between 2019 and 2040. This reflects the uncertainty in Congressional commitment to future federal funding levels and the critical state of the Highway Trust Fund.

2040 Metropolitan Transportation Plan Update Revenue Forecasts

FUNDING SOURCE	FY 14/15 - FY 17/18: 4 years (Millions \$)	FY 18/19 - FY 24/25: 7 years (Millions \$)	FY 25/26 - FY 39/40: 15 years (Millions \$)
Federal Aid Highway and Bridges ¹	\$194.443	\$340.275	\$729.161
Federal Aid Statewide Competition ²	\$53.196	\$93.093	\$199.486
Transportation Alternatives Program ³	\$5.902	\$10.328	\$22.131
Federal Aid Transit (5307,5337, 5339, 5310/5317) ⁴	\$87.102	\$152.428	\$326.632
Federal Discretionary (TIGER-like or equivalent)	\$20.000	\$35.000	\$75.000
(Fixed Guideway Capital Investment) ¹⁰	\$0.000	\$0.000	\$232.000
Federal Aid Total	\$360.643	\$631.125	\$1,584.410
State Dedicated Funding ¹	\$58.873	\$103.028	\$220.774
SDF Statewide Competition ²	\$26.978	\$47.212	\$101.169
State Marchiselli Funding ⁵	\$18.573	\$32.503	\$69.649
Local Match to Federal Aid ⁵	\$6.191	\$10.834	\$23.216
State Dedicated Transit (10%)	\$10.888	\$19.054	\$40.829
Local Match to Federal Aid Transit (10%)	\$10.888	\$19.054	\$40.829
Transit 88c Funding ⁶	\$18.303	\$28.143	\$60.306
NYS Dedicated Transit Funding ⁶	\$15.325	\$0.000	\$0.000
State Transportation Financing ¹¹	\$0.000	\$0.000	\$210.000
Local Transit Capital Financing ¹¹	\$0.000	\$0.000	\$77.000
NYSTA Contribution ⁷	\$180.000	\$315.000	\$675.000
Local (Non-Federal) Infrastructure Investments ⁸	\$48.000	\$84.000	\$180.000
State Local Hwy Aid to Municipalities (CHIPS) ⁹	\$65.973	\$115.452	\$247.398
Non-Federal Totals	\$459.992	\$774.279	\$1,946.169
TOTAL	\$820.634	\$1,405.404	\$3,530.579

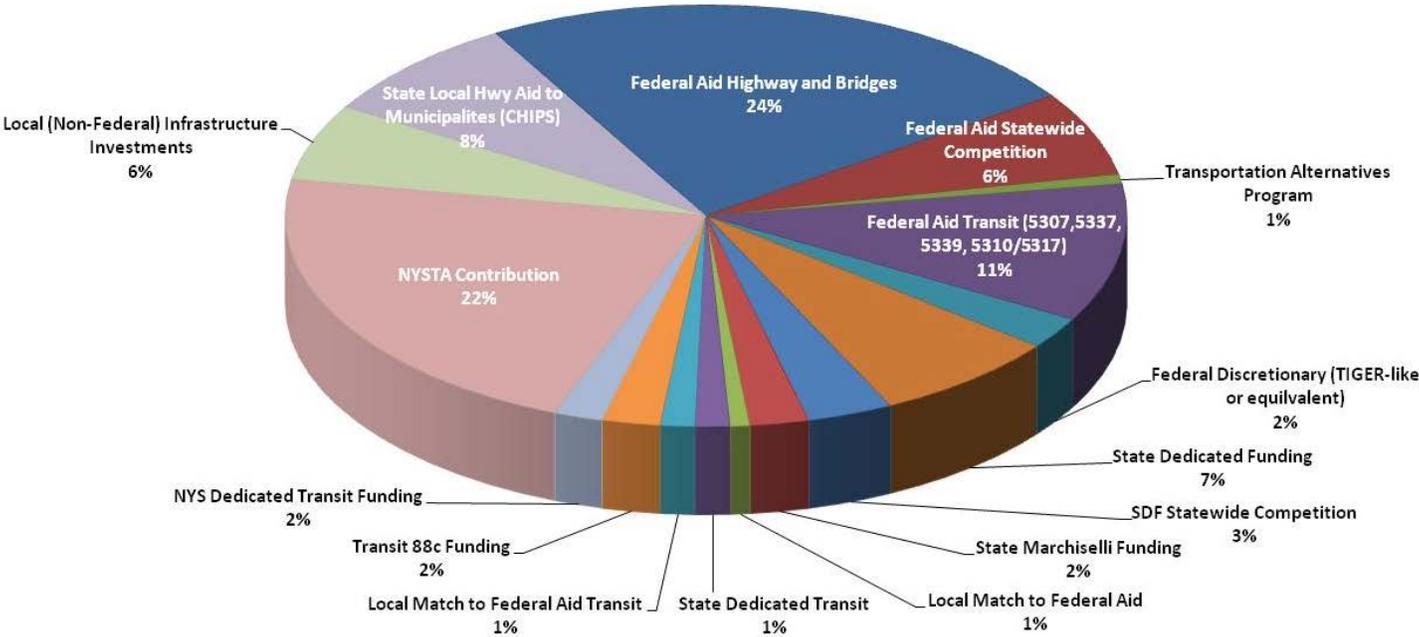
MTP Federal Funds (2015-2040)	\$2,576.177
MTP Non-Federal Funds (2015-2040)	\$3,180.440

Notes

1. Revised Allocation Source: NYSDOT Main Office 11/21/12 (MPO proportion of NYSDOT Region 5 total target allocation estimated at 60%)
2. 25% of Federal Funds Withheld (NHPP,STP,SDF) for Statewide Competition (Assume 7.3% returned to Reg 5; MPO share est. 60%)
3. T.A. estimate based on published GBNRTC sub-allocation of \$0.623268 for FFY 2013 + 60% of 'Anywhere, Small Urban, Rural' Reg 5 Target
4. Transit Estimates: New York State Department of Transportation: Public Transportation Bureau 1/31/13
5. Federal Aid funding match for Local Projects (40% share) estimated at 20% (15% assumed from State Marchiselli funding and 5% assumed from project sponsor)
6. NFTA Capital Program 2015-2019
7. NYSTA contribution above match assumed at \$45M annually
8. Local (non-federal) transportation investments assumed at \$12M annually as follows: Erie Co=5M, Niagara Co.=2M, N. Falls=2M, Buffalo=3M
9. CHIPS estimated at ~\$16.5M annually based on SFY 13/14 budget of total allocations to Bflo=4.1M; N. Falls=1.4M; Erie Co=8.8M and Niagara Co=2.2M
10. Federal Discretionary assumed at \$5M/year; Fixed Guideway Capital Investment assumed at \$232 M
11. Match and State Participation for Fixed Guideway Capital Investment

The pie chart below presents the funding resource estimates as shares of anticipated funding over the course of the next four years. Since no inflation adjustments were assumed in the succeeding years, these shares will remain relatively unchanged.

Funding Sources as Percentage of 2015-2018 Revenue Estimates



Additional Funding Sources

The fiscal constraint achieved in this plan relies upon the successful application and award of new federal discretionary funds to the region. Federal Transit Administration (FTA) Fixed Guideway Capital Investments for example, are an integral part of the *Transit Plan* financing strategy discussed later. To advance the projects on the *Illustrative Project Listing*, federal TIGER grants or equivalent new funding are assumed. Without these external resources, many desired projects will be unable to proceed.

Funding resources beyond those already in place will need to be investigated and considered. Finding new revenue sources is always challenging and support may only be achieved if there is a belief that the existing funds are being spent efficiently and providers of new financing are convinced that the benefits of the transportation investment exceed the additional cost. Some additional opportunities that could be considered include:

- User-based revenue sources
- Broadening the dedicated tax-based revenues
- Public-Private partnerships

Trends in Federal Funding

Previous long-range metropolitan transportation plans employed a strategy of combining specific project allocations with broad, flexible categories into a single tactic. That flexibility manifested itself by leaving a portion of the forecasted revenue dollars unallocated to any specific project. The flexibility meant the region would be better positioned to react to changing economic, demographic, and cultural conditions.

The trends in federal funding, and in particular the state of the Highway Trust Fund, leave little room for flexibility today. There is broad agreement among transportation professionals that as a nation we are significantly under-investing in transportation—that there is a large and growing gap between available revenues and infrastructure needs. A recent study sponsored by the Transportation Research Board of the National Academies estimated that the annual gap between revenues and the investment needed to “improve” the highway and transit systems was about \$105 billion in 2007, and is expected to increase to \$134 billion in 2017 under current trends. The National Surface Transportation Infrastructure Financing Commission assigned to investigate the issue, reiterated that point by stating a maintenance-only program is conservatively under-funded by 50% and that an increase of 2.5 times current funding levels would be required to improve the system.

With no resolution to the current federal revenue crisis in sight, this 2040 MTP Update has taken the unprecedented step of aligning all future revenue forecasts solely for the maintenance and preservation of the existing transportation system. Members felt this was a prudent and responsible course of action until such time the federal funding deficits are resolved and/or alternative sources of transportation revenue are realized.

Project Cost Estimates

Forecasting costs for specific projects included in the plan or illustrative project listing is an essential component to assuring fiscal constraint. This 2040 Metropolitan Transportation Plan Update incorporated project costs from the previous plan, which began by generating a current-year estimate for each project in cooperation with the appropriate agency/sponsor. Projects programmed in the 2014-2018 TIP had an automatic inflation factor applied depending upon the year that a project phase was scheduled. This was a software feature implemented at the state level for statewide consistency. This process resulted in the estimates for projects in the MTP that are programmed in the current TIP.

For projects anticipated beyond 2018, guidance provided by the FTA/Federal Highway Administration (FHWA) directed that “forecast year” dollar cost projections for highways and transit projects in planning documents assume a four percent (4%) annual inflation rate for construction costs. This notably covers both highway and transit improvements. In compliance with that guidance, present-day costs were inflated at a fixed 4% rate to the closest forecast year of implementation. It is important to note that the 4% inflation rate applies to “planning-level” cost estimation only. It was not intended to supplant the more rigorous cost estimates produced by project sponsors during Alternatives Analyses, Preliminary Engineering, and Final Design, with associated documentation.

This methodology of converting current-year costs to year-of-expenditure (YOE) produces a more realistic estimate of project funding needs. Furthermore, it is the expectation that with both fund resources and project needs forecasted in a realistic manner, the process of balancing needs against resources (fiscal constraint) will yield a more realistic plan as well.

Identified Plan Improvements

There were few new projects selected for the 2040 MTP Update and most were added to the *Illustrative Project Listing*. The previous projects were selected based on the following criteria:

1. Have a relationship to at least one of the goals set forth for the Metropolitan Transportation Plan.
2. Be consistent with the Erie and Niagara Counties Regional Framework and preliminary work for One Region Forward.
3. Continue the priority of maintenance of the existing system.
4. Resolve existing transportation problems within the region.
5. Retain a degree of flexibility. Good planning necessitates the ability to react to changing conditions and to delay final decisions until the completion of transportation studies that are either underway or will be starting in the current year. This flexibility is especially important in the implementation of the bicycle pedestrian master plan, intersection improvements, resolution of safety problems, and projects to support economic development.
6. Recognize the limitations of capacity improvements to resolve long-term congestion.
7. Meet the need to provide transportation options for all members of the region, including the transportation disadvantaged and an aging population.
8. Recognize the importance of providing reliable travel movements for freight shipments, inter-city travel, and along major travel corridors.
9. Focus on projects that can meet multiple plan goals.
10. Reflect the issues of climate change, the need to reduce the nation's reliance on foreign oil, and the New York State Energy Plan.
11. Be in balance with the potential funding likely available from all principal sources through the 2040 Plan time period in order to be meaningful.
12. Incorporate an illustrative listing of projects that have merit to the region, but are beyond the projected funding availability.

2040 Long-Range Metropolitan Transportation Plan Update

The importance of maintaining and preserving the region's existing network has always been the key to any plan developed in the Buffalo-Niagara region. This has become THE focus of the 2040 MTP Update. Historically, the amount of funding allocated to maintenance has remained relatively constant at approximately 70%. Recent data on the condition of the transportation system however has indicated that this allocation has become insufficient to maintain the system in acceptable condition, meet major plan objectives, and demonstrate long-term system operating viability as required in fiscal constraint.

With this 2040 MTP Update, the 70% level for existing system preservation (P) is maintained and the remaining 30% are allocated to major structural replacements and full depth reconstructions. The latter improvements are typically referred to as 'Beyond Preservation (BP)'. With 100% of forecast revenues directed to existing system P and BP, all additional desired transportation changes identified in previous long-range transportation plans were placed on the *Illustrative Project Listing* (page 82).

The following sections define how the region may reasonably expect to fund its transportation needs and goals given the anticipated revenues from FHWA and FTA, state government, and regional or local sources. The 2040 MTP Update is presented in three (3) parts - Transit, NYS Thruway Authority, and

2040 MTP



Metropolitan Transportation Plan Update

Local/NYS DOT – so that funds are properly allocated by source and permitted use. Note that in all cases fiscal constraint has been attained.

Basic Assumptions

Revenue Forecasts 2016-2040: The updated revenue forecasts presented in the table titled "2040 Metropolitan Transportation Plan Update Revenue Forecasts" on page 80, include information on the anticipated revenues from FHWA and FTA, state government, regional or local sources, the private sector, and user charges. The entire revenue estimate from 2015 through 2040 totaled approximately \$5.7 billion. It was established that all projects and revenues currently programmed in the TIP through 2015 would be untouched. This established the horizon as a 25-year period between 2016 and 2040. The 2015 revenue was subsequently removed from the revenue table and resulted in a slightly lower revenue estimate at \$5.5 billion.

The 2016-2040 Table below became the new revenue basis for programming and fiscal constraint.

Revenue Forecast 2016-2040	\$M
Federal Aid Highway and Bridge	1215
Federal Aid Statewide Competition	332
Transportation Alternatives Program	37
Federal Aid Transit	544
Fed Discr - TIGER, etc	125
Fed Discr - Fix Guideway Cap Investment	232
State Dedicated Funding	368
SDF Statewide Competition	169
State Marchiselli Funding	119
Local Match Federal Aid	40
State Dedicated Transit	68
Local Match Fed Aid Transit	68
Transit 88c	104
NYS Dedicated Transit Funding	9
State Transportation Financing	210
Local Transit Capital Financing	77
NYSTA Revenue	1125
Local funded projects	300
CHIPS	412
Total	5550

Project Costs: It was assumed that all projects currently programmed in the last three years (2016-2018) of the current 2014-2018 TIP were committed and their cumulative costs were accounted for in the analyses.

2040 MTP



Metropolitan Transportation Plan Update

Funding Source Limitations: Programming of projects must account for the limitations and directives associated with each funding source. For example, the revenue tables include funding from NYS Thruway Authority user fees (tolls) that can only be used on facilities under their jurisdiction (e.g. Interstate System). Likewise, FTA funding will be directed almost exclusively to addressing bus and rail needs. It is acknowledged that while there is some flexibility in transferring federal funding, project selection scenarios will assume none will occur.

Transit Program / Constrained Fiscal Plan

The Transit Program paired anticipated transit revenues with proposed transit projects. A subset of funding resources from pages 76/77 was extracted and matched to the transit projects from both the approved 2035 Long-Range Transportation Plan and newly identified needs (e.g. escalator rebuilds). The results are as follows:

Transit Revenue Only	
Federal Aid Transit	544
State Dedicated Transit	68
Local Match Fed Aid Transit	68
Transit 88c	104
NYS Dedicated Transit Funds	9
Fed Discr New/Fixed Guideway	242
State Transportation Financing	210
Local Transit Capital Financing	77
Total	1322
Transit Capital Projects	
TIP FFY 2016-18 (<i>committed</i>)	65
Future Project Candidates	
Amherst Corridor (rev est)	450
Prev Maint/Paratransit	369
Bus Replacements	241
Light Railcar Replacement	85
Tonawanda Corridor	59
Escalator Rebuild	22
Cobblestone District Imprvmts	20
Program Management	6
Light Rail Trackbed Replacmnt	5
Total	1322

Note that the revenues assume successful application and award of federal discretionary funding for *fixed guideway capital improvements*. Associated state and local funding support is also included. If either should fail to materialize, new revenue sources would need to be identified or the project candidate list would need to be adjusted.



2040 MTP



Metropolitan Transportation Plan Update

New York State Thruway Authority Program / Constrained Fiscal Plan

Anticipated NYS Thruway Authority generated revenues were matched with proposed projects on facilities under their jurisdiction (e.g. Interstate System). A subset of funding resources from pages 76/77 were again extracted and matched to the Thruway Authority projects from the approved 2035 Long-Range Transportation Plan and refined system needs (e.g. toll modernization).

The results are as follows:

NYSTA Revenue Only	
NYSTA Revenue	1125
Total	1125
NYSTA Capital Projects	
TIP FFY 2016-18 (federal)	6
Future Project Candidates	
South Grand Island Bridge Rep	400
Buffalo Corridor Improvement <i>(I-90 widen plus 50% of 90/290)</i>	304
Preservation and Capital Needs	235
Tolling Modernization <i>(WTB \$72.5M; LTB \$107M)</i>	180
Total	1125

Note that the cost of improving the I-290 / I-90 interchange was split with NYSDOT (\$64M each) as each has jurisdiction for part of that interchange.



2040 MTP



Metropolitan Transportation Plan Update

Local and NY State Department of Transportation / Constrained Fiscal Plan

The third and final piece of the plan allocates the entire remainder of the forecast revenues to core Preservation (70%) and Beyond Preservation (30%) work (reconstruction/replacement, safety, intersection improvements, Intelligent Transportation Systems, etc.). This in essence, commits nearly all future *non-discretionary* funding to basic system needs. The following table uses this assumption to reserve approximately \$118M per year over 25 years. With the exception of the Transportation Alternatives Program, this program spends the maximum on the core transportation system needs while moving most of the remaining projects under the 2035 Long-Range Transportation Plan to the *Illustrative Project Listing*. These *Illustrative* projects will be prioritized and advanced based on availability of future federal discretionary funds such as TIGER. Note that there is approximately \$115 M of federal discretionary funding anticipated to be received during this period that could be used to advance projects on the *Illustrative Project Listing*.

Core Revenue NYSDOT & Local	
Fed Aid Highway and Bridge	1215
SDF Statewide Competition	169
Local match-Federal Aid	29
State Dedicated Funding	368
State Marchiselli Funding	116
Local funded projects	300
CHIPS	412
Federal Aid Statewide Competition	332
Total	2941
NYSDOT and Local Capital Projects	
TIP FFY 2016-18 (<i>committed</i>)	271
Core Preservation & Maintenance Needs	
Preservation and Local Capital Needs	1869
Beyond Preservation	801
Total	2941

Balance of Core Program **0**

% Preservation & Maintenance	70%
% Beyond Preservation	30%

Federal & State Discretionary Revenue	
Balance of Core Program	0
Transport Alternatives Prog	37
Local match-Federal Aid	10
Total	47
<i>Federal Discretionary - TIGER, etc</i>	<i>115</i>
Future Beyond Preservation Projects	
Bicycle Pedestrian Projects	47
Total	47

Potentially Fundable if \$115M Federal Discretionary Funds Awarded	
Buffalo Harbor Bridge (rev est)	150
Southtowns Access [Ridge-Rt 179]	97
Rt 198 Scajaquada Xwy Enhncmnts	70
Main St Revitalization (Buffalo)	83
Safety Projects (<i>Integrated with Core</i>)	22
Robert Moses Parkway North	64
I-90/290 Interchange (50% unfunded)	64
Youngs Road Interchange	64
ITS Implementation	27
Economic Development Projects	22
Intersection Projects (<i>Refined</i>)	16
Areawide Signals (<i>Integrated with Core</i>)	11
Erie Street Extension	10
Rail Passenger Study	5

2040 MTP



Metropolitan Transportation Plan Update

The Constrained Plan

The individual constrained plans presented for the NFTA, the NYSTA, NYSDOT and locals on the previous pages were compiled into the composite listing below.

2040 Long Range Metropolitan Transportation Plan Update Draft Constrained Project Listing (2016-2040)

Project	Project Description	Inflated Cost Estimate
Preservation and Local Capital Investments	Basic roadway & bridge investments to maintain current system	\$1,869,000,000
Beyond Preservation Investments	Reconstruction & replacement of roads and bridges on current system	\$801,000,000
Buffalo-Amherst Corridor Transit Enhancements	University Station to Crosspointe	\$450,000,000
South Grand Island Bridge	New South Grand Island Bridge with six travel lanes	\$400,000,000
Preventive Maintenance/Paratransit	Transit system investments	\$369,000,000
TIP FFY 2016-18 (committed)	Previously programmed projects	\$343,000,000
Metro Bus Replacements	Vehicle replacements to meet average fleet age criteria	\$241,000,000
I-90 Widening between Exit 50 and Exit 53	Two lanes added in each direction subject to revision in Buffalo Corridor Study. The number of lanes added should correspond to what is necessary to bring highway to acceptable LOS in 2040	\$240,000,000
NYS Thruway Preservation and Capital Investments	Basic Thruway capital and maintenance needs in WNY	\$235,000,000
Toll Barrier & Toll Collection Modernization	Re-strategize toll locations and collection operations	\$180,000,000
Light Railcar Replacements	End of service life replacement of LRRT cars	\$85,000,000
I-90/290 Interchange Improvement (Exit 50)	Reconfigure interchange at Blue Water Tower (50%)	\$64,000,000
Tonawanda Corridor Transit Enhancements	LaSalle Station to Tonawanda City (Main and Niagara Street)	\$59,000,000
Bicycle Pedestrian Projects	Implementation of the Bicycle/Pedestrian Master Plan	\$47,000,000
Escalator Rebuilds	Rebuild LRRT station escalator systems	\$22,000,000
Canalside-Cobblestone District Transit Enhancements	Lower Main Street enhancements and amenities	\$20,000,000
NFTA Program Management	Management oversight of transit projects	\$6,000,000
Light Rail Trackbed Replacement	Rebuild of LRRT trackbed	\$5,000,000
Total:		\$5,436,000,000

Color Key: Blue = NYS Thruway Authority Projects; Brown = NFTA Projects; Green = NSYDOT and Local Projects; Black = Mix



Potential Environmental and Social Impacts of Constrained Plan

At the time of project selection for MTP programming, environmental analysis and project design specifics are generally not available requiring programming decisions to be made conceptually. As a project progresses, design alternatives evolve and become available for further review. All projects at some point are subject to the requirements of the National Environmental Policy Act (NEPA) and related state and federal legislation which provides for formal public review of the environmental impacts of projects beginning in their design stage.

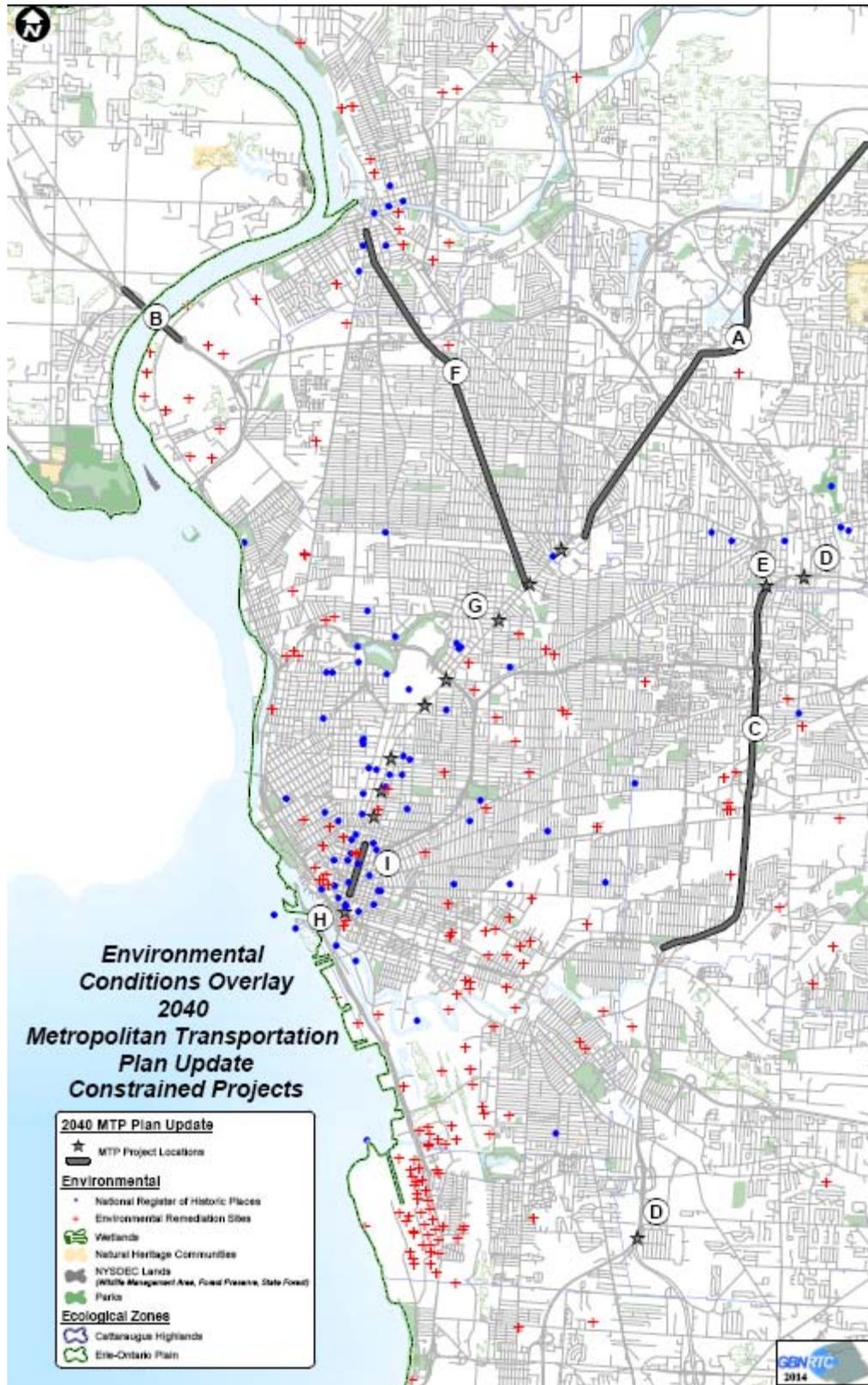
The Framework for Regional Growth for the Erie and Niagara Counties presented in Chapter 5, documents an extensive inventory of the natural and cultural resources in the region. The plan defines two kinds of conservation overlays: a Natural Systems’ Overlay and a Heritage Assets’ Overlay. The Natural Systems’ Overlay identifies sensitive environmental resources—wetlands, floodplains, streams, and steep slopes—and adjacent lands. The Heritage Assets’ Overlay provides a preliminary definition of areas with unique concentrations of natural, recreational, scenic, and cultural resources. These areas include major lake and riverfronts, the Erie Canal Corridor, and the Niagara Escarpment. The Constrained Plan projects that were location specific were overlaid on these maps to flag potential environmental issues that may arise as a particular project advances. An outreach to specific environmental agencies was also conducted to ensure this mapping information was correct and to engage these agencies early on in the project development process.

DISTANCE		WITHIN 1 MILE RADIUS					
		AREA PARKS	NATIONAL HERITAGE COMMUNITIES	DEC LANDS	HISTORIC SITES	REDMEDIATION SITES	AREA WETLANDS
LABEL	PROJECT DESCRIPTION						
A	Buffalo-Amherst Corridor Transit Enhancements				X	X	X
B	South Grand Island Bridge					X	X
C	I-90 Widening Between Exit 50 and Exit 53						
D	Toll Barrier & Toll Collection Modernization	X			X		X
E	I-90/290 Interchange Improvements (Exit 50)	X			X		
F	Tonawanda Corridor Transit Enhancement	X			X	X	
G	Escalator Rebuilds						
H	Canalside-Cobblestone District Transit Enhancements	X			X	X	X
I	Light Rail Trackbed Replacement	X			X	X	

2040 MTP



Metropolitan Transportation Plan Update



2040 MTP

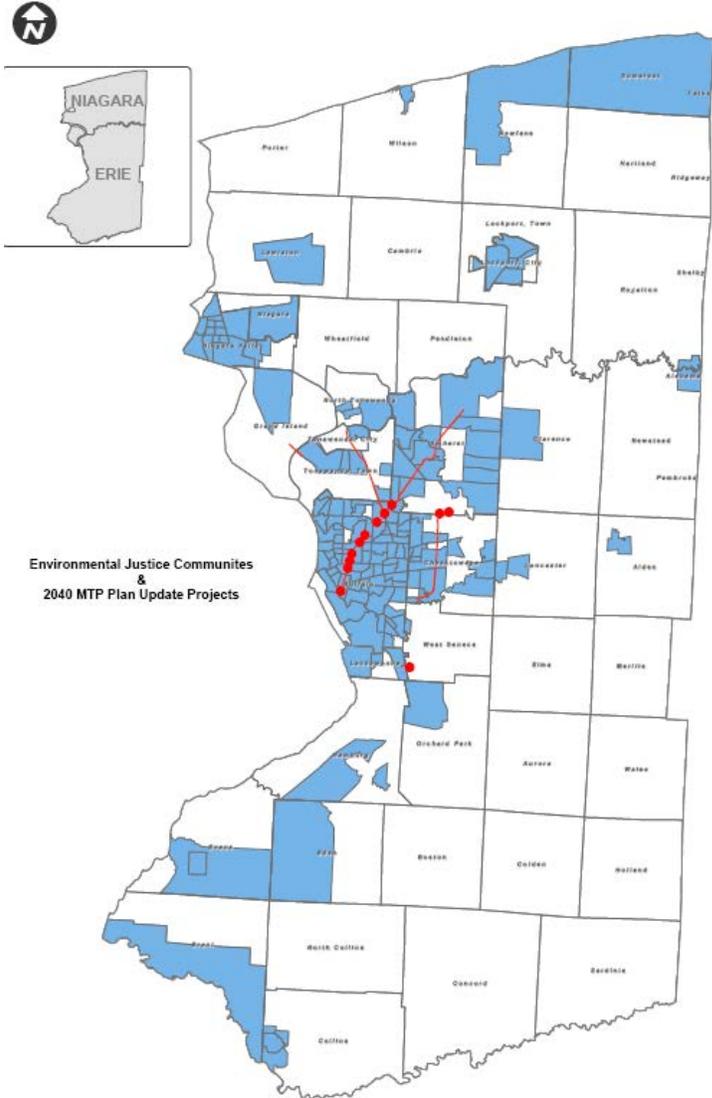


Metropolitan Transportation Plan Update

Title VI and Environmental Justice

Both federal and state legislation require that the transportation planning process and outcome are fair, equitable, and non-discriminatory. On December 14, 2012, the GBNRTC approved the Transportation Equity Statement and Title VI Plan. The document contains written procedures that demonstrate the GBNRTC's commitment to ensuring nondiscrimination based on grounds of race, color, sex, age, disability or national origin, within any of its activities, programs, or projects as required by federal non-discrimination statutes, regulations, and orders. Compliance with such regulations is demonstrated through annual planning process certification. For more information on the GBNRTC's Environmental Justice activities visit <http://www.gbnrtc.org/planning/environmental-justice/>.

As one of three defined objectives contained within the Transportation Equity Statement and Title VI Plan, the GBNRTC uses Geographic Information Systems and other tools and data sources to determine the needs of traditionally underserved communities and to assess how regional transportation programs and plans impact different population groups in the region.



2040 MTP



Metropolitan Transportation Plan Update

Illustrative Project Listing

While the 2040 MTP Update must be fiscally constrained, a region may include projects that have merit but are beyond the constrained funding available to the area. The projects listed below would be considered for implementation if additional funds became available to the region. This illustrative listing of transit and highway projects and programs reflect desirable but unmet transportation needs for the Buffalo-Niagara region. These illustrative projects will be prioritized and advanced based on availability of future federal discretionary funds, such as TIGER.

Illustrative Project List		
Project	Project Description	Cost
North Grand Island Bridge	New North GI Bridge with six travel lanes	\$342,000,000
I-290 (I-190 to NY 5)	Complete Reconstruction	\$205,000,000
Airport Corridor Transit Enhancements	Buffalo to BNIA/Cheektowaga transit system investment	\$200,000,000
Buffalo Harbor Bridge (rev est.)	Construction of Outer Harbor Bridge over the Buffalo River	\$150,000,000
Southtowns Access [Ridge to Rt 179]	Infrastructure improvements to Rt 5	\$97,000,000
Border Crossing Access Improvements	Infrastructure changes to support bridge plaza redesign	\$90,000,000
Main St Revitalization (Buffalo)	Including Main St. multi-modal access and revitalization project	\$83,000,000
Rt 198 Scajaquada Expressway Enhancements	Redesign of Route 198 Expressway to better integrate with surrounding land use	\$70,000,000
Robert Moses Parkway Enhancements	Removal from NF CBD to NF North City Line; reduction from 4 to 2 lanes from NCL to Route 18F	\$64,000,000
I-90/290 Interchange (50%)	Reconfigure interchange at Blue Water Tower (Exit 50)	\$64,000,000
Rt 78 Transit Rd [Gould to French]	Complete Reconstruction	\$45,000,000
ITS Implementation	Complete Reconstruction	\$27,500,000
Economic Development Projects	Specific projects being refined by the International Trade Gateway Organization	\$22,000,000
Buffalo Ave [I-190 to Cayuga Dr] Phase II	Complete Reconstruction	\$21,000,000
Rt 62 NFB [Kruger to Bergholtz Creek]	Complete Reconstruction	\$15,000,000
Kenmore Ave [Starin to Military]	Complete Reconstruction	\$15,000,000
Lockport St [Main to Seneca Av] (N. Falls)	Complete Reconstruction	\$10,500,000
Rt 62 S Park Ave [City of Lackawanna]	Complete Reconstruction	\$5,000,000
Total Illustrative Projects:		\$1,505,000,000

Color Key: Blue = NYS Thruway Authority Projects; Brown = NFTA Projects; Green = NSYDOT and Local Projects

Appendix 1

Public Participation

Public Participation Plan

The GBNRTC officially adopted an updated Public Participation Plan on December 12, 2011 specifying actions to be followed for certain GBNRTC activities and designed to provide complete information in a timely manner so that the community is fully engaged throughout the transportation planning and program development process. Means of notification, mechanisms for public input, and appropriate feedback consideration to comments received are essential steps to building meaningful public relationships and eventual support for decision makers. The efforts undertaken in the development of the 2040 Metropolitan Transportation Plan (MTP) Update are consistent with the GBNRTC official Public Participation Plan [http://www.gbnrtc.org/files/1313/6439/9987/2011 Public Participation Plan.pdf](http://www.gbnrtc.org/files/1313/6439/9987/2011_Public_Participation_Plan.pdf).

The public was made aware that comments received prior to the end of the public review and comment period would be addressed and made part of the GBNRTC's submission to NYSDOT, the Federal Highway Administration, and the Federal Transit Administration. Only after public comment was received and considered by the GBNRTC would the Policy Committee take action to approve the 2040 MTP Update.

Official Review Period and Policy Committee Action

For this 2040 MTP Update, the public review and comment period officially began April 3, 2014 and extended a minimum of twenty (20) calendar days as specified by the GBNRTC Public Participation Plan, through April 25, 2014. The official public notice and draft MTP was made available on the GBNRTC website (www.gbnrtc.com) and in the GBNRTC office. Efforts to inform the public are documented in separate sections in this document.

The Planning and Coordinating Committee was given a presentation on the full extent of public feedback at their regular meeting on May 7, 2014, prior to making their program recommendations to the Policy Committee.

Advertising and Public Notification

The GBNRTC initiated a public review and comment period on April 3, 2014 with a public notice posted on the GBNRTC website, social media sites, and via an email campaign. The public notice explained the development process of the 2040 MTP update, the multiple opportunities for

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**Public Review and Comment Period Opens
2040 Metropolitan Transportation Plan Update**

The Greater Buffalo-Niagara Regional Transportation Council officially opens its public review and comment period for its proposed 2040 Metropolitan Transportation Plan update.

The 2040 Metropolitan Transportation Plan is an update to the 2035 Long-Range Transportation Plan and contains an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system in the Erie and Niagara County region through the year 2040.

The public review and comment period extends from April 3, 2014 through April 25, 2014. An electronic version of the draft plan is available on the GBNRTC website (www.gbnrtc.org) for viewing and/or downloading; and may also be reviewed by visiting the GBNRTC offices.

Comments may be sent to:
GBNRTC Executive Director, Suite 503, 438 Main Street, Buffalo, NY 14202;
(716) 856-2026; Fax: (716) 856-3203; or E-mail: staff@gbnrtc.org.

Public comments will be received through April 25, 2014.

438 Main Street, Suite 503 | Buffalo, NY 14202 | Ph: 716.856.2026

Share This:   



**NOTICE OF PUBLIC MEETINGS
2040 METROPOLITAN TRANSPORTATION PLAN UPDATE**

The Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) is holding two public meetings to encourage the community to review and comment on the Draft 2040 Metropolitan Transportation Plan Update. The 2040 Metropolitan Transportation Plan is an update to the 2035 Long-Range Transportation Plan and contains an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system in the Erie and Niagara County region through the year 2040. The following public meetings have been scheduled to further explain and discuss the draft plans. A formal presentation will be made followed by an open discussion format. Special accommodations will be provided upon request.

**Tuesday, April 15, 2014 – Wheatfield Community Senior Center
2790 Church Rd. North Tonawanda, NY
5:00pm – 7:00pm**

**Thursday, April 17, 2014 - Buffalo and Erie County Public Library
Central Meeting Room 2nd Floor, 1 Lafayette Square, Buffalo, NY
5:00pm – 7:00pm**

The public review and comment period extends from April 3, 2014 through April 25, 2014. An electronic version of the draft plan is available on the GBNRTC website (www.gbnrtc.org) for viewing and/or downloading; and may also be reviewed by visiting the GBNRTC offices.

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Public comments will be received through April 25, 2014.

438 Main Street, Suite 503 | Buffalo, NY 14202 | Ph: 716.856.2026

public comment, and where the draft MTP document could be reviewed. The notice also announced the dates and locations for two (2) scheduled public informational meetings.

As for accessibility to the proposed MTP document, downloadable versions and associated materials were posted on the GBNRTC website. That same information was available for review in the GBNRTC office during normal business hours beginning April 3, 2014.

Open House Meetings

The GBNRTC hosted two public meetings in the region to share information and solicit community comment on the draft 2040 MTP Update. Public meetings were held at the dates, times, and locations below:

**Tuesday, April 15, 2014 - Wheatfield Community Senior Center
2790 Church Rd. North Tonawanda, NY
5:00pm – 7:00pm**

**Thursday, April 17, 2014 - Buffalo and Erie County Public Library
Central Meeting Room 2nd Floor, 1 Lafayette Square, Buffalo, NY
5:00pm – 7:00pm**

Hal Morse, GBNRTC Executive Director, opened each of the public meetings with a welcome and introduction. Timothy Trabold, GBNRTC Transportation Program Manager, then went through a 30-minute formal presentation, which gave an overview of the proposed 2040 MTP Update. The remainder of the meeting was devoted to public comments and questions.

**Tuesday, April 15, 2014 – Wheatfield Community Senior Center
2790 Church Rd. North Tonawanda, NY
5:00pm – 7:00pm**

Statements/comments made:

- Richard Muscatello, Town of Wheatfield Planning Board, expressed the need to calm traffic along Niagara Falls Blvd in the Town of Wheatfield. Traffic calming techniques discussed included a left turn lane, center median, cobblestone streets, and designated bicycle lanes.
- Jeffrey Amplement submitted a comment sheet that asked what GBNRTC's role is in coordinating sustainable development patterns and how projects listed in the 2040 MTP Update support smart growth efforts.

**Thursday, April 17, 2014 - Buffalo and Erie County Public Library
Central Meeting Room 2nd Floor, 1 Lafayette Square, Buffalo, NY
5:00pm – 7:00pm**

Statements/comments made:

- Doug Funke, Citizens for Regional Transit, stressed the critical need to identify new funding for the region's tremendous infrastructure needs. He also favored looking at transit solutions rather than highway improvements for relieving congestion and

suggested that employers who decide to locate in areas not served by transit should cover for the cost of expanding service.

- Elizabeth Giles, Citizens for Regional Transit, mentioned a new UN report on climate change that says, in 10 years if we do not begin to make significant changes, the damage that has been done to our environment will be irreversible.

Written Correspondence Received

- Eric Gillert, Planning Director Town of Amherst
A letter dated, April 24, 2014, provided results of a review of the draft 2040 MTP Update demographic forecasts conducted by the Town of Amherst. The review found that municipal totals for households and population are similar to the Town's current demographic forecasts from its Comprehensive Plan. However, employment projections indicate that the Town will likely exceed the 2040 MTP Update forecasts in the near future.
- Doug Funke, Citizens for Regional Transit
A letter dated April 25, 2014, echoed many of the concerns Mr. Funke expressed at the public meeting he attended on April 17, 2014 at the Buffalo and Erie County Public Library. Main topics covered in the letter include support for the Airport Corridor as one of the highest transit investment priorities, priority consideration given to transit projects compared to new non-transit infrastructure, and the need to consider new sources of transportation funding (i.e. taxes, bond measures, parking surcharges, and capture value generated by transit investments).

Social Media

The GBNRTC's social media sites facilitated a platform for interested individuals and other parties to share public meeting date, times, and locations. It also allowed for interested individuals and parties who missed the public meetings to make inquiries as to where they could access, review, and submit comments on the Draft 2040 MTP Update.

Sign-In Sheet



	NAME	AFFILIATION	EMAIL
1.	Jeff Arplecraft	NFTA	jeff-arplecraft@nfta.com
2.	MICHELLE BODEWES	KHEOPS	mbodewes@kheopsdps.com
3.	Dan Howard	NFTA	dhoward@combestur-1.us
4.	Melissa Gernann	Thredfield	
5.	RICHARD GERMAN	Wheat Field	
6.	RICHARD W. MUSCATELO	W/WHTFD	RWM6744@gmail.com
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			

Sign-In Sheet

GBNRTC 2040 Long-Range Metropolitan Transportation Plan Update



NAME	AFFILIATION	EMAIL
1. Elizabeth M. Giles	Citizens for Regional Transit	elimgiles@yahoo.com
2. Lynn Magdol	CRT	lucagdol@yahoo.com
3. Doug Funkel	CRT	doug.funkel@gmail.com
4. Dan LeBar	WNYL	Danny60@hotmail.com
5. Darren Kempner	NFTA	darren_kempner@fla.com
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GBNRTC 2040 Long-Range Metropolitan Transportation Plan Update

COMMENT SHEET

Public Meeting
April 15, 2014

The Greater Buffalo-Niagara Regional Transportation Council values your input! Please share your comments and thoughts about the 2040 Long-Range Metropolitan Transportation Plan through April 25, 2014.

Name: Jeffery Amplement
Affiliation: NFTA
Address: 181 Ellicott St.
City, State, Zip: Buffalo, NY 14203
Daytime Phone: 716-855-7302
Email: jeffery-amplement@nfta.com

- General Question but how do we overcome sprawling development at a regional level when New York is a home rule state with so many local towns and villages acting in an uncoordinated way? What role does the GBNRTC have in coordinating better development patterns? If not GBNRTC, who?

- Is there any coordination between the projects listed in the MTP and Smart growth efforts? Is priority given to those proposed projects given to those that best support future growth

Comments may be sent to: GBNRTC Executive Director, Suite 503, 438 Main Street, Buffalo, NY 14202; (716) 856-2026; Fax: (716) 856-3203; or E-mail: staff@gbnrtc.org. Public comments will be received through April 25, 2014.

From: Amy Weymouth
Sent: Friday, May 02, 2014 9:33 AM
To: 'jeffery.amplement@nfta.com'
Subject: 2040 Metropolitan Transportation Plan Update

May 2, 2014

Jeffrey Amplement
Assistant Manager

Grants and Government Affairs
Niagara Frontier Transportation Authority
181 Ellicott Street
Buffalo, NY 14203

Dear Mr. Amplement:

Thank you for attending a recent public meeting for the 2040 Metropolitan Transportation Plan Update and for sharing your comments and questions with us. We would like to take an opportunity to address your concerns.

As you suggested, one of the key regional challenges to cost effective, sustainable growth in the Buffalo-Niagara region is to better manage the sprawl of residential development and the suburbanization of employment.

The Framework for Regional Growth for Erie and Niagara Counties, the two-county area's current Regional Plan for Sustainable Development (RPSD), was developed in collaboration between Erie and Niagara Counties with participation from the GBNRTC and serves as a roadmap to guide the future growth and development of the region. The purpose of the Framework Plan is to help all sectors and jurisdictions within Buffalo-Niagara region make better, more coordinated decisions about growth and redevelopment. It establishes a regional development vision and outlines policies and programs consistent with that vision. As such, the plan fosters development coordination across political boundaries to help the region grow in smart, sustainable, and efficient ways.

A current initiative known as One Region Forward will, in part, advance the Framework for Regional Growth and outline how the Buffalo-Niagara region will coordinate federal, state, and local investments for long-term economic, environmental, and social sustainability. It is being led by a broad-based consortium of public, private and non-profit sector organizations, with participation from local towns and villages.

The 2040 Metropolitan Transportation Plan Update is consistent with the Framework Plan and emerging One Region Forward strategies for future growth focusing transportation investment in areas of the region already served by existing infrastructure. Investment in public infrastructure is seen in the Framework as a major force in policy implementation. The GBNRTC policy of reinvestment in existing infrastructure is the primary focus of the 2040 MTP update.

We thank you again for your comments and participation in the 2040 MTP public meeting. If you have any questions regarding any of the information in this e-mail or wish to discuss further, please contact me at (716) 856-2026.

Sincerely,

Amy Weymouth-Michaux
Greater Buffalo-Niagara Regional Transportation Council
aweymouth@gbnrtc.org
438 Main Street
Buffalo, NY 14202
716.856.2026



CITIZENS for REGIONAL TRANSIT
617 Main Street, Buffalo, NY 14203
716-691-8528 crtc@citizenstransit.org

25 April 2014

Mr. Hal Morse
GBNRTC Executive Director
Suite 503, 438 Main St., Buffalo, NY 14202
staff@gbnrtc.org

Re: Public Comments on the 2040 MTP draft

The 2040 MTP draft is indeed grim. The constrained plan with its assumption of no federal funds for transportation reflects a stark, conservative, but fiscally responsible approach. We are optimistic that some of the additional projects that are currently on hold will be realized with the resumption of federal funding. We are especially heartened to see that the NFTA Airport Corridor project is included in the expanded list. The alternative scenarios that were presented at the PCC meeting earlier in April will be helpful in readjusting the budget as additional funds become available.

At the public meeting on April 17, Citizens for Regional Transit attendees noted that the NFTA Airport Corridor project is included in the list of deferred projects. This is the first time that the Airport Corridor has been included in the plan and this is an important first step. However, the prioritizing of this list is not clear. We see the Airport Corridor as one of the highest transit investment priorities.

It is essential that mass transit be given high priority in the short-term as well as in the long-term. With global climate change, the necessity of reducing our consumption of fossil fuels is urgent. A recent United Nations panel concluded that climate change must be halted within 15 years or the damage will be irreversible. Because transportation accounts for a significant portion of fossil fuel use, fuel-efficient transit is an essential part of the solution.

We therefore believe that transit-related projects should be given priority consideration compared to new non-transit infrastructure. This would contribute to two of the stated points in the MTP Regional Vision: (1) Create an environmentally healthy, resilient region and (2) Promote safe, equitable regional service for all residents. Improved transit is also consistent with the results of the community meetings sponsored by One Region Forward. The vision and values resulting from those meetings included "Make it easier for people to get around without a car." and "... connect our places by expanding and diversifying our transportation options." Since it takes time to plan, finance, and develop large-scale transportation infrastructure, transit projects must be given high priority in all long-range planning documents.

As an example, any emphasis on congestion mitigation is a short-term approach that addresses



CITIZENS *for* REGIONAL TRANSIT
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716-691-8528 crtc@citizenstransit.org

symptoms only. It does not get to the root of the problem, i.e., the glut of private automobiles on our roads, many of them occupied by a single person. At the presentation on April 17, one congested location that was mentioned was on Interstate 90 near the Galleria Mall. The proposed light rail extension from downtown Buffalo to the Buffalo Niagara International Airport could easily transport thousands of people to the Galleria Mall daily, thus reducing highway congestion in a manner that makes more sense economically and environmentally.

Given the abysmal state of federal funding with regard to public transportation, we note that in numerous states, counties, and municipalities across the country, the electorate has approved local transit funding. This is usually done by means of taxes (usually sales or fuel), by bond measures, or by other fees such as a parking surcharge (which also has the effect of helping to motivate the cultural change toward transit). Innovative approaches that capture the value generated by transit investments have also been successfully used elsewhere in the US. These approaches should be considered here. We urge our local leadership to take similar action in the Buffalo Niagara two-county region.

We look forward to working with the GBNRTC to help forge future plans that provide long-term solutions to our transportation problems.

Sincerely,

Doug Funke
President, Citizens for Regional Transit



Town of Amherst Planning Department

Erie County, New York



Barry A. Weinstein, MD
Supervisor
Eric W. Gillert, AICP
Planning Director
Gary Black, AICP
Assistant Planning Director

April 24, 2014

Mr. Hal Morse, Executive Director
GBNRTC
438 Main Street, Suite 503
Buffalo, New York 14202

RE: 2040 Metropolitan Transportation Plan – Demographic Forecasts

Dear Mr. Morse:

The Town of Amherst greatly appreciates the opportunity to review the 2040 Demographic Forecasts and where appropriate, make recommendations for adjustment. Enclosed please find the results of the Town's demographic review for households, population, and employment dated April 21, 2014. These revisions were derived from the Town's review of recent development activity between April 1, 2010 and February 28, 2014, and projected growth reflected in the GBNRTC's forecasts, the Town's Bicentennial Comprehensive Plan, and proposed future development projects. The adjustments recommended made by the Town do not exceed the municipal demographic forecast totals provided by the GBNRTC in the DRAFT 2040 Metropolitan Transportation Plan. However, the municipal totals were reallocated among TAZs based on our findings and review.

The Town's demographic review utilized the GBNRTC's municipal totals for households (55,130) and population (141,410) and found they are similar to our current demographic forecasts from the Comprehensive Plan which project continued population and household growth. As of February 2014, we estimate the Town's population as 125,432; therefore, the GBNRTC's forecast remains consistent with this trend.

With regard to employment, we have found that the 2040 employment forecast for Amherst may not accurately reflect future conditions in the Town. Employment data reported by the U.S. Census Bureau for 2010 indicates that the Town's total employment was 104,149. Our analysis indicates that the 2040 municipal total cited in the GBNRTC forecast (110,390) may fall substantially short based on current estimates and future projections. By analyzing commercial development trends between April 1, 2010 and February 28, 2014, we estimate the current number of jobs in the Town to be 107,435, leaving a difference of only 2,955 jobs from the 2040 forecast.

Page 2

April 21, 2014

2040 Metropolitan Transportation Plan – Demographic Forecasts

Demographic analyses completed for the Comprehensive Plan indicate that the Town will continue to experience employment growth in the future reaching a total of approximately 122,000 jobs in 2020. These projections suggest that employment growth within the Town will exceed the 2040 forecast in the near future. In addition, the University at Buffalo's Building UB Plan phase-end projection indicates a future total of 6,201 jobs on North Campus, located within TAZ 127, an increase of 1,091 from the current counts. Further, the Town expects significant changes in land uses within TAZs 128 and 132 in the near future. Although we have not received a conceptual plan for the development of the Westwood Country Club (located in TAZ 132), our understanding is that the project sponsors anticipate the construction of a significant number of housing units and non-residential floor area. The Town will also see a substantial (42,000 square foot) expansion of Boulevard Consumer Square in TAZ 129. The Town has recently received a conceptual site plan for a large mixed-use development within TAZ 207 which includes significant office space and housing units. This proposed growth in TAZ 207 is consistent with the growth projected in the Comprehensive Plan which projects substantial growth in that TAZ. It is also important to note the Village of Williamsville (TAZs 235 and 236) has sustained its employment figures, which are currently higher than the 2040 GBNRTC forecasts.

Meanwhile, sixty-four shovel ready acres remain available in CrossPoint Business Park located in TAZ 218 which is primed for considerable growth in the near future. Given these recent growth figures and future trends, we have significant reservations about the 2040 municipal employment figures for Amherst.

Thank you again for allowing the Town of Amherst to review the GBNRTC 2040 forecasts. The point of contact for our review is Lucas Strittmatter at 631-7051 (lstrittmatter@amherst.ny.us).

Very truly yours,



ERIC W. GILLERT, AICP
Planning Director

X:\Special_Projects\Traffic & Transportation\GBNRTC\2040 MTP\GBNRTC Demographic Memo.doc

PUBLIC PARTICIPATION PROCESS

The Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) is the designated Metropolitan Planning Organization (MPO) for Erie and Niagara Counties charged with encouraging the public to participate in setting priorities for transportation plans and programs in the region.

The GBNRTC public participation process is designed to provide complete information in a timely manner so that the community is fully engaged throughout the transportation planning process. Means of notification, mechanisms for public input, and appropriate feedback consideration to comments received are essential steps to building meaningful public relationships and eventual support for decision makers.

Moving Ahead for Progress in the 21st Century Act (MAP-21)

MAP-21 extended the federal transportation funding authorization under TEA-21 until 2014. Public involvement remains a hallmark of the transportation planning process.

2040 Metropolitan Transportation Plan Update

One of the prime responsibilities of the GBNRTC is the development and maintenance of the region's metropolitan transportation plan. The plan is a multimodal "blueprint" for transportation systems and services aimed at meeting the transportation demands of existing and future development in Erie and Niagara Counties. The plan also serves as a guide to the development of the Transportation Improvement Program (TIP), which consists of all federally funded roadway, transit, bicycle, and pedestrian projects scheduled over a five year period. Required by federal legislation, a metropolitan transportation plan must maintain a 20-year planning horizon. The GBNRTC's current metropolitan transportation plan, the 2035 Long-Range Transportation Plan for Erie and Niagara Counties is scheduled for an update in 2014. The 2040 MTP Update thus will ensure the region stays in compliance with federal transportation law and remains eligible for federal transportation dollars.

PUBLIC PARTICIPATION OPPORTUNITIES

The GBNRTC utilizes a variety of public participation methods to provide interested individuals, groups, and organizations with the opportunity to fully participate in the planning process. Below are a number of opportunities and initiatives to ensure continuous and comprehensive public involvement.

- **Website** – The GBNRTC maintains a website (www.gbnrtc.org), which is updated frequently to keep the public informed. The site contains information on the agency's responsibilities, programs, publications, meetings, and events; contact information; a search function; Title VI information, including complaint procedures; and a comment form so that visitors may comment directly to the GBNRTC on any subject.
- **Email Blasts/Campaigns** – The GBNRTC routinely uses email to keep the public informed of the agency's programs, public comment periods, meetings, and publications. Information is disseminated to minority media and ethnic/gender related organizations to help ensure social-, economic-, and ethnic-interest groups in the region are represented and engaged in the planning process.

- **Social Media** – The GBNRTC uses social media outlets, such as Facebook, Twitter, Instagram, Google+, and LinkedIn to share information, encourage discussion, and post information on upcoming meetings and events.
- **Partner with Community Based Organizations and Leaders** – The GBNRTC actively participates in regional advisory groups and other organizations and agencies that are familiar with the needs of traditionally underserved populations.
- **GBNRTC Committee Meetings** – All GBNRTC meetings are open to the public. Time for public comments is reserved at the beginning of all meetings. Meeting dates and times are posted in advance on the agency’s website, social media sites, and in frequent GBNRTC emails to which anyone can subscribe.
- **MPO Events** - Workshops, open houses, and forums are held on an as-needed basis and are open to the public. Events are held in locations that are accessible by public transit and in facilities that are compliant with the Americans with Disabilities Act.
- **Videos and Other Visualization Techniques** – The GBNRTC employs a variety of visualization techniques such as videos, PowerPoint presentations, photo simulations, and traffic simulation models to generate attention and make material more understandable to a wider audience.
- **Open House Meetings** – The GBNRTC conducted a series of open house meetings to present and solicit comments on the Draft 2040 MTP Update. The draft document was available for download from the GBNRTC website, advertised and linked on GBNRTC social media sites, and available for review in the GBNRTC office.
- **Visualizations** – When appropriate, the GBNRTC will utilize visualization techniques (e.g. photographs, maps, simulations, etc.) to better illustrate to the public the ideas and concepts represented in the 2040 MTP update.
- **Contact List** - The GBNRTC maintains a master list of contacts, which is updated on a continual basis. The list includes committee members, government and public officials, interested individuals, groups, and organizations. The list is used to provide information on public meetings and other transportation issues.

Title VI/Environmental Justice

In December 1997, the Federal Highway Administration (FHWA) issued the FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (DOT Order 6640.23), which mandated the FHWA and all its subsidiaries to implement the principles of Executive Order 12898 and US DOT Order 5610.2 into all of its programs, policies, and activities. On October 7, 1999, the FHWA and the Federal Transit Administration (FTA) issued a memorandum Implementing Title VI Requirements in Metropolitan and Statewide Planning. This memorandum provides clarification for field offices on how to ensure environmental justice is considered during current and future planning certification reviews. The intent of this memorandum was for planning officials to understand that environmental justice is equally important during the planning stages as it is during the projects development stages. To certify compliance with Title VI and address environmental justice, MPOs need to:

- Enhance their analytical capabilities to ensure that the long-range transportation plan and the transportation improvement program (TIP) comply with Title VI.
- Identify residential, employment, and transportation patterns of low-income and minority populations so that their needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed.
- Evaluate and – where necessary – improve their public involvement processes to eliminate participation barriers and engage minority and low-income populations in transportation decision making.

There are three fundamental environmental justice principles:

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

Community Engagement

The goal of GBNRTC’s public participation program is to ensure early and continuous public notification about, and participation in, major actions and decisions by the GBNRTC. In seeking public comment and review, the GBNRTC makes a concerted effort to reach all segments of the population, including people from minority and low-income communities as well as organizations representing these and other protected classes.

Demographic Profiles and Equity Analysis

The GBNRTC uses Geographic Information Systems (GIS) and other tools and data sources to aid in determining the needs of traditionally underserved communities and to assess how regional transportation programs and plans impact different population groups in the region. One technique used to minimize the potential adverse effects on affected populations is to identify and then create demographic profile maps of low-income and minority populations for the GBNRTC planning area. These maps help in understanding which communities are prone to environmental justice concerns and assists in targeting public outreach efforts to these groups.

Limited English Proficiency

To improve contact with non-English speakers, the GBNRTC website (www.gbnrtc.org) can be viewed in multiple languages with a selection on the “Google Translate” button. This is performed by automatic translation software from Google, which is able to instantly translate the site into thirty-three (33) different languages. This service is intended to provide a basic understanding of the GBNRTC’s website content in a different language.

The GBNRTC will also provide LEP individuals with language assistance through written language translations of some key materials. This is performed upon request or as deemed necessary for effective outreach.

Coordinated Human Services Transportation Plan (HSTP)

The GBNRTC Coordinated Human Services Transportation Plan (HSTP) identifies transportation barriers and needs, along with strategies and actions for addressing transportation gaps affecting seniors,

persons with disabilities, and low-income individuals in the Buffalo-Niagara region. The plan provides a framework for the development of projects that will address identified transportation needs by ensuring that the two-county area and its human service agencies coordinate transportation resources offered through multiple Federal Transit Administration (FTA) programs.

RESOURCE AGENCY CONSULTATION

In the development of transportation plans and transportation programs, federal transportation law requires metropolitan planning organizations, like the GBNRTC, to “consult, as appropriate, with state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation...” This important consultation process plays a critical role in establishing a dialogue with environmental agencies and creating a foundation for ongoing consultation and knowledge sharing regarding the potential environmental impacts of transportation planning on a regional, system-wide scale.

To begin the consultation process for the 2040 MPT Update, the GBNRTC reviewed a number of planning documents related to the region’s environmental resources, including the New York State Open Space Conservation Plan. In addition to reviewing these plans, the GBNRTC gathered and mapped inventories of natural, cultural, and historic resources, which were used to identify environmentally sensitive areas in the region.

As part of the consultation process, the agencies listed below were contacted and asked to provide comments on the data resources and planning documents reviewed as part of the 2040 MTP Update. The questions the agencies were asked to comment on included:

- Are there any issues related to environmental conservation, land use, and/or historic preservation we should consider when developing transportation plans for the region?
- Are you aware of any plans or initiatives in the Buffalo-Niagara region that should be considered when developing regional transportation plans and programs?
- Do we have an accurate inventory of natural and historic resources in the Buffalo-Niagara region? Are there other data sources/inventories available that we should consider?
- Are there other environmental mitigation activities we should consider at a planning and policy level?

- | | |
|---|--|
| - US Environmental Protection Agency | - Department of State Coastal Resources |
| - National Park Service | - NYS Office of Parks, Recreation, and Historic Preservation |
| - US Army Corps of Engineers | - New York State Department of Health |
| - US Department of Agriculture/Natural Resource Conservation Service | - Niagara County Sewer Water Conservation District (SWCD) |
| - National Marine Fisheries | - Erie County SWCD |
| - US Fish and Wildlife Service | - Erie County Environmental Management Council |
| - NYS Department of Environmental Conservation | - Seneca Nation of Indians |
| - NYS Department of Agriculture and Markets (Agriculture Protection) | - Buffalo Niagara Riverkeeper |
| - NYS Department of Agriculture (NYS Soil and Water Conservation Committee) | - Preservation Buffalo Niagara |
| | - Buffalo Sewer Authority |

Responses were received by the following agencies and are included below:

- NYS Department of Environmental Conservation Region 9
- Buffalo Sewer Authority
- Niagara County Department of Economic Development
- US Fish and Wild Life Service
- Environmental Protection Agency

From: David Denk
Sent: Friday, December 27, 2013 4:28 PM
To: Amy Weymouth
Subject: Re: Resource Agency Consultation Request

Hi Amy - -

Thank you for the opportunity to review and comment on the Environmental Planning Considerations document prepared by the GBNRTC. It appears that your inventory of plans is quite comprehensive. I'm not aware of other plans which should be included.

In reference to inventories of natural and historic resources, I wonder if GBNTRC has developed or has access to a geographic information system. Many data sets are available from the New York State GIS Clearinghouse. Available data includes information on: elevation, land use/land cover, hydrography, parks/recreation, soils, hazards, habitat, agriculture, watersheds/water supply, wetlands, and historic sites. I urge the GBNRTC to take advantage of these many data sets.

Your email posed the question: "Are there other environmental mitigation activities we should consider at a planning and policy level?" My answer is probably not. Usually, environmental mitigation is required in response to a specific project with quantified impacts, like to wetlands or streams. Certainly, this Department will be available to review and comment on any specific project which may be planned in the future.

I hope this helps in your planning efforts. If you have any questions, please let me know.

Dave

David S. Denk
Regional Permit Administrator
NYSDEC Region 9
Division of Environmental Permits
270 Michigan Avenue
Buffalo, New York 14203-2915
Tel. (716) 851-7165
Fax (716) 851-7168

From: Amy Weymouth
Sent: Thursday, February 06, 2014 9:52 AM
To: 'David Denk'
Subject: RE: Resource Agency Consultation Request

Hello Dave,

Thank you for your input on the 2040 Metropolitan Transportation Plan Update - Environmental Planning Considerations. As you suggested, we will look at the NYS GIS Clearing House for additional datasets as we continue to build a comprehensive inventory of natural and historic resources in the region.

Progress on the 2040 Metropolitan Transportation Plan Update activities will be discussed at monthly GBNRTC-PCC meetings and draft documents and other related plan information is now available on our website at www.gbnrtc.org. We would also be happy to meet with you to discuss any issues or concerns you may have regarding the future of transportation in the region.

Please contact me if you would like to schedule a meeting.

Thank you again for your participation.

Sincerely,

Amy Weymouth-Michaux
Greater Buffalo-Niagara Regional Transportation Council
aweymouth@gbnrtc.org
438 Main Street
Buffalo, NY 14202
716.856.2026

From: Julie Barrett-O'Neill
Sent: Monday, January 06, 2014 4:37 PM
To: Amy Weymouth
Subject: Re: Resource Agency Consultation Request

Hi Amy,

I was able to take a look at your preliminary analysis over the weekend. It looks good. However, I would also recommend that you take a look at any Local Waterfront Revitalization Plans that have been prepared, the Niagara River Greenway Plan, Niagara National Heritage Area Plan, the Great Lakes Seaway Trail National Scenic Byway planning documents, any Erie Canal planning documents, the Niagara River Habitat plan prepared by Buffalo Niagara Riverkeeper for the EPA/DEC that discusses the "Active River Area", the Buffalo and Niagara River Remedial Action Plans and the Lake Erie Watershed Management Plan (prepared by Erie County).

The City's proposed Green Code, Brownfield opportunity area plans, local waterfront revitalization plan and zoning code are on track to be released sometime in February or March this year.

Also, I am sure that a host of historic preservation inventory resources exist - those were not listed in the document I reviewed. They are also not my area of traditional expertise. I would recommend that you contact the Preservation Board or Preservation Buffalo Niagara for more information on those items.

Please let me know if you have any further questions!

Julie

Julie Barrett O'Neill, Esq.
Green Program Director
Buffalo Sewer Authority
716-851-4664 x. 4213
joneill@sa.ci.buffalo.ny.us

From: Amy Weymouth
Sent: Friday, January 10, 2014 1:05 PM
To: 'Julie Barrett-O'Neill'
Subject: RE: Resource Agency Consultation Request

Hi Julie,

Thanks so much for your input. I will include the plans you suggested in our review. We've reach out to Preservation Buffalo Niagara and are currently looking at additional datasets to include. Thanks again for your feedback. We will keep you posted as work on the MTP update progresses.

Amy

Amy Weymouth-Michaux
Greater Buffalo-Niagara Regional Transportation Council
aweymouth@gbnrtc.org
438 Main Street
Buffalo, NY 14202
716.856.2026



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New York Field Office

3817 Luker Road

Cortland, NY 13045

Phone: (607) 753-9334 Fax: (607) 753-9699

<http://www.fws.gov/northeast/nyfo>

Document Control Number: 140203

To: Amy Weymouth

Date: Jan 23, 2014

Regarding: 2040 Metropolitan Transportation Plan

Town/County: Erie and Niagara Counties

We have received your request for information regarding occurrences of federally-listed threatened and endangered species within the vicinity of the above-referenced project/property. In an effort to streamline project reviews, species lists may now be obtained from our website at <http://www.fws.gov/northeast/nyfo/es/section7.htm>. Please go to this site and follow the instructions to obtain: an official list request response; information about listed, proposed, and candidate species; and steps to complete initial assessments of whether a species may be present and impacted by a proposed action. Please note that this process involves two parts: (1) visiting the U.S. Fish and Wildlife Service's IPaC website to obtain an official species list; and (2) returning to the New York Field Office's website to complete the remaining steps in determining your project's potential impacts.

As a reminder, Section 9 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) prohibits unauthorized taking* of listed species and applies to federal and non-federal activities. Additionally, threatened and endangered species and their habitats are protected by Section 7(a)(2) of the ESA, which requires federal agencies, in consultation with the Service, to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of designated critical habitat. An assessment of the potential direct, indirect, and cumulative impacts is required for all federal actions that may affect listed species.

For projects not authorized, funded, or carried out by a federal agency, we provide technical assistance to individuals and other non-federal entities to assist with project planning to avoid the potential for "take," or when appropriate, to provide assistance with their application for an incidental take permit pursuant to Section 10(a)(1)(B) of the ESA.

Project construction or implementation should not commence until all requirements of the ESA have been fulfilled. If you have any questions or require further assistance regarding threatened or endangered species, please contact the Endangered Species Program at (607) 753-9334. Please refer to the above document control number in any future correspondence.

*Under the ESA and regulations, it is illegal for any person subject to the jurisdiction of the United States to *take* (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import or export, ship in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered fish or wildlife species and most threatened fish and wildlife species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. "Harm" includes any act which actually kills or injures fish or wildlife, and case law has clarified that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.

From: Amy Weymouth
Sent: Thursday, February 06, 2014 9:46 AM
To: 'VanDonsel, MaryEllen'
Subject:RE: 2040 Metropolitan Transportation Plan

Hello MaryEllen,

Thank you for your input on the 2040 Metropolitan Transportation Plan Update - Environmental Planning Considerations and the information you provided on federally-listed threatened and endangered species. The GBNRTC is committed to establishing a platform for ongoing dialog and resource sharing regarding environmental issues with Federal, State and Tribal agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation.

Progress on the 2040 Metropolitan Transportation Plan Update activities will be discussed at monthly GBNRTC-PCC meetings and draft documents and other related plan information is now available on our website at www.gbnrtc.org. We would also be happy to meet with you to discuss any issues or concerns you may have regarding the future of transportation in the region. Please contact me if you would like to schedule a meeting.

Thank you for your participation in the consultation process.

Sincerely,

Amy Weymouth-Michaux
Greater Buffalo-Niagara Regional Transportation Council
aweymouth@gbnrtc.org
438 Main Street
Buffalo, NY 14202
716.856.2026

From: Benjamin Bidell
Sent: Friday, December 20, 2013 10:42 AM
To: Weymouth, Amy
Cc: Ferraro, Sam; Fisk, Amy; Timm, Dawn
Subject:Re: Resource Agency Consultation Request

Hi Amy,

Please also include the Niagara Communities Comprehensive Plan in your review. This plan covers all of the areas you've identified below; land use management, natural resources, environmental protection, conservation, and historic preservation. The Niagara Communities Comprehensive Plan can be found online at www.niagaracounty.com/CountyInformation/NiagaraCommunitiesComprehensivePlan.aspx.

Most of what you need will be found in Chapter III - Environmental Setting and Overview of Existing Conditions as well as Chapter V - Land Use and Environment. If you have any questions, please do not hesitate to let me know.

I'm copying Amy Fisk, the other Senior Planner in my office, and Dawn Timm, the County's Environmental Science Coordinator, in case they know of any other documents that you may want to include in your inventory/assessment.

Thanks for reaching out to us! Happy holidays!!!

-Ben

Benjamin J. Bidell, AICP, Senior Planner
Niagara County Dept. of Economic Development
6311 Inducon Corporate Drive
Sanborn, New York 14132
Phone: (716) 278-8756
Fax: (716) 278-8757
Email: benjamin.bidell@niagaracounty.com
Website: www.niagaracountybusiness.com

From: Amy Weymouth
Sent: Thursday, February 06, 2014 9:51 AM
To: 'Benjamin Bidell'
Subject: RE: Resource Agency Consultation Request

Hello Ben,

Thank you for your input on the 2040 Metropolitan Transportation Plan Update - Environmental Planning Considerations. As you suggested, we will include the Niagara Communities Comprehensive Plan in our review. Progress on the 2040 Metropolitan Transportation Plan Update activities will be discussed at monthly GBNRTC-PCC meetings and draft documents and other related plan information are now available on our website at www.gbnrtc.org. We would also be happy to meet with you to discuss any issues or concerns you may have regarding the future of transportation in the region. Please contact me if you would like to schedule a meeting.

Thank you again for your participation.

Sincerely,

Amy
Amy Weymouth-Michaux
Greater Buffalo-Niagara Regional Transportation Council
aweymouth@gbnrtc.org
438 Main Street
Buffalo, NY 14202
716.856.2026



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

DEC 31 2013

Ms. Amy Weymouth-Michaux
Greater Buffalo-Niagara Regional Transportation Council
438 Main Street
Buffalo, NY 14216

Dear Ms. Weymouth-Michaux:

Thank you for your December 12, 2013, email requesting EPA comment on the Greater Buffalo-Niagara Regional Transportation Council's (GBNRTC) Environmental Planning Considerations document. As you know interagency consultation is the primary mechanism for ensuring early coordination in the transportation planning process between state, local and federal governments.

EPA and GBNTC have a long standing history of collaboration through the interagency consultation group for air quality conformity in New York State. We welcome this opportunity to consult with you with respect to environmental protection, sustainability and environmental justice on a broader scale as you work to update your most recent metropolitan transportation plan.

Sustainable Development

The Town of Tonawanda, EPA, New York State Department of Environmental Conservation, the Clean Air Coalition of Western New York, the Empire State Development Corporation, the New York State Pollution Prevention Institute (P2I) and thirteen additional stakeholders signed a charter to coordinate and strategically target federal, state and local technical assistance to help the Tonawanda community improve overall air quality and work with businesses to become more efficient, competitive and environmentally sustainable. Two sustainable development projects being pursued in Tonawanda that should be considered in GBNRTC planning are:

- The River Road Landscape District Project is an attempt to create greenways along major public roadways and access points in the waterfront region, including River Road; Grand Island Boulevard; Sawyer Avenue, and; Sheridan Drive. The project includes enhancing the buffer between vehicles on roadways and people and bicycles on adjacent paths; greatly improving the view sheds for all travelers; restoring natural habitat throughout the project area, and; improving community character and pride.
- The Sustainability Corridor project is a strategic plan to transform the waterfront region into a unique center of sustainable development by combining existing assets with regional sustainability initiatives. The project includes the

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identification of existing site and area conditions; market niche based on regional sustainability strategies; preparation of concept plans and cost estimates for key projects and public investments, and; development of an overall sustainability strategy.

The lead for these projects is Robert Dimmig, Executive Director Town of Tonawanda Development Corporation who can be reached via email at rdimmig@tonawanda.ny.us. In addition, please see EPA's sustainability compendium of science-based assessment tools and approaches available to support sustainable decisions at <http://www.epa.gov/sustainability/analytics>.

Diesel Emissions – Construction Equipment

Although GBNRTC is not located in a nonattainment area for particulate matter air quality, localized air quality concerns from diesel particulate matter continue to remain high priority for state and local governments as well as community groups in the area. The Peace Bridge Plaza Expansion project which is expected to be in construction over the next few years provides GBNRTC an opportunity to promote implementation of several effective diesel emission reduction measures that will improve local air quality and public health.

Emissions from diesel construction equipment impact the health of people on and near construction sites. Although EPA regulations apply to new diesel engines, existing engines can last over 30 years. Adoption of the Northeast Diesel Collaborative's Clean Diesel Construction Contract Specifications, which include model language to include in contracts for this project, can help reduce the amount of diesel emissions that may be adversely impacting the community. Please reference the following website for model language: <http://www.epa.gov/cleandiesel/documents/cl-nedc-model-2010rev.pdf>

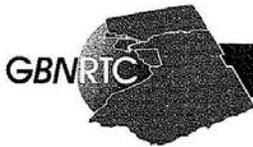
Diesel Truck Emissions

EPA's SmartWay Transport Partnership for Long Haul Trucks is another resource GBNRTC can promote to mitigate diesel emissions. Trucking companies with vehicle that serve or traverse the GBNRTC area including those that frequently cross the Peace Bridge can participate in the EPA SmartWay Transport Partnership. Information about the partnership can be found at <http://www.epa.gov/smartway/index.htm>.

Participation in SmartWay helps SmartWay Truck Carriers:

- identify opportunities to improve efficiency,
- demonstrate efficiency to potential customers, and
- reduce fuel costs.

There are a number of verified technologies truckers can choose from to reduce emissions from their fleet, <http://www.epa.gov/smartway/technology/index.htm>. Technologies include Auxiliary Power Unit or Generator Set devices that supply cooling, heating, and electrical power to Class 8 trucks, and Aerodynamic technologies that minimize wind resistance.



**GREATER BUFFALO-NIAGARA
REGIONAL TRANSPORTATION COUNCIL**

City of Buffalo
City of Niagara Falls
County of Erie
County of Niagara
New York State Thruway Authority
Niagara Frontier Transportation Authority
New York State Department of Transportation

April 14, 2014

John Filippelli, Director
US Environmental Protection Agency Region II
290 Broadway
New York, New York 10007-1866

Dear Mr. Filippelli:

Thank you for your comments regarding the 2040 Metropolitan Transportation Plan update. The GBNRTC is committed to establishing a platform for ongoing dialog and resource sharing regarding environmental issues with Federal, State and Tribal agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation. In response to the recommendations you presented in your letter, we would like to offer some additional details on various GBNRTC activities.

In regards to sustainable development, the GBNRTC in partnership with the Niagara Frontier Transportation Authority (NFTA) serves as the lead agency for the One Region Forward initiative. One Region Forward is a collaborative, broad-based effort to guide and promote more sustainable forms of development in Erie and Niagara counties in land use, transportation, housing, energy and climate, access to food, and more. It is combining research and public engagement with planning and action to help us meet the combined economic, environmental, and social challenges of the 21st century.

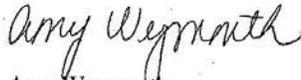
The project is funded by a \$2 million grant from the U.S. Department of Housing and Urban Development (HUD) Sustainable Communities Initiative in partnership with U.S. Environmental Protection Agency (EPA) and U.S. Department of Transportation (DOT). The Buffalo Niagara Consortium was one of 29 grant winners in a FFY 2011 competition that drew more than 140 applicants from around the country. A Regional Plan for Sustainable Development (RPSD) that outlines how a region will coordinate Federal, State and local investments for long-term economic, environmental and social sustainability is one of the main deliverables of the One Region Forward initiative. Projects such as the River Road Landscape District Project and the Sustainable Corridor Project in the Town of Tonawanda are the types of projects that would advance RPSD goals. These projects may also be eligible for funding through the Transportation Alternatives Program (TAP). TAP applications are currently begin solicited and are due by June 11, 2014. Robert Dimmig, Executive Director Town of Tonawanda, has been added to the

GBNRTC email list and will begin receiving information on important GBNRTC planning initiatives, meeting notices and funding opportunities.

The GBNRTC is fully engaged in the "NY Gateway Connections Improvement Project" for the Peace Bridge and surrounding neighborhoods and is committed to improving overall air quality in the region as it relates to vehicular emissions. As you may know, the purpose of the project is to reduce the use of the local streets by interstate traffic and provide access to the existing Plaza at its current location. The "Draft Environmental Impact Statement" (DEIS) has been released by NYSDOT for review and describes the proposed design alternatives and examines the potential environmental (CO, particulate, greenhouse, MSAT) effects that may result from the action, and where adverse impacts are identified, it discusses measures to mitigate those effects. In addition, the GBNRTC is aware of the truck preclearance demonstration project currently under way at the Peace Bridge and will monitor results relative to future changes in primary inspections of U.S.-bound cargo to the Canadian side of the bridge.

We thank you again for your comments and recommendations. If you have any questions regarding any of the information in this letter or wish to discuss this further, please contact me at (716) 856-2026.

Sincerely,



Amy Weymouth
Greater Buffalo-Niagara Regional Transportation Council

Cc: Hal Morse, GBNRTC

Appendix 2

2040 Demographic Tables

ERIE COUNTY

MUNICIPALITIES	POPULATION			MTP Forecast 2040
	1990	2000	2010	
ERIE COUNTY:	1990	2000	2010	2040
ALDEN	10,372	10,470	10,865	11,910
AMHERST	111,711	116,510	122,366	141,410
AURORA	13,433	13,996	13,773	16,720
BOSTON	7,445	7,897	8,023	10,130
BRANT*	3,918	3,907	3,901	4,470
BUFFALO	328,123	292,648	261,444	318,950
CHEEKTOWAGA	99,314	94,019	88,092	101,940
CLARENCE	20,041	26,123	30,673	35,170
COLDEN	2,899	3,323	3,265	4,020
COLLINS	6,020	8,307	6,598	8,740
CONCORD	8,387	8,526	8,494	10,000
EDEN	7,416	8,076	7,688	8,910
ELMA	10,355	11,304	11,326	12,950
EVANS	17,478	17,594	16,356	18,690
GRAND ISLAND	17,561	18,621	20,374	24,400
HAMBURG	53,735	56,259	56,936	64,920
HOLLAND	3,572	3,603	3,401	3,960
LACKAWANNA	20,585	19,064	18,141	20,060
LANCASTER	32,181	39,019	41,604	47,720
MARILLA	5,250	5,709	5,327	7,060
NEWSTEAD	7,440	8,414	8,628	10,030
NORTH COLLINS	3,502	3,376	3,523	4,010
ORCHARD PARK	24,632	27,637	29,054	34,770
SARDINIA	2,667	2,692	2,775	2,970
TONAWANDA, CITY	17,284	16,136	15,130	16,530
TONAWANDA, TOWN	82,464	78,155	73,567	80,580
WALES	2,917	2,960	3,005	3,510
WEST SENECA	47,830	45,920	44,711	51,730
ERIE CO. TOTAL:	968,532	950,265	919,040	1,076,260

MUNICIPALITIES	HOUSEHOLDS			MTP Forecast 2040
	1990	2000	2010	
ERIE COUNTY:	1990	2000	2010	2040
ALDEN	3,010	3,278	3,347	3,940
AMHERST	41,252	45,076	48,894	55,130
AURORA	4,919	5,421	5,491	6,690
BOSTON	2,651	2,997	3,221	3,970
BRANT*	1,363	1,413	1,491	1,670
BUFFALO	135,595	122,720	112,579	138,080
CHEEKTOWAGA	39,669	40,045	39,282	44,680
CLARENCE	6,997	9,154	11,282	12,730
COLDEN	1,036	1,262	1,304	1,580
COLLINS	1,656	1,754	1,644	1,910
CONCORD	3,050	3,264	3,403	3,960
EDEN	2,522	2,855	2,951	3,250
ELMA	3,644	4,186	4,462	4,950
EVANS	6,125	6,639	6,669	7,280
GRAND ISLAND	6,300	6,898	7,936	9,330
HAMBURG	20,085	21,999	23,447	26,140
HOLLAND	1,267	1,332	1,369	1,510
LACKAWANNA	8,451	8,192	8,242	8,890
LANCASTER	12,066	15,053	16,559	18,900
MARILLA	1,777	2,021	2,069	2,580
NEWSTEAD	2,863	3,376	3,606	4,160
NORTH COLLINS	1,196	1,254	1,368	1,540
ORCHARD PARK	8,832	10,277	11,398	13,350
SARDINIA	908	944	1,081	1,080
TONAWANDA, CITY	6,869	6,741	6,749	7,130
TONAWANDA, TOWN	33,636	33,278	32,951	35,390
WALES	1,009	1,116	1,218	1,360
WEST SENECA	17,271	18,328	19,151	21,290
ERIE CO. TOTAL:	376,019	380,873	383,164	442,470

MUNICIPALITIES	EMPLOYMENT			MTP Forecast 2040
	1990	2000	2010	
ERIE COUNTY:	1990	2000	2010	2040
ALDEN	4,872	5,334	5,215	5,700
AMHERST	70,288	94,393	103,000	110,390
AURORA	8,059	7,899	9,653	8,160
BOSTON	1,343	1,202	1,226	1,300
BRANT*	1,056	1,160	1,735	1,240
BUFFALO	229,455	191,851	193,601	198,200
CHEEKTOWAGA	52,446	56,474	53,482	60,040
CLARENCE	13,964	14,812	13,302	15,670
COLDEN	620	464	395	500
COLLINS	3,554	3,277	2,720	3,330
CONCORD	4,059	4,844	4,717	5,230
EDEN	1,248	2,359	1,773	2,550
ELMA	5,753	7,291	6,976	7,870
EVANS	4,284	5,034	4,474	5,530
GRAND ISLAND	6,181	6,397	6,627	6,830
HAMBURG	25,020	29,248	26,934	32,060
HOLLAND	959	1,069	1,117	1,150
LACKAWANNA	7,276	8,675	6,107	9,590
LANCASTER	13,085	20,369	19,015	23,400
MARILLA	70	507	546	550
NEWSTEAD	2,621	4,756	3,888	5,220
NORTH COLLINS	919	1,397	1,220	1,520
ORCHARD PARK	12,299	16,562	18,498	17,960
SARDINIA	638	1,253	844	1,370
TONAWANDA, CITY	11,274	8,091	8,542	8,280
TONAWANDA, TOWN	36,193	38,528	36,247	40,810
WALES	175	484	449	520
WEST SENECA	20,248	21,826	19,318	23,410
ERIE CO. TOTAL:	537,959	555,556	551,621	598,380

2040 Population, Household and Employment Forecasts

NIAGARA COUNTY

MUNICIPALITIES	POPULATION			MTP Forecast
	1990	2000	2010	2040
NIAGARA COUNTY:				
CAMBRIA	4,779	5,393	5,841	6,250
HARTLAND	3,911	4,165	4,117	4,610
LEWISTON*	16,225	17,395	17,414	19,940
LOCKPORT, CITY	24,426	22,279	21,165	23,120
LOCKPORT, TOWN	16,596	19,653	20,527	27,280
NEWFANE	8,996	9,657	9,666	11,080
NIAGARA	9,880	8,978	8,378	10,150
NIAGARA FALLS	61,840	55,593	50,193	58,900
NORTH TONAWANDA	34,989	33,262	31,568	35,660
PENDLETON	5,010	6,050	6,397	8,780
PORTER	7,110	6,920	6,771	7,610
ROYALTON	7,453	7,710	7,660	8,640
SOMERSET	2,655	2,865	2,662	3,140
WHEATFIELD	11,125	14,086	18,117	21,050
WILSON	5,761	5,840	5,993	6,260
NIAGARA CO. TOTAL:	220,756	219,846	216,469	252,470

MUNICIPALITIES	HOUSEHOLDS			MTP Forecast
	1990	2000	2010	2040
NIAGARA COUNTY:				
CAMBRIA	1,676	1,995	2,181	2,380
HARTLAND	1,341	1,526	1,561	1,740
LEWISTON*	5,483	6,280	6,709	7,450
LOCKPORT, CITY	9,838	9,459	9,153	10,160
LOCKPORT, TOWN	5,925	7,537	8,292	10,820
NEWFANE	3,254	3,597	3,798	4,270
NIAGARA	3,801	3,611	3,605	4,200
NIAGARA FALLS	25,885	24,099	22,603	26,210
NORTH TONAWANDA	13,585	13,671	14,004	15,060
PENDLETON	1,695	2,116	2,344	3,180
PORTER	2,505	2,616	2,782	2,960
ROYALTON	2,618	2,810	2,955	3,240
SOMERSET	940	1,000	988	1,140
WHEATFIELD	4,022	5,305	7,180	8,170
WILSON	2,120	2,224	2,401	2,470
NIAGARA CO. TOTAL:	84,688	87,846	90,556	103,450

MUNICIPALITIES	EMPLOYMENT			MTP Forecast
	1990	2000	2010	2040
NIAGARA COUNTY:				
CAMBRIA	1,080	1,575	1,392	1,910
HARTLAND	288	429	376	520
LEWISTON*	6,675	6,322	6,901**	7,340
LOCKPORT, CITY	18,792	16,774	11,760**	17,110
LOCKPORT, TOWN	6,381	9,009	9,340**	12,930
NEWFANE	2,457	3,039	2,479	3,680
NIAGARA	7,102	7,184	6,027	8,470
NIAGARA FALLS	32,559	24,541	26,145	30,810
NORTH TONAWANDA	12,286	9,756	8,736	10,960
PENDLETON	1,082	2,242	1,993	2,830
PORTER	1,066	1,553	1,202	1,880
ROYALTON	2,122	3,385	1,878	3,970
SOMERSET	1,047	1,008	924	1,170
WHEATFIELD	5,952	7,391	7,094	10,810
WILSON	1,218	1,055	890	1,280
NIAGARA CO. TOTAL:	100,107	95,263	59,136	115,670

GRAND TOTAL:	1,189,288	1,170,111	1,135,509	1,328,730
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GRAND TOTAL:	460,707	468,719	473,720	545,920
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GRAND TOTAL:	638,066	650,819	610,757	714,050
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* includes Indian Reservation

* includes Indian Reservation

* includes Indian Reservation

** manually adjusted

* Population in Households and Group Quarters

TAZ	POPULATION*			Forecast 2040	HOUSEHOLDS			Forecast 2040	EMPLOYMENT			Forecast 2040
	1990	2000	2010		1990	2000	2010		1990	2000	2010	
1	0	8	80	100	0	3	51	51	4,779	3,472	2,295	2,300
2	0	0	0	0	0	0	0	0	5,682	4,075	6,169	6,175
3	29	0	0	0	0	0	0	0	2,570	2,302	2,600	3,000
4	39	106	38	209	39	60	26	95	1,519	772	1,354	1,354
5	36	0	0	0	36	0	0	0	10,450	7,434	9,637	9,637
6	519	1,364	870	1,493	0	6	2	11	10,662	9,256	6,958	6,525
7	0	0	1	1	0	0	1	1	347	742	517	520
8	1,139	1,267	1,639	1,739	765	851	908	974	1,341	1,083	1,533	1,633
9	1,507	1,912	1,365	1,941	714	837	548	831	446	832	935	935
10	1,570	1,363	1,315	1,553	768	648	668	731	543	774	1,730	1,736
11	236	136	125	315	215	118	107	241	2,453	2,227	1,226	1,226
12	383	419	372	737	205	240	242	411	1,343	1,155	1,200	1,269
13	152	98	151	413	45	64	113	253	731	1,213	571	571
14	17	23	21	218	2	10	12	122	607	825	1,908	1,908
15	163	68	361	561	15	49	88	187	1,590	876	583	583
16	136	125	303	794	49	36	156	451	1,439	1,451	1,694	1,694
17	0	0	0	0	0	0	0	0	311	306	204	204
18	57	44	142	460	57	37	113	354	4,849	3,367	1,940	1,949
19	0	0	0	0	0	0	0	0	2,831	3,267	2,792	2,800
20	39	4	9	9	10	2	7	7	3,002	3,363	3,375	3,500
21	170	34	30	110	138	19	19	53	6,390	3,933	1,919	1,919
22	34	1	29	195	0	1	23	153	2,700	3,080	1,245	1,245
23	3,621	2,547	2,179	2,558	1,568	1,119	942	1,134	999	398	450	480
24	3,977	3,485	3,002	3,396	1,596	1,303	1,170	1,267	2,499	2,688	2,000	1,991
25	10,254	8,230	7,706	8,552	3,945	3,176	3,150	3,343	1,603	967	1,263	1,263
26	2,431	2,028	1,594	2,183	921	817	668	983	464	392	350	358
27	3,429	3,326	3,008	4,177	1,912	1,846	1,797	2,386	5,469	4,338	5,707	5,707
28	3,788	3,667	3,354	4,069	2,074	2,041	2,074	2,308	1,166	1,087	1,087	1,062
29	3,269	3,059	3,224	3,776	2,316	2,155	2,188	2,618	5,977	5,952	6,636	6,636
30	2,885	2,765	2,441	2,967	1,437	1,276	1,174	1,393	845	480	498	498
31	2,496	2,395	2,262	2,737	1,221	1,336	1,321	1,553	1,590	1,591	1,328	1,238
32	4,358	3,596	2,891	4,374	1,903	1,560	1,241	1,951	1,933	1,277	1,366	1,366
33	5,016	4,144	3,119	4,355	2,017	1,764	1,373	1,993	420	1,275	1,400	1,421
34	2,286	1,863	1,403	2,655	975	800	662	1,096	6,734	7,123	10,582	13,580
35	1,165	1,056	655	1,232	533	424	297	510	692	328	273	273
36	987	949	906	1,124	428	443	429	488	1,252	663	708	808
37	1,297	967	990	1,128	680	438	439	525	1,395	1,112	2,119	2,119
38	5,971	5,805	4,738	6,700	2,797	2,819	2,298	3,333	1,842	1,815	2,016	2,016
39	100	216	176	257	59	77	74	94	558	817	1,020	1,020
40	1,567	1,182	1,290	1,806	545	487	498	594	2,762	3,004	2,720	3,285
41	413	653	673	1,093	311	372	419	637	1,787	1,127	862	862
42	4,850	3,826	2,857	4,373	1,852	1,567	1,276	1,821	2,229	2,420	2,453	2,453
43	0	0	0	0	0	0	0	0	1,585	1,028	892	892
44	2,437	2,061	1,899	2,077	999	827	689	943	2,067	2,110	1,408	1,408
45	8,138	7,738	8,011	8,194	3,758	3,491	3,425	3,787	3,701	4,252	3,564	3,564
46	8,141	7,451	7,288	7,685	3,362	2,842	2,594	3,096	3,045	2,023	1,330	1,330
47	8,513	7,868	7,592	8,287	3,893	3,622	3,569	3,868	1,282	1,004	1,311	1,311
48	2,956	2,112	1,940	2,629	125	95	52	181	5,647	3,512	3,800	3,746
49	4,219	4,266	4,182	4,440	1,874	1,829	1,782	2,054	5,674	5,661	2,975	2,975
50	2,734	2,485	2,409	2,585	1,191	1,140	1,151	1,217	3,954	3,092	3,442	3,442
51	16,048	15,239	14,218	15,956	7,023	7,078	6,901	7,560	3,318	2,205	3,363	3,363
52	4,229	4,031	3,850	4,293	1,931	1,911	1,900	2,141	2,566	1,864	1,408	1,408
53	748	716	578	744	332	282	259	354	244	169	300	631
54	4,189	3,747	3,530	3,999	1,666	1,661	1,570	1,873	4,222	3,515	4,200	4,013
55	2,533	2,605	2,414	2,789	719	724	705	803	3,424	2,579	2,993	2,993
56	5,711	4,999	4,367	5,379	2,202	1,986	1,872	2,154	1,558	1,483	1,245	1,245
57	4,298	4,445	4,568	4,913	2,097	2,034	1,870	2,317	6,480	4,097	3,200	3,351
58	11,188	10,688	11,170	11,570	4,587	4,398	4,343	4,699	2,198	2,318	2,617	2,617
59	2,802	2,739	2,535	2,950	1,299	1,281	1,212	1,467	676	537	676	880
60	9,649	9,051	8,827	10,042	3,821	3,719	3,781	3,989	2,920	2,100	2,756	2,756
61	6,703	7,119	6,645	7,610	2,530	2,690	2,600	2,921	1,599	1,441	1,402	1,402
62	6,570	6,313	5,975	6,623	2,634	2,399	2,274	2,689	897	573	617	917
63	7,588	6,458	5,163	6,804	2,734	2,473	2,215	2,626	4,209	3,848	4,049	4,049
64	3,947	3,598	3,072	3,704	1,344	1,264	1,151	1,322	3,553	3,424	4,147	4,147
65	8,479	8,054	7,245	8,378	3,457	3,234	3,002	3,548	2,718	1,872	1,670	1,670
66	9,162	8,352	7,753	8,691	3,568	3,322	3,295	3,643	803	1,182	600	686
67	1,670	1,536	1,594	1,914	69	77	70	100	8,019	5,513	6,866	6,900
68	4,606	3,771	2,757	3,798	1,780	1,508	1,195	1,503	1,669	1,546	1,300	1,317
69	5,256	3,915	2,608	4,366	1,899	1,484	1,079	1,687	3,075	3,022	2,135	990
70	8,459	7,957	7,576	8,317	3,490	3,040	2,781	3,248	1,849	1,408	1,062	1,062
71	6,285	4,466	3,311	4,385	2,493	1,883	1,490	2,047	1,748	1,494	1,300	1,226
72	11,540	7,979	4,693	7,901	4,574	3,132	1,857	3,266	2,117	883	983	1,050
73	2,396	2,481	2,304	2,574	999	1,033	976	1,088	1,035	1,154	1,154	1,718
74	11,341	7,656	5,067	8,037	4,925	3,267	2,184	3,512	1,826	1,045	1,045	1,324
75	579	515	424	660	213	221	173	348	1,701	1,212	1,050	1,050
76	5,674	3,890	2,075	3,795	2,768	1,773	1,025	1,974	5,283	3,744	3,575	3,060
77	9,654	8,926	7,801	9,545	4,005	4,003	3,474	4,396	3,060	1,457	1,736	1,736
78	2,633	2,230	1,778	2,113	1,102	1,010	823	978	2,185	1,971	1,785	1,785
79	1,657	1,528	1,243	1,599	699	609	516	762	3,629	2,718	1,900	1,900
80	572	437	371	575	206	186	167	208	3,678	2,672	2,932	2,932

TAZ	POPULATION*			Forecast	HOUSEHOLDS			Forecast	EMPLOYMENT			Forecast
	1990	2000	2010	2040	1990	2000	2010	2040	1990	2000	2010	2040
81	5,795	5,494	5,178	5,981	2,567	2,513	2,428	2,816	867	1,026	931	631
82	1,268	1,100	798	1,074	507	442	340	391	678	721	576	376
83	9,997	8,963	8,518	9,651	3,756	3,706	3,640	4,106	1,085	918	1,186	2,181
84	3,836	3,366	3,154	3,625	1,418	1,390	1,398	1,640	982	488	520	480
85	6,600	5,930	5,730	6,385	2,476	2,366	2,394	2,621	1,763	1,369	1,645	1,645
86	8,596	8,129	7,077	8,752	3,205	3,054	3,010	3,388	1,961	2,905	4,763	4,863
87	2,519	2,177	1,961	3,043	915	838	807	1,206	929	1,358	1,220	1,220
88	4,939	4,411	4,076	5,136	1,914	1,746	1,678	2,096	2,394	1,092	1,931	2,121
89	879	925	800	1,022	321	336	288	494	216	330	328	328
90	4	0	0	0	0	0	0	0	69	25	10	10
91	0	0	0	0	0	0	0	0	496	1,232	480	380
92	212	382	429	467	98	141	159	177	725	1,141	1,299	1,300
93	208	249	285	356	79	81	100	120	25	47	158	158
94	523	558	556	721	264	272	287	361	530	649	1,153	1,163
95	795	1,159	1,544	1,731	271	391	551	600	155	420	200	218
96	951	890	874	1,558	318	385	408	722	377	201	231	231
97	572	571	543	687	241	223	227	275	0	13	10	14
98	338	357	576	576	111	122	186	186	10	8	12	15
99	2,822	2,701	2,520	2,862	898	970	974	1,056	79	150	134	155
100	603	605	496	706	211	222	183	266	19	47	12	36
101	1,474	1,329	1,313	1,642	489	480	485	610	826	132	91	116
102	38	47	128	128	16	16	56	56	6	25	24	27
103	991	990	886	1,021	449	418	399	446	3,467	4,316	2,550	2,800
104	235	204	193	211	70	58	58	58	2,290	2,165	1,785	2,023
105	0	0	0	0	0	0	0	0	4,022	2,617	2,165	2,465
106	182	193	148	199	91	93	68	99	1,143	1,393	1,105	1,634
107	1,419	1,291	1,179	1,331	542	512	509	546	2,024	2,351	2,422	2,422
108	3,076	2,864	2,584	2,952	1,201	1,183	1,087	1,260	2,537	2,931	3,175	3,440
109	0	0	0	0	0	0	0	0	645	506	685	700
110	1,824	1,680	1,749	1,749	797	800	930	930	962	903	996	1,635
111	2,255	2,066	2,141	2,141	998	884	930	933	693	1,164	1,111	1,141
112	4,397	3,766	3,530	3,882	1,903	1,750	1,811	1,838	1,277	2,206	2,501	2,555
113	9,020	8,752	8,288	9,021	3,772	3,822	3,812	4,013	3,293	2,870	2,192	2,766
114	4,905	4,910	4,686	5,063	2,151	2,165	2,168	2,294	1,648	1,819	2,246	2,246
115	4,745	4,687	4,487	4,833	1,982	1,993	1,955	2,123	3,006	2,340	1,773	2,387
116	8,160	7,963	7,393	8,192	3,323	3,385	3,360	3,600	2,579	1,540	1,888	1,888
117	5,854	5,237	5,028	5,400	2,528	2,298	2,286	2,449	982	958	765	939
118	3,950	3,666	3,507	3,780	1,495	1,550	1,523	1,651	534	608	1,317	1,638
119	7,332	6,746	6,342	6,955	2,865	2,760	2,728	2,941	1,472	2,335	2,350	2,350
120	3,014	2,773	2,511	2,860	1,194	1,163	1,156	1,240	608	452	777	777
121	6,444	6,314	5,851	6,500	2,351	2,415	2,371	2,547	1,136	2,856	2,319	2,792
122	5,585	5,732	5,582	5,910	2,249	2,386	2,379	2,541	695	832	838	838
123	2,369	1,800	1,687	1,856	860	746	740	793	469	323	340	340
124	4,719	4,329	3,965	4,463	1,732	1,716	1,703	1,829	614	894	789	876
125	1,988	2,192	1,830	2,261	1,083	1,181	978	1,259	98	149	158	158
126	960	1,258	1,294	2,128	581	765	811	871	289	1,319	1,069	2,077
127	4,082	4,641	5,972	8,259	88	93	96	121	4,887	4,961	5,179	6,201
128	214	340	310	522	108	149	148	693	138	401	474	487
129	727	865	868	861	542	562	567	576	4,228	5,763	4,857	5,013
130	885	786	853	853	561	503	512	517	3,677	5,845	3,206	3,245
131	2,769	2,515	2,569	2,564	1,060	1,059	1,122	1,120	2,570	4,494	3,764	4,651
132	2,884	2,702	2,604	2,958	1,057	1,090	1,079	1,141	299	676	880	895
133	1,860	1,974	1,837	1,830	885	858	865	891	1,395	1,637	2,556	2,700
134	2,525	2,474	2,487	2,750	925	995	1,016	1,039	892	1,138	1,475	1,524
135	5,771	5,600	5,811	5,977	2,252	2,272	2,253	2,323	1,907	2,184	2,677	2,892
136	2,920	2,676	2,637	2,637	1,175	1,134	1,130	1,161	854	587	474	474
137	5,091	5,321	5,293	5,291	2,185	2,345	2,355	2,404	2,804	2,957	1,779	1,798
138	5,339	5,229	5,111	5,161	2,039	2,087	2,064	2,141	1,032	1,562	1,081	1,081
139	4,255	4,045	3,970	4,001	1,703	1,654	1,680	1,695	1,652	1,131	1,117	1,132
140	5,363	5,370	4,453	5,542	2,443	2,400	1,786	2,586	1,916	1,195	1,105	1,184
141	4,924	4,855	4,649	5,010	2,044	2,064	2,051	2,202	819	759	1,063	1,063
142	4,859	4,581	4,411	4,727	2,131	2,033	2,019	2,169	370	487	595	595
143	1,621	1,747	1,589	1,803	748	711	653	760	733	330	322	327
144	3,835	3,363	2,912	3,472	1,565	1,470	1,310	1,569	478	778	1,062	1,062
145	6,651	6,635	6,441	6,848	2,853	2,775	2,745	2,965	1,784	912	2,082	2,082
146	674	595	570	615	290	272	264	290	3,779	6,735	5,549	6,080
147	2,236	2,149	2,144	2,218	1,020	962	976	1,026	562	828	862	862
148	2,291	2,029	1,924	2,093	881	869	854	928	2,586	2,562	1,858	2,544
149	19	5	4	5	7	3	2	3	1,952	1,243	1,330	1,584
150	118	209	195	217	67	83	104	104	260	238	255	469
151	3,830	3,775	3,661	3,897	1,635	1,680	1,674	1,794	983	660	571	654
152	441	423	327	436	162	186	151	198	618	1,342	1,068	1,490
153	41	34	18	35	16	14	8	18	618	917	929	929
154	3,755	3,448	3,169	3,559	1,797	1,827	1,718	1,950	516	620	455	614
155	2,482	2,348	2,238	2,423	1,024	1,049	1,029	1,118	1,337	1,128	1,020	1,118
156	4,253	3,820	3,659	3,942	1,805	1,681	1,657	1,794	975	823	510	815
157	1,148	1,176	1,311	1,311	430	558	684	684	594	741	710	735
158	532	544	564	602	247	259	264	296	53	168	79	179
159	4,662	4,582	4,323	5,063	1,842	1,997	2,030	2,278	2,959	3,226	2,422	2,522
160	697	788	884	884	391	403	601	601	831	2,114	1,220	1,420
161	3,370	3,082	2,717	3,394	1,333	1,250	1,135	1,427	128	183	176	227
162	1,628	1,560	1,471	1,724	600	617	603	704	320	138	115	198
163	2,058	1,891	1,837	2,090	957	931	946	1,063	653	592	407	630
164	3,052	2,966	2,889	3,278	1,348	1,337	1,338	1,526	1,261	1,796	1,530	1,859
165	786	774	784	855	227	284	326	326	1,546	1,969	1,973	2,181
166	1,850	1,771	1,722	1,958	700	724	735	826	364	126	128	175
167	67	63	61	70	33	20	20	23	1,670	902	911	1,014
168	527	468	545	545	179	192	215	219	259	920	383	676
169	851	826	788	913	346	347	338	396	1,396	1,848	1,572	1,961
170	4,754	4,525	4,773	5,001	1,582	1,805	1,977	2,060	1,478	1,185	1,275	1,432

TAZ	POPULATION*			Forecast	HOUSEHOLDS			Forecast	EMPLOYMENT			Forecast
	1990	2000	2010	2040	1990	2000	2010	2040	1990	2000	2010	2040
171	529	598	501	661	218	250	230	286	0	68	12	73
172	4,990	4,563	4,585	4,747	2,297	2,094	2,237	2,240	1,154	1,697	1,591	1,824
173	1,326	1,122	1,041	1,150	487	477	482	502	169	171	109	158
174	3,485	3,306	3,190	3,705	1,244	1,332	1,463	1,542	1,711	1,824	1,621	2,006
175	6,466	5,945	5,542	6,449	2,859	2,760	2,643	3,082	1,352	1,076	1,226	1,426
176	1,133	994	931	931	376	348	324	329	636	1,943	1,002	2,149
177	3,185	3,134	2,852	3,078	1,188	1,181	1,093	1,195	1,777	1,314	279	1,452
178	0	0	0	0	0	0	0	0	477	650	279	575
179	128	239	228	310	73	91	90	122	250	278	152	177
180	2,296	1,907	2,355	2,536	835	710	968	977	1,399	807	1,068	1,068
181	2,236	2,896	2,932	3,544	779	978	1,051	1,290	133	219	231	243
182	996	1,140	1,268	1,588	369	432	487	619	179	64	73	75
183	1,216	1,632	2,069	2,335	379	556	746	818	539	713	692	711
184	1,579	1,439	1,747	1,977	677	643	785	828	890	1,375	990	1,008
185	574	520	511	676	192	185	193	247	38	108	97	115
186	6,154	5,615	5,206	5,742	2,408	2,365	2,312	2,496	3,268	1,321	1,378	1,378
187	1,808	1,738	1,576	1,725	700	696	686	713	120	188	231	231
188	3,351	3,156	2,929	3,053	1,310	1,270	1,254	1,267	1,413	1,668	2,440	2,440
189	2,629	2,480	2,283	2,692	1,089	1,056	1,066	1,182	4,737	3,754	2,799	2,537
190	3,342	3,147	3,136	3,318	1,362	1,354	1,431	1,472	1,736	1,160	1,694	1,694
191	1,027	668	662	717	537	452	449	498	1,518	1,639	1,381	1,491
192	5,133	5,067	4,546	5,433	2,137	2,109	2,095	2,324	2,780	1,972	1,751	2,133
193	5,034	4,578	4,549	4,907	2,076	1,978	2,117	2,178	252	186	306	382
194	3,531	3,328	3,197	3,569	1,376	1,362	1,424	1,500	1,657	922	595	985
195	4,023	3,834	3,712	4,110	1,624	1,669	1,708	1,838	1,134	968	867	1,037
196	1,737	1,916	1,750	2,053	690	751	749	829	236	267	237	402
197	3,804	3,845	3,793	4,122	1,437	1,560	1,580	1,718	1,426	1,046	1,034	1,277
198	6,073	5,535	5,140	5,934	1,970	1,983	2,015	2,183	538	703	462	789
199	1,957	1,883	1,775	2,018	705	734	766	809	1,256	1,037	1,335	1,400
200	2,670	2,608	2,444	2,797	1,033	1,073	1,101	1,183	1,488	1,016	768	1,064
201	84	65	81	81	38	27	35	35	28	413	516	581
202	4,542	4,344	4,804	5,570	1,552	1,629	1,793	2,163	312	1,706	2,592	2,600
203	1,196	975	974	1,052	370	353	377	391	0	150	12	185
207	2,259	2,219	2,053	3,830	743	779	781	1,482	215	213	279	1,380
208	397	478	411	585	165	190	180	239	7,874	7,240	7,024	7,193
209	2,588	2,549	2,368	2,828	1,021	1,024	1,019	1,121	354	623	777	796
210	2,287	2,459	2,810	3,843	893	970	1,153	1,512	72	168	322	322
211	2,917	3,947	4,940	5,361	1,349	1,716	2,310	2,528	2,803	5,848	8,305	8,362
212	364	279	272	364	131	112	115	150	34	17	11	16
213	466	513	473	1,158	156	186	191	587	0	66	200	200
214	79	67	364	2,206	28	22	192	742	68	95	188	188
215	3,206	3,328	3,468	4,324	1,196	1,344	1,470	1,815	280	326	613	736
216	1,182	1,454	1,477	1,857	420	497	540	665	39	90	152	152
217	534	763	1,664	1,843	274	361	660	738	6	120	237	235
218	2,261	2,581	2,841	3,341	720	848	1,040	1,146	104	1,214	4,025	5,035
219	1,798	2,868	3,486	4,194	534	942	1,224	1,500	215	842	844	896
220	2,083	2,356	2,436	2,990	661	784	874	1,035	2,500	858	1,062	1,071
221	5,089	5,365	5,195	5,785	1,565	1,749	1,768	1,858	469	648	1,056	1,056
222	4,179	4,142	4,193	4,535	1,328	1,497	1,583	1,702	997	627	978	1,005
223	1,859	2,291	2,356	3,045	616	736	820	921	1,162	495	413	428
224	2,918	3,993	4,979	4,984	1,098	1,869	2,330	2,332	1,701	3,860	5,167	5,105
225	4,875	4,589	4,485	4,764	1,799	1,829	1,840	1,912	865	775	698	698
226	1,659	1,532	1,655	1,696	683	683	720	782	981	768	1,311	1,311
227	2,616	2,516	2,494	2,723	897	931	931	1,044	423	310	370	370
228	7,989	7,604	7,299	7,734	2,861	2,984	3,009	3,174	1,062	1,790	2,829	2,886
229	1,156	974	1,003	1,054	331	320	515	514	1,360	1,531	1,238	1,238
230	568	815	930	1,178	279	390	527	690	1,460	5,594	7,012	6,981
231	507	743	898	1,324	151	232	482	523	1,447	2,612	2,076	2,070
232	733	932	853	1,054	311	355	343	414	675	458	704	704
233	681	618	619	721	247	248	251	307	2,741	8,352	7,389	8,091
234	81	545	828	823	42	294	429	427	802	4,021	3,430	3,715
235	2,658	2,759	2,541	2,920	1,202	1,228	1,220	1,291	3,492	3,372	4,978	4,978
236	2,925	2,786	2,685	2,949	1,337	1,294	1,278	1,460	6,736	2,444	3,485	3,485
237	2,693	2,635	2,815	2,904	1,093	1,087	1,196	1,239	2,167	2,092	2,119	2,150
238	3,112	2,876	2,752	3,265	1,183	1,207	1,206	1,417	1,503	1,603	1,888	1,888
239	40	45	29	51	27	22	16	26	4,102	4,237	3,369	4,005
240	87	45	39	51	39	22	20	26	1,403	1,265	2,140	2,140
241	1,049	1,171	955	1,329	581	720	638	846	292	1,143	826	1,371
242	149	108	91	122	51	40	43	55	3,577	1,969	1,827	1,951
243	4,155	3,486	3,256	3,958	1,516	1,531	1,524	1,778	36	65	55	64
244	4,304	3,953	3,820	4,489	1,726	1,683	1,669	1,976	1,990	2,659	2,034	2,251
245	3,405	2,994	2,759	3,400	1,192	1,216	1,226	1,427	3,615	3,463	3,187	3,430
246	5,810	5,444	4,868	5,876	2,122	2,187	2,102	2,441	713	842	1,226	1,226
247	1,853	1,790	1,742	2,033	809	762	759	891	2,226	1,851	2,598	2,598
248	1,625	1,344	1,317	1,526	606	567	611	665	6,615	6,147	5,136	5,841
249	1,489	815	730	926	657	240	267	267	1,085	2,152	2,732	2,732
250	3,266	4,062	4,081	4,821	1,022	1,655	1,864	2,071	132	1,116	826	1,347
251	3,795	3,440	3,116	3,907	1,318	1,317	1,304	1,505	303	688	953	953
252	15,288	10,885	9,959	12,357	5,284	4,098	4,205	4,605	1,871	576	704	704
253	1,346	4,999	4,903	5,676	618	2,141	2,143	2,526	2,101	4,400	2,635	3,332
254	2,999	2,751	2,965	3,166	987	1,057	1,260	1,260	579	548	613	720
255	1,444	1,426	1,413	1,640	510	549	566	652	837	1,775	2,374	2,601
256	1,744	1,744	1,550	2,007	552	593	594	705	945	1,000	1,038	1,242
257	2,155	2,325	2,254	2,675	750	908	920	1,079	344	634	510	674
258	2,124	1,996	1,781	2,296	793	793	780	942	724	1,051	801	1,070
259	3,249	3,184	2,835	3,637	1,159	1,145	1,147	1,312	749	544	467	579
260	870	147	143	170	11	19	0	24	2,244	300	862	1,190
261	3,505	3,873	3,860	4,457	1,045	1,358	1,543	1,614	397	489	304	521
262	4,377	4,036	4,051	4,644	1,461	1,490	1,583	1,671	509	250	146	266
263	1,313	1,974	2,394	2,743	644	957	1,148	1,265	1,109	1,440	1,651	1,651

TAZ	POPULATION*			Forecast	HOUSEHOLDS			Forecast	EMPLOYMENT			Forecast
	1990	2000	2010	2040	1990	2000	2010	2040	1990	2000	2010	2040
264	548	629	776	873	180	219	325	325	18	126	36	30
265	695	884	1,423	1,423	204	289	443	443	67	122	73	65
266	1,120	1,084	1,077	1,506	402	421	421	600	604	567	607	607
267	1,739	1,761	1,726	2,253	719	789	763	1,025	4,721	1,871	2,143	2,143
268	1,541	1,533	1,512	2,130	632	629	619	841	422	593	1,700	1,700
269	1,557	1,623	2,189	2,255	480	585	761	835	38	49	176	176
270	1,628	1,497	1,304	1,774	534	535	529	650	268	804	905	905
271	1,454	1,471	1,381	1,742	540	607	600	737	42	93	49	25
272	549	506	465	599	207	179	182	229	575	1,891	2,580	2,580
273	533	424	446	503	174	177	220	220	1,022	1,397	1,220	1,005
274	1,303	1,620	1,465	1,918	509	651	628	791	905	1,901	1,609	1,399
275	500	527	471	624	180	245	243	298	1,061	2,596	2,878	2,878
276	708	694	605	822	325	302	274	368	332	582	753	755
277	914	1,117	1,101	1,322	422	453	475	550	36	201	255	255
278	922	1,246	1,460	1,475	307	353	606	606	220	244	382	382
279	539	532	431	630	180	181	168	220	161	450	121	98
280	2,867	2,588	2,325	2,880	1,064	1,065	1,040	1,267	419	1,902	3,139	3,150
281	2,900	2,723	2,553	3,111	1,201	1,202	1,164	1,332	1,485	1,879	1,500	1,862
282	994	809	713	934	425	327	320	389	1,129	400	747	757
283	958	993	741	1,147	347	391	368	461	310	431	1,821	1,888
284	0	5	5	6	0	3	4	4	2,876	2,795	906	1,200
285	1,815	1,997	1,977	2,306	673	765	857	910	110	480	747	760
286	2,145	1,933	1,873	2,232	830	833	858	992	578	502	534	550
287	2,440	2,679	2,489	2,994	912	1,051	1,072	1,252	3,412	3,605	1,900	2,553
288	20	67	72	77	11	28	40	40	31	440	522	530
289	976	1,210	1,527	1,527	343	455	553	553	108	664	407	727
290	591	820	839	948	159	238	344	344	666	806	546	883
291	990	1,112	1,190	1,294	509	624	684	743	330	215	468	470
292	5,223	5,199	5,029	5,547	1,797	2,029	2,104	2,312	972	1,908	1,445	2,092
293	606	597	428	722	393	364	263	451	3,211	2,656	4,963	5,325
294	903	462	135	682	477	210	59	325	4,072	1,689	1,005	1,745
295	0	0	0	0	0	0	0	0	701	316	408	408
296	2,272	1,862	1,798	1,935	1,040	902	800	962	1,499	707	797	797
297	5,091	4,574	4,045	4,714	2,294	2,149	1,896	2,273	1,404	847	728	914
298	2,958	2,458	2,115	2,602	1,176	1,063	1,068	1,152	2,472	1,670	1,687	1,749
299	2,190	1,803	1,375	1,919	1,050	790	643	860	1,897	1,220	1,040	1,435
300	3,007	2,663	2,274	2,935	1,507	1,270	1,098	1,433	3,354	2,802	2,346	3,219
301	6,230	5,617	5,288	5,786	2,887	2,685	2,548	2,838	1,572	1,563	2,034	2,034
302	7,824	6,713	5,777	6,904	2,790	2,588	2,289	2,730	1,069	376	653	653
303	3,476	2,784	2,262	3,019	1,296	1,121	998	1,249	823	1,151	1,023	1,400
304	1,527	1,545	1,325	1,733	644	569	536	655	723	399	399	449
305	2,731	2,222	2,294	2,441	1,014	869	933	980	78	172	526	526
306	1,268	1,290	1,202	1,350	563	595	575	640	654	905	872	980
307	55	10	11	11	44	4	4	4	157	43	81	124
308	1,025	1,037	1,011	1,105	418	444	450	486	205	291	589	589
309	0	0	0	0	0	0	0	0	497	1,424	573	1,200
310	1,822	1,622	1,561	1,723	754	702	679	765	322	111	283	283
311	56	203	186	247	34	89	87	113	2,332	1,181	1,560	1,560
312	849	840	748	915	316	302	312	338	780	271	214	346
313	1,252	1,095	1,009	1,161	438	433	422	470	99	41	12	46
314	5,471	5,051	4,900	5,243	2,294	2,163	2,228	2,298	1,638	901	566	726
315	3,192	2,882	2,735	2,993	1,220	1,234	1,211	1,316	1,179	611	647	741
316	333	520	345	606	172	285	201	340	589	1,883	1,520	1,807
317	2,862	2,694	2,524	2,811	1,090	1,085	1,081	1,162	814	916	919	1,033
318	3,438	3,054	2,948	3,209	1,414	1,357	1,394	1,464	300	366	688	688
319	1,402	1,995	1,897	2,134	560	826	828	906	119	29	12	33
320	64	68	68	102	18	31	31	48	1,396	1,673	1,658	2,409
321	142	164	173	245	51	58	64	90	135	273	133	318
322	265	423	370	632	109	147	135	232	18	223	370	530
323	3,503	4,437	4,559	5,190	1,413	1,853	2,048	2,329	1,443	2,063	1,710	2,263
324	389	478	541	715	139	169	212	262	46	111	87	131
325	720	816	903	1,119	347	397	504	615	1,642	1,036	930	1,553
326	0	355	995	995	0	126	337	337	0	0	40	49
327	1,791	2,157	2,489	2,831	527	685	807	1,078	488	816	734	989
328	877	957	982	1,430	295	339	367	424	185	287	116	318
329	939	906	856	1,354	337	333	345	415	37	35	139	139
330	720	709	803	1,059	243	260	293	303	106	206	202	261
331	279	1,030	1,677	1,677	98	348	604	604	170	175	173	256
332	309	328	725	725	108	118	259	259	0	26	45	48
333	203	817	1,886	1,886	78	279	628	628	0	139	220	560
334	924	441	1,090	1,090	259	162	546	546	286	328	537	986
335	529	613	641	890	181	215	227	325	231	520	497	565
336	1,010	986	941	1,376	307	329	347	475	267	404	347	434
337	350	425	408	617	129	150	153	225	33	54	17	61
338	279	564	685	818	128	197	222	297	128	151	133	160
339	402	368	438	535	122	133	168	200	10	46	29	52
340	733	1,163	1,323	1,687	264	399	483	600	56	30	81	100
341	765	849	868	1,178	253	314	338	450	36	145	11	104
342	147	147	140	213	50	58	58	87	178	424	485	661
343	795	935	953	1,466	261	321	348	521	142	468	393	693
344	1,257	1,216	1,406	1,621	424	441	514	605	528	480	540	592
345	3,115	4,627	5,404	5,636	942	1,454	1,802	1,822	430	421	619	630
346	1,535	3,346	4,679	4,993	467	1,108	1,668	1,701	619	1,074	1,390	1,595
347	1,668	2,017	2,015	2,688	607	731	753	1,003	771	1,544	1,688	1,835
348	1,896	1,854	1,871	2,472	732	720	794	988	4,375	3,471	3,115	3,570
349	2,539	2,565	3,044	3,419	1,000	1,057	1,306	1,409	1,944	2,721	1,542	2,083
350	1,142	1,380	1,427	1,633	407	480	491	587	972	2,041	1,943	2,154
351	320	324	309	384	137	118	117	145	455	520	449	597
352	3,819	5,488	6,066	6,913	1,204	1,829	2,165	2,283	459	749	1,056	1,106
353	3,897	3,849	3,555	4,345	1,401	1,518	1,492	1,753	1,488	2,990	2,416	2,912

TAZ	POPULATION*			Forecast	HOUSEHOLDS			Forecast	EMPLOYMENT			Forecast
	1990	2000	2010	2040	1990	2000	2010	2040	1990	2000	2010	2040
354	2,708	2,552	2,379	2,811	1,144	1,149	1,112	1,309	1,195	2,055	1,378	1,858
355	4,917	4,705	4,211	5,003	2,129	2,098	1,982	2,391	4,651	3,348	4,408	4,500
356	7,023	6,483	6,141	7,233	2,649	2,628	2,569	3,137	1,303	1,008	1,178	1,252
357	2,565	4,879	5,338	5,774	994	1,886	2,178	2,297	442	1,234	1,038	1,788
358	2,118	5,340	7,094	7,094	707	1,864	2,468	2,468	492	547	498	629
359	204	219	256	259	74	85	106	106	336	1,007	874	1,157
360	1,523	2,024	1,728	2,049	579	734	688	828	855	866	1,008	1,040
361	674	726	949	949	256	284	384	384	889	1,706	820	930
362	1,217	1,308	1,310	1,426	442	492	523	554	198	385	534	598
363	1,083	1,168	1,151	1,273	369	410	442	461	2,868	2,638	2,319	2,889
364	1,239	1,187	1,205	1,691	456	508	517	753	243	350	704	362
365	874	924	978	1,315	294	345	383	507	5	317	249	327
366	705	813	849	1,261	247	285	315	457	152	167	237	172
367	867	1,006	963	1,431	311	390	393	574	444	311	461	321
368	758	722	781	923	253	262	293	346	36	57	49	59
369	407	194	294	442	50	71	100	166	112	27	18	15
370	674	1,374	1,638	1,642	254	371	486	486	83	662	656	656
371	1,439	2,086	1,891	2,388	459	633	639	743	46	87	91	91
372	1,386	1,453	1,518	1,738	404	449	493	551	67	111	49	30
376	1,345	1,358	1,270	1,518	426	444	472	509	78	130	225	225
377	542	598	591	714	205	219	223	268	52	239	200	188
378	1,276	1,452	1,626	1,736	395	508	580	624	259	379	121	101
379	1,619	1,567	1,424	1,703	625	617	614	692	34	163	243	255
380	2,627	2,357	2,180	2,615	1,073	914	898	1,046	228	322	328	353
381	1,631	1,578	1,610	1,820	548	605	659	720	356	421	128	563
382	117	553	914	914	30	170	283	283	331	460	492	606
383	1,408	1,326	1,189	1,529	473	476	481	566	154	290	328	338
384	2,334	2,286	2,105	2,429	877	947	928	1,037	381	401	316	439
385	1,089	1,418	1,603	1,635	471	572	651	674	1,480	1,810	1,821	1,984
386	605	620	601	714	203	256	249	304	61	60	73	75
387	1,016	1,234	1,324	1,423	316	418	449	498	82	120	73	131
388	3,861	3,744	3,471	3,877	1,482	1,499	1,468	1,642	2,040	2,367	1,833	2,439
389	3,648	3,609	3,344	3,795	1,313	1,450	1,391	1,578	5,620	3,483	3,527	3,614
390	2,933	2,763	2,627	3,083	1,230	1,061	1,086	1,204	558	1,165	1,184	1,277
391	471	662	716	764	185	252	273	300	111	196	121	215
392	34	107	109	123	16	33	42	42	0	144	73	158
393	84	823	1,274	1,469	36	338	547	623	65	171	243	255
394	833	1,244	1,049	1,537	289	412	402	597	170	527	413	578
395	2,924	3,117	3,829	3,829	1,044	1,124	1,380	1,380	72	168	109	184
396	1,128	1,334	1,340	1,539	390	426	494	506	521	199	97	218
397	1,365	1,882	2,630	2,630	464	678	901	901	70	430	437	472
398	525	327	411	411	160	130	157	157	21	67	42	73
399	688	774	712	892	249	289	275	344	115	137	212	220
400	452	446	778	778	164	174	272	272	104	11	62	72
401	424	353	363	408	176	147	139	175	20	109	97	119
402	2,861	4,142	3,902	5,424	1,193	1,869	1,832	2,510	603	1,109	907	1,592
403	1,692	2,664	4,006	4,510	642	1,111	1,597	1,929	281	377	503	789
404	254	326	333	453	92	117	130	169	6	73	23	105
405	287	391	387	543	123	160	163	230	1,525	1,089	2,539	2,939
406	1,278	1,318	1,319	1,570	452	533	523	651	1,111	985	1,271	1,818
407	2,655	1,203	1,101	1,280	920	459	461	500	833	2,514	1,271	1,471
408	2,977	4,805	4,856	6,863	962	1,709	1,927	2,504	81	559	428	1,005
409	1,211	1,014	973	1,142	432	418	399	488	1,073	1,306	836	1,369
410	4,425	4,104	3,941	4,265	1,845	1,762	1,795	1,895	1,347	1,001	910	1,181
411	5,562	5,347	5,306	5,399	2,230	2,292	2,296	2,388	1,227	1,694	1,400	1,999
412	3,350	3,233	2,968	3,314	1,326	1,314	1,232	1,395	2,655	1,998	1,998	2,360
413	2,500	2,072	2,059	2,204	1,267	1,094	1,026	1,204	4,315	2,717	2,127	3,035
414	4,053	3,619	3,364	3,732	1,532	1,440	1,351	1,536	1,825	1,301	1,161	1,536
415	1,572	1,407	1,184	1,461	611	533	498	574	136	241	168	284
416	1,395	1,125	1,058	1,270	471	470	431	549	414	303	210	531
417	358	358	309	330	124	136	123	129	105	482	145	741
418	0	0	3	3	0	0	2	2	5,695	5,731	2,805	4,074
419	2,137	2,105	2,142	2,735	594	605	641	860	1,208	1,194	1,295	1,415
420	457	454	410	630	141	151	150	220	234	348	335	550
421	663	864	754	1,199	232	264	285	386	70	301	98	483
422	1,335	1,381	1,317	2,073	574	559	583	861	429	460	670	763
423	557	757	778	927	161	239	274	302	46	66	24	70
424	1,642	2,612	3,412	3,568	555	842	1,110	1,184	344	703	638	744
425	1,610	1,718	1,670	2,347	587	650	671	921	436	670	771	880
426	1,951	2,738	3,588	3,740	657	951	1,199	1,336	1,294	933	595	987
427	2,271	2,673	2,806	3,759	865	961	1,191	1,459	3,176	2,729	2,380	2,684
428	336	401	447	637	135	151	172	249	144	1,393	802	1,398
429	633	586	736	931	200	218	264	358	482	1,583	1,354	1,822
430	671	763	731	1,213	227	273	282	449	342	1,292	1,050	1,484
431	898	1,087	1,958	1,958	353	404	788	788	255	456	547	575
432	930	963	956	1,532	305	352	373	580	70	146	24	168
433	1,098	1,230	1,252	1,467	398	473	511	581	52	97	103	120
434	1,042	989	1,067	1,181	330	362	402	446	43	143	85	148
435	1,475	1,560	1,508	1,861	500	614	623	691	565	563	735	750
436	1,532	1,611	1,678	1,923	498	550	619	677	253	473	686	696
437	711	688	683	821	272	267	270	328	31	420	686	699
438	6,684	6,673	6,236	7,213	2,467	2,596	2,521	2,896	6,597	6,075	7,267	6,276
439	569	671	714	725	233	281	280	314	15	79	127	81
440	1,098	1,283	1,325	1,386	414	481	504	538	234	351	395	363
441	639	717	722	775	244	273	285	305	333	192	164	199
442	362	259	211	364	140	122	103	179	125	570	375	682
443	2,709	2,437	2,153	2,356	1,264	1,102	1,026	1,102	569	1,266	1,104	1,493
444	322	212	182	567	109	86	77	192	1,705	1,364	306	1,010
445	2,987	2,691	2,637	2,637	1,098	1,038	1,083	1,083	1,397	2,042	2,381	2,600
446	933	808	707	909	339	316	295	367	497	526	445	714

TAZ	POPULATION*			Forecast	HOUSEHOLDS			Forecast	EMPLOYMENT			Forecast
	1990	2000	2010	2040	1990	2000	2010	2040	1990	2000	2010	2040
447	1,626	1,588	1,451	1,691	543	591	581	652	2,752	1,063	867	1,202
448	941	983	1,037	1,626	308	356	440	625	57	353	549	769
449	1,182	1,176	1,181	1,349	413	440	465	520	485	810	653	941
450	1,826	1,754	1,747	2,009	604	664	725	788	236	169	266	196
451	1,425	1,560	1,481	1,897	76	76	72	159	1,799	848	900	985
452	3,048	2,781	2,701	2,971	1,297	1,268	1,289	1,400	2,613	1,885	2,178	2,189
453	2,692	2,691	2,800	2,923	1,038	1,053	1,109	1,185	442	1,210	1,416	1,405
454	709	1,138	1,152	1,304	229	398	456	471	178	127	347	148
455	988	935	909	1,071	342	346	350	409	124	84	110	98
456	1,375	1,326	1,310	1,467	481	493	519	564	484	478	500	554
457	1,403	2,506	2,519	2,819	493	990	1,116	1,151	99	485	300	562
458	1,577	1,528	1,614	2,130	510	552	608	803	215	226	231	262
459	2,956	2,809	2,865	3,089	1,065	1,106	1,141	1,239	376	683	543	827
460	1,486	1,507	1,480	1,657	582	579	630	655	92	106	266	377
461	1,554	1,507	1,385	1,657	481	492	569	569	519	634	324	475
462	1,114	1,097	1,041	1,207	377	439	442	497	79	130	69	201
463	880	948	1,261	1,261	330	387	427	450	574	846	612	700
464	487	556	633	745	158	238	263	287	219	154	306	357
465	654	823	815	895	226	282	299	338	81	183	127	221
466	1,224	1,399	1,466	1,562	393	493	549	592	58	118	46	195
467	801	926	926	1,012	299	323	348	387	80	178	156	242
468	733	741	740	775	270	272	295	326	68	96	145	195
469	1,668	1,679	1,793	1,800	600	636	717	717	127	109	121	130
470	873	892	868	956	296	319	348	354	34	68	23	84
471	864	983	1,061	1,061	337	361	405	405	82	42	64	64
472	2,356	2,286	2,271	2,443	887	908	931	994	975	836	682	1,002
473	1,668	1,718	1,632	1,971	610	668	664	792	239	451	295	497
474	2,047	2,741	2,740	3,145	699	938	1,016	1,115	591	955	855	980
475	923	1,053	1,134	1,209	318	359	403	428	629	392	324	587
476	4,358	4,145	4,160	4,755	1,627	1,632	1,715	1,935	999	1,241	1,005	1,616
477	613	648	720	726	209	241	265	278	19	70	116	156
478	929	1,095	1,112	1,228	315	383	421	442	5	50	92	146
479	1,034	1,105	1,067	1,238	323	395	405	456	5	270	197	317
480	2,516	2,604	2,566	2,918	927	974	1,017	1,122	1,393	1,827	849	1,981
481	2,361	2,258	2,195	2,530	844	817	847	942	700	1,168	624	1,370
482	1,388	1,387	1,405	1,535	504	509	514	579	136	77	145	145
483	846	932	858	1,031	281	348	343	398	52	176	121	160
484	1,067	1,188	1,144	1,316	368	433	443	494	78	143	87	174
485	610	658	710	728	188	236	261	269	22	33	23	41
486	1,643	1,811	1,708	1,985	600	641	621	731	874	809	814	939
487	1,012	1,054	954	1,155	340	359	367	409	173	199	110	231
488	924	1,155	1,250	1,377	299	402	454	495	54	56	43	61
489	646	888	956	1,059	197	309	340	380	109	207	212	247
490	2,998	3,085	2,868	3,668	1,268	1,313	1,293	1,597	1,898	2,946	2,271	3,028
491	734	906	1,090	1,090	250	317	412	412	482	1,354	1,002	1,486
492	1,408	1,683	1,748	2,005	610	782	841	964	72	159	358	360
493	730	697	716	831	239	253	266	312	6	34	2	38
494	587	446	429	514	185	164	177	231	19	122	54	130
495	1,613	1,668	1,492	1,898	302	363	384	467	1,098	2,085	1,597	2,131
496	4,779	4,594	5,218	5,218	1,224	1,272	1,274	1,502	1,649	1,314	1,603	1,603
497	3,393	3,762	3,726	4,280	1,299	1,479	1,512	1,740	2,106	1,813	1,961	1,836
498	1,370	1,424	1,376	1,761	492	508	541	648	27	56	115	115
499	1,912	1,911	1,831	2,363	578	653	687	835	32	299	322	324
500	1,369	1,666	1,473	2,061	501	609	601	777	4	114	91	91
501	599	708	647	875	206	251	240	320	7	38	18	20
502	891	940	1,037	1,115	304	340	405	414	37	290	219	222
503	729	637	629	755	629	245	259	299	84	40	121	134
504	927	907	843	1,075	327	352	360	429	34	77	73	82
505	370	476	496	565	141	179	194	218	20	77	36	82
506	1,695	1,909	1,847	2,310	671	735	752	920	417	353	249	310
507	595	761	745	920	178	277	289	347	80	45	55	60
508	609	653	673	790	187	250	263	313	123	66	91	130
509	1,238	1,073	1,029	1,180	435	413	430	469	564	729	692	721
510	1,014	1,083	992	1,190	317	366	365	415	51	65	128	130
511	1,320	1,447	1,380	1,590	515	553	574	626	344	275	297	299
512	488	569	598	627	154	188	221	221	39	41	128	135
513	1,365	1,321	1,327	1,458	505	473	518	517	574	1,078	595	1,089
514	814	802	850	885	249	283	342	342	25	134	121	146
515	964	1,092	1,132	1,401	364	413	439	548	1,140	96	103	104
516	4,026	4,071	3,881	5,221	1,461	1,570	1,620	2,080	114	504	528	544
517	1,856	2,083	2,235	2,672	630	764	868	1,012	50	474	558	513
518	409	448	547	575	136	176	208	232	34	117	37	127
519	190	203	228	261	60	74	86	98	5	11	0	12
520	406	554	560	650	145	190	220	231	4	65	12	70
521	1,522	1,422	1,377	1,618	506	535	582	629	563	168	225	230
522	1,448	1,377	1,401	1,565	492	527	559	620	272	212	243	269
523	444	542	571	736	155	189	212	265	9	78	24	85
524	245	382	289	548	88	119	110	182	5	92	133	199
525	4,322	4,249	4,296	4,883	1,664	1,704	1,720	2,033	3,206	4,229	4,080	4,377
526	654	691	587	763	240	252	233	287	248	97	24	105
527	1,875	2,035	1,893	2,245	590	704	764	802	35	506	206	547
528	3,385	3,767	3,675	4,155	1,165	1,325	1,360	1,509	867	1,597	1,403	1,726
529	731	681	662	751	226	231	245	262	65	68	73	73
530	771	902	871	996	301	343	349	390	33	91	67	99
531	742	722	699	856	233	261	282	320	78	62	237	255
532	1,817	1,601	1,763	1,903	637	625	679	768	745	1,082	904	1,001
533	599	583	614	692	205	209	237	256	43	60	18	65
534	344	470	447	559	121	159	170	196	53	193	61	199
535	576	677	586	711	185	234	232	244	17	194	97	198
536	872	2,363	733	2,486	308	318	296	361	14	462	255	469

TAZ	POPULATION*			Forecast	HOUSEHOLDS			Forecast	EMPLOYMENT			Forecast
	1990	2000	2010	2040	1990	2000	2010	2040	1990	2000	2010	2040
537	3,645	4,204	4,284	4,425	822	800	725	881	3,485	2,444	1,955	2,212
538	202	243	167	256	71	96	66	99	15	45	18	56
539	725	820	828	862	270	306	325	325	23	132	395	395
540	5,528	5,354	4,979	5,687	1,842	1,902	1,985	2,085	339	1,071	1,566	1,766
541	494	620	653	659	177	227	236	250	37	176	121	194
542	273	268	285	285	94	100	105	110	0	68	55	86
543	1,164	1,083	1,073	1,151	455	463	491	508	298	631	431	693
544	666	732	721	777	241	279	292	305	95	79	42	87
545	5,747	5,778	5,087	6,137	2,020	2,266	2,156	2,484	212	436	480	565
546	3,210	3,313	3,140	3,520	1,181	1,239	1,242	1,359	3,291	2,530	1,724	2,069
547	396	446	418	474	115	163	162	179	12	43	55	70
548	787	768	835	879	321	291	323	344	127	172	255	184
549	348	274	309	314	111	111	135	135	64	48	5	51
550	984	864	921	987	345	308	359	365	188	422	243	451
551	162	259	244	296	53	91	95	107	174	99	267	106
552	292	446	536	536	98	161	184	191	23	18	115	19
553	1,345	1,296	1,053	1,455	435	451	394	527	480	401	850	429
554	0	0	3	3	0	0	1	1	0	0	0	0
Erie Totals	968,532	950,265	919,040	1,076,260	376,019	380,873	383,164	442,470	537,735	555,556	551,621	598,380
Niagara Totals	220,756	219,846	216,469	252,470	84,688	87,846	90,556	103,450	100,107	95,263	87,137	115,670
Regional Totals	1,189,288	1,170,111	1,135,509	1,328,730	460,707	468,719	473,720	545,920	637,842	650,819	638,758	714,050