

On-Street Bicycle Facility Opportunities Review (UPWP Task 6530)

Executive Summary

Objective

To examine the street network in the Rochester Transportation Management Area (TMA) for opportunities to incorporate bicycle accommodations per the accepted range of on-street bicycle facility types emphasizing low-cost applications and strategic improvements, including roads identified in Phase I of the Regional Trails Initiative.

Project Approach

Key project work tasks included:

- Documenting accepted on-street bicycle accommodations and treatments
- Identifying Rochester TMA roadways to be included
- Developing a comprehensive inventory of available roadway attributes
- Assessing opportunities to apply on-street bicycle accommodations and classifying accommodations as near-, mid-, or long-term
- Producing a technical memorandum documenting accepted accommodations and treatments
- Producing a technical memorandum assessing opportunities to apply accepted accommodations and treatments based on further evaluation

The GTC *Technical Memorandum: Overview of Accepted On-Street Bicycle Accommodations and Treatments* describes the bicycle facility treatments included within the final *Technical Memorandum: On-Street Bicycle Facilities Opportunities Assessment*. The treatments are derived from the Federal Highway Administration (FHWA) publication "Selecting Roadway Design Treatments to Accommodate Bicycles" (1992) for the average-skilled bicyclist.

Posted speed limit and rural/urban classification served to screen the roads for treatments to be applied. The near-, mid-, or long-term implementation window for each prospective improvement was based on the suitability ratings developed by the Rochester Cycling Club (RCC) in 2006. Those roadways with a suitability rating of "poor" were classified as near-term, those with a suitability rating of "fair" were classified as mid-term, and those with a suitability rating of "good" were classified as long-term.

Alternative measures such as average annual daily traffic (AADT) and crash rates could be used for this purpose; however, data for these attributes were either not available in a standard format across the Rochester TMA or would have required significantly greater data collection than the project scope allowed.

Findings

- The facility opportunities (accommodation and treatments) fall into three general categories: bike lanes, wide curb lanes, and paved shoulders
- Five- to six-foot wide bike lanes could accommodate bicyclists along roadways in the Rochester TMA with posted speed limits of 35 to 45 miles per hour, depending on AADT and whether or not on-street parking is provided.
- Five-foot wide bike lanes or wide curb lanes (14-foot) could accommodate bicyclists along many of the roadways in the Rochester TMA with posted speed limits of 25 to 35 miles per hour, depending on AADT and pavement width.
- Four-foot shoulders could accommodate bicyclists along many rural roadways in the Rochester TMA.
- General recommendations can be provided at a regional scale based on limited information; however, specific recommendations for a particular segment of roadway will require additional investigation of operating speeds, the presence or absence of on-street parking, and the limitations imposed by the geometric features of the roadway, which are beyond the scope of this study.
- Roadways should be selected for further evaluation based on a variety of factors including, but not limited to, crash rates, traffic volume, and scheduled roadway reconstruction.

Products

1. *Overview of Accepted On-Street Bicycle Accommodations and Treatments* technical memorandum which provides an overview of the current accepted national, state, and local bicycle facility standards, guidelines, and practices. It also provides information on liability as it relates to bicycle facilities and the accommodation of bicycling in our transportation system. This information serves as a basis for recommending bicycle facility treatments for the Rochester TMA roadway system.
2. *On-Street Bicycle Facilities Opportunities Assessment* technical memorandum which identifies prospective on-street bicycle accommodations for Collector-level and above classified roads included in the *Regional Trails Initiative – Phase 1* (which covers the Rochester TMA) based on rural/urban classification, posted speed, pavement width, shoulder width, number of lanes, and AADT. In addition, the selected roadway segments were classified as near-, mid-, or long-term recommendations for further evaluation based on the suitability ratings developed by RBC in 2006.

TECHNICAL MEMORANDUM

TO: Interested Parties
FROM: Robert R. Torzynski, AICP, Bicycle/Pedestrian Program Manager
DATE: November 7, 2007
RE: On-Street Bicycle Facilities Opportunities Assessment

Objective

To examine the street network in the Rochester Transportation Management Area (TMA) for opportunities to incorporate bicycle accommodations per the accepted range of on-street bicycle facility types emphasizing low-cost applications and strategic improvements, including roads identified in Phase I of the Regional Trails Initiative. See Exhibit 1 on page six for a map of the Genesee-Finger Lakes Region and the Rochester TMA.

Key project work tasks included:

- Documenting accepted on-street bicycle accommodations and treatments
- Identifying Rochester TMA roadways to be included
- Developing a comprehensive inventory of available roadway attributes
- Assessing opportunities to apply on-street bicycle accommodations and classifying accommodations as near-, mid-, or long-term
- Producing a technical memorandum documenting accepted accommodations and treatments
- Producing a technical memorandum assessing opportunities to apply accepted accommodations and treatments based on further evaluation

This Technical Memorandum identifies prospective on-street bicycle accommodations for Collector-level and above classified roads included in the Regional Trails Initiative – Phase 1 (which covers the Rochester TMA) based on rural/urban classification, posted speed, pavement width, shoulder width, number of lanes, and AADT. In addition, the selected roadway segments were classified as near-, mid-, or long-term recommendations for further evaluation based on the suitability ratings developed by the Rochester Bicycling Club (RBC) in 2006.

Note: the level of analysis undertaken for this assessment is not sufficient for implementation purposes; project-specific analysis will be needed to advance any of the potential opportunities identified. Following the project-specific analysis, the preferred improvements based on this analysis will be implemented by the appropriate municipality or transportation agency as GTC does not build, operate, or maintain transportation facilities.

Process

The GTC *Technical Memorandum: Overview of Accepted On-Street Bicycle Accommodations and Treatments* provides an overview of the current accepted national, state, and local bicycle facility standards, guidelines, and practices. It also provides information on liability as it relates

to bicycle facilities and the accommodation of bicycling in our transportation system. This information serves as a basis for recommending bicycle facility treatments for the Rochester TMA roadway system.

The *Rochester TMA Roads Suggested for Improvement* included as Table 7 within the GTC *Regional Trails Initiative – Phase I* (RTI) were chosen as the roadway segments for this assessment. The RTI identified specific roadway segments for improvement and include an on-road rating of the suitability of each roadway segment for bicycling made by members of the RBC during the year 1998. According to the RTI, these roads identify “gaps between existing trails or between existing trails and proposed new trails, as well as gaps between major origins or destinations and existing or proposed new trails.” The network identified within the RTI was again rated for suitability during 2006 by the RBC including Collector-level and above roadways within the Rochester TMA. The network excludes local streets, but otherwise includes most of the roads within the Rochester TMA that are legally available for bicycle riding.

The inventory of TMA roadway attributes includes location information (centerline files), posted speed limit, suitability rating (from the RBC 2006 suitability rating), rural/urban classification, and – depending on the roadway segment – roadway geometrics, traffic volume, vehicle mix (e.g., percent of trucks), and roadway conditions. However, as a result of multiple jurisdictions owning and operating the roadways within the TMA, the data is incomplete and inconsistent for the network as-a-whole. In order to ensure consistent analysis, posted speed limit and each route’s rural/urban classification served as the basis for identifying potential accommodations and treatments to be applied.

The assessment of opportunities to provide on-street bicycle accommodations was based on the FHWA *Selecting Roadway Design Treatments* publication Group B/C bicyclist (Average Skill Adults/Children) design guidance for several reasons. First, the majority of bicyclists consist of Group B/C individuals and providing accommodations for these bicyclists will enhance safety and further encourage bicycling as a mode of travel. Second, although the FHWA does provide recommended roadway treatments for Group A bicyclists (Highly Skilled Adults), the FHWA guidance requires information on sight distance and traffic mix (trucks, buses, and recreational vehicles) to determine accommodations for Group A bicyclists. This information is not available throughout the TMA. Finally, the recommended treatments to accommodate Group A bicyclists (such as extensive utilization of wide curb lanes) are not always consistent with the recommended treatments for Group B/C cyclists (such as bike lanes) and would do little to encourage and/or support the majority of bicycle users.

Notwithstanding the previous discussion, every road should at a minimum meet the FHWA design treatment recommendations for Group A cyclists. The recommendations within this report address the average (Group B/C) cyclist. Since the prioritization within this report are based in part on the RBC (experienced cyclist) ratings, the recommended improvements will improve conditions along the routes these cyclists perceive to require improvement although they go beyond what an experienced rider would need to feel comfortable riding along these segments.

The FHWA recommended design treatments for providing accommodations for Class B/C cyclists are included within Appendices C, E, and G of the *Selecting Roadway Design Treatments* publication. The information required to determine the recommended treatment for a specific roadway segment using these Appendices includes: Average Motor Vehicle Operating Speed, Average Annual Daily Traffic (AADT) Volume, the roadway’s Urban/Rural Classification, vehicle

mix, and whether on-street parking is allowed along the roadway. Site distance, included within the FHWA tables, does not affect recommended treatments to accommodate average skill cyclists.

Appendices C, E, and G within the FHWA *Selecting Roadway Design Treatments* publication can be summarized within the following decision tree:

On-Street Bicycle Facility Opportunities for Group B/C Bicyclists (Average Skill Adults/Children) within Rural and Urban Areas ¹

1. Rural² Areas
 - a. Average MV operating speed
 - i. Less than 30 mph 4' shoulder
 - ii. 30-40 mph 4' shoulder³
 - iii. 41-50 mph 6' shoulder
 - iv. Over 50 mph
 1. <2000 AADT 6' shoulder
 2. 2000 or more AADT 8' shoulder

2. Urban² Areas
 - a. Average MV operating speed
 - i. Less than 30 mph
 1. 10,000 or less AADT 14' wide curb lane
 2. > 10,000 AADT 5' bike lane
 - ii. 30-40 mph
 1. 10,000 or less AADT 5' bike lane³
 2. > 10,000 AADT w/o On-Street Parking 5' bike lane³
 3. > 10,000 AADT with On-Street Parking 6' bike lane
 - iii. 41-50 mph
 1. < 2,000 AADT w/o On-Street Parking 5' bike lane
 2. < 2,000 AADT with On-Street Parking 6' bike lane
 3. 2,000 or more AADT 6' bike lane
 - iv. Over 50 mph
 1. w/o On-Street Parking 6' bike lane
 2. with On-Street Parking n/a

Notes:

1. Adapted from Selecting Roadway Design Treatments to Accommodate Bicycles, FHWA, 1992, Appendices C, E, and G
2. Rural roads consist of those facilities that are outside of small urban areas as designated by the U.S. Census, and also outside urbanized areas, as defined in Federal-aid highway law (Section 101 of Title 23, U.S. Code). Rural/Urban classification for the Rochester TMA are as approved by the FHWA for the year 2000.
3. Additional width may be required due to vehicle mix if the road is subject to the regular presence of trucks, buses, and/or recreational vehicles.

A review of the decision tree illustrates three sets of data, not available throughout the TMA, that are required to complete the determination of the appropriate accommodation and treatment along each roadway segment: vehicle mix, average vehicle *operating* speeds, and *on-street parking*. These data, along with crash rates, traffic volume, scheduled roadway reconstruction, and the limitations imposed by the geometric features of the roadway, which are beyond the scope of this study, should be considered in studying the feasibility for any particular improvement along the listed roadway segments.

The analysis of the available roadway data results in recommendations that need to be refined as potential projects advance but illustrate the types of accommodation and treatment that should be considered along each roadway segment. The assessment matrix also identifies the factors that would need to be considered in order to determine the specific treatment that would best meet the FHWA guidelines for a particular roadway segment but that are not available at the level of a regional analysis. For example: Facility Opportunities stated to be 5- to 6-foot BL (AADT, Parking) means that the appropriate treatment would include either a five-foot wide bike lane *or* a six-foot wide bike lane, depending on whether or not the Average Annual Daily Traffic along the roadway exceeded the set criteria (in this case, 10,000 ADT) and whether or not parking is allowed along the roadway.

By analyzing the roadways included in the RTI recommendations utilizing the criteria described above, a matrix is created showing each street/highway name, the limits to the segment, affected jurisdictions, the 1998 suitability rating, 2006 suitability rating, urban/rural classification, posted speed limit, available data, and facility opportunities and considerations. The table, included within Appendix I to this Final Report, also includes a column that indicates prioritization for further study.

The stratification of the suggested accommodations into near-, mid-, and long-term prioritization for further study was based on the 1998 suitability ratings and the 2006 suitability ratings. Roadway segments rated "poor" or "fair/poor" were recommended for near-term study, those rated "fair" recommended for mid-term study, and those rated "fair/good" or "good" recommended for long-term study. The near-term recommendations for further study are identified in Table 1 on page five.

Summary

This memorandum provides an assessment of the roadway network in the Rochester Transportation Management Area (TMA) for opportunities to apply bicycle accommodations and/or treatments within the accepted range of on-street bicycle facility types. The near-term recommendations for further study are consistent with the FHWA publication *Selecting Roadway Design Treatments to Accommodate Bicycles* (1992), and are prioritized based on roadway condition (suitability), connection to multi-use trails, and importance to the TMA-wide bicycle facilities network.

Table 1

**On-Street Bicycle Facilities Opportunities
Near Term Recommendations for Further Study**

Street/Highway Name	Jurisdiction	Facility Opportunities
Baird Road	Perinton	Wide Curb Lane, 5' Bike Lane
Culver Road	Rochester, Irondequoit	5-6' Bike Lane
Dewey Avenue (SR 18)	Greece, Rochester	5-6' Bike Lane
East Henrietta Road (SR 15A)	Rochester, Brighton, Henrietta	5-6' Bike Lane
East Ridge Road	Rochester, Irondequoit	5-6' Bike Lane
Elmwood Avenue	Brighton, Rochester	5-6' Bike Lane
Empire Boulevard (SR 404)	Rochester, Irondequoit	5-6' Bike Lane
Fairport Road (SR 31F)	Pittsford, Perinton	5-6' Bike Lane
Highland Avenue	Brighton, Rochester	5-6' Bike Lane
Hudson Avenue	Rochester, Irondequoit	5-6' Bike Lane
Hylan Drive	Henrietta	5-6' Bike Lane
Jefferson Avenue	Perinton	5-6' Bike Lane
Jefferson Road (SR 252)	Henrietta	5-6' Bike Lane
Jefferson Road (SR 252 and SR 96)	Pittsford, Perinton	5-6' Bike Lane
Lake Avenue	Rochester	5-6' Bike Lane
Lake Road (SR 19)	Brockport, Clarkson	4' or 6' SH, 5-6' Bike Lane
Lehigh Station Road (SR 253)	Henrietta	5-6' Bike Lane
Long Pond Road	Greece	5-6' Bike Lane
Marsh Road	Perinton, Pittsford	Wide Curb Lane, 5' Bike Lane
Monroe Avenue (SR 31)	Rochester, Brighton, Pittsford	5-6' Bike Lane
Mount Read Boulevard	Greece, Rochester	5-6' Bike Lane
Panorama Trail	Penfield	Wide Curb Lane, 5-6' Bike Lane
Penfield Road	Penfield, Perinton	5-6' Bike Lane
State Route 15	Brighton, Henrietta, Rochester	5-6' Bike Lane
State Route 96	Pittsford, Perinton	5-6' Bike Lane
State Route 441	Penfield, Brighton	5-6' Bike Lane
St. Paul Boulevard	Irondequoit	5-6' Bike Lane
State Street/Exchange Street	Rochester	5-6' Bike Lane
Turk Hill Road	Perinton	Wide Curb Lane, 5-6' Bike Lane
Washington Road (SR 153)	East Rochester, Pittsford	5-6' Bike Lane
West Ridge Road (SR 104)	Rochester, Greece, Parma, Clarkson	5-6' Bike Lane
Westfall Road	Brighton, Rochester	5-6' Bike Lane

Technical Resources

Guide for the Development of Bicycle Facilities, American Association of State and Highway Transportation Officials, 1999 edition.

Long Range Transportation Plan for the Genesee-Finger Lakes Region: 2005-2025, Genesee Transportation Council, December 2004.

Regional Trails Initiative Final Report and Action Plan, Phase 1 – Rochester TMA, Genesee Transportation Council, August 2002.

Selecting Roadway Design Treatments to Accommodate Bicycles, Federal Highway Administration, 1992 (FHWA-RD-92-073).

Technical Memorandum: Overview of Current Accepted Bicycle Facility Standards, Guidelines, and Practices, Kristen Bennet, AICP, Genesee Transportation Council, February 7, 2005.

Appendix I

**On-Street Bicycle Facilities
Opportunities Assessment Matrix**

Monroe County

Street/Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
Allens Creek Road	Edgewood Avenue to East Avenue (SR 96)	Pittsford, Brighton	fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Mid Term
Archer Road (SR 252)	Beaver Road to Ballantyne Road	Chili	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Attridge Road	Buffalo Road (SR 33) to Chili-Riga Center Road (SR 33A)	Riga	fair, good	fair	R,U	25	S	4' SH, WC, 5' BL (R/U, AADT)	Long Term
Baird Road	Whitney Road to Fairport Road (SR 31F)	Perinton	fair, poor	fair	U	25	S	WC, 5' BL (AADT)	Near Term
Ballantyne Road (SR 252)	Jefferson Road to Archer Road	Henrietta, Chili	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Bay Road	Lake Road to Empire Boulevard (SR 404)	Webster	good	fair, good	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Bay Street	Portland Avenue to North Goodman Street	Irondequoit	good	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Beach Avenue	Greenleaf Road to Edgemere Drive	Greece	good	not rated	U	25, 35	S	WC,5-6' BL (S, AADT, Parking, VM)	Long Term
Beahan Road	Paul Road to Chili Avenue (SR 33A)	Chili, Gates	good	fair	U	35	WS	5-6' BL (AADT, Parking, VM)	Long Term
Beaver Road (SR 252)	Archer Road to Chili Avenue (SR 33A)	Chili	good	fair	U	25	WSV	WC, 5' BL (AADT)	Long Term
Blossom Road	Route 590 to Browncroft Boulevard (SR 286)	Penfield, Brighton	fair, good	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
Brighton-Henrietta Town Line Road	Winton Road to West Henrietta Road (SR 15)	Henrietta, Brighton	good	fair, poor	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Brooks Avenue	Erie Canal to Chili Avenue (SR 33)	Gates	good	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
Browncroft Boulevard (SR 286)	Old Browncroft Boulevard to Clark/Qualtrough Roads	Penfield	fair	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Mid Term
Bull Saw Mill Road	Mendon Center Road to West Bloomfield Road	Mendon	fair	not rated	R	25	S	4' SH	Mid Term
Buffalo Road (SR 33)	Mount Read Boulevard to West Side Drive	Rochester, Gates, Ogden	fair, good	fair	U	45	WSV	5-6' BL (AADT, Parking)	Long Term
Calkins Road	West Henrietta Road (SR 15) to Mendon Road (SR 64)	Henrietta, Pittsford	fair, good	fair, good	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Carter Road	Furman Road to Whitney Road	Perinton	fair	fair	U	25	S	WC, 5' BL (AADT)	Mid Term

Appendix I

Monroe County (continued)

Street/Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
Carter Street	East Ridge Road to Norton Street	Irondequoit, Rochester	good	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Castle Road	East Henrietta Road (SR 15A) to Winton Road	Henrietta	good	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Chamberlain Road	Cheese Factory Road to Taylor Road	Mendon	not rated	not rated	N/A	N/A	N/A	N/A	N/A
Chili Avenue (SR 33A)	Genesee Street to Paul Road (SR 252A)	Rochester, Gates, Chili	fair	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Mid Term
Clifford Avenue	St. Paul Street to Culver Road	Rochester	fair, good	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Colby Street	Washington Street (SR 36) to Lake Road (SR 19)	Ogden, Sweden	fair	fair	R	25	S	4' SH	Mid Term
Commercial Street	Country Club Road to Washington Street	East Rochester	not rated	fair	N/A	N/A	N/A	N/A	N/A
Creek Street	Embury Road to Plank Road	Penfield	good	fair	U	35	WS	5-6' BL (AADT, Parking, VM)	Long Term
Crittenden Road	East Henrietta Road (SR 15A) to West Henrietta Road (SR 15)	Brighton	fair	fair	U	25	S	WC, 5' BL (AADT)	Mid Term
Culver Road	Clifford Avenue to Monroe Avenue (SR 31)	Rochester	fair, good	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Culver Road	Brookdale Park to East Ridge Road	Irondequoit	poor	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
Dewey Avenue (SR 18)	Lyell Avenue to Stone Road	Greece, Rochester	fair, poor	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
East Avenue (SR 96)	East Main Street to Culver Road; Park Avenue to I-490	Rochester	fair, good	fair	U	35, 45	WSV	5-6' BL (AADT, Parking, VM)	Long Term
East Avenue (SR 96)	I-490 to Fairport Road (SR 31F) at St. John Fisher College	Brighton, Pittsford	fair	fair	U	35, 45	WSV	5-6' BL (AADT, Speed, Parking, VM)	Mid Term
East Main Street	North Union Street to State Street	City of Rochester	fair	fair	U	35, 45	S	5-6' BL (AADT, Speed, Parking, VM)	Mid Term
East Henrietta Road (SR 15A)	Mount Hope Avenue (SR 15) to Lehigh Station Road (SR 253)	Rochester, Brighton, Henrietta	fair, poor	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
East Ridge Road	St. Paul Street to Kane Drive	Rochester, Irondequoit	good, fair, poor	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term

Appendix I

Monroe County (continued)

Street/Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
East River Road	West Henrietta Road (SR 15) to Jefferson Road (SR 252)	Brighton, Henrietta	good, fair	fair	U	25	WSV	WC, 5' BL (AADT)	Long Term
East River Road	Lehigh Station Road to Scottsville-Rush Road (SR 251)	Henrietta, Rush	good	fair	R, U	25	S	4' SH, WC, 5' BL (AADT, R/U)	Long Term
Edgemere Drive	Beach Avenue to East Manitou Road	Greece	good	not rated	U	25	S	WC, 5' BL (AADT)	Long Term
Elmgrove Road (SR 386)	Straub Road to Buffalo Road (SR 33)	Greece, Gates	good	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
Elmwood Avenue	East Avenue (SR 96) to Lattimore Road	Brighton, Rochester	good, poor	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
Empire Boulevard (SR 404)	Culver Road to Irondequoit Bay Basin	Rochester, Irondequoit	fair, poor	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
English Road	North Greece Road to Dewey Avenue (SR 18)	Greece	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Erie Station Road (SR 253)	East Henrietta Road (SR 15A) to East River Road	Henrietta	good	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
Fairport Road (SR 31F)	East Avenue (SR 96) to Erie Canal	Pittsford, Perinton	fair, poor	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
Fishers Road	Pittsford-Victor Road (SR 96) to Monroe/Ontario County Line	Perinton	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Five Mile Line Road	Whalen Road to Whitney Road	Penfield, Perinton	good, fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
French Road	East Avenue (SR 96) to Edgewood Avenue	Pittsford, Brighton	good, fair	poor	U	25	S	WC, 5' BL (AADT)	Long Term
Frisbee Hill Road	Manitou Road (SR 261) to Flynn Road	Parma, Greece	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Genesee Street	Brooks Avenue to West Main Street (SR 33)	Rochester	good	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Golf Avenue	Marsh Road to Washington Road (SR 153)	Pittsford, Perinton	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Highland Avenue	Monroe Avenue (SR 31) to South Goodman Street	Brighton, Rochester	poor	poor	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
Holt Road	Klem Road to Ridge Road (SR 404)	Webster	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Hudson Avenue	Norton Street to Titus Avenue	Rochester, Irondequoit	good, poor	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term

Appendix I

Monroe County (continued)

Street/Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
Hylan Drive	Jefferson Road (SR 252) to I-390 Interchange	Henrietta	poor	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
Jackson Road	Ridge Road (SR 404) to State Road	Webster, Penfield	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Jefferson Avenue	Fairport Road (SR 31F) to Ayrault Road	Perinton	poor	poor	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
Jefferson Road (SR 252)	Winton Road to Brighton-Henrietta Town Line Road	Henrietta	fair, poor	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
Jefferson Road (SR 252 and SR 96)	Sutherland Street to Marsh Road	Pittsford, Perinton	poor	fair	U	35, 45	WSV	5-6' BL (AADT, Parking, VM)	Near Term
King's Highway	Lakeshore Boulevard to East Ridge Road	Irondequoit	fair	fair	U	25, 35	S	WC,5-6' BL (S, AADT, Parking, VM)	Mid Term
Knickerbocker Road	Mendon Road (SR 64) to Jefferson Road (SR 96)	Pittsford	not rated	fair	U	N/A	N/A	N/A	N/A
Kreag Road	Pittsford-Victor Road (SR 96) to Ayrault Road	Perinton	good	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Lake Avenue	Beach Avenue to Lyell Avenue	Rochester	fair, poor	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
Lake Road	Bay Road to Monroe/Wayne County Line	Webster	good, fair	good, fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
Lake Road (SR 19)	East Avenue to Brockport-Spencerport Road (SR 31)	Brockport, Sweden	good, fair, poor	fair	R, U	35	WSV	4' or 6' SH, 5-6' BL (R/U, AADT, Parking, VM)	Near Term
Lake Shore Boulevard	St. Paul Boulevard to Colebrook Drive	Irondequoit	good	fair	U	25, 35	S	WC,5-6' BL (S, AADT, Parking, VM)	Long Term
Latta Road (SR 18)	Long Pond Road to Manitou Road (SR 261)	Greece, Parma	good	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
Lattimore Road	Elmwood Avenue to Kendrick Road	Rochester	not rated	fair	N/A	N/A	N/A	N/A	N/A
Lehigh Station Road (SR 253)	West Henrietta Road (SR 15) to Middle Road	Henrietta	poor	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
Lehigh Station Road (SR 253)	Pinnacle Road to Clover Street (SR 65)	Henrietta, Pittsford	good, fair	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
Lincoln Road	Commercial Street to Fairport Road (SR 31F)	East Rochester, Perinton	not rated	fair	U	N/A	N/A	N/A	N/A
Linden Avenue	Route 441 to Washington Road (SR 153)	Pittsford, East Rochester	not rated	fair	U	N/A	N/A	N/A	N/A

Appendix I

Monroe County (continued)

Street/Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
Long Pond Road	Spencerport Road (SR 31) to Latta Road (SR 18)	Gates, Greece	good, poor	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
Lyell Avenue/Spencerport Road (SR 31)	Glide Street to Elmgrove Road (SR 386)	Rochester; Gates	good, fair	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Mid Term
Lyell Avenue	Broad Street to Lake Avenue	Rochester	fair	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Mid Term
Maiden Lane	Dewey Avenue (SR 18) to North Avenue	Greece	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Manitou Road	West Ridge Road (SR 104) to Buffalo Road (SR 33)	Greece, Gates	good, fair	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
Marsh Road	Pittsford-Victor Road (SR 96) to Great Embankment Park	Perinton, Pittsford	poor	fair	U	25	S	WC,5' BL (AADT, Parking)	Near Term
Mendon Center Road	Calkins Road to Mendon Ponds Park	Pittsford, Mendon	good, fair	fair	R, U	25	S	4' SH, WC,5' BL (R/U, AADT)	Long Term
Monroe Avenue (SR 31)	Highland Avenue to Erie Canal	Brighton, Pittsford	fair, poor	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
Mount Read Boulevard	Latta Road (SR 18) to Buffalo Road (SR 33)	Greece, Rochester	good, fair, poor	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
North Avenue	Maiden Lane to West Ridge Road (SR 104)	Greece	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Panorama Trail	Atlantic Avenue (SR 286) to Penfield Road	Penfield	poor	poor	U	25, 35	S	WC,5-6' BL (S, AADT, Parking, VM)	Near Term
Pattonwood Drive	St. Paul Boulevard to O'Rorke Bridge	Irondequoit	fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Mid Term
Penfield Road	Panorama Trail to Old Penfield Road	Penfield	poor	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
Phillips Road	Klem Road to Ridge Road (SR 404)	Webster	fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Mid Term
Pittsford-Palmyra Road (SR 31)	Erie Canal to Mason Road (Hamlet of Egypt)	Pittsford, Perinton	good, fair	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Mid Term
Redman Road	West Ridge Road (SR 104) to Roosevelt Highway (SR 18)	Clarkson, Hamlin	good	fair	R	25	WSV	4' SH	Long Term

Appendix I

Monroe County (continued)

Street/Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
Ridge Road (SR 404)	Gravel Road to Holt Road	Webster	good	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
Ridgeway Avenue	Elmgrove Road (SR 386) to Mount Read Boulevard	Greece, City of Rochester	fair	fair	U	25, 35	S	WC,5-6' BL (S, AADT, Parking, VM)	Mid Term
Rush-Lima Road (SR 15A)	Rush Road to Plains Road	Rush	fair	fair	R	35	WSV	4' or 6' SH	Mid Term
State Route 15	Elmwood Ave to Calkins Road	Brighton, Henrietta, Rochester	fair, poor	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
State Route 18	Collamer Road to Bennett Road	Hilton, Parma	good	fair	U	25, 35	WSV	WC,5-6' BL (S, AADT, Parking, VM)	Long Term
State Route 31	Washington Street (SR 36) to Redman Road	Ogden, Clarkson	good, fair	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
State Route 96	Erie Canal to Monroe/Ontario County Line	Pittsford, Perinton	poor	fair	U	45	WSV	5-6' BL (AADT, Parking)	Near Term
State Route 253	Scottsville Road (SR 383) to East River Road	Wheatland, Henrietta	good	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
State Route 404	Bay Road to Hard Road	Webster	good, fair	good	U	35	WSV	5-6' BL (AADT, Parking, VM)	Long Term
State Route 441	Watson Road to East Avenue (SR 96)	Penfield, Brighton	fair, poor	fair, poor	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
State Route 590	Titus Avenue to Culver Road (Sea Breeze)	Irondequoit	not rated	fair	N/A	N/A	N/A	N/A	N/A
St. Paul Boulevard	Lakeshore Boulevard to Titus Avenue	Irondequoit	good, fair, poor	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
Salt Road	State Road to Penfield Road (SR 441)	Penfield, Webster	good	fair	R, U	25	S	4' SH, WC, 5' BL (AADT, R/U)	Long Term
Schlegel Road	Webster Road (SR 250) to Salt Road	Webster	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
South Avenue	Averill Street to St. Paul Street	Rochester	fair	fair, poor	U	35	S	5-6' BL (AADT, Parking, VM)	Mid Term
South Clinton Avenue	Downtown Rochester	Rochester	fair, poor	poor	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
State Street/Exchange Street	Lyell Avenue to Court Street	Rochester	good, poor	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
Stone Road	Mendon Road (SR 64) to Clover Street (SR 65)	Pittsford	fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Mid Term

Appendix I

Monroe County (continued)

Street/Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
Stone Road	Dewey Avenue (SR 18) to Stonewood Drive	Greece	fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Mid Term
Stony Point Road	Buffalo Road (SR 33) to Washington Street (SR 36)	Ogden	good, fair	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Sweden-Walker Road	Colby Street to Brockport-Spencerport Road (SR 31)	Sweden	good	fair	R, U	25	WSV	4' SH, WC, 5' BL (AADT, R/U)	Long Term
Taylor Road	Chamberlain Road to Mile Square Road	Mendon	not rated	not rated	N/A	N/A	N/A	N/A	N/A
Thomas Avenue	Pattonwood Drive to St. Paul Boulevard	Irondequoit	not rated	not rated	N/A	N/A	N/A	N/A	N/A
Thornell Road	Jefferson Road (Route 96) to East Street	Pittsford, Perinton	good, fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Tobin Road	Clover Street (SR 65) and Reeves Road	Pittsford, Perinton	not rated	fair	U	35	S	5-6' BL (AADT, Parking, VM)	N/A
Turk Hill Road	Whitney Road to Macedon Center Road (SR 31F)	Perinton	fair, poor	fair	U	25, 35	S	WC, 5-6' BL (S, AADT, Parking, VM)	Near Term
Vintage Lane	Dewey Avenue (SR 18) to Route 390	Greece	good, fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term
Washington Road (SR 153)	Linden Avenue to North Main Street (SR 96)	East Rochester, Pittsford	poor	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Near Term
West Ridge Road (SR 104)	Lake Avenue to Lake Road (SR 19)	Rochester, Greece, Parma, Clarkson	fair, poor	fair, poor	U	45	WSV	5-6' BL (AADT, Parking)	Near Term
Westfall Road	South Clinton Avenue to Mount Hope Avenue (SR 15)	Brighton, Rochester	poor	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Near Term
Wilder Road	Bennett Road to Manitou Road (SR 261)	Parma	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Winton Road	Westfall Road to Stone Road	Brighton, Henrietta	good, fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Long Term

Appendix I

Livingston County (TMA areas only)

Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
State Routes 5 & 20	Genesee Street to Bronson Hill Road	Avon	fair	Fair	R	45	SV	6' SH*	Mid Term

*Road designated rural based on FHWA classification, however, improvement to urban standards (5-6' bike lane) should be considered within/adjacent to the Village of Avon.

Ontario County (TMA areas only)

Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
Buffalo Street	Main Street (SR 332) to North Pearl Street	Canandaigua	fair	fair	U	25	S	WC, 5' BL (AADT)	Mid Term
County Road 16	Parrish Street to South Bristol/Canandaigua Town Line	Canandaigua	good	fair	R, U	25	S	4' SH, WC, 5' BL (AADT, R/U)	Long Term
Fishers Road	Ontario/Monroe County Line to Main Street Fishers	Victor	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
High Street	West Main Street (SR 96) to Valentown Road	Victor	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Main Street (SR 332)	Buffalo Street to State Routes 5 & 20	Canandaigua	fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Mid Term
Mertensia Road	State Route 96 to County Road 41	Farmington	not rated	fair	N/A	N/A	N/A	N/A	N/A
New Michigan Road	County Road 41 to County Road 30	Farmington, Canandaigua	good, fair	fair	R, U	25	S	4' SH, WC, 5' BL (AADT, R/U)	Long Term
North Street	State Route 332 to the Civic Center	Canandaigua	good	fair	U	25	S	WC, 5' BL (AADT)	Long Term
Parrish Street	Pearl Street to Main Street (SR 332)	Canandaigua	not rated	fair	N/A	N/A	N/A	N/A	N/A
State Route 332	North Street to Gateway Drive	Canandaigua, Farmington	fair	fair	U	35	WSV	5-6' BL (AADT, Parking, VM)	Mid Term
State Route 364	Lakeshore Drive to Gorham/Canandaigua Town Line	Canandaigua	fair	fair	U	35	S	5-6' BL (AADT, Parking, VM)	Mid Term
State Routes 5 & 20	Ontario/Livingston County Line through Town of Canandaigua	West and East Bloomfield, Ca	fair	good	R	45	WSV	6' SH	Mid Term

Appendix I

Ontario County, continued (TMA areas only)

Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further study
State Route 64	Ontario/Monroe County Line to State Routes 5 & 20	West and East Bloomfield	good	good	R	35	WSV	4' or 6' SH (AADT, VM)	Long Term
State Route 96	Ontario/Monroe County Line to County Road 8	Victor, Farmington	fair	fair	U	45	WSV	5-6' BL (AADT, Parking)	Mid Term
Turk Hill Road (CR 44)	Ontario/Monroe County Line to Pittsford-Victor Road (SR 96)	Victor	fair	poor	U	25	S	WC, 5' BL (AADT)	Mid Term

Wayne County (TMA areas only)

Highway Name	Limits	Jurisdiction	2006 Rating	1998 Rating	Rural or Urban	Posted Speed	Data Avail.	Facility Opportunities, (Considerations)	Prioritization for further Study
Lake Road (Seaway Trail) (CR 101)	Wayne/Monroe County line to Ontario/Williamson Town Line	Ontario	good	fair, good	R	35	S	4' or 6' SH (AADT, VM)	Long Term
State Route 104	County Line Road to Ontario/Williamson Town Line	Ontario	good	fair	U	45	WSV	5-6' BL (AADT, Parking)	Long Term

- Key:**
- Limits shown within Appendix I represent the segment limits considered within the RTI *Improvement Recommendations*.
 - 2006 and 1998 ratings represent the on-road suitability ratings for bicycle riding as undertaken by the Rochester Bicycling Club (RBC). These ratings are provided as a public service, but road conditions may change. The GTC, its member agencies, staff, the Rochester Bicycling Club, and road rating volunteers accept no responsibility for personal injuries or property damage resulting from the use of the ratings.
 - Rural/Urban classification reflects FHWA 2000 classification of the Rochester TMA. Segments located along rural/urban boundaries are classified as "urban."
 - Data Available: W= Roadway width, which may include but not be limited to pavement width, shoulder width, and number of lanes; S= Posted speed limit; V= Traffic Volume.
 - Facilities Opportunities: 4' SH= 4-foot shoulder (rural roads); WC= 14-foot wide curb lane; 5-6' BL= 5-foot or 6-foot wide bike lane (urban roads).
 - Considerations include the factors that need to be considered to further refine the facility opportunities: AADT= average annual daily traffic volume, Parking= presence or absence of on-street parking; R/U= rural/urban designation of the segment; S= operating speed along the segment, VM= vehicle mix.