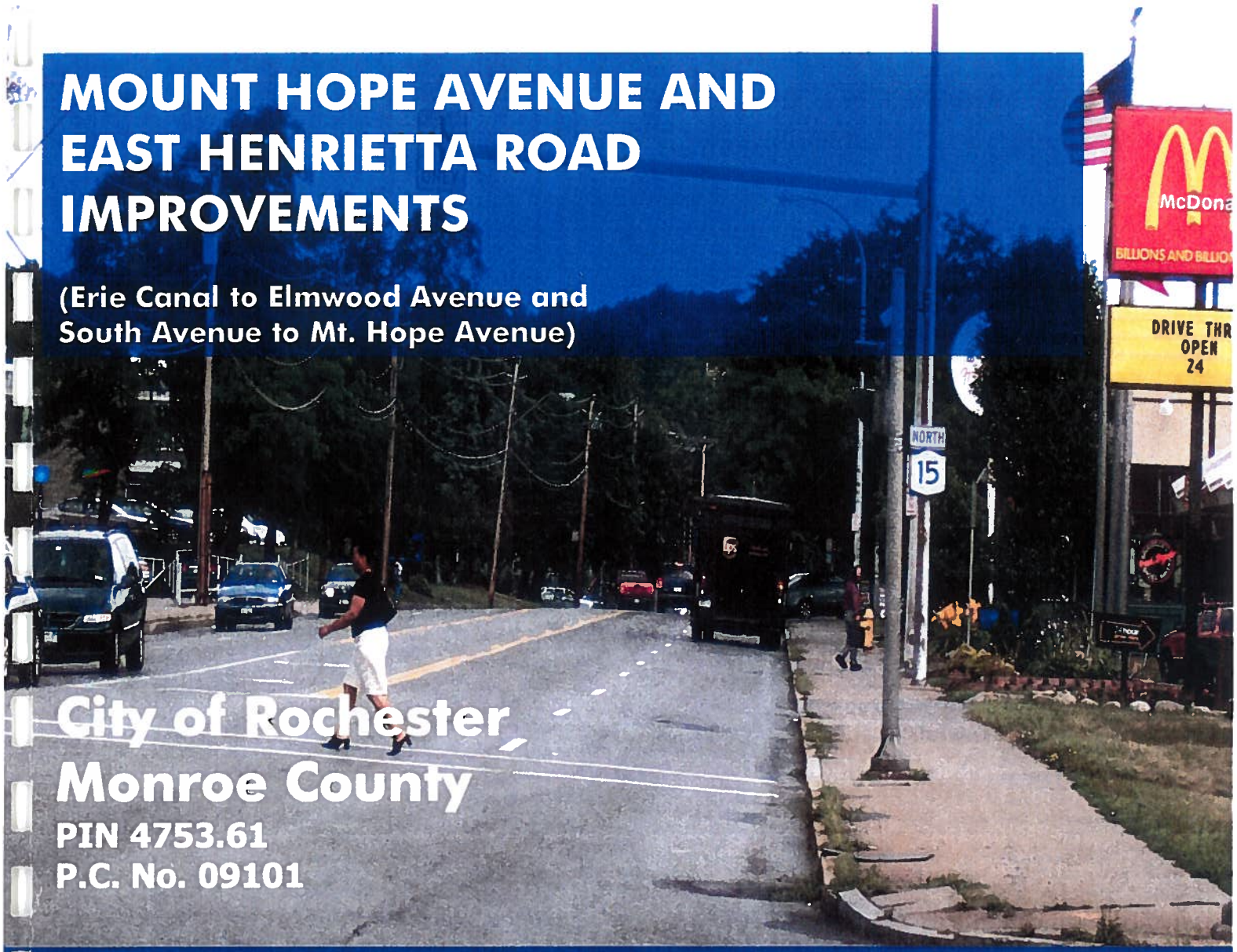
MOUNT HOPE AVENUE AND EAST HENRIETTA ROAD IMPROVEMENTS

(Erie Canal to Elmwood Avenue and South Avenue to Mt. Hope Avenue)



City of Rochester, Monroe County

PIN 4753.61
P.C. No. 09101

FINAL DESIGN REPORT
March , 2009

City of Rochester
Monroe County
New York

U.S. Department of Transportation
Federal Highway Administration

New York State Department of Transportation
Region 4

Bergmann associates

Mt. Hope Avenue and East Henrietta Road Improvements
PIN 4753.61

TABLE OF CONTENTS

Page Number

CHAPTER I: INTRODUCTION I-1

CHAPTER II: PROJECT IDENTIFICATION, EVOLUTION, CONDITIONS AND NEEDS, AND OBJECTIVES II-1

A. Project Identification II-1
1. Project Type II-1
2. Project Location/Description II-1

B. Project Evolution II-3

C. Conditions and Needs II-3
1. Transportation Conditions, Deficiencies and Engineering Considerations II-3
a. Functional Classification and National Highway System II-3
b. Ownership and Maintenance Jurisdiction II-3
c. Culture, Terrain and Climatic Conditions II-4
d. Control of Access II-4
e. Existing Highway Section II-5
f. Abutting Highway Segments and Future Plans for Abutting Highway Segments II-8
g. Speeds and Delay II-11
h. Traffic Volumes II-12
i. Level of Service II-19
j. Non-Standard Features and Non-Conforming Features II-21
k. Safety Considerations, Accident History and Analysis II-22
l. Pavement and Shoulder Conditions II-32
m. Guide Railing, Median Barrier, Impact Attenuators II-32
n. Traffic Control Devices (Signs, Signals, etc.) II-33
o. Structures II-33
p. Hydraulics of Bridges and Culverts II-33
q. Drainage Systems II-33
r. Soil and Foundation Conditions II-34
s. Utilities II-34
t. Railroads II-36
u. Visual Environment II-36
v. Provisions for Pedestrians and Bicyclists II-36
w. Planned Development for Area II-37

2. Needs II-35
a. Project Level Needs II-37
b. Corridor Area Needs II-38
c. Transportation Plans II-39
d. Community Goals II-39

D. Project Objectives II-39

CHAPTER III: ALTERNATIVES III-1

A. Design Criteria III-1

B. Alternatives Considered III-3

C. Feasible Alternatives III-5
1. Description of Feasible Alternative(s) III-5

2. Engineering Considerations of Feasible Alternative(s) III-9
a. Special Geometric Features: Non-Standard/Non-Conforming Feature Justification III-9
b. Traffic Forecasts, Level of Service and Safety Considerations III-10
c. Pavement III-20
d. Structures III-21
e. Hydraulics III-21
f. Drainage III-21
g. Maintenance Responsibility III-21
h. Maintenance and Protection of Traffic III-21
i. Soils and Foundations III-22
j. Utilities III-22
k. Railroads III-23
l. Right-of-Way Takings III-23
m. Landscape Development III-27
n. Provisions for Pedestrians, Including Persons with Disabilities III-27
o. Provisions for Bicycling III-28
p. Lighting III-28

D. Project Costs and Schedule III-28
1. Cost Estimate III-28
2. Anticipated Schedule III-29

CHAPTER IV: SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS IV-1

A. Introduction IV-1
1. NEPA Classification IV-1
2. SEQRA Classification IV-1

B. Environmental Consequences IV-1
1. Surface Waters/Wetlands IV-1
2. Flood Plains IV-2
3. Groundwater IV-2
4. General Ecology and Wildlife IV-3
5. Historic and Cultural Resources IV-3
6. Visual Resources IV-3
7. Parks and Recreational Facilities IV-4
8. Farmland Assessment IV-4
9. Air IV-4
10. Noise IV-5
11. Energy IV-5
12. Contaminated Materials Assessment IV-6
13. Construction Impacts IV-7

14. Anticipated Permits and Approvals IV-7

CHAPTER V: SUMMARY AND ANALYSIS OF COMMENTS RECIEVED V-1
A. Responses to Comments Received from Agencies V-1
B. Responses to Comments Received both at the Public Hearing and During Comment Period V-1

FIGURES

Figure II-1 Project Location Map II-2
Figure II-2 Adjacent Project Area Improvements II-10
Figure II-3 Peak Hour Volumes: 2005 Existing Conditions II-13
Figure II-4 2030 Design Year Growth Rates II-16
Figure II-5 Peak Hour Volumes: 2030 No Build Condition II-18
Figure II-6 High Accident Locations Diagram II-29
Figure II-7 High Accident Locations Diagram II-30
Figure II-8 High Accident Locations Diagram II-31

Figure III-1 Peak Hour Volumes: 2030 Design Year III-16

TABLES

Table II-1 Existing Travel Lane, Pavement and Right of Way Widths II-5
Table II-2 Existing Intersections II-7
Table II-3 Mt. Hope Avenue Speed Study Results II-11
Table II-4 Mt. Hope Avenue Travel Time & Delay Results (Elmwood Avenue to Westfall Road) II-11
Table II-5 Average Daily Traffic Counts II-12
Table II-6 Mt. Hope Avenue Peak Period Volumes – Directional Splits II-14
Table II-7 2005 Existing and 2030 No Build Future Traffic Volumes II-17
Table II-8 Capacity Analysis Results (seconds of delay) II-20
Table II-9 MCDOT – Roadway Segment Accident Rates II-23
Table II-10 MCDOT – Intersection Accident Rates II-23
Table II-11 NYSDOT - Roadway Segment Accident Rates II-24
Table II-12 NYSDOT - Intersection Accident Rates II-25
Table II-13 Accident Types II-26
Table II-14 Accident Clusters II-27
Table II-15 Intersection Traffic Control II-33
Table III-1 Mt. Hope Avenue/East Henrietta Road Design Criteria III-1
Table III-2 Other Controlling Parameters III-2
Table III-3 Capacity Analysis Results ETC+20 Alternative III-17
Table III-4 Proposed Maintenance Jurisdiction III-21
Table III-5 Potential Utility Impacts III-22
Table III-6 Anticipated Right of Way Takings III-23
Table IV-1 Site of Potential Contamination w/Proposed Construction Limits IV-6

APPENDICES

Appendix A: Proposed Typical Sections, Plans and Profiles
Appendix B: Feasible Alternative Cost Estimate
Appendix C: Correspondence
Appendix D: Traffic Analysis and Accident Data
Appendix E: Environmental Checklists and Documentation

CERTIFICATION IN ACCORDANCE WITH TITLE 23 UNITED STATES CODE 128

Mt. Hope Avenue and East Henrietta Road Improvements
(Erie Canal to Elmwood Avenue and South Avenue to Mt. Hope Avenue)
PIN 4753.61, PC 09101

City of Rochester,
Monroe County, New York

Notice was published in the Rochester Democrat and Chronicle newspaper on December 22, 2009 with respect to the above project. The notice stated that a public hearing would be held in the St. Anne's Church Social Hall on Mt. Hope Avenue at 7:00 p.m. on January 21, 2009.

The City of Rochester sent notification letters via certified mail to all of the property owners within the project area as well as the adjacent streets and provided news releases to the local newspapers, television and radio stations in order to notify the general public of the public hearing.

I hereby certify that the hearing was held at the location indicated, all material presented was duly recorded and full reconsideration has been given to the economic and social effects of the location, its impact on the environment and its consistency with the goals and objectives of such urban planning as has been promulgated by the community.

Paul M. Way

3-2-2009

Mr. Paul Way, P.E.
Project Manager
City of Rochester
Department of Environmental Services

Date

R

Chapter I: INTRODUCTION

This report serves as the project Design Report, providing documentation for the Mt. Hope Avenue and East Henrietta Road project improvements, including defining the needs and objectives for the corridor and how these are being met as well as assessment of the environmental impacts. It also serves as the design approval document for the project. The official project title is:

Mount Hope Avenue and East Henrietta Road Improvement Project
(Elmwood Avenue to South City Line and
Mount Hope Avenue to South Avenue)
PC #09101, PIN 4753.61

This report has been prepared by the City of Rochester, serving as the lead agency for the project, in association with the New York State Department of Transportation (NYSDOT) and Monroe County Department of Transportation (MCDOT). The recommended alternative consists of widening Mt. Hope Avenue between Elmwood Avenue and Crittenden Blvd. to install a raised median with recessed on-street parking and a mid-block signalized intersection, realignment of the Mt. Hope Ave./ Crittenden Blvd./ E. Henrietta Rd. intersection, including the removal of the Fort Hill Terrace approach to this intersection, and a minor curb lane widening of Mt. Hope Avenue between Crittenden Blvd. and Westfall Road. The project will also re-align Westfall Road and add an eastbound right and left turn lane on Elmwood Avenue as it approaches Mt. Hope Avenue. The project also includes pavement reconstruction, drainage improvements, traffic signal improvements, street lighting replacement, sidewalk improvements, signs and pavement markings, landscaping and tree plantings.

This Design Report is conducted in accordance with the NYSDOT Procedures for Locally Administered Federal Aid Projects (LAFAP) and all applicable amendments. The procedure described in the LAFAP ensures that projects are progressed in conformance with all applicable federal and state laws, regulations, policies, and procedures.

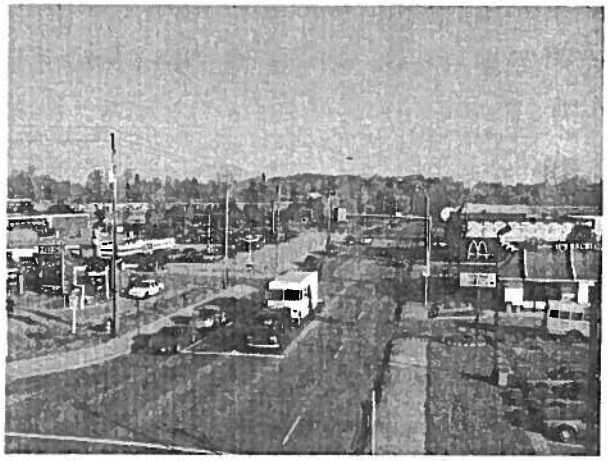
This project will be advanced as a Class II Action (Categorical Exclusion) under the National Environmental Policy Act (NEPA). This project has also been classified as a Type 1 Action by the City of Rochester. This project alone would be classified as an Unlisted Action under the State Environmental Quality Review Act (SEQRA) guidelines, however, the City has combined this project with the rezoning of the University of Rochester property at the north end of the project as part of the University's proposed "Collegetown" redevelopment. The City of Rochester is the lead agency for the SEQRA process and the Federal Highway Administration (FHWA) is the lead agency for the NEPA process. The City will complete the SEQRA process for both projects together. See Chapter IV for further discussions regarding classification and environmental processing.

Copies of this report will be distributed for review and comment to all affected federal, state, and public agencies. It will also be made available to the public. After distribution of this report a public information meeting regarding this project will be held. A design recommendation will be prepared upon review and analysis of all comments and concerns. Upon approval, the project will progress through the final design phase, including preparation of construction plans and specifications.

Mt. Hope Avenue and East Henrietta Road are located in the southern portion of the City of Rochester, Monroe County, New York. The City of Rochester currently owns and maintains both Mt.

Hope Avenue, which is a principal north and south arterial through the City of Rochester, and East Henrietta Road, which is a minor north and south arterial through the City of Rochester.

The intent of this project is to improve the pavement and roadway infrastructure and vehicular safety along the corridor and reduce the high accident rates, specifically on Mt. Hope Avenue between Elmwood Avenue and Crittenden Blvd. This area has one of the highest accident rates for roadways within Monroe County juridicition. The corridor would benefit from an Access Management design approach to reduce the accident potential between the vehicles that utilize Mt. Hope Avenue as a main arterial into the City and the vehicles entering and exiting the many businesses along the corridor. This project will also address the necessary pavement, drainage, street lighting and landscaping improvements along the corridor which will enhance this vital link to the City of Rochester.



This project will build upon the planning efforts of the Mount Hope Gateway Study completed in April 2000 and offer alternatives to meet the project objectives. The feasible alternatives for this project are described in detail in Chapter III of this report. The project will be funded with Federal, State, Monroe County and City of Rochester funds.

Due to funding concerns and since the NYSDOT is currently studying several options for improving the I-390/Rte 15 and 15A interchange near the southern limits of the project, this project will be built in 2 phases. Phase I consists of making improvements at the northern limits of the project by improving Mt. Hope Avenue, between Rossiter Road and Elmwood Avenue along with improvements on East Henrietta Road, between South Avenue and Mount Hope Avenue. It will also include the addition of the eastbound right and left turn lane on Elmwood Avenue at the Mt. Hope Avenue intersection. This work is proposed for the 2010 construction season. Phase II consists of making improvements to Mt. Hope Avenue from Rossiter Road south to the southern City Line and the re-alignment of Westfall Road at the Mt. Hope Avenue intersection. The schedule for this work will be determined at a later date.

Copies of this report and additional information concerning this project may be obtained from:

Mr. Paul Way, P.E.
City of Rochester
Department of Environmental Services
City Hall, Room 300 B
30 Church Street
Rochester, NY 14614
Telephone: (585) 428-6860

Identify this project as the Mt. Hope Avenue & East Henrietta Road Improvements (PC #09101) in all correspondence and when requesting additional information.

CHAPTER II PROJECT IDENTIFICATION, EVOLUTION, CONDITIONS AND NEEDS, AND OBJECTIVES

A. Project Identification

1. Project Type

This is a pavement rehabilitation project. It will improve the pavement deficiencies through full depth pavement reconstruction/rehabilitation on Mt. Hope Avenue from the Erie Canal to Elmwood Avenue, and on East Henrietta Road from South Avenue to Mt. Hope Avenue. The project also includes installation of a raised median and recessed parking along Mount Hope Avenue, between Crittenden Boulevard and Elmwood Avenue, including a new mid-block signalized intersection; geometric modifications at the Mt. Hope Ave./Crittenden Blvd. intersection; an eastbound right and left turn lane at the Elmwood Avenue/Mt. Hope Avenue intersection and realignment of Westfall Road at the Westfall Road/Mt. Hope Avenue intersection. Water main replacement, street lighting replacement, upgrading/replacing traffic signals, drainage improvements, new pavement markings, signs and various landscaping and sidewalk improvements will also be included. The proposed project does not include improvements to the East Henrietta Road/South Avenue intersection.

2. Project Location/Description

This project is located in the City of Rochester in Monroe County, New York. The project area encompasses approximately 4500 linear feet of Mt. Hope Avenue/ NYS touring Route 15 beginning at the Erie Canal (southern City limit) and proceeding northerly to just north of the Elmwood Avenue intersection. The project also includes improvements to East Henrietta Road (NYS touring Route 15A) from South Avenue north approximately 1,700 linear feet to the Mt. Hope Avenue intersection. Improvements continue along Crittenden Boulevard approximately 500 ft. The project will also widen and restripe Westfall Road east of Mt. Hope Avenue to and provide a westbound double left turn lane. An eastbound right and left turn lane is also being proposed on Elmwood Avenue, from Mt. Hope Avenue approximately 650 ft. to the west.

A project location map is shown in Figure II-1.

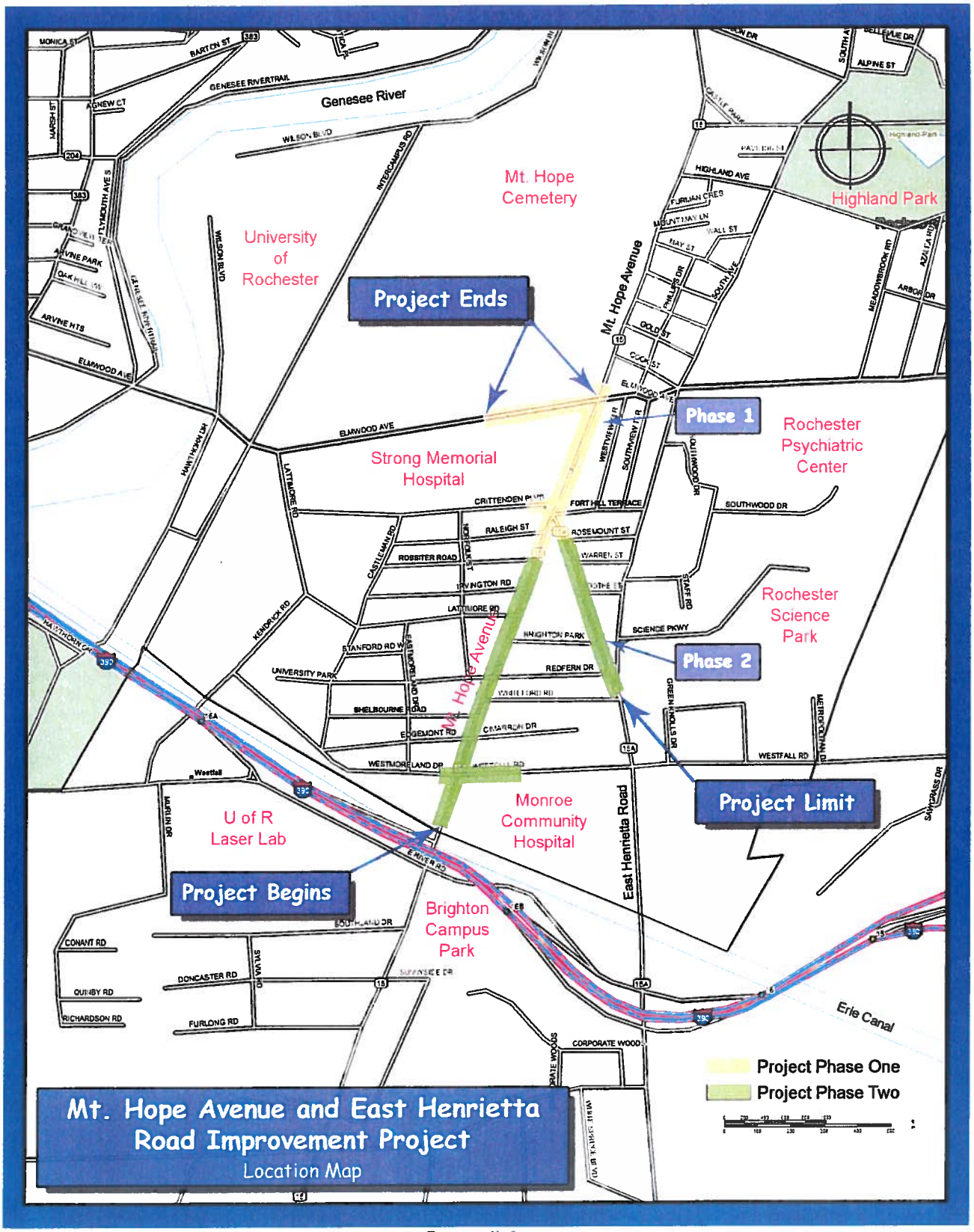

Genesee River
Mt. Hope Cemetery
Highland Park
University of Rochester
Project Ends
Mt. Hope Avenue
Phase 1
Rochester Psychiatric Center
Strong Memorial Hospital
Rochester Science Park
Phase 2
Project Limit
U of R Laser Lab
Monroe Community Hospital
East Henrietta Road
Project Begins
Brighton Campus Park
Erie Canal
Project Phase One
Project Phase Two
Mt. Hope Avenue and East Henrietta Road Improvement Project
Location Map

Figure II-1

B. Project Evolution

The intent of this project is to improve the pavement and safety and reduce the high accident rates along the project corridor, specifically on Mt. Hope Avenue between Elmwood Avenue and Crittenden Blvd. This area has one of the highest accident rates for a roadway within Monroe County jurisdiction. The corridor would benefit from an Access Management design approach to reduce the accident potential between the vehicles that utilize Mt. Hope Avenue as a principal arterial into the City and the vehicles entering and exiting the many businesses along the corridor. This project will build upon the planning and preliminary design efforts of the Mount Hope Gateway Study which was completed in April 2000 and address the necessary pavement, drainage, street lighting and landscaping improvements along the corridor which will enhance this vital link to the City of Rochester.

C. Conditions and Needs

1. Transportation Conditions, Deficiencies and Engineering Considerations

This section of the report documents the existing conditions of the highway features and identifies any deficiencies or considerations within the project area. In addition, the needs for the project were also determined through several meetings and discussions with the local business owners, concerned citizens, Monroe County Department of Transportation and City of Rochester representatives.

a. Functional Classification and National Highway System

Mt. Hope Avenue and East Henrietta Road are located within a thriving urbanized area of the City of Rochester and are classified as:

Mt. Hope Avenue: from the southern City limit north to Elmwood Avenue is classified as a Principal Arterial and is designated as "Other" on the National Highway System (NHS) but is not designated as a qualifying or access highway in New York State.

East Henrietta Road: from South Avenue north to Mt. Hope Avenue is classified as a Minor Arterial and is designated as "Other" on the National Highway System (NHS) but is not designated as a qualifying or access highway in New York State.

Crittenden Boulevard is an east/west Urban Collector. Elmwood Avenue is an east-west Minor Arterial. Westfall Road is classified as a Minor Arterial. The other side streets within the project limits are classified as Local Streets.

East Henrietta Road and Mt. Hope Avenue are within one mile of the National Network (Qualifying Highways) of Designated Truck Access Highways. Therefore, Special Dimension Vehicles may operate on East Henrietta Road and Mt. Hope Avenue.

b. Ownership and Maintenance Jurisdiction

Mt. Hope Avenue (NYS Route 15) and East Henrietta Road (NYS Route 15A) are owned and maintained by the City of Rochester including the pavement, curb, guide railing, sidewalks and

landscaping. Ownership and maintenance of the various other features within the project area are as follows:

- The intersecting side streets are owned and maintained by the City of Rochester.
- Street lighting along Mt. Hope Avenue from the southern project limit to Crittenden Boulevard and the entire length of East Henrietta Road within the project limits are owned and maintained by Rochester Gas and Electric (RG&E), however the cost for the street lighting is paid by the City of Rochester. There are some individual poles and hand holes on Mt. Hope Avenue between Crittenden Blvd. and Elmwood Avenue which have dual ownership by the City of Rochester and RG&E. A determination on the individual pole and hand hole ownership will be completed during detailed design. The City of Rochester and RG&E own and maintain the street light poles on the side streets within the project limits.
- All traffic features including the signals, signs and pavement markings within the project limits are owned and maintained by the Monroe County Department of Transportation (MCDOT).
- Monroe County Department of Environmental Services (MCDES) maintains the sewer and drainage system.

c. Culture, Terrain and Climatic Conditions

Mt. Hope Avenue is primarily a commercial/retail area near the northern project limits and a mix of commercial/retail/residential uses near the southern project limit. East Henrietta Road is a mix of residential and commercial properties on both sides of the street.

There will be no adverse impact upon Cultural or Historical Resources. The Mt. Hope-Highland Historic District lies to the north of the project and will not be impacted by this project.

The numerous businesses along the corridor generally consist of restaurants, gas stations, and other retail services that provide daily service to the area neighborhoods, Strong Hospital/ University of Rochester employees and commuters which travel this corridor.

The terrain along Mt. Hope Avenue and East Henrietta Road is generally flat.

This project does not lie in or encroach upon the Genesee River 100 year flood plain.

The general climate of this region is typical of upstate New York State. The Rochester area receives approximately 81 cm (32 in) of precipitation each year. On average, there are 161 days each year with some measurable precipitation. No unusual climatic or weather related conditions exist within the project limits that would affect the design and construction of this project.

d. Control of Access

The Mt. Hope Avenue Right of Way within the project area is typically 66 feet wide with areas where it is 100 feet wide, all with access. There are 12 intersecting side streets, 38 commercial business and 10 residential driveways which access Mt. Hope Avenue.

The East Henrietta Road Right of Way is typically 66 feet wide within the project area with access. There are 6 intersecting side streets, 8 commercial business and 12 residential driveways which access East Henrietta Rd.

e. Existing Highway Section

Right-of-Way and Pavement Widths

Table II- 1 summarizes the existing pavement and highway right of way widths within the project limits.

TABLE II-1
EXISTING TRAVEL LANES, PAVEMENT AND RIGHT OF WAY WIDTHS

Location	Number and Width of Travel Lanes	Overall Pavement Width	Existing Right of Way Width
Mt. Hope Avenue			
Elmwood Avenue to Crittenden Boulevard	2-10 ft. lanes Northbound 2-10 ft. Lanes Southbound 1-10 ft. Center Two Way Left Turn Lane/Left Turn Lanes at Intersections	50 ft.	66 ft.
Crittenden Boulevard to Lattimore Road	2-10 ft. lanes Northbound 2-10 ft. Lanes Southbound	40 ft.	66 ft.
Lattimore Road to Westfall Road	2-10 ft. lanes Northbound 2-10 ft. Lanes Southbound 1-10 ft. Center Two Way Left Turn Lane/Left Turn Lanes at Intersections	50 ft.	66 ft. and varies
East Henrietta Road			
Mount Hope Avenue to South Avenue	1-18 ft. lane Northbound 1-18 ft. lane Southbound	36 ft.	66 ft.

Note:

1. *The City of Rochester has a highway reservation line (commonly known as the "Bartholomew line") along Mt. Hope Avenue. The 100 foot wide highway reservation line was established in the 1931 and most recently adopted in 1987, is used by the City as a planning tool and often limits private property improvements in the highway reservation area.*

Curb

Five inch wide granite stone curb exists throughout the project area along Mt. Hope Avenue. The curb is in fair to poor condition with chipping, cracking, and discoloration present in the majority of the sections and curb reveals ranging from four to six inches.

Five inch wide concrete curb exists on East Henrietta Road. The curb is in very poor condition with many chipped, broken or missing sections and curb reveals range from zero to six inches. The adjacent side streets within the project limits have either concrete or medina stone curb.

Sidewalks

There are 7 ft. wide concrete sidewalks adjacent to the curb along both sides of the road along the northern section Mt. Hope Avenue. The concrete sidewalks in the southern section of the project are either 8 ft. wide attached sidewalks or 5 ft. wide detached sidewalks separated by a 3 ft. wide tree lawn on both sides of the road. Pedestrians that walk this corridor indicated that they feel unsafe walking that close to the nearly 25,000 cars and trucks that travel this corridor on a daily basis. The sidewalks on Mt. Hope Avenue are in generally poor condition with cracking and differential settlement prevalent throughout the length.

On East Henrietta Road the 5 foot wide concrete sidewalks are separated from the roadway by an 8 foot wide tree lawn area. The sidewalks are in generally fair condition. However, isolated sidewalk areas have differential settlement of up to 1 inch between the sidewalk flags, causing a tripping hazard to pedestrians. Other areas have asphalt paved on top of the existing concrete sidewalk.

Curves

According to available record plans, there are no horizontal curves along Mt. Hope Avenue within the project limits; however, there are several angle points which have less than a 1 degree angle break along the length of the project. The maximum grade on Mt. Hope Avenue is 2.27%.

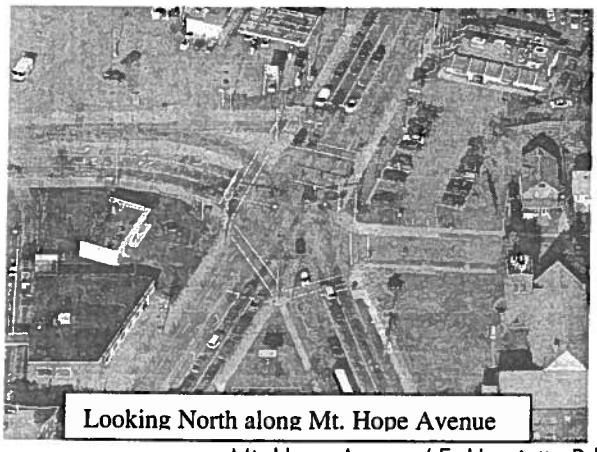
On East Henrietta Road there are no horizontal curves and the maximum grade is 0.85%. As East Henrietta Road crosses Mt. Hope Avenue it turns into Crittenden Blvd. which curves sharply to the south utilizing a 150 foot radius curve.

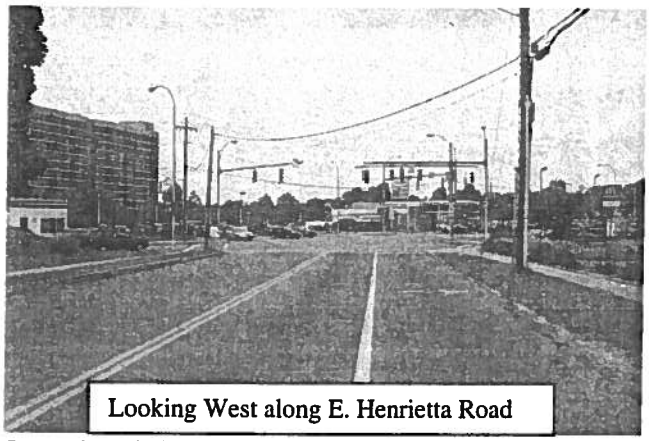
Intersections

There are twenty (20) at-grade intersections within the project area. These intersections are tabulated as follows:

TABLE II-2
EXISTING INTERSECTIONS

Main Road	Intersecting Road	Control
Mt. Hope Avenue	Elmwood Avenue	Traffic Signal
Mt. Hope Avenue	Crittenden Boulevard/Fort Hill Terrace/East Henrietta Road	Traffic Signal
Mt. Hope Avenue	Raleigh St.	Side Street Stop Sign
Mt. Hope Avenue	Rossiter Rd.	Side Street Stop Sign
Mt. Hope Avenue	Irvington Rd.	Side Street Stop Sign
Mt. Hope Avenue	Lattimore Rd.	Traffic Signal
Mt. Hope Avenue	Brighton Park	Side Street Stop Sign
Mt. Hope Avenue	Redfern Dr.	Side Street Stop Sign
Mt. Hope Avenue	Shelbourne Rd.	Side Street Stop Sign
Mt. Hope Avenue	Whiteford Rd.	Side Street Stop Sign
Mt. Hope Avenue	Elmerston Rd.	Side Street Stop Sign
Mt. Hope Avenue	Cimarron Dr.	Side Street Stop Sign
Mt. Hope Avenue	Edgemont Rd.	Side Street Stop Sign
Mt. Hope Avenue	Westfall Rd.	Traffic Signal
East Henrietta Road	Rosemount St.	Side Street Stop Sign
East Henrietta Road	Warren St.	Side Street Stop Sign
East Henrietta Road	Boothe St.	Side Street Stop Sign
East Henrietta Road	Brighton Park	Side Street Stop Sign
East Henrietta Road	Redfern Dr.	Side Street Stop Sign
East Henrietta Road	South Ave.	Traffic Signal (adjacent to project area)


Looking North along Mt. Hope Avenue


Looking West along E. Henrietta Road

Mt. Hope Avenue/ E. Henrietta Rd./ Crittenden Blvd. Intersection Photos

The five legged skewed intersection comprised by Mt. Hope Avenue, East Henrietta Rd., Crittenden Boulevard and Fort Hill Terrace is one of the busiest intersections in Monroe County's jurisdiction. This intersection is controlled by a series of traffic signals on mast arms. East Henrietta Road enters the intersection at a skew of 37 degrees. Fort Hill Terrace exits this intersection from the same side and the skew between East Henrietta Road and Fort Hill Terrace is 76 degrees. Crittenden Boulevard is offset from the center of the intersection by a distance of 100 ft.

All of the side streets along Mt. Hope Avenue intersect Mt. Hope Avenue at an angle of 67 degrees which is slightly above the AASHTO minimum recommendation of 60 degrees. These skewed intersections make it more difficult for drivers to see oncoming cars when turning onto Mt. Hope Avenue.

Parking Regulations
There are "No Parking Any Time" signs posted on both sides of Mt. Hope Avenue and East Henrietta Rd.

f. Abutting Highway Segments and Future Plans for Abutting Highway Segments

The City of Rochester milled and resurfaced East Henrietta Road from the south City line north to South Avenue (this project's southern limit) during the 2007 construction season.

The City of Rochester also milled and resurfaced South Avenue from East Henrietta Road north to Elmwood Avenue during the 2007 construction season.

In 2009, the City of Rochester has plans to mill and resurface Westfall Road from Mt. Hope Avenue to East Henrietta Road.

In 2010, the City of Rochester also has plans to rebuild Lattimore Road, from Castleman Road to Mt. Hope Avenue and complete a curb replacement project on Castleman Road.

In 2012, the City of Rochester is planning to reconstruct South Avenue from Elmwood Avenue to Bellevue Drive.

The Monroe County Department of Transportation is planning to reconstruct Westfall Road from East Henrietta Road to Lac De Ville Road in 2011. They anticipate maintaining one travel lane in each direction as well as provide a center two way left turn lane except in the immediate vicinity of East Henrietta Road intersection where they are proposing to provide a westbound left turn lane and northbound right turn lane.

The University of Rochester is currently preparing a Campus Master Plan, scheduled to be completed in Winter of 2008-09. This plan is anticipated to include the development of 1.8 million square feet of office space to the south of Interstate 390 adjacent to Kendrick Road The plan is also anticipated to include the redevelopment of their property on the west side of Mt. Hope Avenue between Crittenden Blvd. and Elmwood Avenue. It is anticipated that this redevelopment will create a 2 to 3 story "College Town" environment with lower level restaurants/ retail and upper level offices or apartments. The University of Rochester with support from the City of Rochester and MCDOT has requested from NYSDOT that a full access Kendrick Road/I-390 interchange be considered to enhance access to their campus.

The NYSDOT is planning to improve a portion of I-390 that will include upgrades to the E. Henrietta Rd. (NYS Rte. 15A)/ I-390 interchange. The current plans for the interchange include building a loop ramp from I-390 northbound onto E. Henrietta Rd. southbound with an additional connection to Mt. Hope Ave/NYS Rte. 15. The plans also include the construction of an on-ramp from E. Henrietta Rd. to I-390 northbound and a roadway connecting E. Henrietta Rd. to Mt. Hope Avenue.

The locations for the above noted improvements to the adjacent project area are shown in Figure II-2.

FIGURE II-2: ADJACENT PROJECT AREA IMPROVEMENTS

g. Speeds and Delay

(1) Existing Speed Limits

The posted speed limit within the project limits is 30 m.p.h.

(2) Actual Operating Speeds

A bi-directional speed study was conducted June 25, 2007 by SRF & Associates during off-peak hour traffic flows on Mt. Hope Avenue on two different roadway segment(s); between Westfall and Lattimore and between Crittenden and Elmwood. Data was collected at each roadway segment for north and southbound vehicles. The data was analyzed to determine the 85th percentile operating speed. Table II-3 summarizes the 85th percentile speed for both locations and directions.

TABLE II-3
MT. HOPE SPEED STUDY RESULTS

Direction	Westfall-Lattimore segment (mph)	Crittenden-Elmwood segment (mph)
Northbound	37	32
Southbound	39	30

A travel time and delay analysis was performed using Synchro 6 software results for the 2005 existing and 2030 No build conditions. The results are shown in the following table.

TABLE II-4
MT. HOPE TRAVEL TIME & DELAY RESULTS
(Elmwood Avenue to Westfall Road)

Condition	Travel Time (seconds)		Delay (seconds)	
	NB	SB	NB	SB
2005 AM	143.9	228.2	48.2	76.8
2030 AM No Build	184.8	404.2	89.1	252.8
2005 PM	167.8	237.0	72.1	85.6
2030 PM No Build	281.6	342.6	185.9	191.2

The table above indicates that the if no improvements are made along Mt. Hope Avenue the delay in that area is expected to more than double for both AM and PM peak conditions by the year 2030.

Detailed data for the off peak speed study are provided in Appendix D.

h. Traffic Volumes

Existing Traffic Volumes

Existing traffic volumes during 2005 were examined within the project limits. Existing traffic conditions were obtained by conducting manual intersection turning movement counts. Manual intersection turning movement counts were conducted at five intersections within the project study area during the weekday morning and evening peak traffic periods. The intersections where counts were conducted are listed below.

Project Study Area Intersections

Intersection No.	Name
1.	Mt. Hope Avenue / Elmwood Avenue
2.	Mt. Hope Avenue / Crittenden Road / E. Henrietta Road / Fort Hill Terrace
3.	Mt. Hope Avenue / Lattimore Road
4.	Mt. Hope Avenue / Westmoreland Dr / Westfall Road
5.	East Henrietta Road / South Avenue

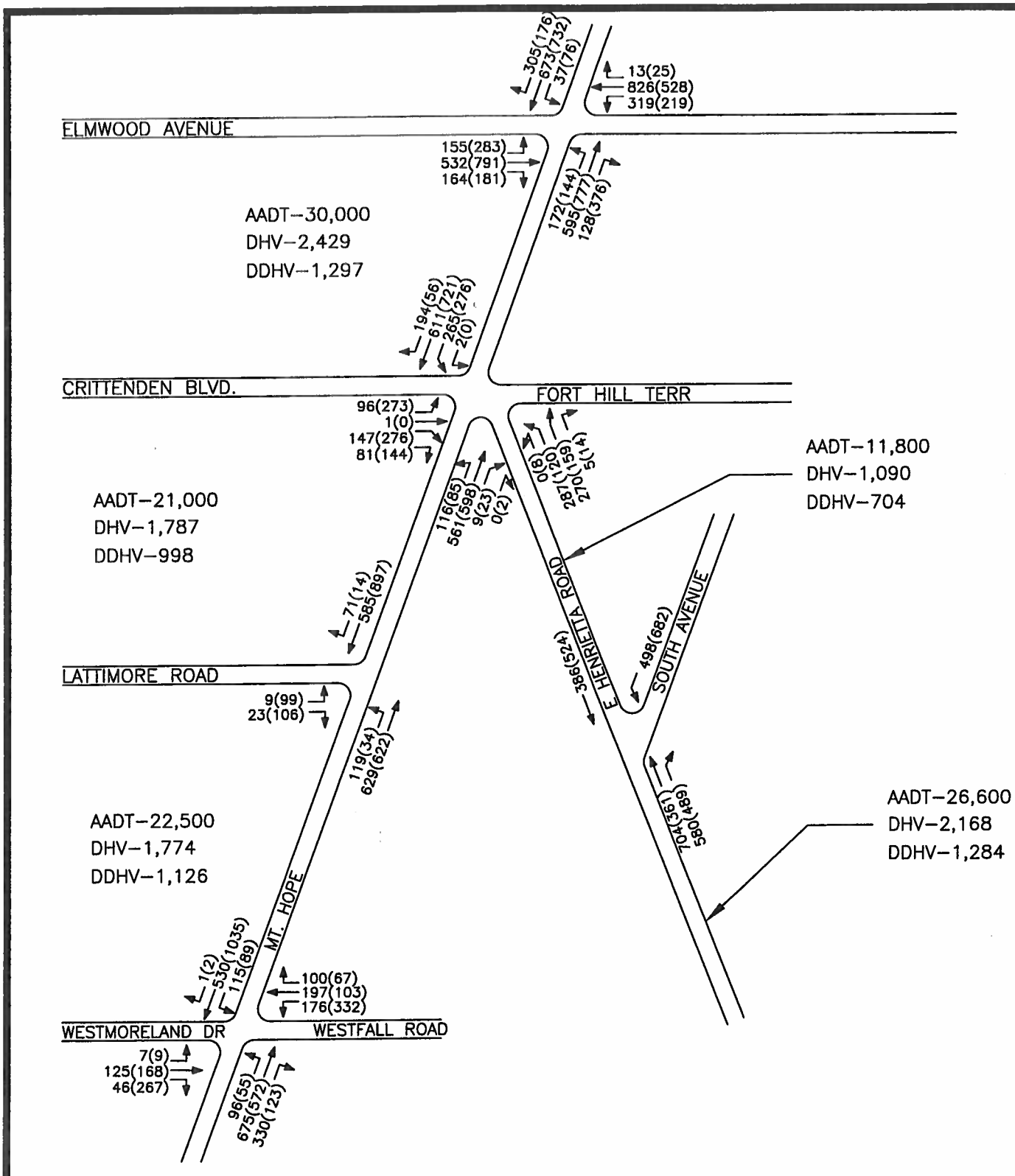
Intersection turning movement counts were conducted September 12-14, 2005. Counts were conducted 7:00 to 9:00 am and 4:00 to 6:00 pm. The peak hours were determined to be generally 7:30 to 8:30 am and 4:45 to 5:45 pm. Because all the counts were not taken on the same day, some minor balancing was performed to develop consistency along Mt. Hope Avenue.

The most recent Average Daily Traffic (ADT) counts were collected by MCDOT in 2006 along Mt. Hope Avenue, with the exception of the segment from Lattimore Road to Westfall Road which was last counted in 2004. ADT volumes along Mt. Hope Avenue were also estimated based on the 2005 and 2006 manual turning movement counts. The Annual Average Daily Traffic Volumes (AADT) was calculated based on current traffic counts and seasonal adjustment factors supplied by MCDOT. Table II-5 illustrates the AADT's based on calculations from the manual turning movement counts, MCDOT ADT counts, and MCDOT seasonal factors.

A summary of the aforementioned existing peak hour turning movement volumes, AADT's, Daily Directional Design Hour Volumes (DDHV), and Directional Design Hour Volumes (DHV's) are shown in Figure II-3.

TABLE II-5
ANNUAL AVERAGE DAILY TRAFFIC COUNTS
(2005 Existing conditions)

Roadway Segment	AADT
Mt. Hope (Elmwood-Crittenden)	30,000
Mt. Hope (Crittenden-Lattimore)	21,000
Mt. Hope (Lattimore-Westfall)	22,500
E. Henrietta (Crittenden-South Ave.)	11,800
E. Henrietta (South of South Avenue)	26,600



KEY

N 00(00) = AM(PM)

FIGURE II-3

PEAK HOUR VOLUMES 2005 EXISTING CONDITIONS

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Examination of the existing (2005) AM and PM peak hour volumes reveals the following directional flow characteristics:

Table II-6
MT. HOPE AVENUE PEAK PERIOD VOLUMES – DIRECTIONAL SPLITS

Roadway Segment	AM		PM	
	NB	SB	NB	SB
Mt. Hope (Elmwood-Crittenden)	44%	56%	53%	47%
Mt. Hope (Crittenden-Lattimore)	50%	50%	45%	55%
Mt. Hope (Lattimore-Westfall)	55%	45%	40%	60%
E. Henrietta (Crittenden-South Ave.)	65%	35%	41%	59%
E. Henrietta (South of South Avenue)	60%	40%	41%	59%

According to the NYSDOT Highway Sufficiency Ratings 2005, the percentage of heavy vehicles along Mt. Hope Avenue is approximately 7%, and 5% along East Henrietta Road. NYSDOT vehicle classification counts along Mt. Hope Avenue conducted in 2005, just north of Elmwood Avenue, indicate that the actual total heavy truck percentage is 2.3% (which includes buses). Classification counts performed by NYSDOT in 2004 along East Henrietta Road, just south of South Avenue, indicate that the heavy truck percentage is 3.8% (which includes buses). The vehicle classification counts document actual heavy vehicle percentages, as compared to the approximation in the Highway Sufficiency Ratings; therefore a 2% heavy vehicle percentage was used along Mt. Hope and 4% along East Henrietta Road.

Future Traffic Volumes

Traffic volume forecasts for the project area were developed using the following sources of information:

1. Regional travel demand forecast model maintained by the Genesee Transportation Council (GTC),
2. Historical ADT count data from NYSDOT,
3. Historical ADT count data from MCDOT,
4. Historical turning movement count data obtained by SRF & Associates,
5. Traffic projections provided by the University of Rochester.

Historical traffic volumes provide documentation as to trends along roadways in terms of overall growth and/or declines. Therefore, historical ADT volumes were closely analyzed to determine growth rates along the study section of Mt. Hope Avenue, East Henrietta Road, Elmwood Avenue, and Westfall Road. The historical growth patterns were researched, studied, and engineering judgment was applied to determine expected future growth trends.

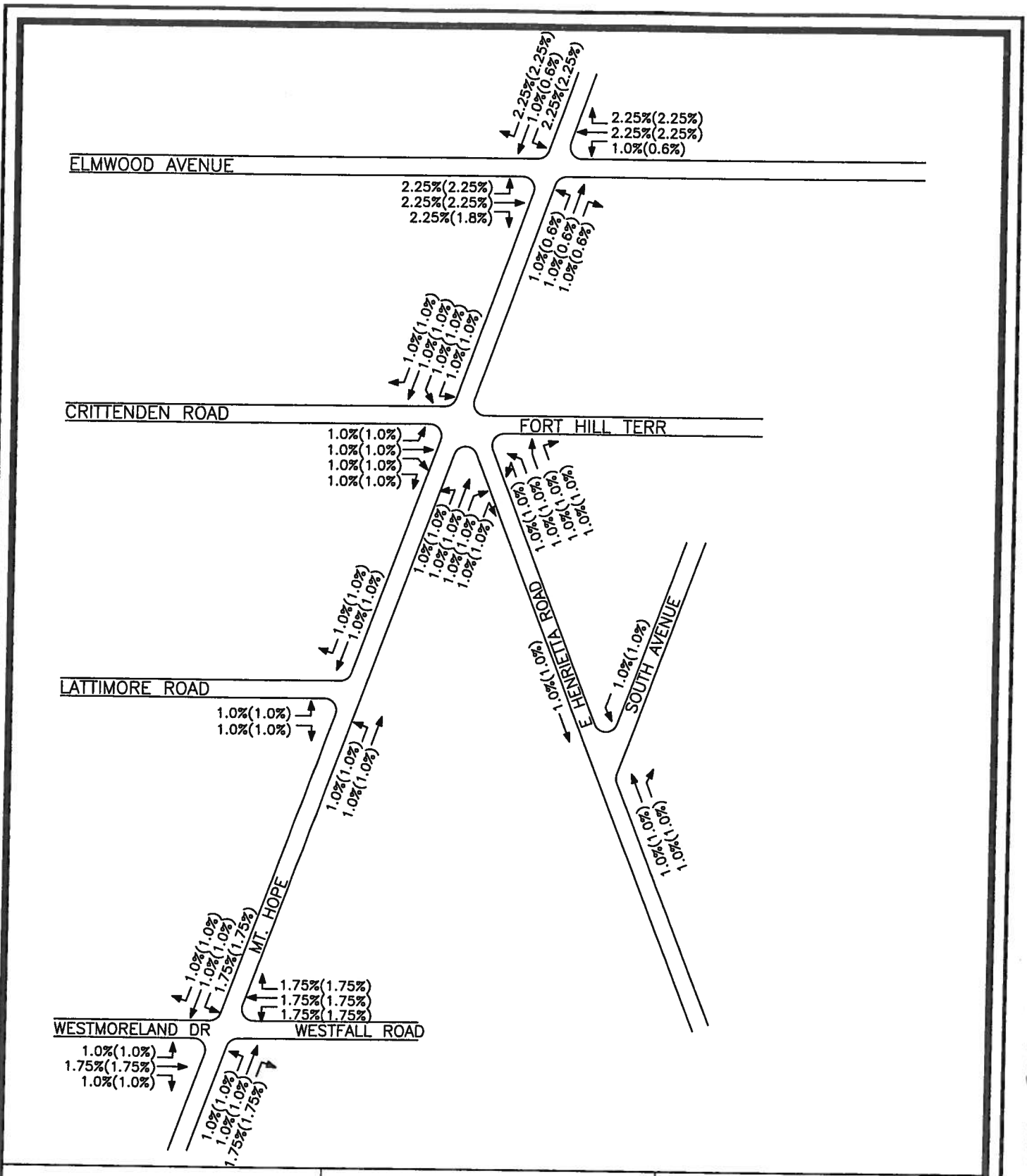
Growth rates are calculated by dividing the change in traffic volumes divided by the number of years that are analyzed. This provides a percent growth rate per year. Due to the variation of growth rates for each roadway within the study area, different growth factors were applied to the roadways within the project study area. The growth rates varied from as little as 0.6% to as high as 2.25%.

Data obtained from MCDOT and NYSDOT indicates that the approximate growth rate for traffic volumes along Mt. Hope Avenue for the past 20 years is 1.0% per year. Future volume

forecasts provided by GTC are slightly lower at 0.50% per year. Therefore, to provide a more conservative analysis a 1.0% growth rate per year was used for Mt. Hope Avenue.

The highest historical growth in traffic volumes, according to MCDOT data, is along Elmwood Avenue. The second highest historical growth rate occurred on Westfall Avenue. Not all movements at Elmwood / Mt Hope intersection will experience the highest growth rates. Some rates are lower to maintain balanced volumes along Mt. Hope between Elmwood Avenue and Crittenden Blvd, while taking into account University of Rochester (U of R) traffic projections. Based on current available data, the U of R expects to generate an additional 80 AM and PM peak hour trips at the segment of Mt. Hope between Elmwood Avenue and Crittenden as a result of the proposed U of R "Collegetown" development . Data provided by the U of R has been included in Appendix D.

These growth rates were applied to the existing volumes for the 25 year design window or 2030 future no-build conditions. Supporting documentation of historical ADT data is provided in Appendix D. The growth rates applied to the study area intersections to determine 2030 conditions are shown in Figure II-4.



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KEY

00(00) = AM(PM)

FIGURE II-4

2030 DESIGN YEAR GROWTH RATES

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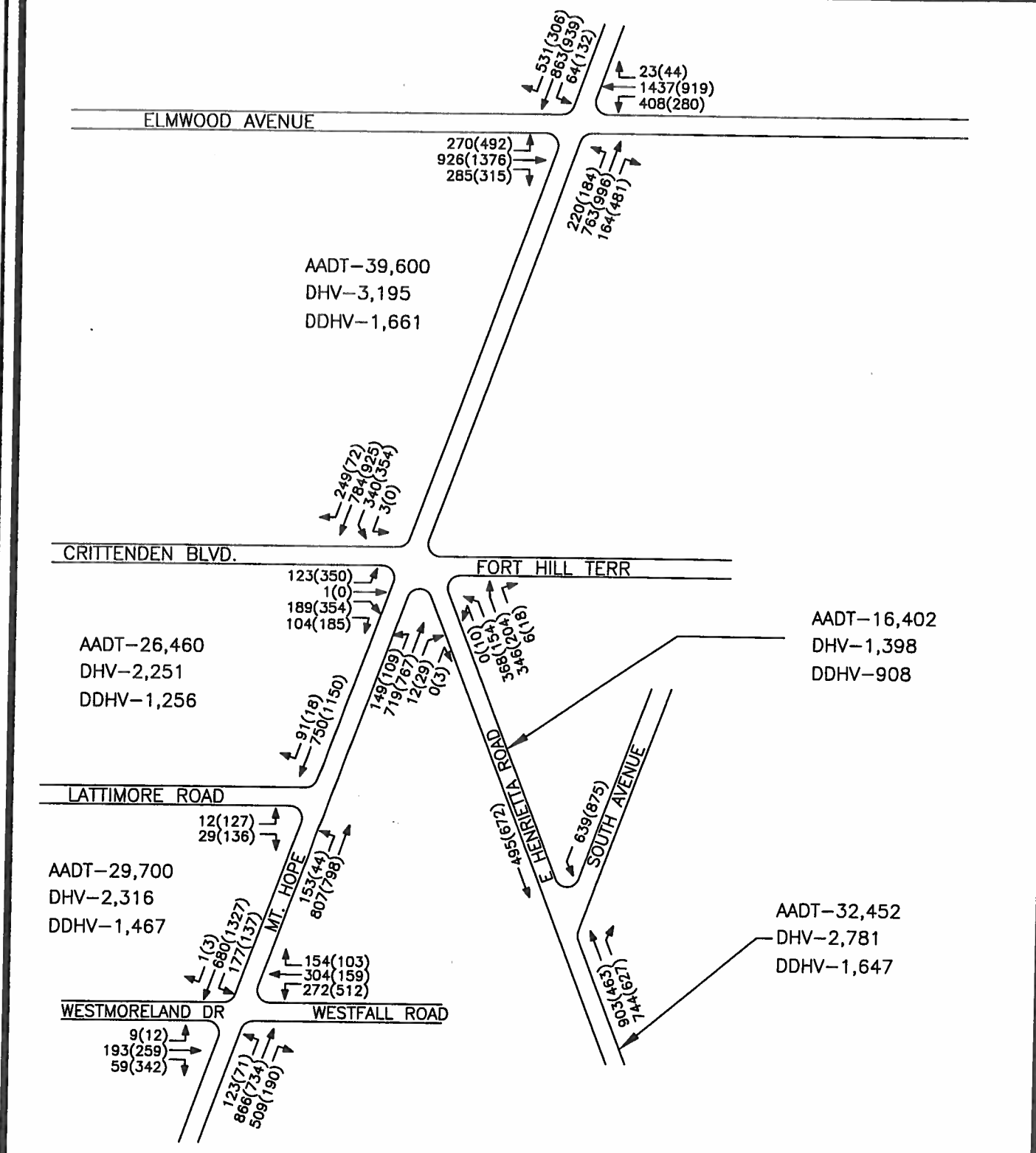
There is no known significant roadway and intersection improvements planned for in the current Transportation Improvement Program (TIP) and capital improvement programs of local governments along the study area (except this project). Just south of the project study area, NYSDOT and the United States Department of Transportation (USDOT) are working on the Project PIN #4390.17 "Southern Corridor Study". The Final Expanded Project Proposal, dated July 2001, was reviewed to determine the potential traffic impacts along East Henrietta Road (NYS Route 15A) and Mt. Hope Avenue (NYS Route 15) as a result of the modifications to the Routes 15A / 15 / I-390 interchanges. Based on traffic volume forecasts contained in the Southern Corridor Study, the change in traffic volumes (within the Mt. Hope study area) is expected to be 50 vehicles during the AM peak hour period, and 100 vehicles per hour during the PM peak hour period. Due to the relatively minor increases in traffic volumes expected from the I-390 ramp modifications, no specific adjustments were made to the 2030 No build volumes. The potential increase in volumes from the I-390 ramp modifications and the University of Rochester Master Plan is accounted for the 2030 design year growth rates.

A summary of the existing (2005) and forecasted 2030 Annual Average Daily Traffic volumes (AADT), Design Hour Volumes (DHV), and peak hour or Directional Design Hour Volumes (DDHV) for roadway segments along Mt. Hope Avenue and East Henrietta Road are contained in Table II-7.

Table II-7
2005 EXISTING AND 2030 FUTURE TRAFFIC VOLUMES

Roadway Segment	AADT (Vehicles/Day)		DHV (Vehicles/Hour)		DDHV (Vehicles/Hour)	
	2005	2030	2005	2030	2005	2030
Mt. Hope (Elmwood-Crittenden)	30,000	39,600	2,429	3,195	1,297	1,661
Mt. Hope (Crittenden-Lattimore)	21,000	26,460	1,787	2,251	998	1,256
Mt. Hope (Lattimore-Westfall)	22,500	29,700	1,774	2,316	1,126	1,467
E. Henrietta (Crittenden-South Ave.)	11,800	16,402	1,090	1,398	704	908
E. Henrietta (South of South Avenue)	26,600	32,452	2,168	2,781	1,284	1,647

Future 2030 No Build turning movement counts, ADT's, DHV's, and DDHV's have been developed and is shown in Figure II-5.



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N 00(00) = AM(PM)

FIGURE II-5

PEAK HOUR VOLUMES 2030 NO BUILD CONDITIONS

MT. HOPE / E. HENRIETTA STUDY
CITY OF ROCHESTER, NEW YORK

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i. Level of Service

A traffic operations capacity analysis was conducted to evaluate the existing (2005) and design year (2030) no build (NULL) operating conditions within the project area. Capacity analysis is a technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period.

The measure of effectiveness used for the capacity analysis is referred to as a Level of Service (LOS). Levels of Service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Intersection capacity analyses have been performed and described in this report.

Six Levels of Service are defined for analysis purposes. They are assigned letter designations, from "A" to "F", with LOS "A" representing the best conditions and LOS "F" the worst. Suggested ranges of service capacity and an explanation of Levels of Service are included in the Appendix. LOS D or better is generally considered acceptable for peak hours of traffic in urban areas although the desirable level of service is LOS C.

The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the 2000 Highway Capacity Manual (HCM 2000) published by the Transportation Research Board. Traffic analysis software, Synchro 6, which is based on procedures and methodologies contained in the HCM 2000, was used to analyze operating conditions at study area intersections. The procedure yields a Level of Service (LOS) based on the HCM 2000 as an indicator of how well intersections operate.

LOS analysis was conducted for five (5) study area intersections. The traffic volumes presented in Section II C.1.h. were used in the analysis. Existing signal timings and lane geometry were obtained from MCDOT and verified in the field. Appendix D includes the LOS analysis results in detail and includes all detailed Synchro computer printouts.

Intersection Operations

Detailed level of service analysis results for five (5) intersections in the project area for the years 2005 and 2030 No Build are presented in Table II-8. An overall intersection level of service of LOS D or better is acceptable, individual lane movements may be LOS E and still provide an acceptable overall level of service also v/c ratio should not exceed1.0.

TABLE II-8
CAPACITY ANALYSIS RESULTS (seconds of delay)

Intersection	2005 Existing		2030 No Build	
	AM	PM	AM	PM
Elmwood Ave. / Mt. Hope				
Eastbound Left	C(30.0)	D(42.0)	F(93.1)	F(413)
Eastbound Thru/Right	D(39.3)	E(60.9)	F(201)	F(346)
Westbound Left	E(67.2)	E(57.3)	F(154)	F(112)
Westbound Thru/Right	D(37.1)	D(36.4)	F(223)	E(68.8)
Northbound Left	C(33.5)	C(32.3)	E(66.0)	D(40.1)
Northbound Thru/Right	B(15.2)	D(42.3)	C(22.1)	F(127)
Southbound Left	B(17.0)	C(27.2)	B(19.2)	E(58.0)
Southbound Thru/Right	D(43.1)	D(41.4)	F(167)	F(111)
Overall	**D(36.6)**	**D(45.7)**	**F(154)**	**F(189)**
Crittenden Blvd. / Mt. Hope				
Eastbound Left(Crittenden)	D(35.8)	E(65.3)	D(38.7)	F(100)
Eastbound (Crittenden)	D(38.6)	F(88.2)	D(44.1)	F(160)
Eastbound Right (Crittenden)	B(20.0)	E(57.5)	C(24.2)	F(101)
Northbound Left (Mt. Hope)	C(32.1)	B(15.0)	D(36.8)	D(39.8)
Northbound Thru/Right(Mt. Hope)	C(30.0)	C(24.8)	E(60.0)	D(53.1)
Southbound Left (Mt. Hope)	C(28.4)	C(24.7)	D(44.4)	C(27.8)
Southbound Thru/Right(Mt. Hope)	C(24.5)	C(24.0)	E(68.0)	C(28.4)
Northwest Left (E. Henrietta)	E(59.6)	E(79.5)	E(61.2)	E(75.0)
Northwest Thru/Right (E. Henrietta)	E(64.3)	F(89.9)	E(74.9)	F(91.4)
Overall	**D(35.7)**	**D(41.9)**	**E(58.1)**	**E(63.4)**
Lattimore Rd. / Mt. Hope				
Eastbound	C(22.8)	D(53.2)	C(22.4)	E(62.4)
Northbound	A(3.0)	A(5.0)	A(7.0)	A(5.6)
Southbound	A(0.2)	A(0.9)	A(1.1)	A(1.1)
Overall	**A(2.4)**	**A(9.4)**	**A(4.8)**	**B(11.0)**
Westfall Rd. / Mt. Hope				
Eastbound Left/Thru	D(40.9)	D(50.2)	D(38.4)	D(52.7)
Eastbound Right	A(10.0)	C(24.6)	B(10.4)	D(39.7)
Westbound Left	C(30.2)	D(45.2)	D(46.7)	F(245)
Westbound Thru/Right	C(28.6)	C(20.3)	D(35.2)	C(21.5)
Northbound Left	B(11.6)	C(31.9)	B(18.3)	D(38.8)
Northbound Thru	B(17.1)	C(22.7)	C(23.1)	C(28.4)
Northbound Right	A(3.0)	A(4.3)	A(6.3)	A(4.1)
Southbound Left	A(6.2)	B(10.5)	B(18.9)	C(23.2)
Southbound Thru/Right	A(9.0)	B(19.3)	B(16.4)	D(49.9)
Overall	**B(16.1)**	**C(25.3)**	**C(23.0)**	**E(68.2)**
South Ave. / E. Henrietta				
Northbound Left (E. Hen.)	B(13.5)	A(9.9)	C(32.2)	B(17.4)
Northbound Thru (E. Hen.)	A(9.0)	A(9.3)	A(8.6)	A(9.1)
Southbound Thru (South)	D(38.6)	D(46.9)	E(76.2)	D(43.4)
Southeast Right (E. Hen.)	A(5.2)	B(10.7)	B(10.6)	C(22.4)
Overall	**B(18.0)**	**C(22.0)**	**D(35.0)**	**C(25.3)**

All of the signalized intersections currently operate at an overall level of service (LOS) "D" or better during both the morning and evening peak hours. All approaches operate at LOS "D" or better during the existing AM and PM peaks, with a few exceptions:

- Eastbound thru/right on Elmwood Avenue at Mt. Hope during PM peak,
- Westbound left on Elmwood at Mt. Hope during AM and PM peaks,
- The eastbound left, thru and right approach to Mt. Hope during the PM peak on Crittenden,
- The northwest left and thru/right approach to Mt. Hope during the AM and PM peaks on East Henrietta Road.

It should also be noted that three of the intersections with the most delay (Mt.Hope/Elmwood, Mt. Hope/Crittenden/E. Henrietta, Mt. Hope/Westfall currently have traffic cameras for MCDOT to observe and manage traffic demands and flows.

As shown in the table above, three of the five study intersections are projected to operate at an overall level of service "E" or worse during the 2030 No build condition.

Under existing AM and PM peak hour conditions there are no movements at any of the study intersections that have a volume to capacity (v/c) ratio that exceeds 1.00. Under the 2030 No-build AM peak hour the following intersections have movements that exceed a v/c ratio of 1.00:

- Mt. Hope / Elmwood (multiple movements)
- Mt. Hope / Crittenden (southbound)

Under the 2030 No-build PM peak hour the following intersections have movements that exceed a v/c ratio of 1.00:

- Mt. Hope / Elmwood (multiple movements)
- Mt. Hope / Crittenden (eastbound)
- Mt. Hope / Westfall (westbound & southbound)

j. Non-Standard Features and Non-Conforming Features

The following Non-Standard features currently exist within the project limits:

- The 10 ft. wide travel lane widths on Mt. Hope Avenue within the project limits do not meet the minimum required width of 11 ft.
- There are many angle points without curves located on Mt. Hope Ave and East Henrietta Road. This alignment is non-standard as the angle points should incorporate a minimum horizontal curve required for this facility which is 443 ft. at 4% superelevation.

The following Non-Conforming features exist within the project limits:

- Mt. Hope Avenue/Crittenden Boulevard/East Henrietta Rd/Fort Hill Terrace is a complex 5 legged intersection with a skew (37 degrees) that is less than the minimum preferred angle of 60 degrees based on AASHTO recommendations.

- There is an instantaneous widening angle point where a 4 lane section widens to provide for a center two way left turn lane at Brighton Park. A widening of this nature should conform to MUTCD standards by providing a 125 feet taper length.
- Left turn lanes do not provide adequate lengths for deceleration and queue storage. This requires some deceleration to occur in the thru lanes prior to entering the tapers and causes left turning traffic to overflow into the thru lanes at times, blocking the thru movements.
- Several of the pedestrian ramps do not meet current ADA standards.
- There are two sides streets on Mt. Hope Avenue, Shelbourne Road and Redfern Drive that are opposite of each other, but not aligned with each other.
- There are side streets on opposite sides of Mt. Hope Ave. that are within 200 ft. of each other (Edgemont Rd. and Cimmaron Dr, Elmerston Rd. and Whiteford Rd.). The AASHTO recommended minimum separation is 200 ft.

k. Safety Considerations, Accident History and Analysis

Accident reports for the roadways within the limits of this project were investigated to assess the safety history. The accidents included in the review occurred during a two year and two month time period from October 11, 2003 through December 19, 2005. A review of data from January 2002 to October 10, 2003 indicated 28 accidents on Mt. Hope Avenue between Crittenden Blvd. and Elmwood Avenue related to the Wegman's store and associated driveways. Because of the frequency and type of accidents associated with the Wegman's grocery store, the accident analysis only considers accidents after the store closed on October 11, 2003. The associated driveways along Mt. Hope were later closed when the building was razed and converted to a parking lot. During the period following closure of the Wegman's store, 283 total accidents were documented at the intersections and roadway sections included in the project; of which 138 were reportable, 50 non-reportable and 95 unknown accidents.

Accident rates were computed for all accidents (reportable and non-reportable) on roadway segments and study intersections and then compared with MCDOT and NYSDOT average accident rates for similar facilities, as summarized in the following tables. Reportable type accidents can be defined as damage to one person's property in the amount of $1,001 or more. The Non Reportable type accidents are $1,000 or less of damage. NYSDOT and MCDOT accident rates are both included in this report for comparison purposes.

MCDOT accident rates do not consider non-reportable accidents, only reportable. MCDOT has an average and critical accident rates. If the critical accident rate is exceeded at a location it is then considered a high accident location.

The NYSDOT accident rates include both reportable and non-reportable type accidents based on the data available for the time period evaluated for this study. Therefore, the number of roadway link and intersection accidents in the following tables indicates different numbers from MCDOT for the same locations.

TABLE II-9
MCDOT - ROADWAY SEGMENT ACCIDENT RATES

Road Segments	Length (miles)	Number of Reportable Accidents	Actual Rate Acc/MVM	MCDOT Average Rate Acc/MVM	MCDOT Critical Rates Acc/MVM	Actual vs. MCDOT Average
MT. HOPE AVENUE						
Westfall Rd. to Lattimore Rd.	0.304	12	2.22	0.46	1.36	4.8 times higher
Lattimore Rd. to Crittenden Blvd.	0.223	18	4.86	0.46	1.60	10.5 times higher
Crittenden Blvd. to Elmwood Ave.	0.213	36	7.12	0.46	1.40	15.4 times higher
EAST HENRIETTA ROAD						
Crittenden Blvd. to South Ave.	0.354	7	2.12	1.08	2.79	2.0 times higher

- Acc/MVM = accidents per million vehicle miles

Three of the four roadway segments in the project study area have higher accident rates as compared to the county wide average and critical for similar type roadway facilities. Most noticeable, the section from Crittenden to Elmwood has the highest rate of 7.12 which is 15 times higher than the MCDOT average accident rate for a similar type facility. The project accident history was further investigated to identify high incident areas and possible trends/causes of the accidents, as described in the following sections.

TABLE II-10
MCDOT - INTERSECTION ACCIDENT RATES

Intersection	Number of Accidents	Actual Rate Acc/MEV	MCDOT Average Rate Acc/MEV	MCDOT Critical Rates Acc/MEV	Actual vs. MCDOT Average
Mt. Hope Ave. / Westfall Rd.	4	0.14	0.15	0.36	1.07 times lower
Mt. Hope Ave. / Lattimore Rd.	4	0.23	0.13	0.40	1.7 times higher
Mt. Hope Ave. / Crittenden Blvd./E. Henrietta Rd. / Fort Hill Terrace	14	0.40	0.15	0.33	2.6 times higher
Mt. Hope Ave. / Elmwood Ave.	38	0.82	0.15	0.31	5.46 times higher
E. Henrietta Rd. / South Ave.	2	0.09	0.46	0.86	5.1 times lower

- Acc/MEV = accidents per million entering vehicles

Three of the intersections have accident rates higher than the MCDOT average rate; and two of the three intersections have rates that exceed MCDOT critical rates. Most noticeable is the Mt. Hope / Elmwood Avenue intersection that exceeds the MCDOT average rate by 5 times.

The total number of accidents shown in the intersection and roadway segment MCDOT tables above, indicate that there are 135 reportable accidents. There are a total of 3 reportable accidents that occurred on Mt. Hope Avenue just south of Westfall Road that were included in the investigation but not in the accident rate calculations since they were not directly associated with any intersection or roadway segment within the project study area.

TABLE II-11
NYSDOT - ROADWAY SEGMENT ACCIDENT RATES

Road Segments	Length (miles)	Number of Accidents	Actual Project Rate Acc/MVM	NYSDOT Average Rate Acc/MVM	Actual vs. NYSDOT rate
MT. HOPE AVENUE					
Westfall Rd. to Lattimore Rd.	0.304	21	3.88	2.19	1.7 times higher
Lattimore Rd. to Crittenden Blvd.	0.223	28	7.56	2.19	3.4 times higher
Crittenden Blvd. to Elmwood Ave.	0.213	68	13.45	2.19	6.1 times higher
EAST HENRIETTA ROAD					
Crittenden Blvd. to South Ave.	0.354	11	3.33	2.19	1.5 times higher

- Acc/MVM = accidents per million vehicle miles

All of the roadway segments in the project study area have higher accident rates than the state wide average for similar type roadway facilities. Although all the roadway segments have rates that exceed the state averages, the segment with the highest accident rate of the entire project study area is the section of Mt. Hope Avenue from Elmwood Avenue to Crittenden Blvd. – East Henrietta Road. This roadway segment is shown to exceed the state average rates by more than six (6) times. A review of the accident collision diagrams (included in the appendix) indicate a majority of accidents within this roadway segment occur at higher volume driveways; such as Hess gas station, CVS pharmacy, and McDonald's. A high percentage of accidents at these locations involve motorists turning left out of a driveway when a car is stopped in the curb lane and the accident happens in the interior through lane.

TABLE II-12
NYSDOT - INTERSECTION ACCIDENT RATES

Intersection	Number of Accidents	Actual Project Rate Acc/MEV	NYSDOT Average Rate Acc/MVM	Actual vs. NYSDOT rate
Mt. Hope Ave. / Westfall Rd.	13	0.47	0.60	1.2 times lower
Mt. Hope Ave. / Lattimore Rd.	8	0.46	0.35	1.3 times higher
Mt. Hope Ave. / Crittenden Blvd. / E. Henrietta Road / Fort Hill Terr.	44	1.26	0.60	2.1 times higher
Mt. Hope Ave. / Elmwood Ave.	78	1.67	0.60	2.7 times higher
E. Henrietta Rd. / South Ave.	3	0.14	0.35	2.5 times lower

- Acc/MEV = accidents per million entering vehicles

As shown in the table above, three of the five study intersections have accident rates higher than the state wide average accident rates for similar intersections. The Mt. Hope Avenue / Crittenden Blvd. / E. Henrietta Road and Mt. Hope / Elmwood intersections are more than two times higher than the state average. A majority of the accidents at these intersections are rear end and left turn types; which could be associated with vehicle queuing and the current intersection geometries.

The total number of accidents shown in the intersection and roadway segment NYSDOT tables above, indicate that there are 274 accidents. There are a total of 9 accidents that occurred on Mt. Hope Avenue just south of Westfall Road that were included in the investigation but not in the accident rate calculations as they were not directly associated with any intersection or roadway segment within the project study area.

Due to the fact that the roadway segment and intersection accidents have rates that exceed state averages, further investigation was performed to identify high incident areas and possible trends/causes of the accidents. The results of the investigation are discussed in the following section.

Accident Patterns and Clusters

This analysis documented number, location, type, and cause of accidents within the project limits. Table II-13 lists the combined results of the type of accidents that occurred mid-block and/or at intersections.

TABLE II-13
ACCIDENT TYPES

ACCIDENT TYPE	TOTAL	%	ACCIDENT TYPE	TOTAL	%
Sideswipe	7	2	Head On	3	1
Rear End	87	31	Right Turn	10	4
Right Angle	56	20	Deer Strike	0	0
Left Turn	65	23	Bicycle	4	1
Pedestrian	3	1	Overtaking	40	14
Fixed Object	8	3	Unknown	0	0
			TOTALS	283	100

The highest percentage of accident types are rear end, followed by left turn, right angle and overtaking. A majority of the rear end, overtaking and left turn type accidents occur at signalized intersections within the project study area. The majority of the right angle collisions for the study area occurred at driveways between intersections (ie. CVS, McDonalds, Hess driveways).

Clusters of accidents occurring in the same vicinity, or having a similar cause/pattern were identified. Locations with at least three (3) identifiable consistent accident patterns were considered an accident cluster. The locations and accident patterns are provided in the following table:

TABLE II-14

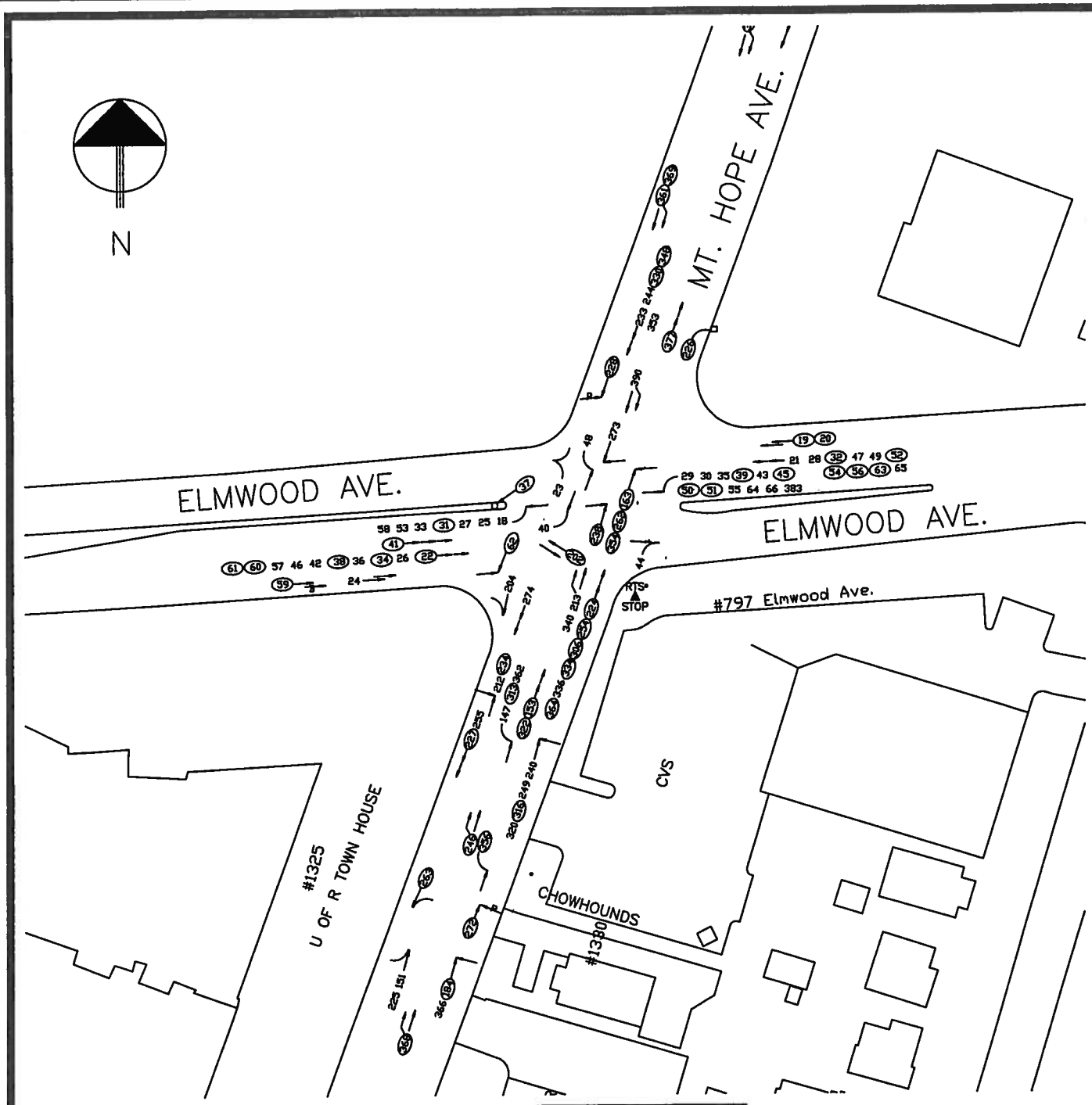
ACCIDENT CLUSTERS

Location	Direction	Accident Pattern	No. of Accidents
Mt. Hope Ave. / Westfall Rd. Intersection	Northbound	Rear End	3
1819 Mt. Hope Ave. (Residence)	Southbound	Overtaking	3
Mt. Hope Ave. / Crittenden Blvd. / East Henrietta Road / Fort Hill Terrace Intersection	Northbound	Left Turn	4
	Southbound	Left Turn	3
	Southbound	Rear End	4
	Southbound	Overtaking	3
	North-Westbound	Overtaking	3
	Eastbound	Rear End	3
1440 Mt. Hope Ave. (Near McDonalds driveway)	Southbound	Rear End	8
1431 Mt. Hope Ave. (Hess Gas Station)	Southbound	Left Turn	3
	Southbound	Rear End	4
	Southbound	Right Angle	10
1415 Mt. Hope Ave. (Near Brueggers driveway)	Southbound	Right Angle	3
1314 Mt. Hope Ave. (CVS)	Northbound	Right Angle	4
	Southbound	Left Turn	3
Mt. Hope Ave. / Elmwood Ave. Intersection	Northbound	Rear End	6
	Northbound	Right Angle	3
	Southbound	Rear End	5
	Eastbound	Rear End	11
	Eastbound	Left Turn	7
	Westbound	Rear End	10
	Westbound	Left Turn	12
30 E. Henrietta Rd. (Dunkin Donuts Driveway)	North-Westbound	Left Turn	4

A majority of the accidents within the project study area occurred on Mt. Hope Avenue between Lattimore Road and Elmwood Avenue, with the highest concentration of accidents between Crittenden Blvd / East Henrietta Road and Elmwood Avenue. Accidents within this segment are attributed to the signalized intersections (rear end, and left turn types) and multiple driveways (Hess, CVS, Brueggers, Starbucks, etc.).

The intersection with the highest number of accidents is Mt. Hope / Elmwood Avenue. A majority of accidents occurred in the east and westbound directions. There were two types of accidents: rear end and left turn. The apparent contributing factors to these accidents were reviewed, and found that most of the rear end accidents were due to driver inattention/distraction or following too closely. Most of the left turn accidents were due to drivers failing to yield the right-of-way to other oncoming vehicles. In summary, most contributing factors are related to driver behavior and not environmental factors related to the intersection.

Detailed analysis of accidents types, locations and collision diagrams are included in the appendix. Accident diagrams of the higher accident locations are shown in Figures II-6, II-7, and II-8.



ACCIDENT DETAIL	SYMBOLS	
TYPE OF ACCIDENT; NUMBER OF VEHICLES; KEY NUMBER	MOVING VEHICLE	SIDE SWIPE
	BACKING VEHICLE	TURNING VEHICLE
	PARKED VEHICLE	PEDESTRIAN
	FIXED OBJECT	BICYCLE

TIME PERIOD:
2 YEARS & 2 MONTHS
10/11/03 – 12/19/05

KEY

XXX = REPORTABLE ACCIDENT

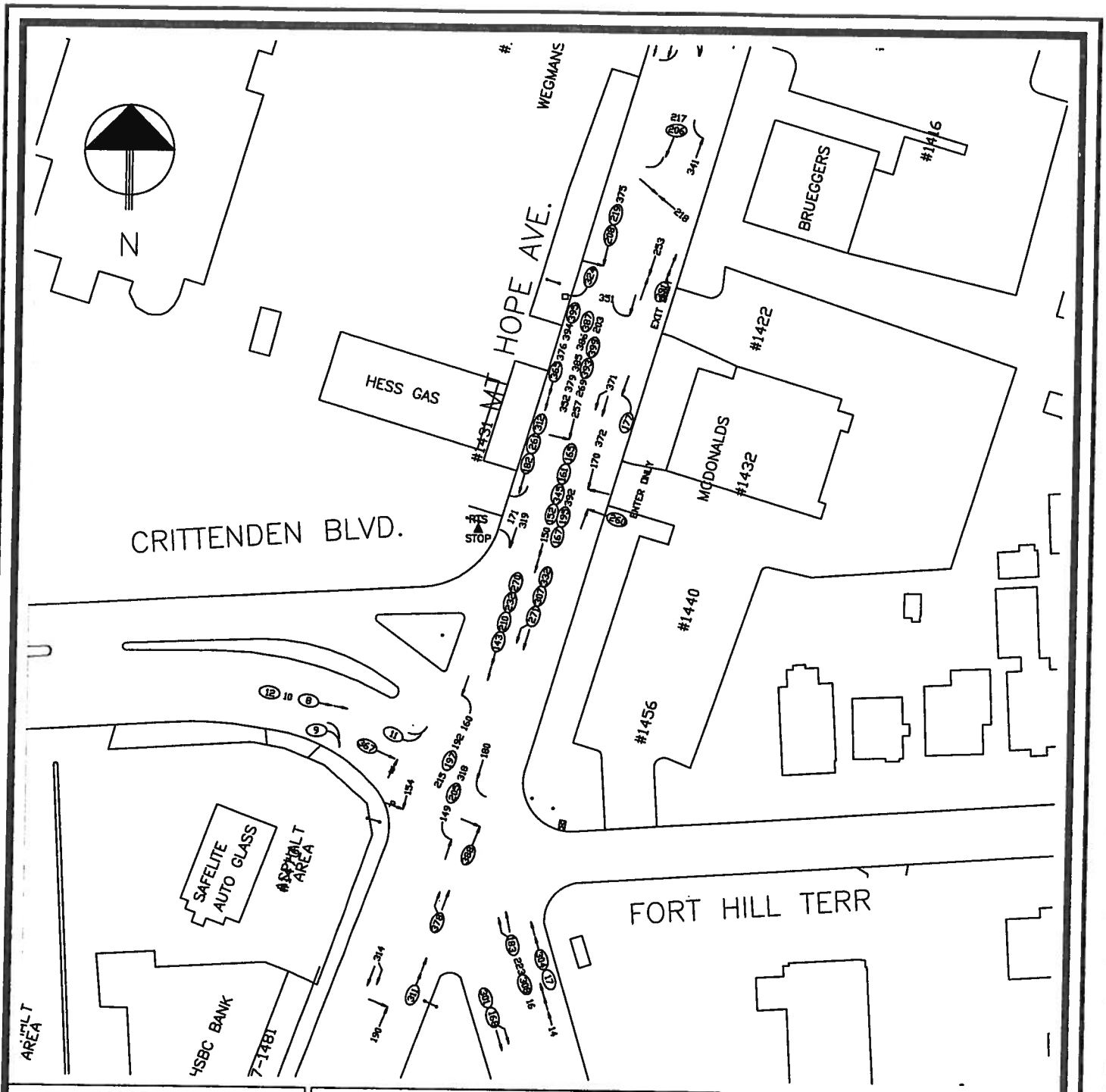
(XXX) =NON-REPORTABLE ACCIDENT

FIGURE II-6

HIGH ACCIDENT LOCATIONS DIAGRAM

MT. HOPE / E. HENRIETTA STUDY
CITY OF ROCHESTER, NEW YORK

SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants



ACCIDENT DETAIL	SYMBOLS	
TYPE OF ACCIDENT; NUMBER OF VEHICLES; KEY NUMBER	MOVING VEHICLE; BACKING VEHICLE; PARKED VEHICLE; FIXED OBJECT	SIDE SWIPE; TURNING VEHICLE; PEDESTRIAN; BICYCLE

TIME PERIOD:
2 YEARS & 2 MONTHS
10/11/03 – 12/19/05

KEY

XXX = REPORTABLE ACCIDENT

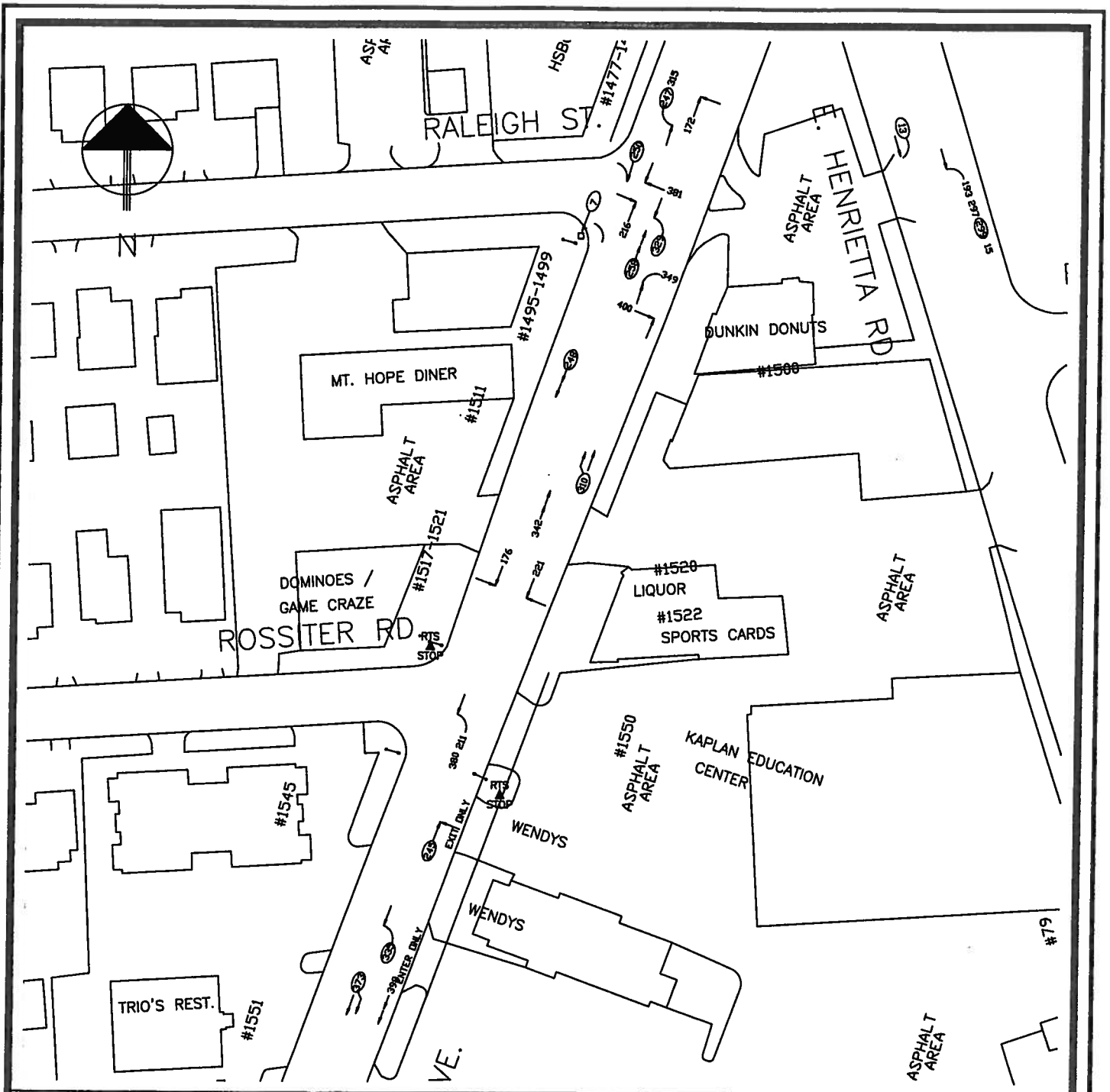
(XXX) = NON-REPORTABLE ACCIDENT

FIGURE II-7

HIGH ACCIDENT LOCATIONS DIAGRAM

MT. HOPE / E. HENRIETTA STUDY
CITY OF ROCHESTER, NEW YORK

SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants



ACCIDENT DETAIL	SYMBOLS	
TYPE OF ACCIDENT NUMBER OF VEHICLES KEY NUMBER	MOVING VEHICLE BACKING VEHICLE PARKED VEHICLE FIXED OBJECT	SIDE SWIPE TURNING VEHICLE PEDESTRIAN BICYCLE

TIME PERIOD:
2 YEARS & 2 MONTHS
10/11/03 – 12/19/05

KEY

XXX = REPORTABLE ACCIDENT

(XXX) = NON-REPORTABLE ACCIDENT

FIGURE II-8

HIGH ACCIDENT LOCATIONS DIAGRAM

MT. HOPE / E. HENRIETTA STUDY
CITY OF ROCHESTER, NEW YORK

SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants

l. Pavement and Shoulder Conditions

City of Rochester Platt maps reveal that Mt. Hope Avenue was originally constructed with 37 ft. wide concrete pavement in 1925. The trolley rails from Elmwood to Crittenden were removed in 1943. No information is available if there were any trolley rails, or when they would have been removed, on Mt. Hope Avenue between Crittenden to the south City line. Mt. Hope Avenue, between Crittenden Blvd. and the south City line was overlaid in 1952 and Elmwood Ave. to Crittenden Blvd. was overlaid in 1966.

Roadway maintenance record plans from 1976 show Mt. Hope Avenue being resurfaced and widened from 37 ft. to it's current 50 ft. width between Elmwood Avenue and Rossiter Road. At that time, the roadway widening was constructed of an 8 inch course granular subbase material, 4 inch select course granular subbase material, 8 inch asphalt concrete base course, 1 ½ inch asphalt concrete binder course and 1 inch asphalt concrete top course.

Record plans from 1979 reveal a similar widening on Mt. Hope Avenue from 40 ft. to 50 ft. between Brighton Park and Westfall Road. At that time, the roadway widening was constructed of an 8 inch type 3 stone subbase course, 4 inch type 4 stone subbase course, 8 inch asphalt concrete base course, 1-½ inch asphalt concrete binder course and 1 inch asphalt concrete top course. The plans also shows a 1 inch pavement resurfacing from Brighton Park to Rossiter Road, maintaining the existing width of 40 ft.

The City SIMS report shows Mt. Hope Avenue being overlaid in 1991. The pavement currently is in generally poor to fair condition exhibiting multiple longitudinal and transverse cracks, alligator cracking, rutting, pot holes and utility repairs that are in poor condition.

Pavement cores taken along Mt. Hope Avenue show that the existing concrete pavement base is centered in the middle of the road, with a 4 inch asphalt overlay. These cores show that the concrete base is in generally good condition. However, the asphalt pavement is delaminating from the concrete.

No record plans are available to determine when East Henrietta Road was originally constructed. However, the available record plans from 1935 show a 36 ft. wide pavement between South Avenue and Mt. Hope Avenue constructed of a 3 inch bituminous macadam material over 3 inches of crushed stone and 6 inches of gravel. Current City of Rochester maintenance records reveal that the roadway was milled and resurfaced in 1987. It has also received a crack fill treatment every 2 years since 1993.

Pavement cores taken along East Henrietta Road show 1-2 inches of asphalt pavement over macadam material in poor condition which is consistent with the original 1935 construction.

m. Guide Railing, Median Barrier, Impact Attenuators

There is box beam guide rail with weak steel posts located on the Mt. Hope Avenue approach to the bridge over the Erie Canal/I-390. The guide rail meets current design requirements.

n. Traffic Control Devices (Signs, Signals, etc.)

Table II-15 provides a brief summary of the intersection traffic control devices and traffic monitoring cameras within the project limits.

TABLE II-15
INTERSECTION TRAFFIC CONTROL

INTERSECTION	TYPE OF CONTROL	TRAFFIC CAMERA
Mt. Hope /Elmwood Ave.	Signalized, actuated, coordinated/interconnected	Existing
Mt. Hope /Crittenden Blvd. / E. Henrietta Road / Fort Hill Terrace	Signalized, actuated, coordinated/interconnected	Existing
Mt. Hope /Lattimore	Signalized, actuated, coordinated/interconnected	None
Mt. Hope / Westfall / Westmoreland	Signalized, actuated, coordinated/interconnected	Existing
East Henrietta / South Avenue	Signalized, actuated, coordinated/interconnected	None

o. Structures

There are no bridges within the project limits. The Mt. Hope Avenue bridge over the I-390/Erie Canal is located just south of the project limits and is not included in this project.

p. Hydraulics of Bridges and Culverts

There are no affected streams or culverts within the project limits.

q. Drainage Systems

The closed drainage system on Mt. Hope Avenue is generally in poor condition. The drainage system consists of a mix of old cast iron grates and brick catch basins and concrete catch basins with reticuline grates. The pipe sizes range from 8 inches to 36 inches. Ponding has been observed during rain events, where water fails to reach the catch basins and lays in vehicle wheel paths, producing an unsafe condition. Due to the narrow curb to curb width that exists, the catch basins are located in the curb lane wheel path, where vehicles constantly run over them. Approximately 80% of the catch basins are in poor condition. The majority of the catch basin grates are cracked and deformed.

The roadway drainage on Mt. Hope Avenue between Elmwood Avenue and Crittenden Boulevard drains from Elmwood Avenue south to Crittenden Blvd. where it merges with the drainage system from East Henrietta Road and continues westerly along Crittenden Boulevard. Drainage on Mt. Hope Avenue south of Crittenden Boulevard flows toward the southerly project limits to a grit chamber located near the bridge over the Erie Canal. The grit chamber discharges into the Erie Canal.

The closed drainage system on East Henrietta Road is also generally in poor condition. The drainage system consists primarily of old cast iron grates and brick catch basins with a few concrete catch basins with reticuline grates scattered throughout. Approximately 90% of the catch basins are in poor condition. The pipe sizes range from 8 inch to 18 inch in size. The drainage system beginning at Brighton Park flows north where it merges with the Mt. Hope Avenue system and continues westerly along Crittenden Blvd. MCDOT has identified a drainage/flooding concern on Crittenden Blvd. west of the project. during the detailed design phase this concern will be addressed to see any mitigation/diversions can be addressed in this project . The system south of Brighton Park flows southerly toward the Erie Canal.

r. Soil and Foundation Conditions

There are no unusual soil or foundation conditions identified along the project corridor.

s. Utilities

Coordination with public and private utilities will need to occur as an ongoing process throughout the project planning and design phases. It is anticipated that impacts to public and private utilities resulting from the Mt. Hope Avenue street improvements will be significant. The information provided below is based on discussions with the various utility agencies.

Sewer

Sewer record maps show an 8" sanitary sewer running parallel to a 15"-18" storm sewer beneath both Mt. Hope Avenue and East Henrietta Road. The sanitary system on Mt. Hope Avenue (between Crittenden Boulevard and Elmwood) and East Henrietta Road (north of Brighton Park) merges at the Crittenden Boulevard intersection and proceeds westerly along Crittenden Boulevard. Both the 8' and 15"-18" storm systems follow this same pattern.

Parallel sanitary and storm sewers on Mt. Hope Avenue, south of Crittenden Boulevard, drain toward Westfall/Westmorland Road, where they continue westerly on Westmorland. The parallel systems on East Henrietta Road, south of Brighton Park drain to the south where they merge with their own system on Westfall Road.

Mr. Kevin Quinn at Monroe County Pure Waters indicated that they had repaired the sewer pipes on Mt. Hope Avenue between Lattimore south to the City line approximately 5 years ago. He is not aware of any problems within the job limits and no work is anticipated.

Rochester Water Bureau Mains

Mr. Enrique Maisch from the Rochester Water & Lighting Bureau indicated that on Mt. Hope Avenue between Elmwood Avenue and Westfall Rd. there is 4,000 feet of 12 inch cast iron pipe water main that was installed in 1923. This pipe was cleaned and cement lined in 1990. The majority of the pipe has approximately 4.5-5.5 feet of cover except for a 400 ft. section between Brighton Park and Shelbourne Road where the cover is approximately 3.5 ft. There is also a recent record of several water main leaks between Irvington Road and Lattimore Road as possible evidence of corrosive soil conditions in the area. From Westfall Road south to the City line, there is approximately 550 feet of 8"

unlined cast iron pipe installed in 1929 with an average cover of 4.5 ft with no record of water main breaks. Water services on Mt. Hope Avenue consist of either galvanized steel or copper pipe.

The Rochester Water Bureau would like to replace 1300 feet of the existing 12 inch water main on Mt. Hope Avenue between Rossiter Road and Shelbourne Rd. with new 12 inch ductile iron pipe including new branch mains (8 inch) at side streets, hydrants and water services. The existing 8 inch unlined water main on Mt. Hope Avenue from Westfall Rd. to the City line will be replaced with new 8 inch ductile iron pipe, hydrants and water services. All water main to remain in service will require installing additional cathodic protection, replace branch mains that are unlined or less than 8 inches in diameter, replace hydrants, valve boxes and small water services that are not copper or copper services that are older than 15 years.

The water main in East Henrietta Road consists of approximately 1,900 feet of 8" unlined cast iron pipe installed in 1923 with an average depth of cover of 6.7 ft. There is record of a main break near Redfern Drive in 1995. Most of the water services are made of galvanized steel pipe. The Water Bureau would like to replace 250 feet of 6 inch unlined cast iron pipe between Redfern Drive and Whiteford Road with new 8 inch ductile iron water main as part of this project.

The water main in Crittenden Boulevard from Mt. Hope Avenue to Norfolk Street consists of 1,000 ft. of 12 inch cast iron pipe installed in 1925. The pipe was cleaned and cement lined in 1985 and the average depth of cover is 4.5 feet. There is a record of several main breaks, indicating the possibility of corrosive soil conditions in the area. The water bureau is recommending keeping the existing water main in service, depending on soil analysis. The majority of the water services are made of galvanized steel pipe.

Monroe County Water Authority

The Monroe County Water Authority indicated that they do not have any transmission mains or facilities within the limits of this project.

Street Lighting

The street lights along the west side of Mt. Hope Avenue consist of 8 ft. long metal davit arms with cobra head fixtures mounted on wood utility poles. The street lights along the east side of Mt. Hope Avenue consist of 30 ft. tall galvanized steel poles with cobra head fixtures. The street lights along the East Henrietta Road consist of 8 ft. long metal davit arms with cobra head fixtures mounted on wood utility poles. Mr. Joe Borrelli from the City of Rochester Street Lighting Division indicated that RG&E currently owns and maintains the street lights on Mt. Hope Avenue, south of Crittenden Boulevard as well as the poles on East Henrietta Road. On Mt. Hope Avenue north of Crittenden Boulevard, the poles have dual ownership, with the wires and fixtures being owned and maintained by RG&E and the pole and the conduit being owned by the City of Rochester. The existing street lighting system is in poor condition and needs to be replaced.

Gas, Electric, Cable Television and Telephone

A review of the project area indicated that the private electric, telephone and cable television systems are a mix of overhead and underground systems within the project limits. Based upon

discussions with some of the utility agencies and recent experiences with large-scale City street reconstruction projects, the scope of improvements to these systems is generally unknown during this stage of the project. The neighborhood business owner association has requested that the City pursue burying the overhead utilities as part of this project. The City is discussing this with the utility owners; however this may not be resolved until the detailed design phase of the project.

RG&E Gas indicated that the gas main system consists of wrapped steel and plastic mains that are relatively new (constructed in 1975 or after). They do not anticipate any work except for relocations necessary due to conflicts.

Frontier Telephone indicated that their system was at maximum capacity, and that they anticipate building new conduits and moving some of the existing conduits to avoid any conflicts. They own approximately 5 poles within the project limits.

Time Warner Communication indicated that they have minor underground facilities in the project area. A majority of their system is on overhead lines. On East Henrietta Road, the overhead lines are on the east side of the roadway. On Mt. Hope Avenue, the overhead lines are on the west side of the road for the length of the project. There are some overhead crossings on both roadways, where overhead lines service some of the side streets houses and businesses within the project limits. Time Warner is not aware of any problems and is not proposing any work.

MCDOT and MCDES has fiber optic lines that run through the entire project area. MCDOT also has coax cable in the project area which may be impacted and will be need to be replaced as necessary.

t. Railroads

There are no railroads within the project limits

u. Visual Environment

There is a combination of commercial, institutional and residential uses on both Mt. Hope Avenue and East Henrietta Road, with East Henrietta Road being mostly residential in nature. Mt. Hope has a commercial feel, with building faces generally found at the back of the attached sidewalk. East Henrietta is more visually pleasing with a treelawn and trees along the corridor and houses set back from the roadway.

v. Provisions for Pedestrians and Bicyclists

Pedestrians use the existing sidewalk that is located along both sides of Mt. Hope Avenue and East Henrietta Rd. The sidewalks are in generally fair to poor condition exhibiting some deterioration, differential settling, cracking, and grass between the joints.
At the 5 legged intersection of Mt. Hope Avenue/Crittenden Boulevard/East Henrietta Rd/Fort Hill Terrace, is a series of audible pedestrian signals for the visually impaired.

In some areas, vehicles are currently parking on the sidewalks by driving over the curbs with low curb reveal, or by driving over the existing ADA ramps. Select placement of bollards and increased curb reveal to 7 ¼" would help control this problem.

Bicyclists currently share the outside travel lane with the existing road traffic. While this situation may be less than ideal, there have been no identifiable correctable patterns of bicycle related accidents as a result of the bicycles sharing the travel/parking lane with vehicles.

w. Planned Development for Area

The University of Rochester is currently preparing a Campus Master Plan, scheduled to be completed in Winter of 2008-09. This plan is anticipated to include the development of 1.8 million square feet of office space to the south of Interstate 390 adjacent to Kendrick Road. The plan is also anticipated to include the redevelopment of their property on the west side of Mt. Hope Avenue between Crittenden Blvd. and Elmwood Avenue. It is anticipated that this redevelopment will create a 2 to 3 story "College Town" environment with lower level restaurants/ retail and upper level offices or apartments. The University of Rochester is also considering possible options to pursue a modified Kendrick Road/I-390 interchange to enhance access to their campus.

The NYSDOT is planning to improve a portion of I-390 that will include upgrades to the E. Henrietta Rd./ I-390 interchange. The current plans for the interchange include building a loop ramp from I-390 northbound onto E. Henrietta Rd. southbound with an additional connection to Mt. Hope Ave. The plans also include the construction of an on-ramp from E. Henrietta Rd. to I-390 northbound and a roadway connecting E. Henrietta Rd. to Mt. Hope Avenue.

2. Needs

This section identifies and describes the transportation problems and opportunities that the proposed alternatives will be developed to address. In addition, the City of Rochester, NYSDOT and MCDOT officials, other Public Agencies, neighborhood organizations, the Advisory Task Force and the general public helped to identify and prioritize the community goals that this project should help to achieve. Both the needs of the project and the community goals were used to develop the project objectives.

a. Project Level Needs

1. Safety Needs

The high accident rates on Mt. Hope Avenue between Elmwood Ave. and Crittenden Blvd. due to high volumes of driveway/turning traffic need to be addressed. In addition, the poor alignment of the 5 legged intersection of Mt. Hope Avenue/East Henrietta Road/Crittenden Boulevard/Fort Hill Terrace also needs to be addressed. These areas have accident rates beyond the State and County wide averages.

2. Capacity Needs

The 5 legged intersection of Mt. Hope Avenue/East Henrietta Road/Crittenden Boulevard/Fort Hill Terrace currently functions below an acceptable level of service and needs to be improved. The Mt. Hope Avenue/Elmwood Avenue intersection functions below acceptable levels of service however the improvements necessary to improve this intersection are beyond the scope and funding available for this project.

3. Improve Pavement and Sidewalk Condition

The existing pavement is structurally in poor condition, exhibiting longitudinal and transverse cracking, alligator cracking, wheel path rutting and potholes. There are also utility repairs that are failing throughout the project limits. The existing sidewalks are also in poor condition. The pavement and sidewalk will continue to deteriorate unless improvements to the surface and structural deficiencies are addressed.

4. Drainage Needs

The existing closed drainage system is in poor condition and needs to be replaced. Ponding of water occurs in the wheel path of vehicles due to water not being able to drain to catch basins. Basins are also in poor condition due to vehicles constantly traveling over them.

b. Corridor Area Needs

1. Modal Interrelationship

There are no airports, railroad or port facilities located within the project corridor, as such, Mt. Hope Avenue and East Henrietta Road are primarily used as a commuter and local delivery route. Mt. Hope Avenue and East Henrietta Road are primary mass transit routes used by the Rochester-Genesee Regional Transportation Authority (RGRTA). Six different bus routes use Mt. Hope Avenue, East Henrietta Road or Elmwood Road/Crittenden Boulevard. The current and future no-build traffic delays will continue to reduce the effectiveness of these facilities.

2. System Needs

This project involves a gateway corridor that serves as a connecting link between the City of Rochester and the I-390 interstate system. Also, two major touring routes (NY 15 and 15A) converge within the corridor.

3. Mobility Needs

This project is needed to improve the mobility of people and goods throughout the corridor. The current and future capacity related deficiencies

will continue to reduce the safe and efficient transportation of people and goods throughout the corridor. In addition, the identified pavement related deficiencies need to be corrected to improve the riding characteristics to a satisfactory condition.

4. Social and Economic Development

Future development planned by the University of Rochester adjacent to this area will increase the local and commuter traffic volume throughout the project corridor. There is a need to improve the level of service and reduce the accident rates throughout the project limits.

c. Transportation Plans

This portion of Mt. Hope Avenue and East Henrietta Road is not listed on any Long Range Transportation Plan.

d. Community Goals

Goals of the community are:

1. To strike a balance between the needs of the vehicles that travel this portion of Mt. Hope Avenue and East Henrietta Road each day with the needs of those who live and work along the project corridor.
2. To create a safe and aesthetically pleasing pedestrian environment while accommodating high-volume turning and through traffic movements
3. To provide safe and efficient signal operations within the 5 legged intersection of Mt. Hope Avenue/East Henrietta Road/Crittenden Boulevard/Fort Hill Terrace.
4. Maintain access to existing businesses.

D. Project Objectives

The following objectives have been established for this project.

1. To improve highway safety and reduce high accident locations.
2. To improve the Level of Service at the 5 legged intersection of Mt. Hope Avenue/East Henrietta Road/Crittenden Boulevard/Fort Hill Terrace.
3. Maintain the residential character of the abutting neighborhoods and buffer the residences from the impacts of the highway.
4. To preserve the investment in the existing highway system by providing structurally adequate pavement.
5. To provide adequate drainage system.
6. To improve facilities for pedestrians and bicycles, where feasible.
7. To provide intersection ramps that meet current ADA requirements.
8. To reduce future maintenance efforts.
9. To make the project corridor a more aesthetically pleasing environment.

CHAPTER III - ALTERNATIVES

A. Design Criteria

The design of this project will be performed in accordance with the following standards and agency requirements:

- AASHTO, Policy On Geometric Design of Highways and Streets, *2004 edition*
- City of Rochester Standards and Specifications
- NYSDOT Highway Design Manual
- NYSDOT Procedures for Locally Administered Federal Aid Projects

Based on these publications the following design criteria have been established:

TABLE III-1
MT. HOPE AVENUE - DESIGN CRITERIA
(Urban Principal Arterial)

Design Criteria	Standard	Existing Condition	Proposed Condition
Design Speed	35 mph	35 mph	35 mph
Travel Lane Width	11 ft.	10 ft.	10 ft. to 12 ft.
Maximum Grade	7.5 %	2.27%	3%
Horizontal Curvature	443 ft. Minimum	1500 ft. & Angle Points without curves	1000 ft.
Maximum Rate of Superelevation	4.0%	2%	2%
Minimum Stopping Sight Distance	279 ft.	600 ft.	600 ft. +/-
Minimum Lateral Clearance	(from face of curb) 0 ft. with barrier 1.6 ft without barrier 3.2 ft. at intersections	1.5 ft. from face of curb to utility pole	2 ft. from face of curb to utility pole
Vertical Clearance	16.5 ft.	N/A	N/A
Normal Cross Slope	1.5% min., 2% max.	2%	2%
Maximum Pavement Rollover between travel lanes	4%	4%	4%
Pedestrian Accommodations	Meet ADA(1)	Does Not Meet ADA	Meet ADA (1)

(1) Pedestrian facilities shall be designed in accordance with Americans with Disabilities Act and Chapter 18 of the Highway Design Manual.

EAST HENRIETTA ROAD – DESIGN CRITERIA
(Urban Minor Arterial)

Design Criteria	Standard	Existing Condition	Proposed Condition
Design Speed	35 mph	35 mph	35 mph
Travel Lane Width	11 ft.	12 ft.	12 ft.
Maximum Grade	7.5 %	0.85%	1%
Horizontal Curvature	443 ft.	200 ft.	200 ft. (non-standard)
Maximum Rate of Superelevation	4.0%	2.5%	2%
Minimum Stopping Sight Distance	279 ft.	991 ft.	991 ft. +/-
Minimum Lateral Clearance	(from face of curb) 0 ft. with barrier 1.6 ft without barrier 3.2 ft. at intersections	15" from face of curb to utility pole	2 ft. from face of curb to utility pole
Vertical Clearance	16.5 ft.	N/A	N/A
Normal Cross Slope	1.5% min., 2% max.	2.5%	2%
Maximum Pavement Rollover between travel lanes	4%	0%	0%
Pedestrian Accommodations	Meet ADA (1)	Does Not Meet ADA	Meet ADA (1)

(1) Pedestrian facilities shall be designed in accordance with Americans with Disabilities Act and Chapter 18 of the Highway Design Manual.

The applied design speed is consistent with the anticipated off peak-85th percentile speed once improvements are completed.

TABLE III-2
OTHER CONTROLLING PARAMETERS

Other Controlling Parameters	Standard	Existing Condition	Proposed Condition
Curb Offset - Minimum - Desirable	 1 ft. 2 ft.	0 ft.	1 ft.
Overall intersection Level of Service - Desirable - Acceptable	 C D	F	D
Shared Use Outside Lane	14 ft.	10 ft.	12 ft.
Median Width	4 ft. (min.)	None	4 ft. to 14 ft.
Design Vehicle	WB-50	WB-50	WB-50

B. Alternatives Considered

Two alternatives were considered as possible engineering solutions to satisfy the project objectives. They are:

1. No Action/Routine Maintenance
2. Reconstruct with Access Management: Provide 5 lanes with a 14 ft. wide raised center median on Mt. Hope Avenue between Elmwood Avenue and Crittenden Blvd. Realign and improve the Mt. Hope Ave. / Crittenden Blvd. / E. Henrietta Rd. / Fort Hill Terrace intersection, including the removal of the Fort Hill Terrace leg from the intersection. Widen the outside travel lanes one foot on Mt. Hope Avenue from the Crittenden Blvd. intersection to the South City line. East Henrietta Road pavement width will be maintained.

Three other alternatives were evaluated during the conceptual design phase and dismissed:

- A continuous 5 lane section on Mt. Hope Avenue was reviewed. Traffic volumes did not justify the amount of impacts and right of way acquisition required to install this section throughout the corridor.
- A continuous 4 lane section was also reviewed. This section consisted of two southbound lanes, a center two way left turn lane and a single northbound lane. This alternative would not accommodate existing or future traffic volumes and was not evaluated any further.
- A double lane roundabout at the Mt. Hope Avenue/E. Henrietta Rd./Crittenden Blvd./Fort Hill Terrace intersection. Due to the skews and heavy traffic volumens of this 5 legged intersection, the roundabout footprint would have been extremely large, causing excessive impacts to businesses and the historic church property.

A discussion of each of the Alternatives under consideration and their ability to satisfy the project objectives are as follows:

- Null/Maintenance

  This alternative will maintain the existing roadway system with no improvements other than routine maintenance. The high accident rates and operational deficiencies exhibited by the existing system will continue. Existing pavement would remain and the pavement and failing drainage system would continue to deteriorate.

  This alternative does not meet the project objectives and will not be considered further.

- Reconstruction with Access Management Alternative:

  This alternative will reconstruct:
  - 4500 ft. of Mt. Hope Avenue from Elmwood Avenue to the southern City line/Erie Canal.
  - 1700 ft. of East Henrietta Road from Mt. Hope Avenue to South Avenue.
  - 500 ft. of Crittenden Blvd. from Mt. Hope Avenue to the west.
  - 300 ft. of Westfall Road re-alignment from Mt. Hope Avenue to the east.
  - 650 ft. eastbound right and left turn lane on Elmwood Ave. west of Mt. Hope Ave.

Reconstruction was chosen in lieu of milling and resurfacing (M&R) because the nominal cost savings achieved with the M&R does not provide for a viable long term solution for the pavement section. Utility improvements would need to be cut into the existing concrete base (82 years old), weakening its structure. Pavement widening adjacent to the existing concrete subbase would also produce seams in the driving lane that would eventually result in longitudinal cracking. It is also unknown how the utility trenches were repaired through the years and if those repairs are still in good condition. If they are not in good condition, it would be very costly and time consuming to repair them during construction. Recycling of the existing concrete pavement for use as subbase material will be considered during detailed design phase.

In addition, although pavement cores reveal that the concrete base is in fair condition, the cost savings for milling and resurfacing with widening versus the level of construction difficulty are not justified. There will be extra costs due to the amount of saw cuts and specialty work required to make required utility upgrades beneath the existing concrete base. There would also be increased disruption to local businesses, because M&R will result in a longer construction period, more extensive maintenance and protection plan.

On Mt. Hope Avenue from Elmwood Avenue to East Henrietta Road/Crittenden Boulevard, a 5 lane section is proposed, consisting of 2 lanes in each direction, with a center left turn lanes at the intersections. A 14 ft. wide center median is included to prevent left turn and right angle accidents from vehicles entering and exiting commercial driveways. Access will be provided via u-turns at the intersections for those who currently turn left. From East Henrietta Road/Crittenden Boulevard intersection to Brighton Park will be a 4 lane section. A 5 lane section is proposed between Brighton Park and the south City line/Erie Canal.

Other proposed improvements within the project limits include:

- Re-alignment of the intersection of Mt. Hope Avenue/East Henrietta Road/Crittenden Boulevard/Fort Hill Terrace to improve the geometrics of this intersection, also including the removal of the Fort Hill Terrace leg from this intersection.
- Adding curves at the end of several side street approaches where they intersect with Mt. Hope Avenue to remove the 67 degree skew that currently exists.
- Providing recessed on-street parking at select locations along the corridor, primarily along both sides of Mount Hope Avenue between Crittenden Boulevard and Elmwood Avenue, where feasible.
- Modifications to the Westfall Road approach to Mount Hope Avenue to improve the alignment and level of service for the westbound Westfall Road turning traffic.

- Construction of a new closed drainage system.
- The existing sidewalks will be reconstructed to a minimum width of 5 ft. throughout the project on both sides of the street(s) and a 5 ft. tree lawn will be established along Mount Hope Avenue where feasible. ADA accessible sidewalk ramps will be constructed at all designated roadway crossings.
- Enhancement of the visual environment by adding street trees and plantings, aesthetic street lighting treatments and other streetscape amenities.
- New signage and striping throughout the project area.
- Traffic signal improvements; auxiliary lane and geometric improvements to the Mt. Hope Ave./Westfall Rd. and Mt. Hope/Elmwood Ave. intersections.

This alternative satisfies the project objectives and will therefore be further evaluated in this report as the "Feasible Alternative".

C. Feasible Alternative

1. Description of Feasible Alternative

The City of Rochester and NYSDOT worked with MCDOT, neighborhood organizations, an Advisory Task Force, and have met several times with the Mount Hope Business Association, the University of Rochester and local business owners and residents to develop the feasible alternative. The final approval of the preferred feasible alternative will not be made until the impacts from the alternative, comments from the "Draft" Design Approval Document and public opinion concerning the alternative have been fully evaluated. The typical sections, plans and profiles for the preferred feasible alternative are included in Appendix A.

The preferred alternative is proposed to be constructed in two phases. Phase I consists of making necessary safety and operational improvements to Mt. Hope Avenue, between Rossiter Road and Elmwood Avenue. Phase I will also include the addition of an eastbound right and left turn lane on Elmwood Avenue. These improvements are necessary to reduce accidents, improve traffic flow, reduce congestion and improve air quality at these intersections.

Phase II construction consists of Mt. Hope Avenue reconstruction from Rossiter Road south to the southern City Line and East Henrietta Road from South Avenue to Mt. Hope Avenue, along with improvements to the westbound turn lanes on the Westfall Road approach to Mount Hope Avenue. (Please note: The East Henrietta Road improvements can be feasibly constructed under either Phase I or II, depending on the availability of funding.)

The primary reason that the project is being split into two phases is that there are several upcoming projects in the surrounding area that could potentially affect traffic operations on the southern, Phase II portion of Mount Hope Avenue. NYSDOT is currently evaluating improvements to the I-390 corridor, including potential modifications to the Route 15, Route 15A and Kendrick Road interchanges. Also, the University of Rochester is finalizing its master plan which will define development plans that could have an effect on the southern portion of the project corridor. Once these projects are better defined, the Phase II portion of Mt. Hope Avenue will be reevaluated to assure that the proposed lane

configurations and improvements will meet the long term needs of the corridor. If the current plans for Phase II still meet the long term goals and objectives of the area, then Phase II of the project will be progressed.

The eastside Mt. Hope Avenue businesses, located between Crittenden Boulevard and Elmwood Avenue (McDonald's, Bruegger's Bagels and Subway and Starbucks Coffee) rely heavily on drive-up traffic to sustain their business. The business owners indicated that the proposed center median, although a safety benefit, would severely limit their customer access and would, by itself, be a detriment to their business operations. These businesses are considering making improvements to their sites and drive-up access in anticipation of the roadway project. Their proposed improvements include:

- McDonald's restaurant is considering replacing their existing building and providing different ingress and egress points.
- Bruegger's Bagels is considering adding a drive-thru window on the south side of the building.
- Starbucks/Subway is considering replacing their existing buildings and providing a new building with different ingress and egress points.
- The University of Rochester is also considering redeveloping their site along the west side of Mt. Hope Avenue to create a "Collegetown" development with offices, restaurants and shops providing services to college students and the community. They intend to remove the two buildings (Professional and Town House buildings) on the west side of Mt. Hope Avenue to create this new development.

In highly urbanized, mixed land use projects such as this, the NYSDOT Highway Design Manual recommends a context sensitive design approach where roadway designs take into consideration not only the necessary travel way improvements but also the interaction the travel way has with adjacent land uses. Balancing the needs of the vehicles with the needs of the pedestrians and adjacent land uses to create great public spaces that serve both of these public needs is paramount on this project. The high density of current and proposed buildings along the northern section of the project, are or will be set close to the highway boundary lines, limiting the available pedestrian space. Therefore, the roadside accommodations in this area have been designed to provide for substantial pedestrian travel areas and waiting areas for transit users, shelters, seating and amenities. The proposed 12 foot wide sidewalks along the east side of the Crittenden to Elmwood section will also provide comfortable areas for entries into buildings, landscaping and the high volume of above ground and underground utilities.

As part of the balanced solution arrived at with the project stakeholders, on-street parking is proposed along both sides of Mt. Hope Avenue between Elmwood Avenue and Crittenden Blvd.. This new parking is considered part of the overall mitigation needed to implement the raised median. It will help to create the desired "Collegetown" environment planned for the adjacent land use, also providing a desired buffer between the 30,000 commuter vehicles which use this corridor on a daily basis and the heavily used pedestrian realm we are also striving to improve. The City's recently adopted zoning code revisions for this Collegetown District (Section 120-77.1 C-V Collegetown Village District.)

encourages the incorporation of on-street parking, where feasible, as ***"The Collegetown Village shall be pedestrian oriented and bicycle friendly with lively and vibrant street activity. Multi-modal access will be encouraged. Shared parking and vehicular access will enhance the pedestrian experience and the intended "park once" environment. "***

While the presence of on-street parking may increase the potential for some parking related accidents, the combined traffic calming effect of the parking activity and the associated elimination of 5 commercial driveways should help to further reduce the overall accident potential of the area. Precedent exists as on-street parking is commonly in use within the City of Rochester on several of its gateway arterial roadways, including Lake Avenue and West Ridge Road (NHS Route 104) which experience similar heavy commuter traffic volumes.

To help reduce the impacts to the local businesses during construction, the following mitigation measures will be also considered and evaluated during the detailed design phase:

- A plus B Bidding. This type of bidding offers the contractor incentives for finishing the project ahead of schedule and punitive damages if he does not finish the project on schedule
- Night work
- Providing temporary parking spaces (if feasible) and temporary pavement to mitigate parking and access inconveniences during construction.

Other Initiatives: Possible Shared Access Road by East Side Business Owners:

In the spirit of fostering enhanced public-private partnerships, the City of Rochester has been coordinating with the business owners on the east side of the street (McDonald's, Bruegger's, Starbucks/Subway) on a possible long term land use and access solution for their collective properties. In conjunction with planned east side site redevelopments, a shared access road, linking these sites along the rear of their lots is being investigated. This shared access road would connect to the eastern leg of the proposed mid-block signalized intersection and extend across the rear lots of Subway, Starbucks and McDonald's, possibly connecting to Fort Hill Terrace. To show their support for the access road plan the business owners have signed a memorandum of understanding which outlines where the access road would be located and the roles and responsibilities of each party. This memorandum is included in Appendix C of this report. If determined to be feasible, the shared access road would be constructed independent of this project and is not an element that this project's feasible preferred alternative relies upon.
The feasible alternative meets the project objectives and includes the following key elements:

Phase 1 Improvements:

A. Mt. Hope Avenue Improvements - Rossiter Road to Elmwood Avenue

1. Installation of a raised median, as an access management measure, along Mount Hope Avenue in the vicinity of Raleigh Street.

2. Installation of a 14 ft. wide raised center median along Mount Hope Avenue, as an access management measure, between Crittenden Boulevard and Elmwood Avenue. This wide median allows for passenger car U-turns at the adjoining signalized intersections.
3. Pavement reconstruction of 1250 ft. of Mt. Hope Avenue which provides a 14 ft. median width, 12 ft. left turning lane, four 11 ft. travel lanes with a 4 ft. curb offset/shared use lane on the outside, 1 curb offset in the inside lanes and 12 ft. wide sidewalks.
4. Eight foot wide, recessed on-street parking lanes will be provided in select locations.
5. Closure of Fort Hill Terrace at the Mt. Hope/Crittenden Blvd./ E. Henrietta Rd. intersection. Fort Hill Terrace would be terminated at the intersection and converted to a two way street, between the termination point and South Avenue.
6. Replacement of the existing traffic signal at the re-aligned intersection of Mt. Hope Avenue/East Henrietta Road/Crittenden Boulevard/Fort Hill Terrace.
7. Installation of a new mid-block traffic signal on Mt. Hope Ave. between Elmwood Ave. and Crittenden Blvd.
8. Several Right-of-way strip takings on both sides of Mt. Hope Avenue. These acquisitions are required to facilitate the construction of the desired offset sidewalks, center medians, widened curb side travel lanes and recessed on-street parking spaces. Also some partial right-of-way takings are needed to facilitate the realignment of the Mount Hope Avenue intersection at East Henrietta Road/Crittenden Boulevard/Fort Hill Terrace.

B. Crittenden Boulevard Improvements- Mt. Hope Avenue to 500 ft. west

1. Pavement reconstruction of 500 ft. of Crittenden Boulevard with new curbs and sidewalks. The overall curb to curb width will be 54 ft. (Four travel lanes that vary in width from 11 ft. to 14 ft. with a 6 ft. median).

C. Elmwood Avenue Improvements- Mt. Hope Avenue to 650 ft. west

1. Widening the south side of Elmwood Avenue to provide a 650 ft. long eastbound right turn lane and removing the 14ft. wide raised median to provide a 650 ft. long left turn lane to the west of the Mt. Hope Avenue intersection. The pavement widening will also require new curbs, sidewalks and right of way takings along the south side of the road. Also, the left turn pocket will be extended, if funding is available. The left turn pocket will be a similar length to prevent queue overflows from blocking the thru lanes which currently exists.

Phase 2 Improvements:

A. Mt. Hope Avenue Improvements- Rossiter Road to Brighton Park

1. Pavement reconstruction of 1300 ft. of Mt. Hope Avenue with a curb to curb width of 42 ft. (4 – 10 ft. lanes with 1 ft. curb offsets).

2. Right of way strip takings on both sides of Mt. Hope Avenue. These acquisitions are required to provide for the proposed 5 ft. wide sidewalks and 5 ft. curb lawn areas.

B. Mt. Hope Avenue Improvements- Brighton Park to Westfall Road

1. Pavement reconstruction of 1400 ft. of Mt. Hope Avenue with an overall curb to curb width of 52 ft. (Five-10 ft. lanes with 1 ft. curb offsets).
2. Right of way strip takings on both sides of Mt. Hope Avenue. These acquisitions are required to facilitate the construction of the additional 1 ft. curb offsets, proposed 5 ft. wide sidewalks and 5 ft. curb lawn areas.

C. Mt. Hope Avenue Improvements- Westfall Road to South City Line/Erie Canal

1. Pavement reconstruction of approximately 550 ft. of Mt. Hope Avenue with an overall curb to curb width that varies from 76 ft. to 65 ft. (Six travel lanes that vary in width from 11 ft. to 13 ft. to match into existing lane configurations).

D. East Henrietta Road Improvements- Mt. Hope Avenue to South Avenue

1. Pavement reconstruction of 1700 ft. of East Henrietta Road with new curbs and sidewalks with an overall curb to curb width of 36 ft. (2-12 ft. travel lanes with 6 ft. shoulders).

E. Westfall Road Improvements- Mt. Hope Avenue to 150 ft. west

1. A slight realignment and restriping of Westfall Road to provide a double left turn lane. This modest widening and realignment improves the Level of Service at this intersection.

Other Highway Modifications/Improvements included in both Phase 1 and 2 work:

- The proposed profile will match the existing profile with only minor (less than 6 in.) modifications in selected areas
- New granite curb and minimum 5 ft. wide sidewalks, with ADA accessible ramps, will be provided throughout the majority of the project
- Replacement of existing street lighting. The new street light poles and luminaries treatments will be determined during the final design phase. However, it is anticipated that the new street light poles and luminaries will be decorative in nature to complement the urban environment and enhance corridor aesthetics.
- Enhancement of the visual environment by adding new green spaces and sidewalk curb lawns, street trees and plantings and other streetscape amenities.
- Existing traffic cameras will either be maintained or relocated as necessary.

2. Engineering Considerations of Feasible Alternative

a. Special Geometric Features - Non-Standard / Non-Conforming Feature Justification

Special Geometic Features

Improving safety and reducing accidents was the critical consideration in the design of this of the project.

A raised center median on Mt. Hope Avenue between Elmwood Ave. and Crittenden Blvd. is proposed. This safety feature will serve to separate opposing travel directions and eliminate left turning and right angle vehicle type accidents.

Non- Standard and Non-Conforming Feature Justification

The feasible alternative meets the Design Criteria noted in Table III-1 with the following exceptions:

Non-Standard Features Retained:

1. On Mt. Hope Avenue a 10 ft. wide inside travel lane width is proposed between Crittenden Blvd. and the Erie Canal due to the restricted Right of Way and close proximity of buildings to the roadway. Widening of this section of Mt. Hope Avenue to provide a minimum of 11 ft. wide travel lanes would require widening the roadway an additional 2 ft. The cost to widen the interior lanes from 10 ft. to 11 ft. is approximately $200,000 for additional pavement. This widening would significantly impact the pedestrian realm within this limited Right of Way. Since there are no accidents related to the existing travel lane widths and safety of the pedestrians walking along the sidewalk is a major concern it is recommended that the 10 ft. wide travel lanes be retained on Mt. Hope Avenue. A Non-Standard Feature Justification form is included in Appendix C of this report.

2. On East Henrietta Rd. at the East Henrietta Rd./ Mt. Hope Avenue intersection a 200 ft. radius curve is proposed through the intersection due to the restricted Right of Way and close proximity of buildings to the roadway. This curve will also encourage slower speeds through the intersection. Providing the required 443 ft. radius curve at this intersection would require taking 1-2 viable businesses adjacent to the intersection. The proposed 200 ft. radius curve meets the AASHTO design criteria for low speed urban streets and would serve as a traffic calming measure helping to control traffic speeds at this high accident location. A Non-Standard Feature Justification form is included in Appendix C of this report.

Non-Conforming Features Retained:

1. Providing the required 14 ft. wide shared use vehicle/bicycle outside travel lanes on Mt. Hope Avenue south of Crittenden Blvd. would require taking additional Right of Way from the property owners and businesses along both

sides of the highway. Widening the roadway will require that sidewalks be constructed immediately adjacent to the travel lanes creating a safety concern or requiring acquisition of additional right of way. Buildings and parking areas are immediately adjacent to the current Right of Way line and additional strip takings would likely require structure takings or significant right of way impacts and costs. This alternative is deemed unacceptable. Therefore, a balance between the needs of the vehicles, bicyclists, pedestrians and property and business owners along the corridor was considered. It is recommended that the an 11ft. outside lane be established while maintaining a minimum 5 ft. sidewalk and minimum 5 ft. curb lawn.

2. Mt. Hope Avenue/Crittenden Boulevard/East Henrietta Rd/Fort Hill Terrace is a complex intersection with a skew (37 degrees) that is less than the minimum preferred angle of 60 degrees based on AASHTO recommendations. Geometric improvements are being proposed that improve the skews at this intersection, but not enough to bring it into conformance. This is a pre-existing condition. Excessive right-of way and building demolitions would be required to meet this requirement. This cost is beyond the funding available for this project.

3. There are two sides streets on Mt. Hope Avenue, Shelbourne Road and Redfern Drive that are opposite of each other, but not aligned with each other. There are also side streets on opposite sides of Mt. Hope Ave. that are within 200 ft. of each other (Edgemont Rd. and Cimmaron Dr, Elmerston Rd. and Whiteford Rd.). The AASHTO recommended minimum separation is 200 ft. These are pre-existing conditions. Excessive right-of way and building demolitions would be required to meet this requirement. This cost is beyond the funding available for this project.

b. Traffic Forecasts, Level of Service and Safety Considerations

(1) Design Year Traffic Volume and Level of Service

Traffic volume forecasts for the project area were developed using the following primary sources of information:

1. Regional travel demand forecast model maintained by the Genesee Transportation Council (GTC),
2. Historical ADT count data from NYSDOT,
3. Historical ADT count data from MCDOT,
4. Historical turning movement count data from SRF & Associates,
5. Traffic projections provided by the University of Rochester.

Historical traffic volumes provide documentation as to trends along roadways in terms of overall growth and/or declines. These historical ADT volumes were closely analyzed to determine growth rates along the study section of Mt. Hope Avenue, East Henrietta Road, Elmwood Avenue, and Westfall Road. The historical growth patterns were researched, studied, and engineering judgment

was applied to determine expected future growth trends. The growth rate assumptions are the same as described in Chapter II for the No Build condition. The methodology for developing traffic projections was previously described in Chapter II and is contained in Appendix D of this report.

The Estimated Time of Completion (ETC) for the project is 2010. The design year ETC+20 (2030) weekday AM and PM peak hour traffic volumes were estimated in order to provide sufficient capacity in the future roadway system. ETC+20 (2030) traffic forecasts are used for designing roadway segments and intersections.

A summary of the existing (2005) and forecasted no-build ETC+20 (2030) Annual Average Daily Traffic volumes (AADT), Design Hour Volumes (DHV), and peak hour or Directional Design Hour Volumes (DDHV) for roadway segments along Mt. Hope Avenue and East Henrietta Road is contained in Chapter II.

A traffic operational analysis was conducted to evaluate the design year ETC +20 (2030) operating conditions within the project area for the Alternative being considered.

The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the 2000 Highway Capacity Manual (HCM 2000) published by the Transportation Research Board. Traffic analysis software, Synchro 6, which is based on procedures and methodologies contained in the HCM 2000, was used to analyze operating conditions at study area intersections. The procedure yields a Level of Service (LOS) based on the HCM 2000 as an indicator of how well intersections operate.

LOS analysis was conducted for five (5) existing study area intersections, and the new midblock intersection between Crittenden and Elmwood, as discussed in the feasible alternative section of this report. The traffic volumes presented in Section II C.1.h. were used in the analysis, with the following additions / modifications:

- New midblock intersection,
- Proposed median treatments,
- Proposed U-turns,
- Driveway closures on the east and west sides of Mt. Hope between Elmwood and Crittenden,
- Closure of Fort Hill Terrace.

The new midblock intersection would be signalized and coordinated with the existing signals along the Mt. Hope corridor. Traffic volume calculations for the 2030 build conditions are included in Appendix D. In addition, Appendix D includes the LOS analysis results in detail and includes all detailed Synchro computer printouts.

A traffic signal warrant analysis was done for the proposed new access road at the midblock intersection between Elmwood Avenue and Crittenden Blvd./East Henrietta Road as part of this report. The need for a traffic signal is determined by comprehensive investigation of existing and projected traffic conditions and physical characteristics at the location. The *Standard Specifications Update for the adoption of the National MUTCD (FHWA) and the New York State Supplement* were reviewed to investigate the need for a traffic control signal at this location. There are eight (8) warrants and they are as follows:

Warrant 1	Eight-Hour vehicular volume
Warrant 2	Four-Hour vehicular volume
Warrant 3	Peak Hour
Warrant 4	Pedestrian Volume
Warrant 5	School Crossing
Warrant 6	Coordinated Signal System
Warrant 7	Crash Experience
Warrant 8	Roadway Network

Warrant 1 is subdivided into Condition A and Condition B. The Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. These conditions are satisfied when, for each of any eight hours of an average day, anticipated volumes on the artery and side road are in excess of the minimum values presented in Tables 4C-1 in the MUTCD.

Eight hours worth of data on the east and west approaches is not available until the developments are completed and generating traffic; however, the daily hour by hour volumes have been projected based on daily distributions of similar type uses and forecasted peak hour volumes. Daily traffic volumes for the east approach (U of R and Mt. Hope professional building) were projected based on a daily distribution for a similar type office development. Daily traffic volumes for the west approach (combined Starbucks, Brueggers, Subway) were projected based on a daily distribution from a Starbucks.

Hourly traffic volumes expected under full development conditions along Mt. Hope Avenue were projected based on the hourly traffic distribution measured by MCDOT in 2006 and forecasted 2030 build peak hour volumes.

The proposed lane configuration for the east and west approaches (minor street) are one left turn lane & one shared thru/right lane. The lane configuration on Mt. Hope (major street) is considered 2 or more lanes for the evaluation.

Based upon these calculations, Warrant 1, Conditions A is not met; however, Condition B is met for the 100% volume requirement. Therefore, this warrant is met. Detailed signal warrant calculations are included in Appendix D.

Warrant 2, the Four-Hour Vehicular Volume signal warrant conditions, are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. This warrant stipulates that for any four hours of a day, minimum threshold volumes are met on the artery and side road. Derivation of the daily volumes is explained above under Warrant 1. Based on the projected hourly traffic volumes, and Figure 4C-1 in the MUTCD, this warrant is met under 2030 build conditions.

Warrant 3 is intended for application where minor street traffic suffers undue delay in entering or crossing the major street for one hour of the day. It stipulates that the warrant shall be applied in unusual cases (such as office complexes, manufacturing plants, and industrial complexes) where a large number of vehicles discharge over a short period of time. Based on Figure 4C-3 in the MUTCD, and the expected uses at the new mid-block intersection (U of R parking lot, Mt. Hope professional building, and future development) the westbound approach could be considered an office complex, and this warrant would be met.

Warrant 4 is met when pedestrians experience excessive delay in crossing the major street (Mt. Hope Avenue) because the traffic volumes are so heavy. It is not possible to determine the number of pedestrians that would use a mid-block crossing at this location under 2030 conditions; however it is unlikely that this warrant would be met.

Warrant 5 is met when a sufficient number of gaps in traffic do not exist for certain size and frequency of school children to cross the major roadway. Based on current conditions, this warrant is not applicable and therefore not met.

Warrant 6 is met when a traffic signal is needed to maintain progressive movement and vehicle platooning in a coordinated signal system. Based on the current and future coordinated signal system along Mt. Hope Avenue at Elmwood Avenue and Crittenden Blvd. – East Henrietta Road a traffic signal at the new mid block intersection would decrease progression of traffic. Therefore, this warrant is not met.

Warrant 7 is met when the severity, frequency, and types of crashes are such that it is a condition susceptible to correction by a traffic signal. It is not possible to determine the accident rates at the new mid-block intersection because it does not exist today. Therefore, it is not possible to determine if this warrant is met until actual accident data is available.

Warrant 8 is met when a traffic signal might encourage concentration and organization of traffic flow on a roadway network. This warrant primarily

focuses on two major intersecting roadways, which is not the case at the mid-block intersection. Therefore, this warrant is not met.

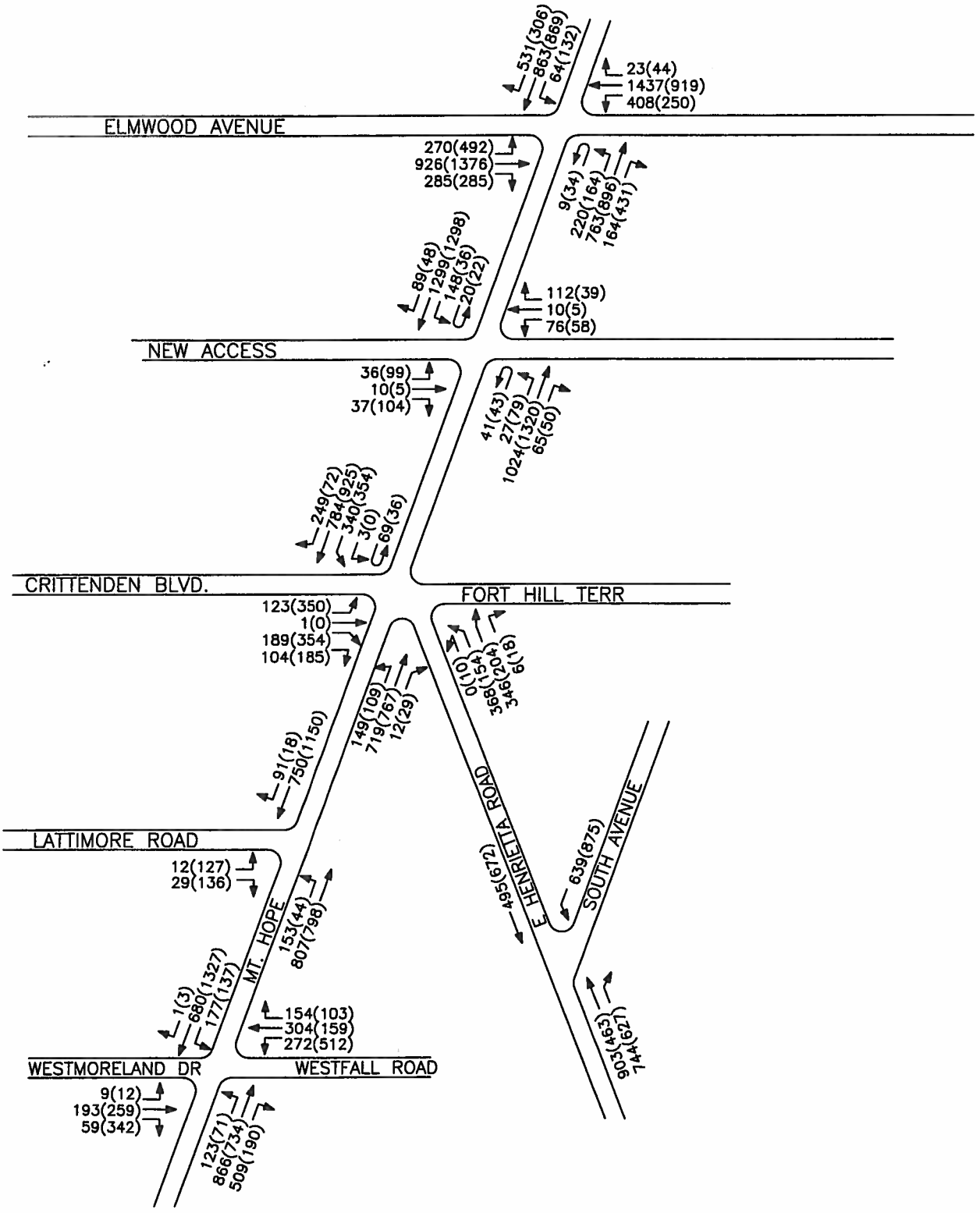
In conclusion the installation of a traffic signal is recommended at the mid block intersection for the following reasons:

- 8 hour warrant based on traffic volumes is met,
- 4 hour warrant based on traffic volumes is met,
- Peak hour volume warrant is met.

A traffic signal at this location will benefit pedestrians by providing a safe mid-block crossing location for direct access from U of R to retailers on the east side of Mt. Hope. Furthermore, this signal will serve University of Rochester developments on the west side of Mt. Hope Avenue and retailers on the east side of Mt. Hope with one combined access point. This will also provide motorists an additional location to execute u-turns along the corridor; otherwise u-turn movements will be concentrated at the Crittenden/East Henrietta and Elmwood intersections.

A signal warrant analysis was performed at the Shelbourne Road intersection with Mt. Hope Avenue in response to local resident concerns as part of this project. The analysis documents existing 2007 conditions and projects future traffic volumes based on expected growth rates, as documented in this report. A detailed review of traffic volumes at this intersection reveal a high number of eastbound right turns from Shelbourne to Mt. Hope Avenue and a significantly lower volume of eastbound left turns. Right turning vehicles generally experience less delay at unsignalized intersections, as compared to left turning vehicles and decrease the need for a traffic signal. Of the eight (8) signal warrants, as discussed in the previous section, none of the warrants are met for signalization. Therefore, the installation of a traffic signal at Shelbourne Road / Mt. Hope Avenue intersection is not recommended. Corresponding back up material is included in the Appendix D.

Although the current design alternative includes removal of Fort Hill Terrace from the Crittenden / East Henrietta Road intersection, an analysis was performed (in response to local business owner concerns regarding installation of a raised median on Mt. Hope Avenue), to determine the feasibility of converting Fort Hill Terrace from one-way to two-way traffic flows through the intersection. Based on the proposed signal phasing at the Mt. Hope Avenue / Crittenden Blvd. – East Henrietta Road intersection, an additional signal phase would be required to accommodate westbound traffic flows from Fort Hill Terrace if converted to two-way operations through the intersection. An additional signal phase at the intersection would negatively impact the operating conditions at this intersection as green time at the signal would be decreased for the other four approaches. Therefore, the conversion of Fort Hill Terrace to two-way operation at Mount Hope Avenue is not recommended. The capacity analysis results of the investigation are included in Appendix D.



KEY

N 00(00) = AM(PM)

FIGURE III-1

PEAK HOUR VOLUMES 2030 DESIGN YEAR

MT. HOPE / E. HENRIETTA STUDY
CITY OF ROCHESTER, NEW YORK

SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants

The following is a summary of the results of the capacity analysis for the alternative for ETC+20 conditions.

TABLE III-3
CAPACITY ANALYSIS RESULTS – 2030 BUILD ALTERNATIVE
(seconds of delay)

Intersection	2030 No Build		2030 Build	
	AM	PM	AM	PM
Elmwood Ave. / Mt. Hope				
Eastbound Left	F(93.1)	F(413)	F(153)	F(160)
Eastbound Thru/Right	F(201)	F(346)		
Eastbound Thru			D(44.3)	F(99.2)
Eastbound Right			B(18.6)	C(32.4)
Westbound Left	F(154)	F(112)	F(371)	F(235)
Westbound Thru/Right	F(223)	E(68.8)	F(209)	F(110)
Northbound Left	E(66.0)	D(40.1)	F(473)	F(158)
Northbound Thru/Right	C(22.1)	F(127)	C(21.4)	F(85.3)
Southbound Left	B(19.2)	E(58.0)	B(17.3)	E(64.1)
Southbound Thru/Right	F(167)	F(111)	F(95.6)	F(89.3)
Overall	**F(154)**	**F(189)**	**F(134.5)**	**F(104)**
Crittenden Blvd. / Mt. Hope				
Eastbound Left(Crittenden)	D(38.7)	F(100)	C(27.3)	E(75.1)
Eastbound (Crittenden)	D(44.1)	F(160)	C(22.2)	D(43.1)
Eastbound Right (Crittenden)	C(24.2)	F(101)	A(4.2)	A(4.5)
Northbound Left (Mt. Hope)	D(36.8)	D(39.8)	D(38.2)	B(15.2)
Northbound Thru/Right(Mt. Hope)	E(60.0)	D(53.1)	E(62.2)	C(22.1)
Southbound Left (Mt. Hope)	D(44.4)	C(27.8)	E(59.1)	E(58.5)
Southbound Thru/Right(Mt. Hope)	E(68.0)	C(28.4)	C(20.3)	C(31.2)
Northwest Left (E. Henrietta)	E(61.2)	E(75.0)	E(62.1)	D(46.7)
Northwest Thru/Right (E. Henrietta)	E(74.9)	F(91.4)	C(20.7)	B(10.9)
Overall	**E(58.1)**	**E(63.4)**	**D(38.8)**	**D(35.4)**
Lattimore Rd. / Mt. Hope				
Eastbound	C(22.4)	E(62.4)	C(22.4)	D(54.3)
Northbound	A(7.0)	A(5.6)	A(7.0)	A(6.2)
Southbound	A(1.1)	A(1.1)	A(0.4)	A(6.3)
Overall	**A(4.8)**	**B(11.0)**	**A(4.5)**	**B(12.7)**
Westfall Rd. / Mt. Hope				
Eastbound Left			C(29.6)	D(37.7)
Eastbound Left/Thru	D(38.4)	D(52.7)	D(40.0)	E(59.8)
Eastbound Right	B(10.4)	D(39.7)	B(13.7)	D(50.7)
Westbound Left	D(46.7)	F(245)	D(47.9)	D(54.5)
Westbound Thru/Right	D(35.2)	C(21.5)	C(31.2)	C(20.3)
Northbound Left	B(18.3)	D(38.8)	C(20.2)	D(39.5)
Northbound Thru	C(23.1)	C(28.4)	C(25.1)	C(29.3)
Northbound Right	A(6.3)	A(4.1)	A(4.9)	A(1.2)
Southbound Left	B(18.9)	C(23.2)	C(26.9)	C(31.5)
Southbound Thru/Right	B(16.4)	D(49.9)	A(6.7)	D(51.7)

Overall	C(23.0)	E(68.2)	C(21.5)	D(43.0)
South Ave. / E. Henrietta				
Northbound Left (E. Hen.)	C(32.2)	B(17.4)	C(22.8)	B(16.6)
Northbound Thru (E. Hen.)	A(8.6)	A(9.1)	A(9.2)	A(8.7)
Southbound Thru (South)	E(76.2)	D(43.4)	D(51.6)	E(76.2)
Southeast Right (E. Hen.)	B(10.6)	C(22.4)	A(9.3)	C(23.2)
Overall	D(35.0)	C(25.3)	C(23.7)	D(36.0)
New Midblock / Mt. Hope				
Eastbound Left			C(33.1)	D(52.1)
Eastbound Thru/Right			B(12.5)	B(15.9)
Westbound Left			D(37.0)	D(47.7)
Westbound Thru/Right			A(8.8)	B(13.8)
Northbound Left			D(39.4)	E(78.7)
Northbound Thru/Right			C(32.9)	A(9.7)
Southbound Left			D(42.3)	D(48.1)
Southbound Thru/Right			B(15.2)	D(44.1)
Overall			C(24.1)	C(29.7)

Under the feasible alternative, the overall intersection LOS will be "D" or better, with the exception of the Elmwood intersection. In addition, there are no volume to capacity ratios (v/c) that exceed 1.0 under the 2030 build condition; with the exception of the Elmwood / Mt. Hope intersection. Furthermore, the 95% vehicle queue lengths from this analysis are included in a spreadsheet in Appendix D.

Due to the introduction of U-turns at the new mid-block intersection, the north and southbound left & U-turns will operate with protected signal phasing. In addition, the phasing for northbound left & U-turns turns at Elmwood will be protected, while the southbound left turn will be permitted/protected phasing. Similarly, the southbound left & U-turns at Crittenden will operate with protected only phasing, while the northbound left turns will operate with permitted/protected phasing.

The Elmwood Avenue / Mt. Hope intersection was carefully studied and tested to determine what improvements were needed to improve levels of service for 2030 build conditions. It was determined that the necessary improvements would require significant right-of-way takings from the Mt. Hope cemetery (on the northwest corner of intersection) and from CVS parcel (on the southeast corner of intersection). Solutions to improving the overall intersection operations are outside the scope of this project and require significant changes to commuter traffic travel modes and patterns.

One feasible option for decreasing delays at the Elmwood Avenue / Mt. Hope intersection include the installation of an eastbound right turn lane on Elmwood Avenue, and extending the existing eastbound left turn lane. While these improvements will not change the overall intersection letter level of service in 20 years, it does decrease motorist delays and vehicle queue lengths through the intersection. No improvements to the westbound left turn on Elmwood Avenue are being proposed; however the storage length for the turn lane was input longer than the existing storage

length based on field observations of vehicles currently using the two-way left turn lane for storage.

The improvements at the Westfall Road / Mt. Hope intersection provide a level of service "D" or better; with the exception of the eastbound approach under future PM peak hour conditions which is LOS "E". Without these improvements, the westbound approach would operate at a significantly reduced level of service "F" during the PM peak hour period. With the introduction of a dual westbound left turn lane, this movement is analyzed as a protected movement only. Further improvements were investigated and not found to be feasible due to constraints of right-of-way and adjacency to the I-390 interchange.

All traffic signals along Mt. Hope Avenue will continue to operate as a coordinated system to optimize traffic flows and minimize delays. Although this alternative does not provide LOS "D" or better on all approaches under design year 2030 conditions, it does provide a considerable safety benefit to a motorist which is discussed further in the following section.

(2) Safety and Traffic Control Considerations

See Section II.C.1.k for a summary of the safety considerations within the study area.

Null Alternative

The Null Alternative would make no improvements to the transportation system. Only routine maintenance would be performed to extend the service life of the pavement, which would be a temporary solution. No substantial improvement to the operations, safety or corridor infrastructure would be incorporated under this Alternative. The potential for the current high rate accident types would not be addressed and would continue to occur.

Feasible Alternative:

This alternative would provide a significant safety benefit along Mt. Hope Avenue between Elmwood and Crittenden with the addition of a raised median. The raised median on this section of Mt. Hope is proposed because the accident rates are more than 6 times the average rate for similar type facilities within New York State, and more than 15 times the average rate for similar facilities within Monroe County.

Although the raised median treatment has been a subject of concern with a few adjacent business owners, the following benefits can be expected as a result of the installation:

- Significantly decrease or eliminate left turn entering and exiting accidents,
- Significantly decrease "courtesy" gap type accidents,
- Significantly reduce the number of conflict points,
- Improved traffic flow through access management,

- Reduce rear end type accidents by improving traffic flow,
- Provides pedestrian refuge area at crosswalks,
- Provides opportunity for landscaped areas and improved corridor aesthetics.

Fort Hill Terrace Closure

To improve the overall safety and operation of the 5 leg intersection of Mt. Hope Avenue/Crittenden Blvd./E. Henrietta Rd./Fort Hill Terrace the removal of the Fort Hill Terrace leg connection from the intersection is proposed. The Fort Hill Terrace roadway would be terminated to a point just east of the intersection and the remaining easterly portion of Fort Hill Terrace would be reestablished as two-way traffic flow onto and off of South Avenue.

Closure of Fort Hill Terrace provides several safety and operational improvements to the project including:

- Elimination of 1 leg of the skewed and awkwardly aligned 5-leg intersection
- Elimination of 6 conflict points within the intersection, further simplifying movements within the intersection and reducing accident potential.
- Eliminates one pedestrian crosswalk conflict within the intersection, further enhancing the sidewalk environment on the east side of Mount Hope Avenue.
- Provides a modest improvement in the overall Level of Service within the heavily trafficked Mt. Hope/Crittenden Blvd. intersection. The overall intersection levels of service (average delay) are improved by 4.5 seconds in morning peak hours and by 1.4 seconds during the afternoon peak hours when Fort Hill Terrace is removed from the intersection.

The proposed intersection geometry re-alignment at Mt. Hope / Crittenden/East Henrietta Road will provide a significant benefit to pedestrians. The vehicle / pedestrian exposure will be decreased by a reduction in the crossing distance on Crittenden Blvd. Furthermore, the presence of the median on Mt. Hope Avenue provides a refuge area that does not exist presently.

c. Pavement

The proposed pavement sections will consist of the City's standard heavy duty pavement section. This typical section will consist of:

- 11.5 in. asphalt concrete pavement (1.5" top, 2" binder and 8" base) over
- 6 in. stone subbase course, Type 2 over
- 5 in. stone subbase course, Type 1 or 2

During the detailed design phase the City will consider recycling the existing asphalt and concrete pavement in an effort to reduce the waste generated from the project. Several

factors such as construction phasing and the additional time and staging area required to recycle the pavement will be considered before a final decision on recycling is made.

d. Structures

There are no structures within the project limits.

e. Hydraulics

There are no affected streams or creeks within the project limits.

f. Drainage

A new closed drainage system will be constructed along all proposed roadways within the project limits. New closed storm sewer systems including new pipes and catch basins will be designed to accommodate a 10-year storm. The type of pipe selected will be based on economy, strength and longevity, with a service life of 75 years. The proposed systems will direct flow to the same location as the existing systems. The MCDOT noted that there has been surcharge flooding of the existing pipes at the Castleman/Crittenden Blvd. intersection which is west of this project. During the detailed design phase this concern will be reviewed to determine if any modifications can be included in this project to help relieve this situation.

g. Maintenance Responsibility

The proposed maintenance jurisdiction for the listed project features are detailed in Table III-4.

TABLE III-4
PROPOSED MAINTENANCE JURISDICTION

Roadway Feature	NYSDOT	Monroe County	City of Rochester
Mt. Hope Avenue pavement & curbs			X
East Henrietta Road pavement & curbs			X
Crittenden Boulevard pavement & curbs			X
Traffic Signals, Signs and Striping		X (MCDOT)	
Closed Drainage System		X (MCDES)	
Sidewalks			X
Street Lighting			X
Traffic Cameras		X (MCDOT)	

h. Maintenance and Protection of Traffic

On site maintenance of traffic and staged construction are anticipated for this project. Traffic flow will be maintained by a minimum of one lane of traffic in each direction along Mt. Hope Avenue and East Henrietta Road during all construction operations. Access to all residential and business driveways will be maintained during construction. A clearly marked traveled way will be delineated through the use of temporary pavement markings, traffic signage and construction barricades. In addition, pedestrian traffic will be

maintained at all times on at least one side of the roadway. Traffic signals will also be maintained during construction.

The need for restricted construction operations during the AM and PM peak traffic movements as well as select night and weekend work will be considered during the preparation of the detailed maintenance and protection of traffic plan.

i. Soils and Foundations

A pavement coring and soils investigation was completed in June of 2007. No problematic soil foundation issues are anticipated for the roadway reconstruction.

The subsurface conditions below the existing pavement surface generally consist of sand and gravel intermixed with silt fill soils underlain by indigenous soils composed of silty sands, silts, clayey silts and silty clay soils. The indigenous soils contained trace to some gravel and occasional cobbles.

No groundwater was encountered in any of the pavement cores. Therefore, no problematic subgrade conditions are anticipated within the project limits.

j. Utilities

Existing utilities within the limits of work will be relocated, if required, to facilitate the proposed construction. The following table identifies the major utilities within the corridor and whether or not they will be impacted by the construction:

TABLE III-5
POTENTIAL UTILITY IMPACTS

Utility	Location	Owner	Impact
Combined storm/sanitary system	All streets	Monroe County D.E.S.	Pure Waters plans to televise the sewers for this job. A visual inspection of the catch basins shows them to be in fair to poor condition. It is anticipated that new catch basins will be required however the existing trunk main will be retained.
Electric	Mt. Hope	RG&E	The City would like RG&E to bury their overhead system and will discuss this further during detailed design.
Various size Gas mains	All Streets	RG&E	No work is proposed.
Telephone lines	All Streets	Frontier	New conduits are anticipated.
Telephone and Cable Television	All Streets	Time Warner	No work is proposed.
Fiber Optic Cable and Coax cable	All Streets	MCDOT and MCDES	Cables that are impacted by the construction will be repaired or replaced.

The City of Rochester Water Bureau anticipates that the following water mains will be replaced as part of the project:

- Replace 1,300 ft. of 12 NPS water main on Mt. Hope Avenue between Rossiter Road and Shelbourne Road, including new branch mains, hydrants and water services.
- Replace 8 NPS unlined water main on Mt. Hope Avenue from Westfall Road to the South City Line, including hydrants and water services.
- Replace 1,900 ft. of 8 NPS unlined water main on East Henrietta Road between Mt. Hope Avenue and South Avenue and replace 250 ft. of 6 NPS water main on East Henrietta Road between Redfern Drive and Whiteford Road, including new hydrants and water services.
- On Crittenden Boulevard, install additional cathodic protection and replace hydrants, valve boxes and small water services that are not copper and copper services older than 15 years.

k. Railroads

There are no railroads within the project limits.

l. Right of Way Takings

The following Right of Way takings are anticipated for this project:

TABLE III-6: ANTICIPATED RIGHT-OF-WAY TAKINGS

	Phase 1 Property Takings						
No.	Property Owner	Address	TAX. MAP #	Remarks (Business or Residential)	Fee/ TE/ PE	Area (SF)	% entire Property
1	Wendy's Restaurant of Rochester	1550 Mt. Hope Avenue	136.61-3-30	Business - Wendy's 4' Strip take	Fee	259	0.4
2	Wendy's Restaurant of Rochester	1522 Mt. Hope Avenue	136.61-3-29	Business - Wendy's Strip take	Fee	113	3.4
3	John Spencer	1520 Mt. Hope Avenue	136.61-3-28	Business - Wendy's 2.5' Strip take	Fee	88	4.9
4	University of Rochester	1510 Mt. Hope Avenue	136.61-3-27	Business 6' Strip take	Fee	589	5.4
5	DB Real Estate Assets, LLC	1500 Mt. Hope Avenue	136.61-3-26	Business - Dunkin Donuts 8' Strip take	Fee	2337	17.8
6	DB Real Estate Assets, LLC	1500 Mt. Hope Avenue	136.61-3-26	Business - Dunkin Donuts 8' Strip take	TE	641	4.9
7	Jeanne M. Blaisdell	1432 Mt. Hope Avenue	136.54-1-22.1	Business - McDonald's 11' Strip take	Fee	2676	7.0
8	Jeanne M. Blaisdell	1432 Mt. Hope Avenue	136.54-1-22.1	Business - McDonald's 11' Strip take	TE	1922	5.1

Phase 1 Property Takings (con't)							
No.	Property Owner	Address	TAX. MAP #	Remarks (Business or Residential)	Fee/ TE/ PE	Area (SF)	% entire Property
9	David L. Gandell	1400 Mt. Hope Avenue	136.54-1-24	Business-Bruegger's Bagel Bakery 18' Stripe Take	Fee	2501	9.3
10	David L. Gandell	1400 Mt. Hope Avenue	136.54-1-24	Business-Bruegger's Bagel Bakery 18' Stripe Take	TE	391	1.5
11	David L. Gandell	1400 Mt. Hope Avenue	136.54-1-24	Business-Bruegger's Bagel Bakery 18' Stripe Take	PE	153	0.6
12	Mamasan's Monroe LLC	1394 Mt. Hope Avenue	136.54-1-25	Business - Record Archive 18' Strip Take	Fee	1080	10.4
13	Mamasan's Monroe LLC	1394 Mt. Hope Avenue	136.54-1-25	Business - Record Archive 18' Strip Take	TE	300	2.9
14	Mamasan's Monroe LLC	1378 Mt. Hope Avenue	136.54-1-27.1	Business - Starbucks & Subway 18' Strip Take	Fee	2689	11.2
15	Mamasan's Monroe LLC	1378 Mt. Hope Avenue	136.54-1-27.1	Business - Starbucks & Subway 18' Strip Take	TE	2457	10.2
16	Mamasan's Monroe LLC	1360 Mt. Hope Avenue	136.54-1-28	Business 19' Strip Take	Fee	3259	15.2
17	Mamasan's Monroe LLC	1360 Mt. Hope Avenue	136.54-1-28	Business 19' Strip Take	TE	863	4.0
18	Alex L. D'Angelo & Patricia A. D'Angelo	1340 Mt. Hope Avenue	136.54-1-30.2	Business 13' Strip Take	Fee	1742	12.0
19	Alex L. D'Angelo & Patricia A. D'Angelo	1340 Mt. Hope Avenue	136.54-1-30.2	Business 13' Strip Take	TE	1296	8.9
20	Le Thi Be Walters	1330 Mt. Hope Avenue	136.54-1-32	Business 16' Strip Take	Fee	674	14.6
21	Le Thi Be Walters	1330 Mt. Hope Avenue	136.54-1-32	Business 16' Strip Take	TE	381	8.2
22	Bershire-Rochester Limited	797 Elmwood Avenue	136.54-1-2	Business 17.5' Strip Take	Fee	2889	8.7
23	Bershire-Rochester Limited	797 Elmwood Avenue	136.54-1-2	Business 17.5' Strip Take	TE	62	0.2
24	1286 Mt. Hope Avenue, LLC	1286 Mt. Hope Avenue	136.46-1-48.1	Business Strip/Corner Take	Fee	2379	11.0
25	Cathaline Robinson	1545 Mt. Hope Avenue	136.61-3-25	Residential Corner Take	Fee	173	1.3
26	Mihalitsas Income Limited	1517 Mt. Hope Avenue	136.61-2-30	Business 5.0' Strip taking	Fee	319	6.2
27	Mihalitsas Income Limited	1517 Mt. Hope Avenue	136.61-2-30	Business 5.0' Strip taking Ave.	TE	110	2.1

Phase 1 Property Takings (con't)

No.	Property Owner	Address	TAX. MAP #	Remarks (Business or Residential)	Fee/ TE/ PE	Area (SF)	% entire Property
28	Mihalitsas Income Limited	1511 Mt. Hope Avenue	136.61-2-29	Business 2.5' Strip Take	Fee	527	4.5
29	Mihalitsas Income Limited	1511 Mt. Hope Avenue	136.61-2-29	Business 2.5' Strip Take	TE	527	4.5
30	Mihalitsas Income Limited	1495 Mt. Hope Avenue	136.61-2-28	Business - 3.0' to 4.6' Strip taking	Fee	224	3.4
31	Mihalitsas Income Limited	1495 Mt. Hope Avenue	136.61-2-28	Business - 3.0' to 4.6' Strip taking	TE	412	6.2
32	HSBC Bank USA	1473 Mt. Hope Avenue	136.61-1-31	Business - HSBC Bank 14' Strip taking	Fee	627	20.1
33	HSBC Bank USA	1473 Mt. Hope Avenue	136.61-1-31	Business - HSBC Bank 14' Strip taking	PE	99	3.2
34	HSBC Bank USA	1475 Mt. Hope Avenue	136.61-1-30	Business - HSBC Bank 18' taking	Fee	633	3.7
35	HSBC Bank USA	1475 Mt. Hope Avenue	136.61-1-30	Business - HSBC Bank 18' taking	PE	111	0.6
36	Jeffrey Solomon	1471 Mt. Hope Avenue	136.61-1-28	Business - Mt. Hope Service Center Strip taking	Fee	2831	24.2
37	Jeffrey Solomon	1471 Mt. Hope Avenue	136.61-1-28	Business - Mt. Hope Service Center Strip taking	TE	166	1.4
38	Hess Realty Corp.	1431 Mt. Hope Avenue	136.53-1-7	Business - Hess Express Gas Station 38.5' taking	Fee	4868	28.0
39	Hess Realty Corp.	1431 Mt. Hope Avenue	136.53-1-7	Business - Hess Express Gas Station	TE	3525	20.3
40	University of Rochester	1401 Mt. Hope Avenue	136.53-1-6	Business - Parking Area 35' to 40' taking	Fee	11143	8.1
41	University of Rochester	1401 Mt. Hope Avenue	136.53-1-6	Business - Parking Area 35' to 40' taking	TE	1970	1.4
42	University of Rochester	1371 Mt. Hope Avenue	136.53-1-5	Business - Parking Area 41' taking	Fee	3911	10.9
43	University of Rochester	1371 Mt. Hope Avenue	136.53-1-5	Business - Parking Area 41' taking	TE	11122	31.0
44	University of Rochester	1351 Mt. Hope Avenue	136.54-1-4	Business - Mt. Hope Professional Building 41' taking	Fee	6017	7.5
45	University of Rochester	1351 Mt. Hope Avenue	136.54-1-4	Business - Mt. Hope Professional Building 41' taking	TE	5050	6.3
46	University of Rochester	1325 Mt. Hope Avenue	136.53-1-3.1	Business - Town Houses 25' Strip taking	Fee	10224	7.4
47	University of Rochester	1325 Mt. Hope Avenue	136.53-1-3.1	Business - Town Houses 25' Strip taking	TE	12483	9.1
				Phase One Total		108588	

Phase 2 Property Takings							
No.	Property Owner	Address	TAX. MAP #	Remarks (Business or Residential)	Fee/ TE/ PE	Area (SF)	% entire property
48	County of Monroe	1870 Mt. Hope Avenue	150.21-1-2	Business Taking on Westfall Road	Fee	6475	1.3
49	Klee Real Estate Holdings, LLC	1810 Mt. Hope Avenue	136.77-2-53.1	Business - Mobil Gas Station 3.0' Strip taking	Fee	389	2.3
50	Laurence & Dennis Kessler	1780 Mt. Hope Avenue	136.77-2-54	Business - Burger King 3.0' Strip taking	Fee	643	2.1
51	Martin J. & Jerold J. La Rosa	1754 Mt. Hope Avenue	136.77-2-55.1	Business - Papa John's 3.0' Strip taking	Fee	610	3.2
52	Miguelito & Michele C. Caceres	1744 Mt. Hope Avenue	136.77-2-56	Residental 3.0' Strip taking	Fee	142	1.9
53	D. Andrew Norwood	1736 Mt. Hope Avenue	136.77-2-1	Residential 3.0' Strip taking	Fee	191	2.8
54	William B. & Sally Crowley	1720 Mt. Hope Avenue	136.69-2-46	Residential Corner Take	Fee	52	0.7
55	Mt. Hope Properties LLC	1714 Mt. Hope Avenue	136.69-2-48	Business - Esthetica Hair Studio 3.0' Strip taking	Fee	179	2.3
56	Mt. Hope Properties LLC	1712 Mt. Hope Avenue	136.69-2-49	Business - 3.0' Strip taking on Mt. Hope Ave.	Fee	177	2.7
57	Mt. Hope Properties LLC	1698 Mt. Hope Avenue	136.69-2-50	Residential 3.0' Strip taking	Fee	178	3.3
58	Hoc Thai & Thi To Nguyen	1686 Mt. Hope Avenue	136.69-2-51	Residential 3.0' Strip taking	Fee	398	5.2
59	Dale E. La Due	1680 Mt. Hope Avenue	136.69-2-52	Residential 3.0' Strip taking	Fee	183	2.4
60	Achille Forgione	1670 Mt. Hope Avenue	136.69-2-53	Residential 3.0' Strip taking	Fee	170	2.0
61	Achille Forgione	1660 Mt. Hope Avenue	136.69-2-54	Residential 3.0' Strip taking	Fee	125	1.6
62	Patrick G. Guisto	1652 Mt. Hope Avenue	136.69-2-55	Residential 1.2' Strip taking	Fee	20	0.4
63	St. Anne's Church of Rochester	1580 Mt. Hope Avenue	136.69-2-1.2	Business Corner taking	Fee	101	0.1
64	United Refining Co.	1837 Mt. Hope Avenue	136.77-1-25.1	Business 4' Strip taking	Fee	517	2.9
65	Mark C. Nesser	1775 Mt. Hope Avenue	136.77-1-13.2	Residential 3.2' Strip taking	Fee	180	1.5
66	Celia Nesser	1757 Mt. Hope Avenue	136.77-1-13.1	Residential 3.2' Strip taking	Fee	562	3.2
67	Rowe Professional Photographer	1737 Mt. Hope Avenue	136.77-1-12	Business - Rowe Photo 8.4' Strip taking	Fee	823	7.1

Phase 2 Property Takings (con't)							
No.	Property Owner	Address	TAX. MAP #	Remarks (Business or Residential)	Fee/ TE/ PE	Area (SF)	% entire property
68	Exhaust Realty, LLC	1705 Mt. Hope Avenue	136.69-1-39	Business Corner Take	Fee	17	0.1
69	RG Account LLC	1653 Mt. Hope Avenue	136.69-1-37	Business - Mt. Hope Plaza 14' Strip taking	Fee	4705	4.5
70	Marie C. Palermo	1575 Mt. Hope Avenue	136.69-1-20	Residential Corner Take	Fee	83	0.5
71	Gary E. Harriman	1557 Mt. Hope Avenue	136.61-3-38	Residential 3.5' Strip Take	Fee	242	4.4
72	Man on the Moon Enterprises, LLC	1551 Mt. Hope Avenue	136.61-3-37	Residential 3.5' Strip Take	Fee	227	3.3
73	Ayanna M. Chastine	127 Redfern Drive	136.70-1-40	Residential Corner Take	Fee	23	0.3
74	Robert H. McCagg & Jean McCagg	130 Redfern Drive	136.70-1-41	Residential Corner Take	Fee	22	0.3
75	Julian M. Clarke	80 East Henrietta Road	136.62-1-31	Residential Corner Take	Fee	6	0.1
76	Jonathan Davis	66 East Henrietta Road	136.62-1-42	Residential Corner Take	Fee	8	0.2
77	John R. Cahoon	48 East Henrietta Road	136.62-1-45	Residential Corner Take	Fee	7	0.1
				Phase Two Total		17,455	
				Total Project (1& 2)		126,043	

m. Landscape Development

Landscaping improvements will be determined during the detailed design phase. Street trees will be planted where possible to mitigate the commercial setting of the corridor. Medians will also be landscaped with appropriate plant material to reduce the roadway dominance within this section of the project area. Installation of specialty crosswalks (that will contrast in color and texture to the roadway pavement) will be considered during detailed design.

n. Provisions for Pedestrians, Including Persons with Disabilities

Curb ramps will be provided in accordance with the ADA accessibility guidelines. A 7 ¼" curb reveal will be provided to prevent vehicles from traveling over ADA ramps to access the front of some of the commercial properties as they currently do today. Sidewalks with a minimum width of 5ft. will be provided on both sides of all streets within the project limits

Crosswalk pavement markings will be provided at all signalized intersections.

o. Provisions for Bicycling

Bicycles will share the proposed 11ft. to 14 ft. wide outside lanes on Mt. Hope Avenue as they currently do today.

Six foot wide shoulders will accommodate any bicycles on East Henrietta Road.

p. Lighting

The existing street lighting will be replaced with new decorative street lighting along Mt. Hope Avenue and East Henrietta Road and the other impacted streets. The light fixtures and poles along the adjacent side streets will match the current lighting or the City standard street light poles and luminaries will be provided. During the detailed design phase the proposed street lighting design will be coordinated with the City of Rochester Water and Lighting Bureau and the NYSDOT to ensure consistency with nearby projects.

D. Project Costs and Schedule

1. Cost Estimate

Phase 1 construction includes:
- Mt. Hope Avenue from Rossiter Road to Elmwood Avenue
- Elmwood Avenue Eastbound Left and Right turn lane improvements

Phase 1 Construction:

	Estimated Costs
Construction Cost	$ 4,715,000
Right of Way Purchase	$ 2,100,000
Right of Way Mapping and Negotiation Costs	$ 240,000
Hazardous Materials	$ 100,000
Asbestos Mitigation	To be determined
Engineering (8%)	$ 385,000
Construction Inspection (12%)	$ 580,000
Constr. Contingency (8%)	$ 385,000
TOTAL PHASE 1	$ 8,505,000

Phase 2 construction includes:

- Mt. Hope Avenue from Erie Canal to Rossiter Road
- E. Henrietta Rd. from South Avenue to Mt. Hope Avenue
- Westfall Road turn lane improvements

Phase 2 Construction:

	Estimated Costs
Construction	$ 5,790,000
Right of Way Purchase	$ 230,000
Right of Way Mapping and Negotiation Costs	$ 180,000
Hazardous Materials	$ 0
Asbestos Mitigation	To be determined
Engineering (8%)	$ 470,000
Construction Inspection (12%)	$ 700,000
Contingency/Overrun (8%)	$ 470,000
TOTAL PHASE 1	$ 7,840,000

Total Cost for Phase 1 and 2 = $ 16,345,000

Notes:

1. All estimates are based on fall 2009 construction costs.

   The proposed improvements to the westbound approach to the Westfall Rd. intersection and for the addition of the eastbound right and left turn lanes on Elmwood Avenue will be paid for out of Congestion Management and Air Quality (CMAQ) funding. The eastbound left turn lane improvements at the Elmwood Avenue intersection will only be constructed if additional CMAQ funding is available. The remainder of the project improvements will be funded by Federal Highways Administration (FHWA), New York State, Monroe County and City of Rochester funds. A breakdown of the estimated construction costs is included in Appendix B.

2. <u>Anticipated Schedule</u>

Receipt of Design Approval	April, 2009 (target date)
R.O.W. Acquisitions	Summer, 2009
Phase 1- P.S. & E, Submission	February , 2010
Begin Phase I Construction	Spring, 2010
Complete Phase I Construction	Summer 2011
Begin Phase II Construction	To Be Determined

CHAPTER IV - SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS

A. Introduction

1. NEPA Classification

This project is being progressed as a Class II (Categorical Exclusion) action under the National Environmental Policy Act (NEPA) as implemented in 23 CFR 771. A NEPA checklist is included in Appendix E. The City of Rochester, with the concurrence of the New York State Department of Transportation and the Federal Highway Administration (FHWA), shall verify that the FHWA Class II determination for the recommended alternative is appropriate. The FHWA is the lead agency for NEPA coordination.

2. SEQRA Classification

This project is being progressed as a Type 1 Action under the New York State Environmental Quality Review Act (SEQRA) in Part 617, Title 6 of the Official Compilation of Codes, Rules, and Regulations of New York State (6 NYCRR Part 617). This project alone would be classified as an Unlisted Action under the State Environmental Quality Review Act (SEQRA) guidelines, however, the City has combined this project with the rezoning of the University of Rochester property at the north end of the project as part of the University's proposed "Collegetown" redevelopment. The City of Rochester is the lead agency for the SEQRA process and the Federal Highway Administration (FHWA) is the lead agency for the NEPA process. The City of Rochester is the lead agency on this project for SEQRA coordination. A City of Rochester Environmental Assessment Form (EAF) has been prepared to determine the potential for environmental impacts under SEQRA. The City issued a Negative Declaration Resolution on November 24, 2008. A copy of the EAF and Negative Declaration Resolution is included in Appendix E. The following discussion only relates to the Environmental, Social and Economic consequences from this project.

B. Environmental Consequences

1. Surface Waters/Wetlands

The proposed project site was screened for surface waters and NYSDEC surface water classifications. Section 847.4 of Title 6 of the *Official Compilation of Codes, Rules and Regulations of the State of New York* showed no streams in the project area. USGS maps of the project area showed no streams or other bodies of water exist in the project area. The southern limits of the project end prior to the Mt. Hope Bridge over the Erie Canal. Runoff from the project area is collected by storm sewers that eventually discharge into the Genesee River to the west and the Erie Canal to the south. The NYSDEC stream classification for both the Genesee River and the Erie Canal at these locations is "B - Fresh Surface Waters."

A review of NYSDEC Wetland Maps of the proposed project site indicates no designated NYSDEC Wetlands exist along the project corridor. Based on this review, NYSDEC Article 24 wetland permits will not be required for this project as construction activity will not occur within a NYSDEC wetland or within the 30.5 meter (100 foot) wetland buffer zone.

A review of US Fish and Wildlife National Wetland Inventory maps indicated no federally mapped wetlands exist within the project corridor. In addition, a site walk-over assessment was conducted and revealed no evidence of wetlands within the project area. No wetlands or surface waters will be directly impacted by this project. A NYSDEC Section 401 Water Quality Certification and a U.S. Army Corps of Engineer Section 404 Permit are therefore not required for this project.

Coverage under the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (GP-0-08-001) is required for any construction project that disturbs more than 0.4 hectares (1 acre) of land. Disturbance is defined as any activity that will expose soil to surface water runoff, and includes full depth reconstruction of roadways such as that anticipated for this project. The project will therefore disturb more and 0.4 hectares (1 acre) of land and will require coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared during final design that will include an Erosion and Sediment Control Plan. The existing storm sewers outlet to the Erie Canal and Genesee River (see Section II.C.1.q), both of which are fourth order streams or greater. Therefore the SWPPP will not need to address the water quantity changes from the project. Since there is little or no new impervious area, the SWPPP will need to address the treatment of 25% of the Water Quality Volume (WQ_V) for the project.

2. Flood Plains

The project area is covered by Panel 3601500005C of the City of Rochester, Monroe County, New York Federal Emergency Management Agency Flood Insurance Study (FIS) (November 1, 1978). The panel shows that the project lies outside the 100-year flood zone and 500-year flood zones. The project will not involve any work in or around a flood zone or flood plains. No further consideration under the National Flood Insurance Program or EO 11988 is required.

3. Groundwater

The project area is not located over any U.S. Environmental Protection Agency Sole Source Aquifers. It is also not located over any NYSDEC primary or principal aquifer areas defined by the NYSDEC Technical and Operational Guidance Series (TOGS) 2.1.3. The project area is located in a residential and commercial section of the City supported by a municipal water distribution system (See Section II.C.1.s). The proposed project is not expected to have any adverse impacts on groundwater or drinking water resources.

The project includes replacement of water mains as described in Section III.C.2.j. A Monroe County Health Department Permit will be required for this work.

4. General Ecology and Wildlife

In a letter dated February 21, 2006, the New York State Department of Environmental Conservation stated they have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of the project site. A copy of this letter is included in Appendix E.

In a letter dated February 22, 2006, the National Marine Fisheries Service stated no threatened or endangered species under the jurisdiction of NOAA Fisheries Service in the immediate project area. A copy of this letter is included in Appendix E.

Since 2006, the USFWS New York Field Office is no longer able to reply to endangered species information requests. It is now the responsibility of the public to go to their website (http://www.fws.gov/northeast/nyfo/es/section7.htm) and determine potential listed species that could be present at proposed project sites. On July 10, 2007 the USFWS New York Field Office website listed the Bog Turtle (*Clemmys muhlenbergii*) as a threatened species within Monroe County. The Bog Turtle only resides in the Riga and Sweden Townships of Monroe County. The project is not located in these areas and does not contain habitat suitable for Bog Turtles. Therefore, no impacts to Bog Turtles or any other threatened or endangered species will occur on this project. A copy of the USFWS web page listing the Bog Turtle as the only threatened or endangered species in Monroe County is included in Appendix E.

5. Historic and Cultural Resources

This project has been reviewed by the NYS Office of Parks, Recreation and Historic Preservation (NYSOPRHP), which serves as the State Historic Preservation Officer (SHPO), in accordance with Section 106 of the National Historic Preservation Act of 1966. In a letter dated June 29, 2007, the NYSOPRHP stated that "it is the SHPO's opinion that your project will have No Adverse Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places." A copy of the letter is included in Appendix E.

At the time NYSOPRHP conducted their review, 31 property right-of-way takings were proposed along the project corridor. Since that time, proposed property right-of-way takings have increased from 31 property takings to 53 property takings. As a result, the project required a supplemental review by NYSOPRHP to confirm the additional takings will not have any adverse effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places in accordance with Section 106 of the National Historic Preservation Act. Upon conducting a review of the additional right-of-way takings proposed for this project, the NYSOPRHP stated in a letter dated January 26, 2009 concluded the following: "Based upon this review, it is the SHPO's opinion that your project will have No Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places." A copy of the letter is included in Appendix E.

6. Visual Resources

There is a combination of commercial; institutional and residential uses on both Mt. Hope Avenue and East Henrietta Road, with East Henrietta Road being mostly residential in nature.

Mt. Hope has a commercial feel, with building faces generally found at the back of the attached sidewalk. East Henrietta is more visually pleasing with lawn and trees through the corridor and houses set back from the roadway. No significant adverse visual impacts are expected to result from this project. Beneficial visual improvements are anticipated, such as incorporating aesthetic enhancements into landscaping, tree plantings, sidewalk improvements, and street light replacements.

7. Parks and Recreational Facilities

There are no state, county, or city parks in the vicinity of the project corridor. No land from public parks or recreation areas will be affected by this project. Therefore, this project does not require a Section 4(f) evaluation of 49 USC 303 of the U.S Department of Transportation Act or a Section 6(f) evaluation of the U.S. Land and Conservation Fund Act.

8. Farmland Assessment

The project area is in an urbanized area, with no active agricultural land or potentially active agricultural land. It is not located within a New York State Agricultural District. There are therefore no impacts to farmland that require review under the Federal Farmland Protection Policy Act (7 CFR Part 658) or Article 25-AA of the New York State Agricultural and Markets Law Section 305(4).

9. Air

The project is located in Monroe County which is currently an air quality nonattainment area for ozone in accordance with the National Ambient Air Quality Standards (NAAQS) as listed on the Environmental Protection Agency (EPA) website. Nonattainment areas are those geographic regions that do not meet the health-based NAAQS for any of the following: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter ($PM_{2.5/10}$), or lead (Pb).

Chapter 1.1 – Air Quality of the NYSDOT Environmental Procedures Manual (EPM) prepared by the NYSDOT Environmental Analysis Bureau (EAB) was used to determine if microscale and mesoscale air quality studies are required. A microscale air quality analysis evaluates the amount of Carbon Monoxide (CO) based on the Air Quality Project Environmental Guidelines, NYSDOT Environmental Procedures Manual (EPM) published by the NYSDOT in January 2001. According to the procedures outlined in the EPM, a microscale air quality analysis is not required because this project will not increase traffic volumes, reduce source-receptor distances, or change other existing conditions to such a degree as to jeopardize attainment of the NAAQS. A mesoscale air quality analysis is not required because this project does not involve high occupancy vehicle (HOV) lanes, change interchanges, large scale signal coordination, significantly alter vehicle miles traveled (VMT), or add more than a mile of travel lane. In addition, this project will not change traffic volumes within the study area and will not result in a change in diesel emissions. Therefore, no particulate matter hot-spot analysis is warranted.

The Clean Air Act identified 188 air toxics, also known as hazardous air pollutants. The Environmental Protection Agency (EPA) has assessed this expansive list of toxics and identified a

group of 21 as mobile source air toxics, which are set forth in an EPA final rule, Control of Emissions of Hazardous Air Pollutants from Mobile Sources (66 FR 17235). The EPA has issued a number of regulations that will dramatically decrease hazardous air pollutants from mobile sources through cleaner fuels and cleaner engines. The annual vehicle miles traveled for the proposed project will be the same for the no build and build alternatives, which will yield no change in air pollutant emissions. Regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce air pollutant emissions from mobile sources by 57 to 87 percent between 2000 and 2020.

The transportation conformity regulation, "Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded, Developed or Approved Under Title 23 U.S.C. or the Federal Transit Act" (40 CFR Parts 51 and 93), is used to determine if a project conforms with National Ambient Air Quality Standards (NAAQS). The proposed project has been classified as exempt from the conformity analysis as determined by the 2005-2010 Genesee Transportation Council (GTC) Transportation Improvement Plan (TIP). GTC is the Metropolitan Planning Organization (MPO) for the metropolitan project area. The proposed project comes from the TIP and was found to conform under the Clean Air Amendments of 1990. GTC made their conformity determination on June 1, 2005 and FHWA/FTA made their conformity determination on June 15, 2005. The project design scope and concept have not changed since the TIP and plan conformity determinations were made, and the facility's design scope and concept have not changed from that in the conforming TIP and plan.

10. Noise

The Federal Highway Administration (FHWA) Chapter 1 of Title 23, Code of Federal Regulations, Part 772 (23 CFR 772) identifies a Type I project as a proposed Federal or Federal-Aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. The NYSDOT Noise Analysis Procedures Manual further defines significant changes of highway alterations as: Horizontal – moves the alignment of the near traffic lanes half the distance or closer to the nearest receptor; Vertical – changes the profile by a grade separation distance, say 6 to 9 meters. This project is not on a new location, it does not significantly change either the horizontal or vertical alignments, and it does not increase the number of through-traffic lanes, therefore, this project does not qualify as a Type I project. A noise study is not required and has not been performed for this project.

11. Energy

The proposed project will not significantly affect:

- energy consumption in the project area during and after construction,
- vehicle miles of travel,
- generation of additional vehicle trips,
- land use development patterns,
- travel patterns or
- vehicle operating speeds.

Therefore, an energy analysis is not required.

12. Contaminated Materials Assessment

A hazardous waste-contaminated materials screening was conducted of the Mount Hope Avenue-East Henrietta Road improvement corridor. The screening was conducted in general accordance with NYSDOT environmental procedures. The screening included review of environmental databases, review of historic land use maps and aerial photographs, interviews and site visits.

The screening identified 16 sites of environmental concern that present the potential for encountering contamination within the proposed construction right-of-way or property acquisitions. These sites include 13 current or former gasoline stations/filling stations and two suspect dry cleaning operations. Three sites are listed by the NYSDEC as active petroleum spill events at which cleanup activities are on-going.

TABLE IV-1
Sites of Potential Contamination Within Proposed Construction Limits and Property Acquisitions

Name	Address	Environmental Concern
Benfante's Appliance / former gas station	1286 Mt. Hope	Former gas station circa 1962 and 1971
Hess Station # 32353*	1431 Mt. Hope	Active service station, USTs, Spill Events
Mt. Hope Service Center/ Safelite Auto Glass	1471 Mt. Hope	Former Service Station, spill events
United Cleaners	1499 Mt. Hope	Dry cleaner, possible cleaning chemicals
Dunkin Donuts/former Mt. Hope Service Center	1500 Mt. Hope	Former location of Mt. Hope Service Center, filling station circa 1962.
U of R Currier Bldg	1510-1540 Mt. Hope	Past Spill event site, gasoline fumes, associated with spill at Hess Station
Fort Hill Liquor Store	1520 Mt. Hope	Spill event-fumes associated with Hess Station
Former filling station	1545 Mt. Hope	Filling station circa 1962
Tire Associates/former Mt. Hope Service Center	1581 - 1591 Mt. Hope	Former service station and repair garage. Also known as the Marie Palermo property.
Tip Top Restaurant	1595 Mt. Hope	Former filling station circa 1961 and 1971
Mt. Hope Cleaners	1665 Mt. Hope	Dry cleaners, EPA air permit, possible use of dry cleaning chemicals
Cole Muffler	1735 Mt. Hope	Automotive services, waste oil storage
Rowe Photo*	1737 Mt Hope	Former service station-active spill event
Mt. Hope Mobil*	1810 Mt. Hope	Active service station, UST, Spill Events
Kwik Fill/Red Apple	1835 Mt. Hope	Active service station, USTs, Spill Events
South Presbyterian Church	30 East Henrietta Road	Petroleum Spill event-tank failure
White's garage/Integrity Auto Repair	241 East Henrietta Road	Former service station-PBS site and spill event site
Former filling station	1925 South Ave at East Henrietta Road	Former filling station circa 1962 between Mt. Hope Ave. and East Henrietta Road

* Denotes active petroleum spill events at which cleanup activities are on-going.

The intersection of Mt. Hope Avenue/East Henrietta Road/Crittenden Blvd/Fort Hill Terrace is of concern due to a long standing active petroleum spill event (Hess Station at 1431 Mt. Hope Ave.) and former filling stations at the intersection. Gasoline contamination has been reported in sewers, buildings and monitoring wells in this vicinity. Rowe Photography at 1737 Mt. Hope Ave. and the ExxonMobil station at 1810 Mt. Hope Ave. are also active petroleum spill events. An active remediation system is in service at the former Tire Associates/Mt. Hope Service Center/filling station at 1581-1590 Mt. Hope.

Subsurface investigative activities should be conducted at identified sites during final design to accurately determine actual limits of contamination prior to construction, to evaluate possible cleanup costs and to identify areas of significant contamination. Investigations may also result in revisions to design options. Investigations should be conducted to identify possible buried tanks within proposed construction areas. Test borings advanced to anticipated construction depths should be screened for evidence of contamination. Soil samples should be collected for laboratory analysis if field screening activities detect of contamination. Depth to groundwater should be determined. Groundwater samples may be required for laboratory analysis to evaluate potential for encountering contaminated groundwater during construction.

If contaminated materials are encountered, the anticipated areas of contamination will be identified on the plans and contract documents. In constructing the project improvements, NYSDOT approved specifications and pay items will be used to properly test, handle, store and remove and dispose of these contaminated materials.

13. Construction Impacts

Impacts to local businesses and residences will be minimized during the construction period. Traffic will be maintained on-site and accessibility to all properties would be maintained. Impacts such as dust and noise are inevitable during any construction project. During construction, airborne particulates can be controlled through wetting of soil surfaces and covering of trucks and other dust sources. These requirements will be included as part of the specifications of the construction contract.

The proposed mind-block traffic signal between Crittenden Blvd. and Elmwood Ave. will offer a new access to the proposed University of Rochester "Collegetown" development and the east side commercial facilities. However, to help further reduce impacts to these businesses during construction the following mitigation measures will also be considered during the detailed design phase:

- A plus B Bidding. This type of bidding offers the contractor incentives for finishing the project ahead of schedule and punitive damages if he does not finish the project on schedule
- Temporary parking spaces
- Temporary pavement, connecting the rear of the businesses on the east side of the road, providing a possible alternative access route during construction.

These mitigation measures will be further evaluated and discussed with the business owners during the detailed design phase of the project.

No significant effect is expected as a result of erosion or sedimentation caused by construction activity. Potential impacts on water quality during construction will be controlled by temporary soil erosion and water pollution measures such as silt fences, hay bales, and sedimentation basins. All disturbed areas will be permanently revegetated to control long term erosion.

14. Anticipated Permits and Approvals

The following permits will be obtained prior to contract award:

- Monroe County Health Department Permit (required for water main design review and approval)
- New York State Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) Permit for Stormwater Discharges from Construction Activity (GP-0-08-001)

CHAPTER V SUMMARY AND ANALYSIS OF COMMENTS RECEIVED

A. Responses to Comments Received from Agencies

The Monroe County Department of Transportation (MCDOT) submitted comments on the Pre-Final Design Approval Document on February 11, 2009. A formal response to comments letter was prepared and submitted on February 26, 2009. A copy of both the MCDOT comments and the formal response is included in Appendix C.

B. Responses to Comments Received both at the Public Hearing and during the Comment Period

The City of Rochester held a Public Open House and EDPL Public Hearing on January 21, 2009 at Saint Anne's Church, 1600 Mount Hope Avenue in Rochester, New York. This section contains a listing of comments received during that hearing and the subsequent comment period. A copy of the transcript from the Public Hearing and copies of written comment letters follows this comment and response section.

Comment 1(Pub. Hrg) Mr. Luis Cabral of 1500 Mount Hope Avenue represented the Mount Hope Business Association (MHBA) and read their written comments into the record. The Business Association supports the proposed improvements. They would like the City of Rochester to see if overhead utilities could be placed underground to improve aesthetics along the corridor. They are interested in working with the City of Rochester to revise what they feel are outdated zoning requirements for the corridor. They also requested that the City re-engage the community and MHBA when Phase II of the project is initiated to confirm the appropriate roadway and sidewalk configurations along with the associated right-of-way impacts.

Response 1 The support of the Mount Hope Business Association is noted and appreciated.

The City of Rochester will discuss burying the overhead utilities with the private utility owners to determine if they can be relocated underground as part of the project.

The City of Rochester would be interested in discussing any outdated zoning requirements for the corridor. This discussion is not relevant to the proposed improvements for this project. When Phase II of the project is initiated the Community and the Mount Hope Business Association will be re-engaged to confirm the appropriate roadway and sidewalk configurations.

Comment 2(Pub. Hrg) Ms. Melanie Warren addressed the meeting as co-owner of the property at 1471 Mount Hope Avenue. Her property is situated on the southwest corner of Crittenden Boulevard and Mount Hope Avenue intersection. Two sides of the property would be impacted by proposed right-of-way acquisitions. Ms. Warren noted that "this is a very important intersection and needs to be realigned in order to make it more functional." She supports the project improvements, but would like to retain as much of their property as possible in order to maintain their business in its current location.

Response 2 The City of Rochester recognizes the need to maintain viable businesses along the project corridor. With this in mind, proposed property acquisitions have been minimized to the greatest extent feasible during preliminary design. In accordance with local, State, and Federal procedures, every effort will be made to provide fair and just compensation to those individuals and businesses directly affected by proposed property acquisitions.

Comment 3 (Pub. Hrg)	Ms. Terry Russo of 16 Redford Drive offered her support of the project. She stated that she would like to see Mount Hope Avenue and its side roads widened, new sidewalks installed, and the establishment of a new grocery store.
Response 3	Widening of Mount Hope Avenue from Crittenden Boulevard to Elmwood Avenue and the reconstruction of side street approaches would be completed as part of the project. Existing concrete sidewalks would also be replaced. The establishment of adjacent commercial businesses though desirable, is outside the scope of this project.
Comment 4 (Pub. Hrg)	Ms. Nancy Rice, member of the South Presbyterian Church, expressed concern regarding the elimination of access to Fort Hill Terrace from the intersection of Mount Hope Avenue, East Henrietta Road, and Crittenden Boulevard citing that it would become extremely difficult to guide persons to the church. Many parishioners use the Fort Hill Terrace's one-way access to reach the church property. If access to Fort Hill Terrace was removed from the adjacent intersection, parishioners would have to find alternate routes to reach the church.
Response 4	Representatives of the City of Rochester and the design team met with the South Presbyterian Church on January 27, 2009 and January 29, 2009 to discuss the project's potential impact on the church. Several improvements including an enhanced church drop-off point on Fort Hill Terrace, additional on-street parking along Fort Hill Terrace, elements to discourage cut-through traffic from Rosemont Street to Fort Hill Terrace through church property, and the development of an informational brochure to define future access routes and parking locations for church visitors were discussed. In a letter dated February 1, 2009, the South Presbyterian Church offered its support of the plan contingent upon these items being carried forward for future consideration by the City of Rochester. A copy of the letter and meeting minutes from the meetings follows this comment and response section.
Comment 5 (Pub. Hrg)	Mr. Dan Hurley, President of the Upper Mount Hope Neighborhood Association indicated that his group had made several attempts to contact the South Presbyterian Church to discuss the planned closure of Fort Hill Terrace. He agreed that the church's concerns are valid but noted that a good faith effort had been made to reach the church.
Response 5	The church's comments and concerns were discussed on January 27, 2009 and January 29, 2009. Please refer to Response 4 for further information.
Comment 6 (Pub. Hrg)	Mr. Fred Porter of 67 Brighton Park supports the project but asked for information regarding the project cost.
Response 6	The estimated project construction costs are $8.31 million for Phase I and $7.44 million for Phase II as documented in Section III.D.1 of the Design Approval Document.
Comment 7 (letter)	Ms. Cathaline Robinson of 1545 Mount Hope Avenue sent in a written comment concerning her property, parking, and its entrance from the Rossiter Road side. A copy of the written comment follows this comment and response section.
Response 7	The introduction of a formal curb cut and driveway along the Mount Hope Avenue frontage of 1545 would restrict access to existing off-street parking in front of the building. Enhanced driveway definition is necessary to improve access definition and safety for all corridor users (motorists and pedestrians). Access to existing off-street parking along the south side of the building would not be affected nor would the entrance from Rossiter Road. Continued discussion of impacts to parking and circulation can be undertaken with

individual business owners as detailed design for Phases I and II of the project are initiated.

Comment 8

Mr. Richard Rowe, President of Rowe Home Theatre, Audio, Camera, and Video offered a written comment on January 26, 2009. The letter offered support for the overall project but called for additional community input prior to the implementation of Phase II. Mr. Rowe also expressed a desire for further study regarding the proposed Kendrick Road Interchange and City Gate Community project and their potential impacts on Mount Hope Avenue. The letter also expressed concerns regarding the proposed design of recessed parking in front of his building and suggested its potential relocation to Elmerston Road. A copy of this correspondence is follows this section.

Response 8

The City of Rochester will re-engage the community and adjacent business owners when Phase II of the project is initiated to confirm the appropriate roadway, parking, and sidewalk configurations. Further consideration of recessed parking along Elmerston Road will also be provided at that time.

Index to Testimony at the Public Hearing

Comment	Name	Address	Transcript Page Number
1	Louis Cabral	1500 Mount Hope Avenue	Page 34, Line 23
2	Malanie Warren	1471 Mount Hope Avenue	Page 36, Line 13
3	Terry Russo	16 Redford Drive	Page 38, Line 14
4	Nancy Rice	187 Lattimore Road	Page 39, Line 6
5	Dan Hurley	95 Southview Terrace	Page 41, Line 22
6	Fred Porter	67 Brighton Park	Page 43, Line 3

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5	Dan Hurley	95 Southview Terrace	Page 41, Line 22
6	Fred Porter	67 Brighton Park	Page 43, Line 3

STATE OF NEW YORK CITY OF ROCHESTER

X - - - - - - - - - - - - - - - - - - - X

MOUNT HOPE AVENUE AND EAST HENRIETTA ROAD IMPROVEMENT PROJECT

(Elmwood Avenue to South City Line and Mount Hope Avenue to South Avenue)

PC #09101, PIN 4753.6

X - - - - - - - - - - - - - - - - - - - X

Transcript of proceedings in accordance with provisions of Title 23 US Code Section 128 and Title 40 Code of Federal Regulations, Parts 1500 to 1508 held at St. Anne's Church, 1600 Mount Hope Avenue, Rochester, New York, on Wednesday, January 21, 2009, commencing at 7:00 p.m.

Reported by:
COMPUTER REPORTING SERVICE
John M. DiMartino, CSR, RPR
270 Reynolds Arcade Building
16 East Main Street
Rochester, New York 14614 (585) 325-3170

MR. WAY: Good evening, ladies and gentlemen. Thank you for joining us this evening for the Mt. Hope Avenue and East Henrietta Road public improvement project hearing.

It is now seven o'clock and I call this public hearing to order.

My name is Paul Way, project manager for the City of Rochester. I will be providing a few opening remarks for this evening's public hearing.

The purpose of this public hearing is to receive your comments and views on the recommended alternative that has been developed for the proposed Mt. Hope Avenue and East Henrietta Road improvements.

The limit of the project on Mt. Hope Avenue is from the Erie Canal to Elmwood Avenue and on East Henrietta Road from South Avenue to Mt. Hope Avenue.

There is also work planned for about six hundred fifty feet on the south side of Elmwood Avenue on its eastbound approach to Mt. Hope avenue and approximately five hundred linear feet of work on Crittenden Boulevard and three hundred linear feet of work on Westfall Road at their approaches to Mt. Hope Avenue.

I would like to call your attention to the

fact that this is -- that the required format for the public hearing does not allow us to respond to your statements and questions directly.

There will be an opportunity later on in this hearing where you can provide an oral statement if you so desire.

Before we proceed any further I would like to point out the location of the exit on the side is of this room. In the case of an emergency please exit at the side of the room and follow the lit exit signs directing you outside the building.

Rest rooms are located at the end of this hallway on the far wall at the end of the hallway.

Please note that smoking is prohibited at this hearing or any where in this building.

Upon entering did each of you fill out -- sign in and fill out a speaker registration card?

If you have not already done so we ask that each of you sign in and fill out the registration card if you wish to provide an oral statement this evening.

Does any one need a registration card?

As the first order of business I would like to introduce a few City of Rochester officials who are present at this hearing.

They are Jim MacIntosh, City Engineer for the City of Rochester and sitting next to him Pete Sacks, administrator for the neighborhood service center.

I would also like to introduce key project staff from Bergmann Associates, our consultant for the project.

Mark McAnany is the project manager. Tom Lichtenthal is the senior project engineer, and Richard Hite working for RK Hite is our real estate expert on the project.

Bergmann Associates is the consulting firm retained by the City of Rochester to work with the community and involved agencies develop the design and perform the environmental studies for the proposed project.

RK Hite is the real estate consulting firm that Bergmann has added to their project team to assist with the right-of-way aspects of the project.

I would also like to introduce Rob Kasarits from the Monroe County Department of Transportation. Monroe County is the traffic engineers for the City of Rochester.

We have a few neighborhood and business association representatives present as well.

Dan Hurley is President of the Upper Mt. Hope Neighbors. Sue O'Neil is here from the friends of Mt. Hope. Joan Lynnberg represents the Lilac Neighborhood Association, and Melanie Warren is President of the Mt. Hope Business Association.

Following this evening's hearing city, New York State DOT and consultant staff will be available to discuss the project and to answer any questions that you may have.

As lead agency the City of Rochester is conducting this hearing in accordance with Title 23 US Code Section 128; Title 40 Code of Federal Regulations, Parts 1500 to 1508 and Article 2 of the Eminent Domain Procedure Law which requires a public hearing on certain highway projects.

This hearing satisfies the requirements of federal regulations as well as those of the New York State Department of Transportation's environmental action plan and design procedure manual.

The legal notice advertising the design public hearing was published on December 22nd, 2008 in the Rochester Democrat & Chronicle.

I will now enter the notice of the public hearing as published into the record as Exhibit 1.

or mailed to Mr. Paul R. Way, PE, at the City of Rochester, Department of Environmental Services, City Hall, Room 300-B, 30 Church Street, Rochester, New York 14614, and received before February 2, 2009, will be made part of the record.

Please advise this office if a sign language interpreter, assistive listening system or any other accommodation will be required to facilitate your participation in the public hearing.

Our contact person is Mr. Paul R. Way, PE, whose phone number is (585) 428-7383.

TDD (Telecommunications Device for the Deaf) Relay Service: New York Relay Operator - translates calls between TDD and non TDD users. For in state calls only. Non TDD user to TDD user: 1-800-421-1220 TDD to non TDD user: 1-800-662-1220.

MR. WAY: The intent of this public hearing is to afford the opportunity for the public to voice their opinions and views regarding this project.

This hearing gives all interested persons an opportunity to express their views at the point in the project's development where flexibility to respond to those views still exists.

At this time we have identified a recommended

alternative to be implemented. However, our plans for this project are still preliminary and we can make adjustments if deemed appropriate in response to comments we receive.

At this point I will turn the hearing over to Bergmann Associate's project manager, Mark McAnany who will continue with the program.

MR. McANANY: Thank you, Paul. Good evening, every one.

As you entered the room each of you should have completed a registration card. I'll show you the card.

The purpose of this card is to obtain a register of attendance and to identify those people wanting to make a public statement later in our program.

If you did not receive and complete a registration card or if your card has not been collected please raise your hand now.

Let the record show no hands were raised. Let the record show that every one received a registration card and that all cards have been collected.

A separate comment sheet was also handed out

for your written comments. Tom is holding that up over there.

These comment sheets are available at the registration table and the project information table. They can be returned to us tonight or submitted for the record at any time before February 2nd, 2009.

The comment sheet is designed to be conveniently folded and taped closed. It is pre-addressed for you to mail back to us. You will need to place a first class postage stamp on it before mailing it.

If you did not receive a comment sheet please raise your hand and we will provide you with one if you'd like one. You can also get one following the meeting on your way out.

Let the record show that every one received a copy of the comment sheet.

For tonight's session you were invited to submit written comments or other documents relating to the proposed project.

These written comments and documents should be addressed to Mr. Paul Way at the City of Rochester department of Environmental Services, 30 Church Street, Rochester, New York, 14614.

These written comments and documents will be included as part of the record of this hearing.

There are several exhibits that are going to be incorporated into the record of this proceeding. The exhibits that are made a part of the record in the transcript will be made available for public review.

The notice of tonight's public hearing was published in the Rochester Democrat & Chronicle newspaper. Paul Way entered this notice as Exhibit 1.

In addition to publishing the notice of this hearing in the newspaper, the City mailed notices to each of the assessment record billing owners.

The letter notices along with copies of the certified mailing and return receipt documents have been premarked as Exhibit 2.

We have a thick pile of exhibits here that will be part of the official record.

Also available tonight for public inspection is a copy of the design report prepared by Bergmann Associates who has been retained by the City to design and oversee this project.

It includes many of the technical details relating to the project, including the scope and evolution, alternatives, environmental, historical and

social matters that were considered. The design report has been premarked as Exhibit 3.

For presentation purposes two display boards have been prepared for tonight's public hearing. These boards contain information on the project corridor including colored plan review renderings and aerial photograph schematics showing the proposed improvements.

If you have not had a chance already, we encourage you to view these displays after the hearing.

City and consultant representatives will be available at the displays to answer questions informally after the hearing is closed.

Smaller versions of these display boards have been premarked as Exhibits 4 and 5 for the record.

In addition to the exhibits that have been premarked and entered into the hearing record this evening, all written submissions will be entered into the hearing record as Exhibit 6 collectively.

At this time I would request that all premarked exhibits be admitted into the record of these proceedings.

The preferred design alternative for the project involves the acquisition of private property.

The City is required to follow a specific process to acquire the property rights necessary for the construction of the project.

The technical portion of the hearing will include an explanation of the property acquisition process.

At the conclusion of the technical presentation we will open the floor for public comments.

Rick Papaj, our DOT project liaison, has arrived so he will be available to assist in the Q and A also.

The proceedings of this hearing are being recorded. Statements may be presented at this hearing either orally or in writing.

Public statements will be given later on in this evening's program. Private testimony may also be given to the stenographer following completion of public testimony.

As soon as possible after tonight's session copies of the transcript of this hearing and the hearing exhibits will be made available to the public for examination without cost during normal business hours at the City of Rochester Department of

Environmental Services and at the New York State Department of Transportation Region 4 offices at 1530 Jefferson Road, Rochester, New York, 14623.

Any person who would like to examine these records should contact Paul Way by phone at (585) 428-7383 or e-mail Paul at Paul.Way@City of Rochester.gov.

After all comments regarding this project are received either from the public or other state and federal agencies they will be fully evaluated.

The City of Rochester in cooperation with the New York State Department of Transportation will then select and recommend an alternative to be carried forward.

At some point within ninety days after the record of this hearing is complete, the entire record will be delivered to the Rochester City Council for consideration and further action.

That further action will occur in the form of the City Council rendering its determination and findings concerning this proposed public project. The Federal Highway Administration must then approve that alternative.

A brief synopsis of the City Council's

determination and findings will be published in the Rochester Democrat & Chronicle newspaper and mailed to assessment record billing owners.

At this time I would like to provide a brief overview of the technical aspects of the project.

This discussion will include a brief review of the project needs and goals and a description of the recommended build alternative.

I would like to note that the recommended alternative which has been identified in the pre final design report may be modified pending public and agency comments.

The project level needs include: Improve highway safety and reduce high accident locations; improve the capacity and function of the five leg Mt. Hope Avenue, East Henrietta Road, Crittenden Boulevard, Fort Hill Terrace intersection; improve the pavement and sidewalks in the project area, and improve the highway drainage.

Corridor area needs include: Multi modal enhancements. If we can reduce traffic delays on Mt. Hope Avenue and East Henrietta Road we will enhance mass transit/bus operations on these roadways further improving their effectiveness.

The project improvements need to improve mobility of people and goods throughout the corridor including improvements to the pedestrian environment where feasible.

By improving capacity and reducing accident rates along this corridor, we will help to create a transportation system that supports community plans for growth and development in the surrounding areas.

The community goals for this project are to strike a balance between the needs of the vehicles that travel these roadways each day with the needs of those who live, work and walk along the project corridor.

I'll refer back to the plan view graphics we have. The large graphics run south to north. North is to the right on the boards and also on these graphics north is to the right side of the imagery.

The City of Rochester and New York State Department of Transportation worked with Monroe County Department of Transportation, neighborhood organizations, an advisory task force and have met several times with the Mt. Hope Business Association, the University of Rochester and local business owners and residents to develop the feasible alternative.

The final approval of the preferred feasible

alternative will not be made until the impacts from the alternative, comments from the pre final design approval document and public opinion concerning the alternative have been fully evaluated.

The proposed roadway improvements will reconstruct the following roadways within the projects limits:

4500 feet of Mt. Hope Avenue from the southern City line/Erie Canal to Elmwood Avenue; 1700 feet of East Henrietta Road from South Avenue to Mt. Hope Avenue; 500 feet of Crittenden Boulevard from Mt. Hope Avenue to the west; 300 feet of Westfall Road realignment from Mt. Hope Avenue to the east; construction of a 650 foot long eastbound right turn lane on Elmwood Avenue west of Mt. Hope Avenue.

On Mt. Hope Avenue from East Henrietta Road/Crittenden Boulevard to Elmwood Avenue the pavement will be reconstructed to provide a 5 lane section consisting of 2 travel lanes in each direction with a center left turn lane at the intersections.

In this area the following improvements are proposed:

A 14 foot wide curbed center median is included to eliminate left turn and right angle

accidents from vehicles entering and exiting commercial driveways. This wide median allows for passenger car U turns at the signalized intersections.

Realignmnent of the Mt. Hope Avenue/East Henrietta Road/Crittenden Boulevard intersection to improve the geometrics of this intersection.

Under the preferred alternative Fort Hill Terrace will be removed from this intersection to improve traffic flow and pedestrian movements and reduce conflicts within the intersection.

Fort Hill Terrace will be terminated just east of the intersection where a turn around will be provided.

The remainder of Fort Hill Terrace between the termination point and South Avenue will be converted to a two way street with alternate side on-street parking.

8 foot wide recessed on-street parking spaces and 12 foot wide sidewalks will be provided on both sides of the street in this section of the project.

A new mid block traffic signal on Mt. Hope Avenue between Crittenden and Elmwood Avenue will be provided to facilitate future access to planned development at the University of Rochester and also

enhance access to and from businesses along the east side of Mt. Hope Avenue.

Several narrow right-of-way acquisition along both sides of Mt. Hope Avenue will be required.

These acquisitions are required to facilitate the construction of the desired sidewalks, center medians, widened curb side travel lanes and recessed on-street parking spaces.

Also some partial right-of-way acquisitions are needed to facilitate the realignment of the Mt. Hope Avenue intersection at East Henrietta Road, Crittenden Boulevard and Fort Hill Terrace.

Continuing south along Mt. Hope Avenue, from the Mt. Hope Avenue/East Henrietta Road/Crittenden Boulevard intersection to Brighton Park it is proposed to retain the 4 lane roadway section consisting of 2 travel lanes in each direction.

This section provides: Pavement reconstruction and widening of the pavement 1 foot on either side of the road to provide a curb to curb width of 42 feet that provides four 10 foot travel lanes with 1 foot curb offsets along the outer lanes; 5 foot wide sidewalks and 5 foot curb lawn areas are included in this section also.

Further to the south, retention of the 5 lane section is proposed between Brighton Park and Westfall Road consisting of 2 travel lanes in each direction with center left turn lanes at the intersections.

This section provides: Pavement reconstruction and widening of the pavement 1 foot on either side of the road to provide a curb to curb width of 52 feet that provides five 10 foot travel lanes with 1 foot curb offsets on the outside lanes.

Approximately 3 foot wide right-of-way strip takings along both sides of Mt. Hope Avenue are required along this section.

These acquisitions are required to provide for the proposed 5 foot wide sidewalks and 5 foot curb lawn areas and the minor roadway widening that is proposed.

A six lane section will be retained on Mt. Hope Avenue from Westfall Road to the south City line/Erie Canal project limit.

In this area the pavement will be reconstructed at the existing width and the existing lane configurations will be maintained.

Westfall Road improvements include a slight realignment and restriping of the roadway on its east

side approach to Mt. Hope Avenue.

This realignment is necessary to provide a westbound double left turn lane at the intersection. This modest widening and realignment improves the level of service at this busy intersection.

On East Henrietta Road from South Avenue to Mt. Hope Avenue the pavement will be reconstructed at the same curb to curb width it is today - 36 feet - providing for two 12 foot travel lanes with six foot paved shoulders.

The sidewalks in this section will be reconstructed with 5 foot wide concrete sidewalks. The existing 8 foot wide curb lawn areas will be retained.

Now, other proposed improvements within the overall project limits include: Reconstruction of the existing roadway pavements with new asphalt pavement over new stone sub base courses, installation of new granite curbs with curbside underdrains.

A new catch basin drainage system will be provided throughout the project limits.

The existing sidewalks will be reconstructed to provide a 5 foot minimum width throughout the project on both sides of the streets.

A 5 foot tree lawn will be established along

Mt. Hope Avenue where ever feasible.

ADA accessible sidewalk ramps will be constructed at all designated roadway passages.

New traffic signals will be provided at the new mid block signal, Mt. Hope Avenue/East Henrietta Road/Crittenden Boulevard and at the Westfall Road intersections.

Center line curve geometry will be added at the end of several side street approaches where they intersect with Mt. Hope Avenue to remove the 67 degree skew angle that currently exists.

Provide recessed on-street parking at select locations along the corridor, primarily along both sides of Mt. Hope Avenue between Crittenden Boulevard and Elmwood Avenue where ever feasible.

New signage and pavement markings throughout the project area.

In general, the proposed roadway profile will match the existing profile with only minor modifications in selected areas.

The project will also include a variety of water main and other utility improvements.

There will also be new aesthetic street lighting and miscellaneous aesthetic corridor and

landscaping enhancements yet to be determined.

Now, the details of these project elements still need to be developed. We will present details associated with these improvements at future project information meetings as the detailed design process evolves.

The preferred alternative is proposed to be constructed in two phases.

Phase I consists of making necessary safety and operational improvements to Mt. Hope Avenue between Rossiter Road and Elmwood Avenue.

Phase I will also include the addition of an eastbound right turn lane on Elmwood Avenue on its approach to Mt. Hope Avenue.

These improvements are necessary to reduce accidents and improvement safety, reduce congestion and improve traffic flow and improve air quality at these intersection.

Phase II construction consists of Mt. Hope Avenue reconstruction from Rossiter Road south to the southern City line, and also East Henrietta Road from South Avenue to Mt. Hope Avenue along with improvements to the Westfall Road approach to Mt. Hope Avenue.

Now, I'd like to note that the East Henrietta

Road improvements can feasibly be constructed under either Phase I or Phase II depending on the availability of funding.

If additional funding can be secured which is still to be determined these improvements may also be built as part of Phase I.

Beyond funding availability a primary reason that the project is being split into two phases is that there are several upcoming projects in the surrounding area that could potentially affect traffic operations on the southern Phase II portion of Mt. Hope Avenue.

The New York State Department of Transportation is currently evaluating improvements to the I-390 corridor including potential modifications to the Route 15, Route 15 A and Kendrick Road interchanges.

Also, the University of Rochester is finalizing its master plan which will define development plans that could have an effect on traffic patterns along the southern portion of the project corridor.

Once the combined effects of these projects are better defined the Phase II portion of Mt. Hope Avenue will be re-evaluated to assure that the proposed

lane configurations and improvements and associated right-of-way takings are still appropriate and will best meet the long term needs of the corridor.

If adjustments are deemed prudent an amendment to the design approval for Phase II would be pursued at that time.

This concludes the technical presentation of the recommended preferred project alternative.

Please note that this recommendation is subject to final public and agency comment and may still be modified in response to comments we receive.

I appreciate your attention and patience during this presentation.

I will now ask Richard Hite from RK Hite Company, our property rights consult for this project, to come up and discuss the right-of-way acquisition process being used in acquiring the necessary real property rights for this project.

Rich.

MR. HITE: Good evening, ladies and gentlemen.

The purpose of my presentation is to explain the process the City will use to acquire real property for this project.

As described earlier, the project extends south along Mt. Hope Avenue from Elmwood Avenue to the Erie Canal.

Approximately fifty-seven properties will be affected by Phases I and II of the proposed project and will require some measure of right-of-way acquisition.

The majority of the impacts will result in partial fee acquisitions or permanent and/or temporary easements.

The Phase I project improvements involve approximately thirty-three properties, including six that are associated with the proposed improvements along East Henrietta Road.

This coming year we will only be dealing with the Phase I right-of-way issues. The Phase II improvements are being deferred to a later date that has yet to be determined.

Essentially there are four steps in the right-of-way acquisition process: An initial meeting with each property owner; the real property appraisal; establishing just compensation, and negotiating a settlement and transferring title to the City.

Our primary goal through the process is to negotiate a fair settlement with each property owner.

The first step in the process is a preliminary meeting with one of our property rights specialists.

The property rights specialist will contact you to schedule a convenience time to meet with you at your property.

At this meeting he or she will provide you with information about the acquisition process and an explanation of the proposed impacts to your property.

We will also inspect the property and gather preliminary information.

The person you meet will also handle your negotiations. We think it is important for you to have one person you can contact if you have any questions.

The next step in the process is the real property appraisal. The appraisal will be used to determine the fair market value for the property rights to be acquired.

The appraiser will first research and analyze the real estate market in your area. Comparable sales data and other market information will be reviewed.

Next, the appraiser will inspect each property. Site specific information will be gathered at this time.

You will be given the opportunity to accompany the appraiser during this visit. You should take advantage of this offer. No one knows your property better than you do.

Finally, the appraiser will prepare a report. The report will document his or her findings and state the fair market value of the property rights to be acquired.

Just compensation is the price the City must pay to acquire your property. The City will establish an amount it believes to be just compensation.

This amount will not be less than the highest approved fair market value for the property.

As stated previously, the fair market value is determined during the appraisal phase.

We will try to offer an amount that reflects the price a willing buyer and a willing seller would agree to in the open market.

To avoid any possible confusion, we will prepare a written offer for each property. The offer will include a statement of the just compensation amount, the basis for the just compensation amount and a description of the property and the interest to be acquired.

We will contact each property owner and schedule a convenient time to meet. At this meeting the negotiator will deliver and review the written offer.

I'd like to stress one point. While we use the word negotiate, we, in fact, work under what is called a one offer system.

We are required by law to offer you the full amount of the highest approved appraisal. So unless there are compelling reasons to raise the offer we will stand by the one offer amount.

Once you have accepted the offer we will prepare the necessary papers and schedule a closing. The closing is similar to other real estate transactions that you may have been involved with.

I would like to quickly summarize the process we will use to acquire real property for this project.

First, we will meet with each property owner to provide information on the project's potential impact to your property.

Next we will appraise your property to determine the fair market value. The fair market value will be used by the City to establish just compensation.

Once the City has established just compensation, we will prepare and deliver a written offer to each affected property owner.

We understand that the right-of-way acquisition process may be new to you.

I'd like to assure you that we will try our best to make it as easy as possible for you. The City will make every effort to acquire the property by negotiations.

That concludes my portion of the presentation.

If you have any questions I will be available after the meeting, and now I would like to turn it back to Mr. Mark McAnany.

MR. McANANY: Thank you, Rich.

I would now like to outline the upcoming procedures and actions we can expect for this project.

The time period between this public hearing and February 2nd, 2009 will be allocated for receipt of written statements regarding this project.

A copy of the transcript and comments received will be available for public review at the City of Rochester's Street Design Office in Room 300-B at 30 Church Street, Rochester, New York.

Following receipt of the transcript, we will prepare a design recommendation and final design report which will include a thorough review and analysis of all the statements received as part of the record of this hearing and any other written comments from advisory agencies and the public that we receive.

When the design recommendation and report are reviewed and approved by the Federal Highway Administration, we will publish a Notice of Preferred Alternative and Notice of Availability of the Final Design Report in the local newspapers.

This will be the last opportunity for comment on the project document and the alternatives.

Following this process a Record of Decision will be published that describe the alternative to be progressed.

Shortly thereafter design approval will be obtained allowing the City to begin the preparation of detailed plans and right-of-way acquisitions.

Although we cannot control this process, we target that we will likely obtain design approval in March of 2009.

If design approval is obtained in early March the official real estate appraisals and acquisition

offers can then occur or be initiated hopefully beginning in late March or early April of 2009.

Final design of the project would then occur during the spring and summer months of 2009 in an effort to get construction underway in late fall of 2009.

We envision a one year construction effort for Phase I with the project being substantially completed in late fall 2010 under this current schedule with some modest work then remaining in the spring of 2011 to wrap up the project.

I would like to remind you that all oral and written comments carry the same weight.

Again, comment sheets can be returned to us tonight or written statements may be submitted to the City of Rochester Street Design Group, City Hall, Room 300-B, 30 Church Street, Rochester, New York, 14614 until February 2nd, 2009.

I want to reiterate, in conjunction with the public hearing process we will not be responding to statements made this evening, but we will analyze those statements and respond to them in the final design report.

All statements received either tonight or by

February 2nd, 2009 will be considered in the preparation and refinement of the design recommendation.

We are now beginning the portion of the public hearing where oral statements can be given.

If there is any one in the audience who wishes to make a statement and has not yet filled out a registration card, please do so now.

Is there any one that would like a registration card? Raise your hand.

Statements will be heard in the order in which the registration cards were received.

We will begin with federal officials, state officials, local officials and then the general public.

We don't have a lot of cards here. It shouldn't be too much.

Also, following the conclusion of the formal hearing private testimony can be made to our stenographer. Our stenographer is located in the front of this room to the left as you face this stage.

To keep this presentation moving we feel it will be necessary to limit the time for each speaker to five minutes.

However, in any one wishes to elaborate

beyond this time the stenographer will remain to take such statements after all speakers have had the opportunity to make their statements.

As your name is called please come up to the podium here, the microphone. Don't be nervous. We're all friends here.

Before beginning your statement, please state your name and address and your position with any organization you may represent.

Please speak loudly and clearly so that the stenographer can make an accurate record of your statement.

I would like to re-emphasize that the format of this hearing does not allow us to respond to your statements and questions.

However, all statements received will be considered in the preparation of the final design recommendation.

I now call for statements from the floor. The first statement I have here is Luis Cabral, 1500 Mt. Hope Avenue.

COMMENT 1

MR. CABRAL: My name is Luis Cabral. I'm at 1500 Mt. Hope Avenue and I'm a member of the Mt. Hope Business Association. I'd like to just read this

letter.

The Mt. Hope Business Association provides support of Phase I of Mt. Hope Avenue and East Henrietta Road public improvement project.

The success of the concept designs for Phase I was achieved through a partnership with the City of Rochester and Mt. Hope Avenue community.

The Mt. Hope Avenue Task Force formed to work on this project consisted of key stakeholders; Mt. Hope business and neighborhood associations, the Southeast Area Coalition, University of Rochester, City of Rochester ED, CD, DES and zoning supported a process that allowed due diligence and community engagement to successfully achieve a single vision.

Due to the pending time frame for Phase II of this project, Mt. Hope Business Association provides their support of Phase II with the knowledge and expectation that the Mt. Hope Avenue Task Force will provide the same due diligence necessary for the success of the project.

As in Phase I, Phase II of this project will solicit community input through design workshops and community forums with the goal of finalizing design concepts that reflect a unified vision.

Some of the areas we will address in the final development of Phase I and II are: The development of underground utilities on Mt. Hope Avenue to add to the safety of our streets making the Avenue more aesthetically appealing, and reviewing and addressing existing zoning regulations that are outdated and do not reflect the future direction of the new vision for Mt. Hope Avenue.

Thank you very much.

MR. McANANY: I now ask Melanie Warren, 1471 Mt. Hope Avenue, to come forward.

COMMENT 2

MS. WARREN: Good evening. My name is Melanie Warren. I'm a property owner at 1471 Mt. Hope Avenue.

I address this board as the co-owner with my husband Jeffrey Solomon of the property at 1471 Mt. Hope Avenue.

The property is situated on the corner of Crittenden Boulevard and Mt. Hope Avenue - meaning two sides of our property will be in the right-of-way.

This is a very important intersection, and according to all plans indicate it needs to be realigned in order to make it more functional.

As long as we are able to remain at this

property we can support this project as we see the benefits to the community and all the benefits the reconstruction of the Mt. Hope Avenue will bring.

We have been working together with different departments of the City of Rochester and feel they understand our fifty year commitment to the Avenue and our neighbors.

Especially during this design concept phase it would be prudent at this time to come to a creative solution for us to retain as much property as possible; thus allowing our business to retain as much parking as possible and keeping it a viable business.

As President of the Mt. Hope Business Association I recognized the importance of this project and facilitated a dialogue between businesses, residents and the City of Rochester and our working together to find a long term vision for the Avenue.

As a business owner I'm confident the City of Rochester recognizes the importance of all small businesses and their contributions to their community and neighbors and will continue working with each of us to find the appropriate answers.

MR. McANANY: Thank you.

I would like to ask Ed Wolak of 1500 Mt. Hope

Avenue to come and give a statement.

MR. WOLAK: I'll pass.

MR. McANANY: Let the record show Ed has passed on that.

I believe this card says Terry Russo of 16 Redford Drive.

MS. RUSSO: Good evening. I know you all know me from St. Anne's Church here.

I do like to see this Mt. Hope area be widened especially --

UNIDENTIFIED SPEAKER: Adjust the microphone. We can't hear you back here.

COMMENT 3

MS. RUSSO: I'm Terry Russo, 16 Redford Drive.

I do like to see this Mt. Hope Avenue and especially side roads be widened and new sidewalks put in and whatever else needs to be done, and I'd like to see some grocery stores put in.

That's all I have.

MR. McANANY: Thank you.

That concludes the list of people who have indicated they wish to make a statement.

Are there any more statements to be made from the floor? Raise your hand.

MS. RICE: I put in a card saying I'd like to make a statement, Nancy Rice.

MR. McANANY: Come on up, Nancy. We will have to fill out a card for you.

COMMENT A

MS. RICE: I'm a member of South Presbyterian Church, and the Pastor of our church was on the planning board for the -- or the planning committee for this work, and when we received the -- this glossy publication about the plans, as of December they said that Fort Hill Terrace which is at Crittenden Road -- or Crittenden Avenue, Mt. Hope, East Henrietta Road intersection that there would be a no right turn except for Fort Hill for people coming north on Mt. Hope Avenue and the bullnose at that corner could be extended to create better alignment of the crosswalks.

However, in the summary that we received in connection with this public hearing I note that it now says that Fort Hill Terrace is going to be cut off from access from Mt. Hope Avenue and from East Henrietta Road.

So that will be disastrous for our church because we're located - let me see - right here, and the parking lot is down here, and if you cut off this access then somehow through our signage we would have

to communicate with people that they have to be able to go all the way around to South Avenue and come back up Fort Hill Terrace to the church.

That -- that just seems to me to be totally unworkable, and so I would register a strong objection to that change since the last time the plan was announced.

I'm not an official of the church. The Pastor knew I was coming over tonight, but we will also have a section of the church contribute a written statement in the ten day comment period.

MR. McANANY: Okay. Thank you. Did you find the card? Would you fill out a card? We do want to make it official.

Are there any more statements to be made from the floor? Raise your hand.

Did you fill out a card?

UNIDENTIFIED SPEAKER: I have heard no mention of price tags for this project.

MR. McANANY: Sir, we can only take official statements entered into the record up here at the podium.

This is not a question and answer session. We will be on hand to answer questions after the

hearing though and we can elaborate at that time.

Does any one want to make a formal statement for the record at this time?

(No response.)

MR. McANANY: I want to thank you for your comments, concerns and suggestions.

As we previously mentioned, all comments will be evaluated and considered prior to making our final recommendation.

I would like to remind you once again that any additional comments should be received by February 2nd, 2009.

These comments should be submitted to the City of Rochester, Department of Environmental Services, Room 300-B, 30 Church Street, City Hall, Rochester, New York, 14614, Attention Mr. Paul Way.

MR. HURLEY: Actually I'd like to make one statement. I didn't sign in.

MR. McANANY: You'll have to state your name and address.

COMMENT 5

MR. HURLEY: Dan Hurley, President of Mt. Hope Neighborhood Association.

In response to the concern on the capping of Fort Hill Terrace, there was an effort to reach Deb

Swift as far back as early October on this via e-mail. There were several attempts and no replies. So we have made an attempt to reach out to South Presbyterian on this.

We realize it's an important issue. It is going to impact the church and we need their comment on this as soon as we can.

I just want to leave that for the record. Thank you.

MR. McANANY: Thank you. Make sure you fill out a card.

Does anybody else want to make an official statement?

We have given you the opportunity to submit written comments.

Lastly, I just want to tell you that our project representatives will be available to answer questions following adjournment of the hearing.

The stenographer is also available for private testimony up here.

If there are no more statements concerning this project -- are there any?

Okay. I declare this hearing adjourned.

Thank you. Good night. Have a safe trip

home.

COMMENT 6

(Private comment made to Court Reporter:)

MR. PORTER: Fred Porter. I live at 67 Brighton Park just across from the school -- the Al Sigl school.

I object to the fact that there's no talk of the amount of monies that we're going to be spending on a project like this at a time where it can have some influence.

By the time the bids are made this project will have so much momentum no one can object to the price tag.

There's something wrong with the process - not this project. The process needs fixing.

You've got to talk money. The state has no money. The federal government has no money. The City has no money. We have no idea what is to be spent.

Enough said.

(No further private comments.)

* * *

REPORTER CERTIFICATE

I, John M. DiMartino, CSR, RPR, do hereby certify that I did report in stenotype machine shorthand the proceedings held in the above-entitled matter;

Further, that the foregoing transcript is a true and accurate transcription of my said stenographic notes taken at the time and place hereinbefore set forth.

Dated 2/2/09

At Rochester, New York

John M. DiMartino, CSR, RPR

COMMENT
4

South Presbyterian Church

4 East Henrietta Road ✠ Rochester, New York 14620

February 1, 2008

Mr. Paul Way, *Street Design Engineer*
City of Rochester
30 Church Street
Rochester, NY 14614

Mr. Mark McAnany
Bergman Associates
28 East Main Street, Suite #200
Rochester, NY 14614

Re: Mt. Hope Avenue and East Henrietta Road Improvement Project
City Project No. 09101, P.I.N. 4753.61

Dear Paul and Mark:

Thank you for meeting with representatives of South Presbyterian Church on both January 27 and January 29, 2009 to discuss the above noted project's potential impact on the church. Present at those meetings were Ms. Amy Doty, Clerk of Session, Mrs. Stena Rickner, Co-Chair of Deacons, Mr. Gordon Rickner, Chair of the Building and Grounds Committee, and our Pastor, the Reverend Deborah Fae Swift.

We have read the minutes of our public meeting on January 29th and agree that they are a fair depiction of the conversations which took place.

South Presbyterian Church stands ready to move forward with this project as long as the concerns outlined in the minutes remain at the forefront of conversation and proposed action on the part of the City of Rochester and other program partners.

Our church traces its roots back 160 years to when our first congregation (a Sunday Bible study) met in the location that would later become Record Archive. We have a strong commitment to the Upper Mt. Hope Neighborhood and the Mt. Hope Business Association – and hold active memberships in both organizations. That having been said, we also have witnessed much change during those years and recognize the safety concerns which are fueling this improvement project.

As such, we look forward to active involvement and partnership with the City in our support of this plan as it has been described and outlined to us.

Sincerely,

Deborah Fae Swift
(The Reverend) Deborah Fae Swift
Pastor

Amy Parker Doty
Elder Amy Doty
Clerk of Session

Bergmann associates

Mt. Hope Avenue and East Henrietta Road Improvement Project

City Project No. 09101
P.I.N. 4753.61

South Presbyterian Church Meeting

4 East Henrietta Road / 24 Rosemount Street
January 29th, 2009 @ 6:00 PM

In Attendance:

Paul Way	City of Rochester, Street Design
Mark McAnany	Bergmann Associates
Deborah Fae Swift, Pastor	South Presbyterian Church
Don Rickner and Stena Rickner	South Presbyterian Church
Several Parishioners	South Presbyterian Church

This meeting was held to discuss the plans for the upcoming Mount Hope Avenue and East Henrietta Road roadway improvements, including the proposed closure of the Fort Hill Terrace approach to the Mount Hope – Crittenden – East Henrietta intersection. The closure will include conversion of Fort Hill Terrace to two-way access via South Avenue, with alternate on-street parking. This modification will provide some real benefits to safety and traffic operations at this location but it does create a changed vehicular access condition for the church and its visitors.

The following comments and ideas were discussed to address the project changes:

Discussion Items:

- In combination with the Fort Hill Terrace roadway closure, an enhanced church drop off point may be possible along the south side curb line of Fort Hill Terrace. Final design will look at on-street parking possibilities and modifications to the sidewalk and ADA access ramps to facilitate improved accessibility to the church.

- Some additional on street parking near the western terminus of Fort Hill Terrace will be pursued if space can be made available to allow this to occur.

- Cut-through traffic across the church property, between Rosemount Street and Fort Hill Terrace, has been an ongoing issue for the church. There is concern that this could potentially increase with the changes to Fort Hill Terrace. Project related improvements could perhaps mitigate this via installation of a swing or sliding gate and fence or perhaps some form of moveable planter boxes.

- Any fence or gate systems should have a black wrought iron appearance, utilizing modern fence materials and treatments.

- The church day care has daily child drop off and playground activities that need to be accounted for in any access and parking reconfiguration.

- Snow plowing and snow storage on church property has been an issue. Any parking and access reconfiguration needs to consider how snow will be handled.

Bergmann associates

- Signage at the Church access drive locations indicating "South Presbyterian Church – No Thru Traffic" should be installed.

- An informational brochure that defines future access routes and parking locations for church visitors can be prepared for long term use and distribution.

- The planting bed that fronts Mount Hope Avenue can potentially be expanded northward with the project modifications, across the Fort Hill Terrace right of way width. It was noted that a local neighborhood entity such as the Mount Hope Business Association would need to accept maintenance of the planting bed for this to occur as the City does not maintain these neighborhood features.

The City and Bergmann Associates offered to work closely and in cooperation with Church representatives during detailed design to develop the best possible plan for future access, parking, snow storage, etc. The proposed roadway and sidewalk modifications will provide real opportunity to make some meaningful improvements in this area.

The above constitutes our understanding of issues discussed and decisions reached at this meeting. Please notify the undersigned, in writing, with any errors or omissions.

Best regards,

BERGMANN ASSOCIATES

Mark J. McAnany, P.E.
Project Manager

cc: Paul Way, City of Rochester
Deb Swift, South Presbyterian Church
Tom Lichtenthal, Bergmann Associates
BA Project 6699.00 file

COMMENT 7

January 29, 2009

Paul Way
City Hall, Room 300B
30 Church St.
Rochester, NY 14614-1279

Dear Paul Way,

Regarding the upcoming Construction Project on Mt. Hope Ave. and the involvement of the property I own, I am concerned about parking , and the entrance on the Rossiter side and how it will effect our building.

Sincerely,

Cathaline Robinson
Owner, 1545 Mt. Hope Ave.
Phone (585) 334-0094

MT. HOPE AVENUE AND EAST HENRIETTA ROAD IMPROVEMENTS
(Erie Canal to Elmwood Avenue and South Avenue to Mt. Hope Avenue)
City of Rochester
PIN 4753.61

COMMENT SHEET

The City of Rochester in cooperation with the New York State Department of Transportation and their Consultant Team value your input! Please share with us your comments and thoughts about this project.

Name: Richard Rowe
Representing Rowe Photo
Address: Mt. Hope Properties, LLC
1737 Mt. Hope Realty Corp.
Daytime phone: (585) 721-8230

COMMENTS ACCEPTED UNTIL FEBRUARY 2, 2009

See attached

Sent 1-26-2009

For further information, please contact:
Paul Way , P.E.
City of Rochester Street Design Manager
City of Rochester, NY
(585) 428-7383

COMMENT 8

Rowe

Home Theater | Audio | Camera | Video

Rochester • Greece • Webster

To: Mr. Paul Way, P.E.
City of Rochester Street Design Manager

PIN4753,61
1-26-2009

RE: Mt. Hope Ave. and East Henrietta Rd. Improvements
Property owned by Mt. Hope Properties, LLC
Tax #136.69-2-46, #136.69-2-48, #136.69-2-49, #136.69-2-50
And, Rowe Professional Photographers Property Tax # 136.77-1-12

After reviewing information presented at the public meeting held 1-21-009, I am in favor with the overall concept of the Phase 1 project, however I have great concern over the Phase 2 portion. Extensive community input and meetings of review were held to develop and adapt the Phase 1 portion. This resulted in general high praise and acceptance from all community stake holders (businesses, residents, U of R, etc.) for Phase 1. However, this same community input process was not done for Phase 2. Why shouldn't landowners, residents, investors and businesses in the Phase 2 region, expect the same amount of caring concern and review time as was done in the Phase 1 area? Also, it should be noted that if the proposed Kendrick Road interchange and The City Gate Community Project proceeds in the future, this would change dramatically the traffic patterns and volume in Phase 2 and would necessitate a future change in the current proposed plan. I strongly believe that there is a need for more study and community input to address future needs and soon to be area changes.

On a personal level, the proposed recessed parking in front of 1737 Mt. Hope Ave. is ill engineered, leaving very little sidewalk for pedestrians, not to mention the problem of snow plowing. This limitation will be of a more serious issue with the current City zoning initiative for future buildings to be moved out to the front of street property lines and would limit the possible redevelopment and value of this property. Also, there are no other areas in Phase 2 that has recessed parking, and with this busy and fast driven area, seems ill designed for safe parking on Mt. Hope Ave. Recessed parking on both sides of our side street Elmerston Road would make much more sense.

I do not wish to have this project delayed, however I do ask for more study and consideration concerning the future changes that will be encountered in the Phase 2 area. We should not be "locked" into a plan that does not address future realities, because of budget time lines and government processing issues.

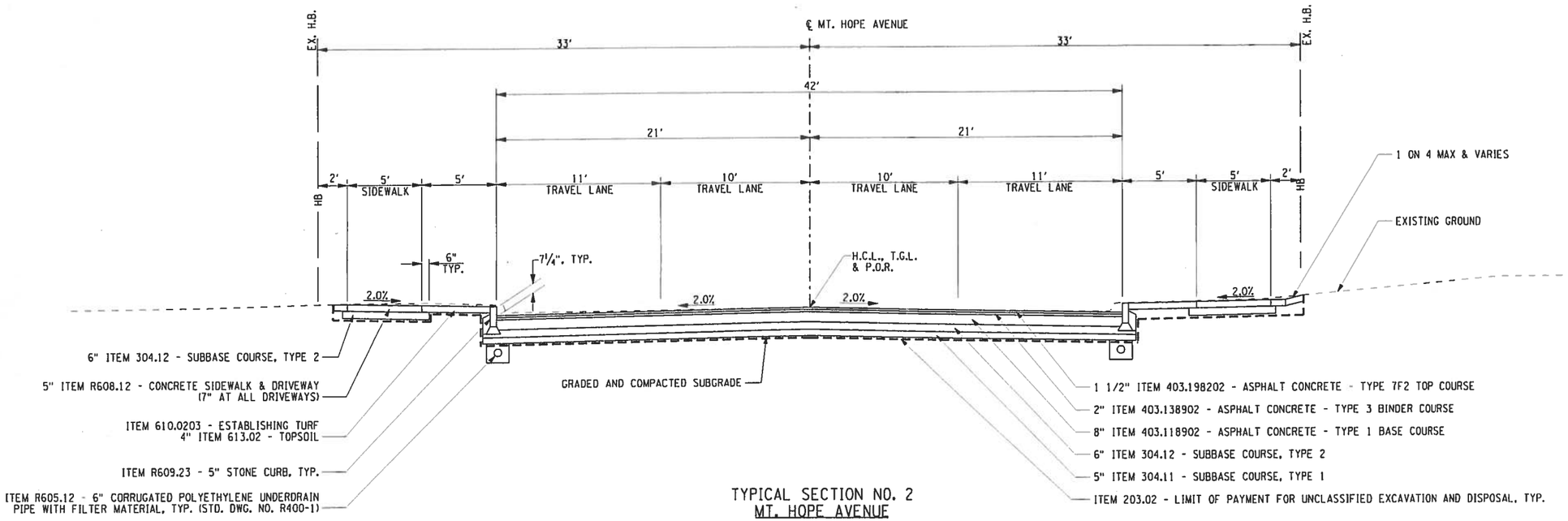
Sincerely,

Richard Rowe
President

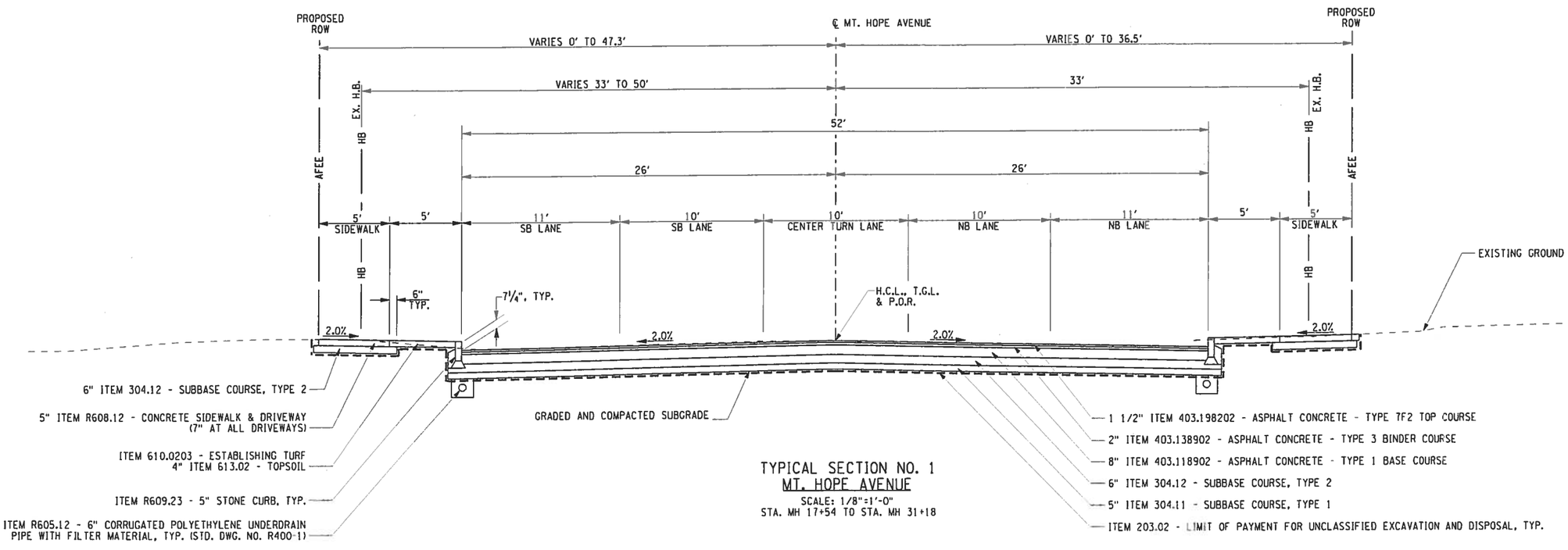
1737 Mt. Hope Ave. Rochester, New York 14620
(585) 442-8230 www.rowephoto.com Fax (585) 442-7454

APPENDIX A

Proposed Typical Sections, Plans and Profiles



TYPICAL SECTION NO. 2
MT. HOPE AVENUE
SCALE: 1/8" = 1'-0"
STA. MH 31+18 TO STA. MH 40+41



TYPICAL SECTION NO. 1
MT. HOPE AVENUE
SCALE: 1/8"=1'-0"
STA. MH 17+54 TO STA. MH 31+18

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

Department of Environmental Services

Bergmann associates
www.bergmannpc.com
28 East Main Street
200 First Federal Plaza
Rochester, New York 14614
585.232.5135 / 585.232.4552 fax
Engineers / Architects /Planners/ Surveyors

REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

Date

NOTE:
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TYPICAL SECTIONS

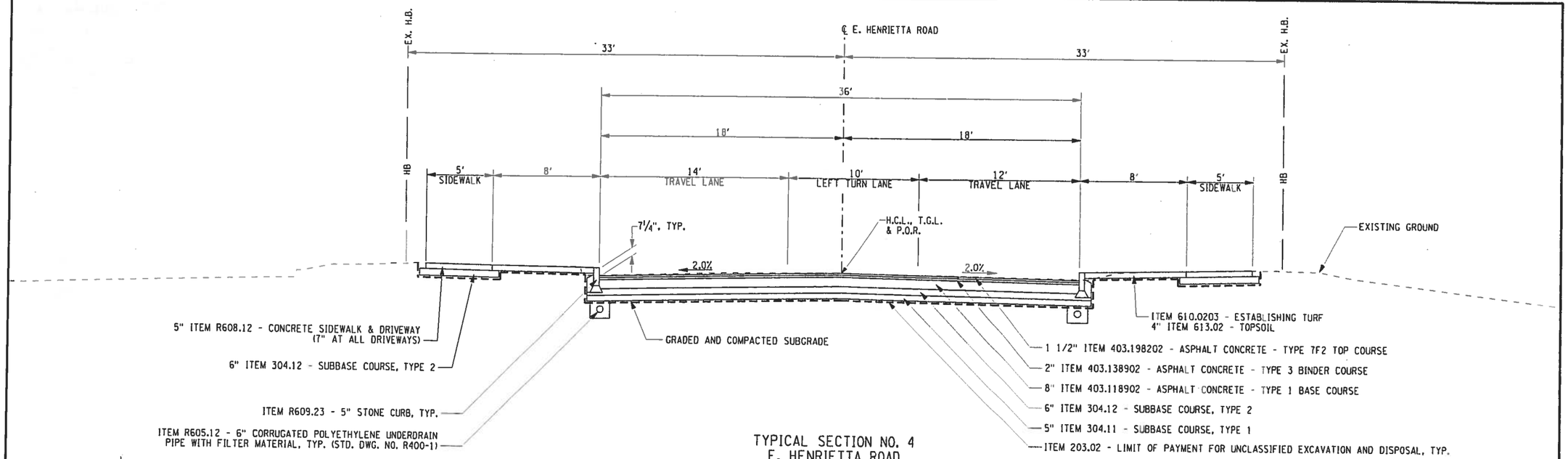
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1/8"=1'-0"

Project Number: 6699
File Name: 6699a_typ.dgn

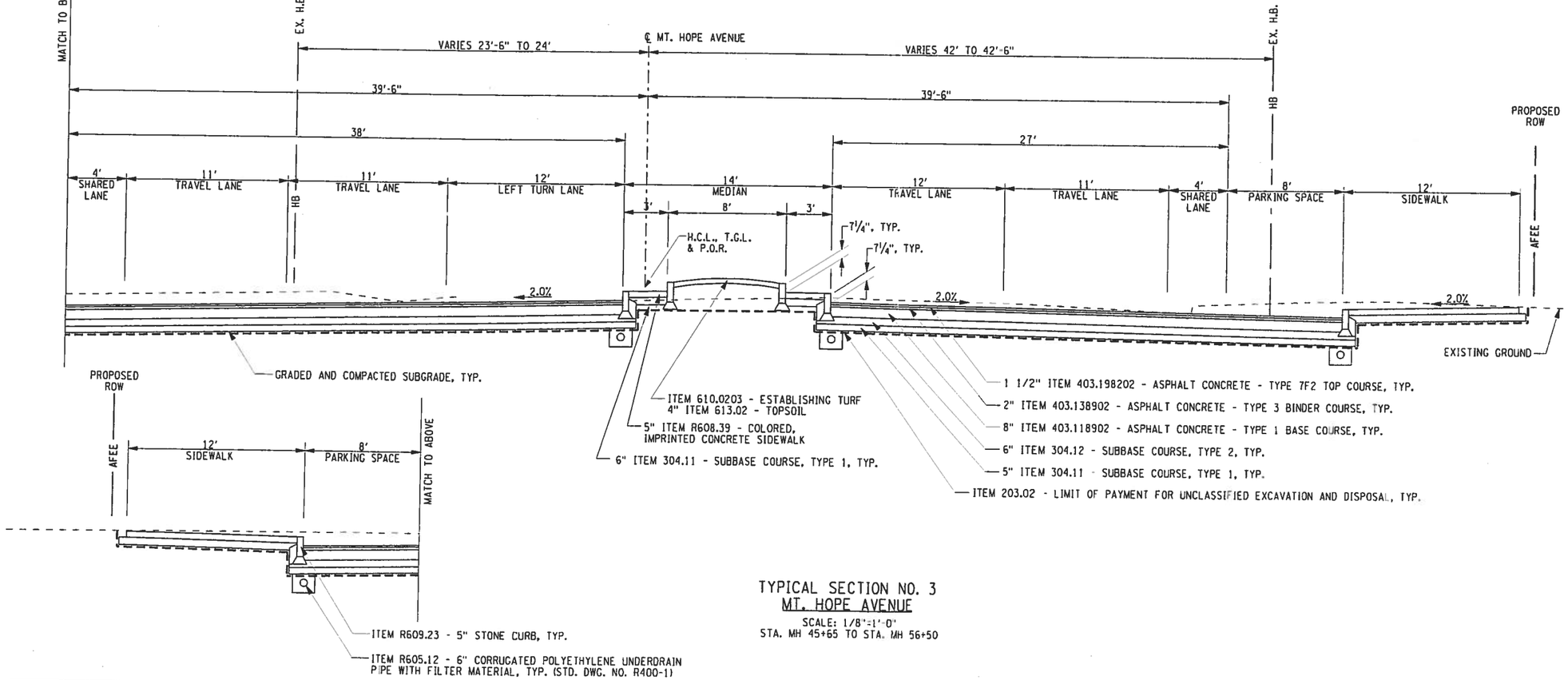
Drawing Number:

TS-1

XX of 29



TYPICAL SECTION NO. 4
E. HENRIETTA ROAD
SCALE: 1/8"=1'-0"
STA. EH 23+55 TO STA. EH 29+40



TYPICAL SECTION NO. 3
MT. HOPE AVENUE
SCALE: 1/8"=1'-0"
STA. MH 45+65 TO STA. MH 56+50

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

Date

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TYPICAL SECTIONS

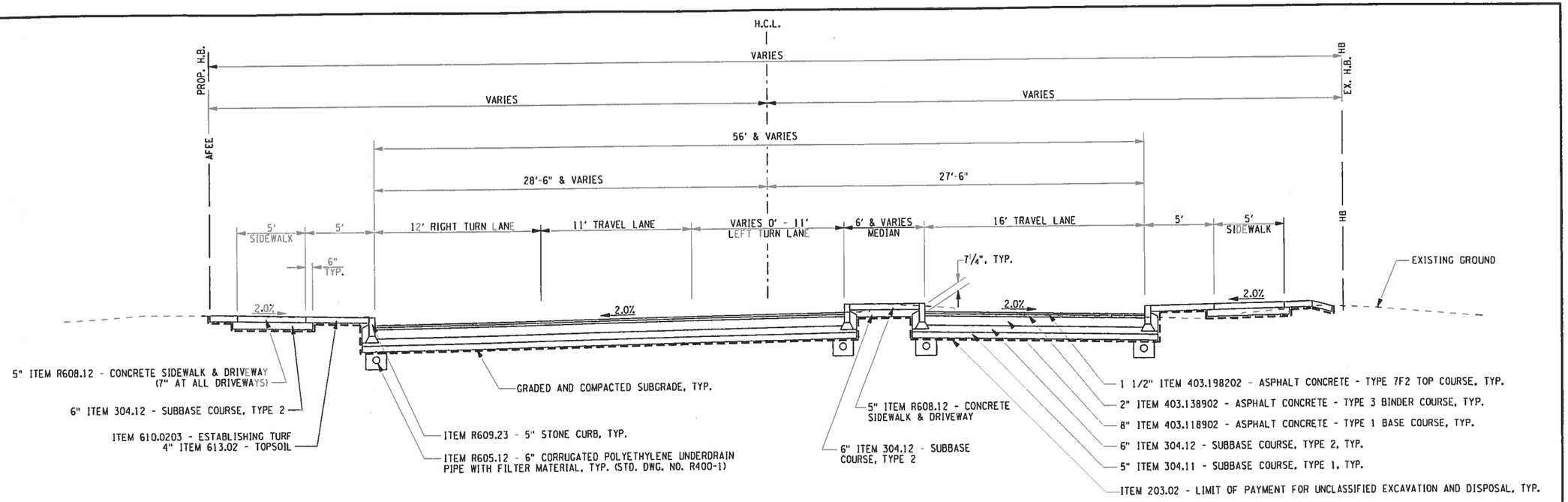
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1/8"=1'-0"

Project Number: 6699
File Name: 6699b_typ.dgn

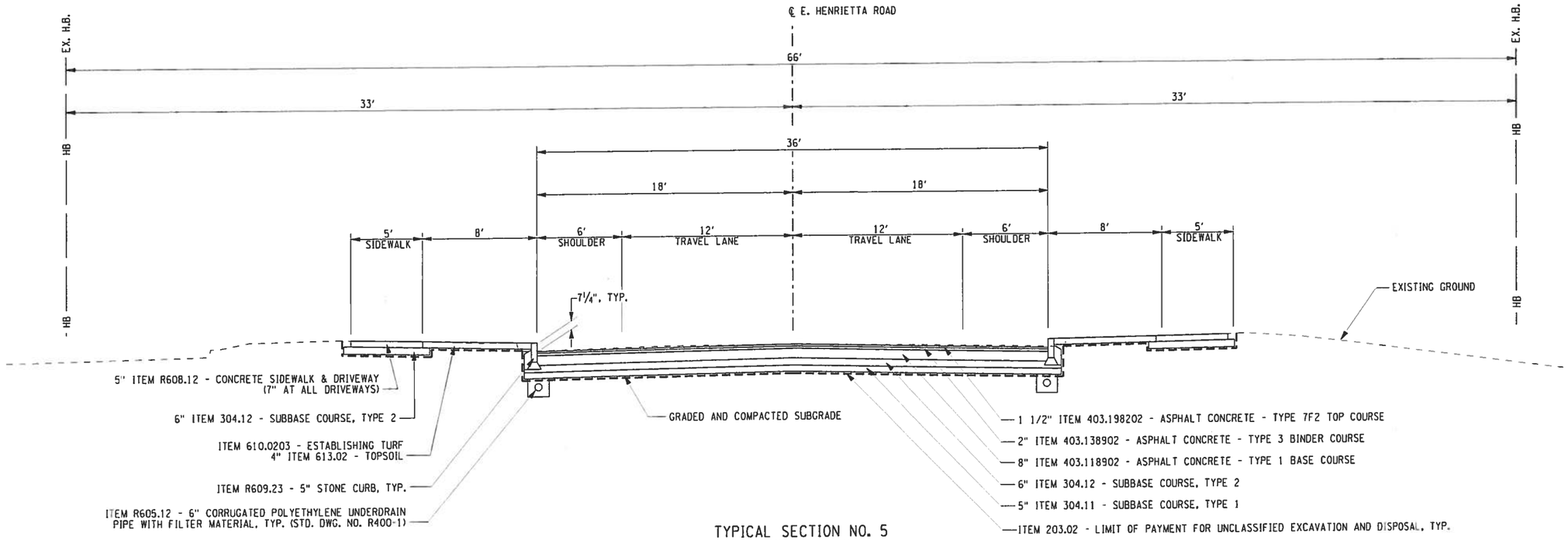
Drawing Number:

TS-2

XX of 29



TYPICAL SECTION NO. 6
CRITTENDEN BOULEVARD
SCALE: 1/8"=1'-0"



TYPICAL SECTION NO. 5
E. HENRIETTA ROAD
SCALE: 1/8"=1'-0"
STA. EH 12+65.6 TO EH 23+50

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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NO.	DATE	DESCRIPTION	REV.	CK'D

Date

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TYPICAL SECTIONS

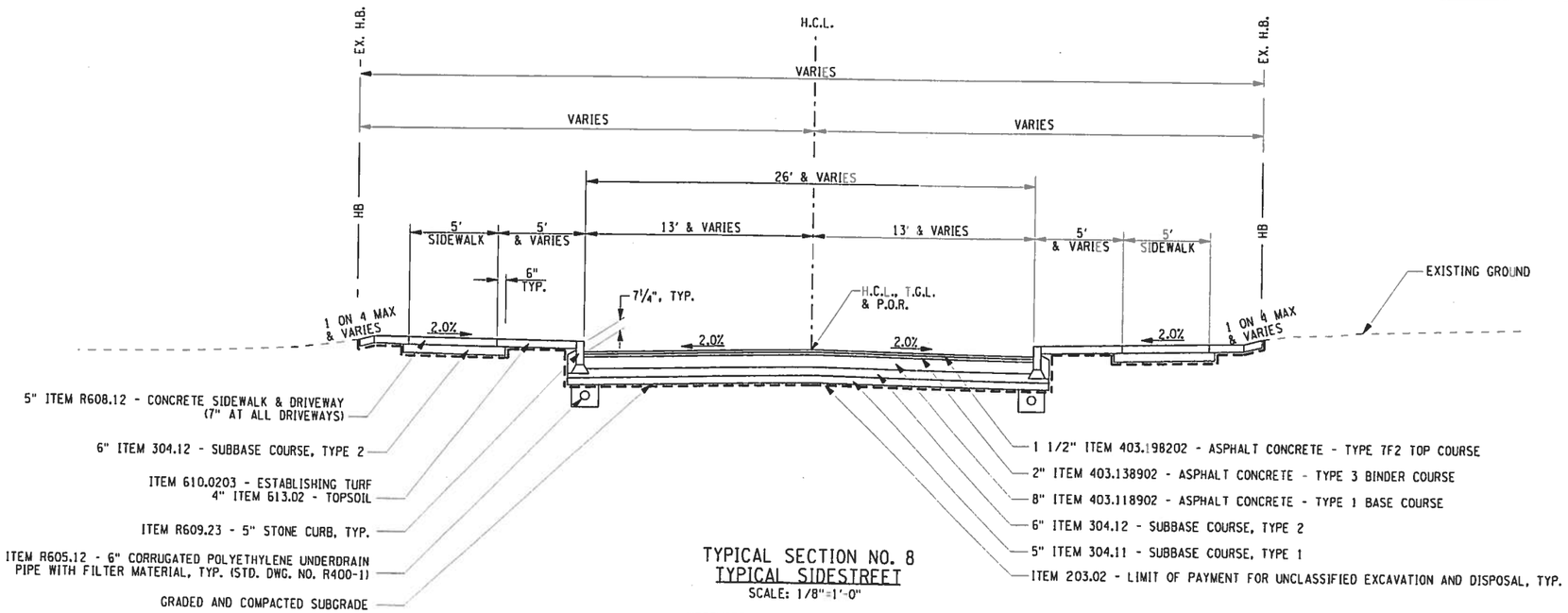
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.P.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1/8"=1'-0"

Project Number: 6699
File Name: 6699c_typ.dgn

Drawing Number:

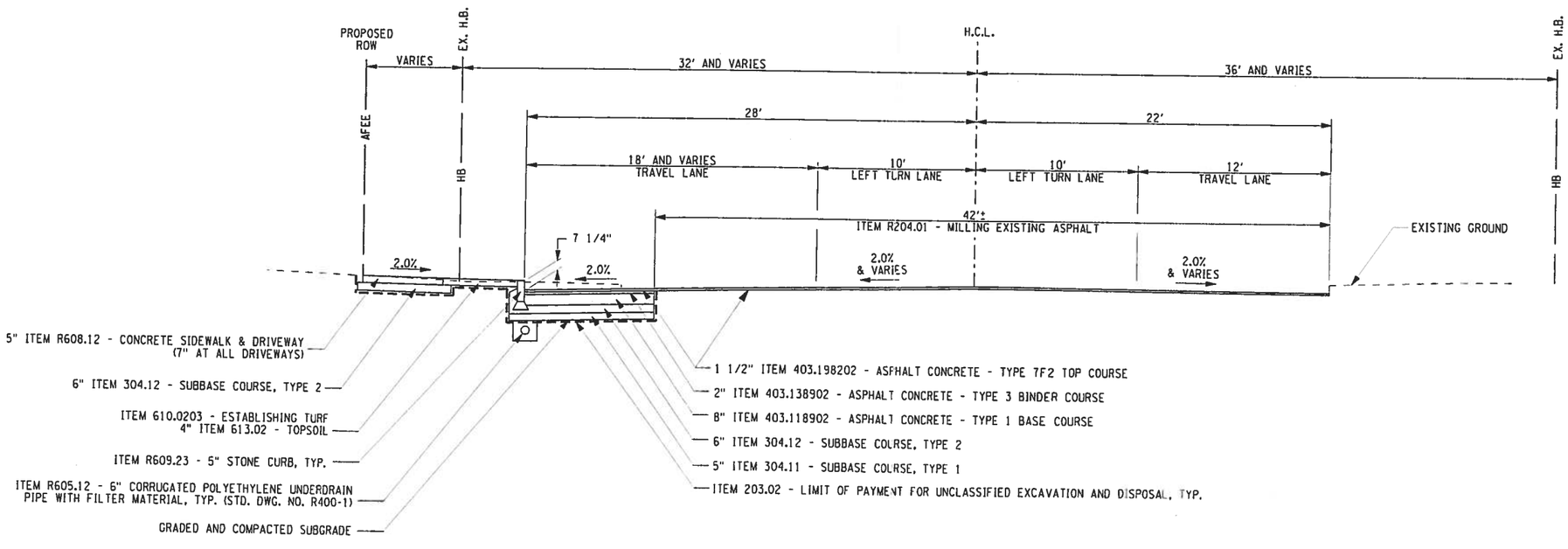
TS-3

XX of 29



TYPICAL SECTION NO. 8
TYPICAL SIDESTREET
SCALE: 1/8"=1'-0"

WESTMORELAND ROAD	LATTIMORE ROAD
EDGEMONT ROAD	IRVINGTON ROAD
CIMMARON DRIVE	ROSSITER ROAD
ELMERSTON ROAD	RALEIGH ROAD
WHITEFORD ROAD	BOOTH STREET
SHELBOURNE ROAD	WARREN STREET
REDFERN DRIVE	ROSEMONT STREET
BRIGHTON PARK	FORT HILL TERRACE



TYPICAL SECTION NO. 7
WESTFALL ROAD
SCALE: 1/8"=1'-0"
LOOKING WEST

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

Date

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TYPICAL SECTIONS

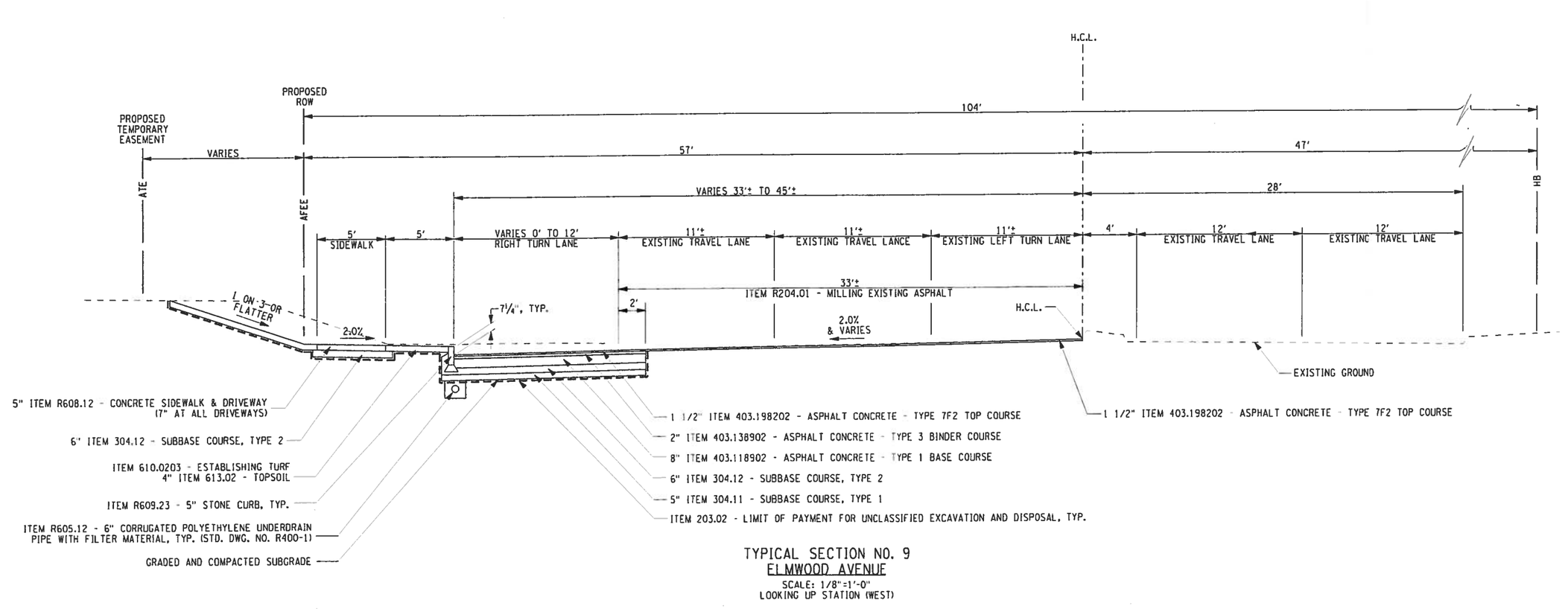
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scales: 1/8"=1'-0"

Project Number: 6699
File Name: 6699d_typ.dgn

Drawing Number:

TS-4

XX of 29



TYPICAL SECTION NO. 9
ELMWOOD AVENUE
SCALE: 1/8"=1'-0"
LOOKING UP STATION (WEST)

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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REVISIONS				
NO.	DATE	DESCRIPTION	REV.	CK'D

Date

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TYPICAL SECTIONS

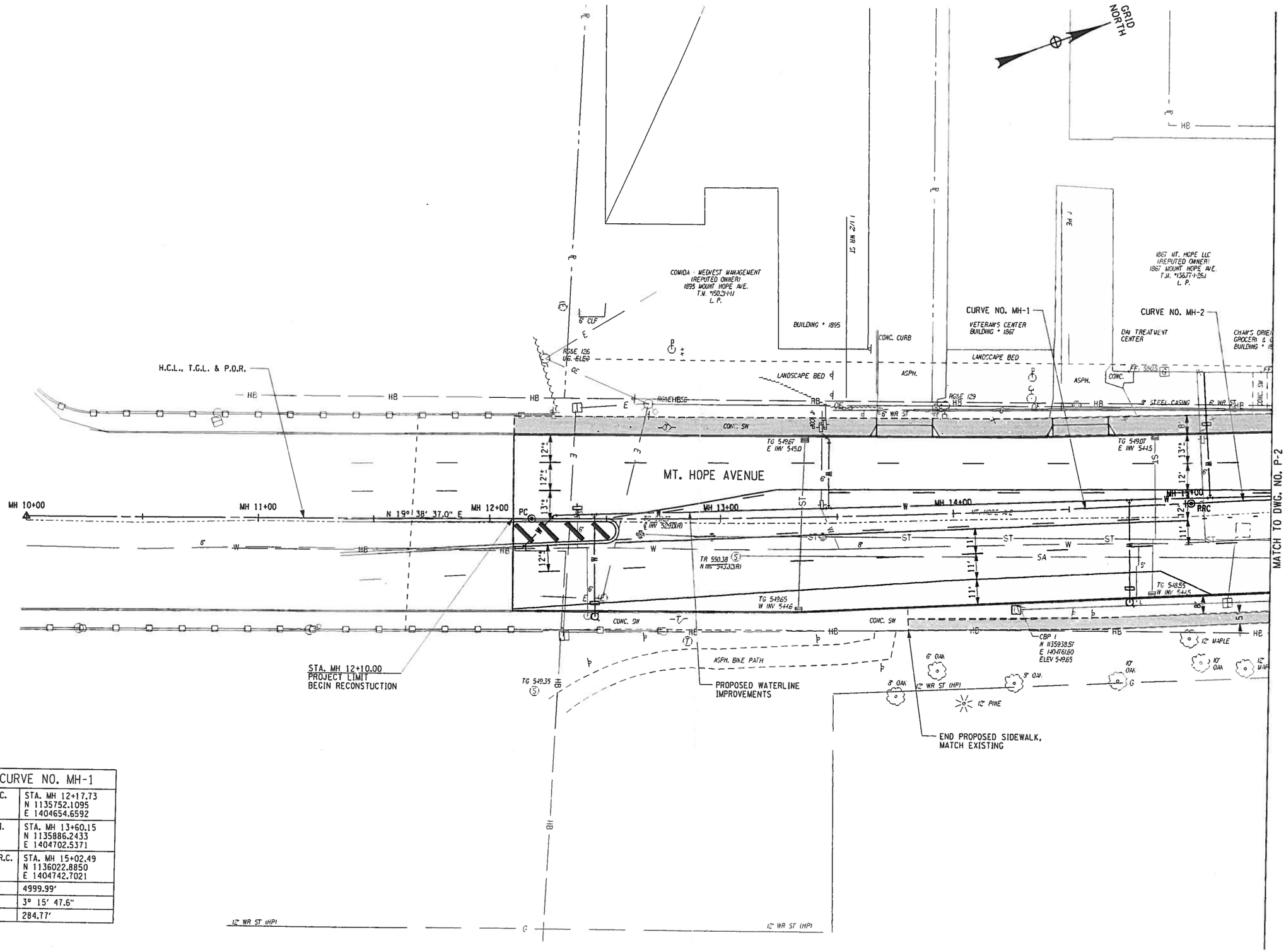
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scales: 1/8"=1'-0"

Project Number: 6699
File Name: 6699e_typ.dgn

Drawing Number:

TS-5

XX of 29



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P.I.	STA. MH 13+60.15 N 1135886.2433 E 1404702.5371
P.R.C.	STA. MH 15+02.49 N 1136022.8850 E 1404742.7021
R	4999.99'
Δ	3° 15' 47.6"
L	284.77'

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REVISIONS			
NO.	DATE	DESCRIPTION	REV. CK'D

The underground structures and utilities shown on this drawing have been plotted from available surveys or utility record maps. They are not certified to the accuracy of their location or their completeness. It is the Contractor's responsibility to verify the location and extent of all underground structures and utilities.

Date

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PLAN

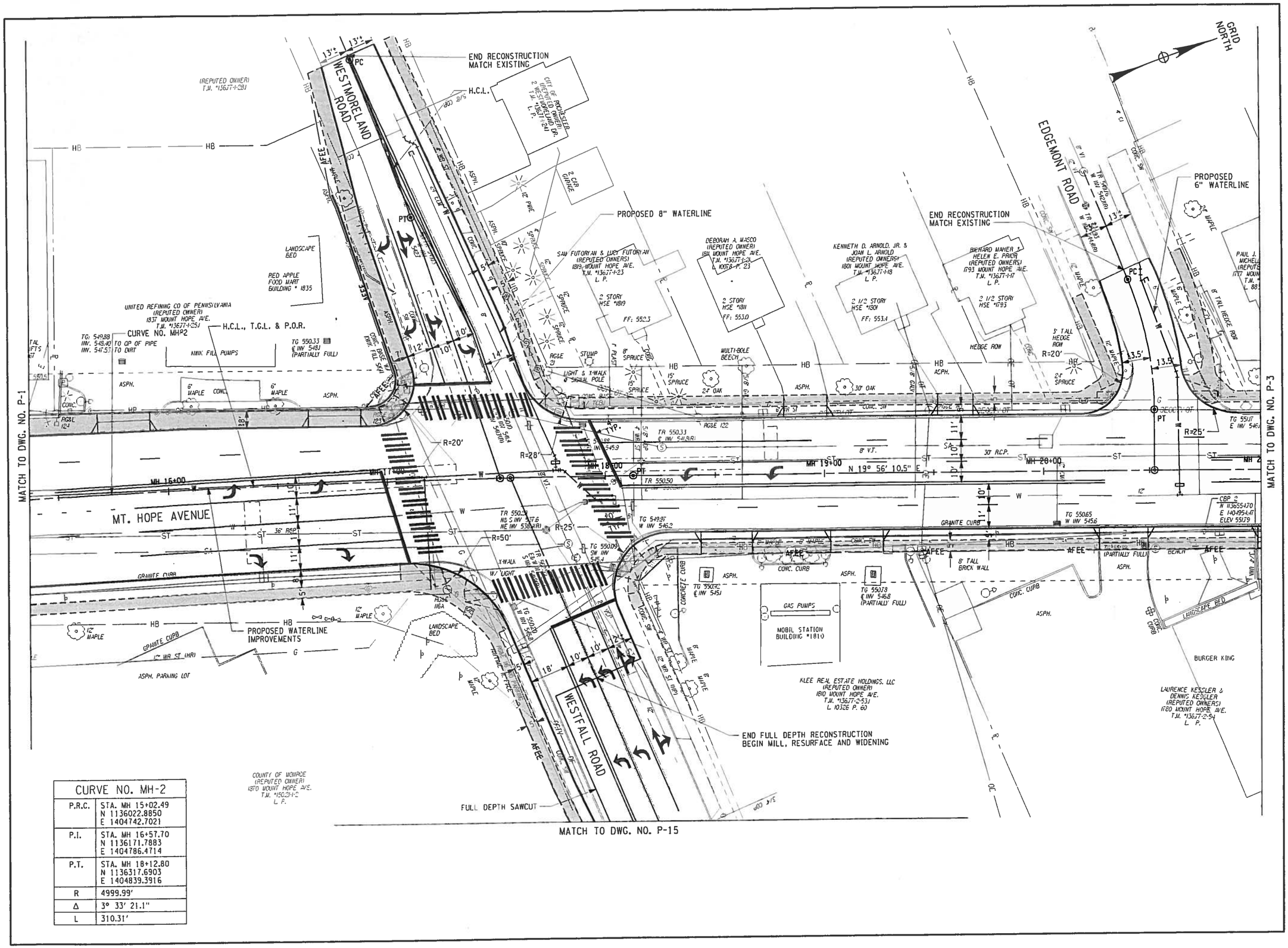
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699ah_wk3.dgn

Drawing Number:

P-1

XX of 29



CURVE NO. MH-2	
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P.I.	STA. MH 16+57.70 N 1136171.7883 E 1404786.4714
P.T.	STA. MH 18+12.80 N 1136317.6903 E 1404839.3916
R	4999.99'
Δ	3° 33' 21.1"
L	310.31'

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PLAN

Project Manager:	M.J.M.
Designed by:	D.W.T.
Drawn by:	D.W.T.
Checked by:	T.W.L.
Date Issued:	February 27, 2009
Scale:	1"=40'
Project Number:	6699
File Name:	6699bh_wk3.dgn
Drawing Number:	P-2
	XX of 29

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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REVISIONS				
NO.	DATE	DESCRIPTION	REV.	CK'D

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PLAN

Project Manager:	M.J.M.
Designed by:	D.W.T.
Drawn by:	D.W.T.
Checked by:	T.W.L.
Date Issued:	February 27, 2009
Scale:	1"=40'

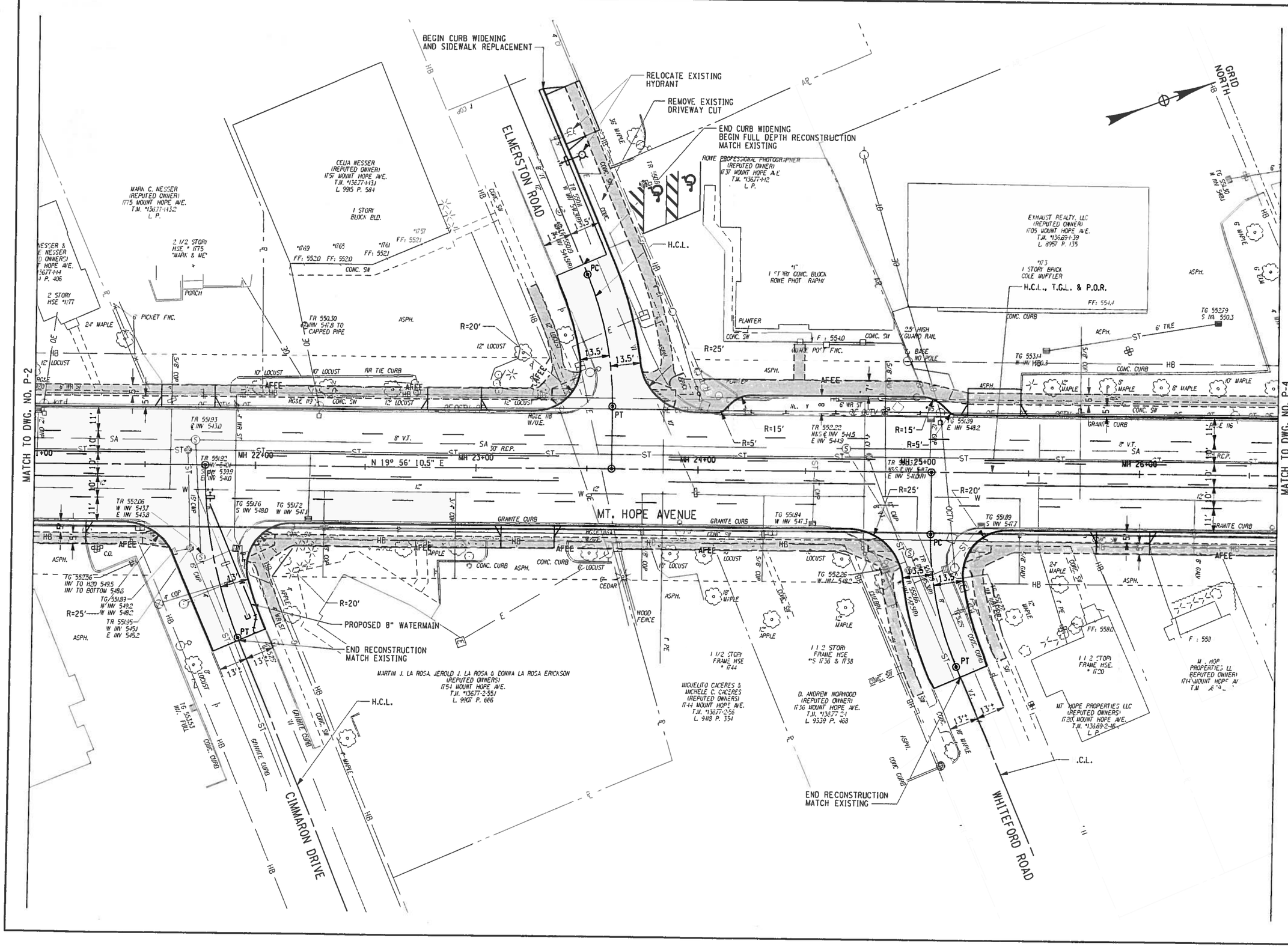
Project Number: 6699

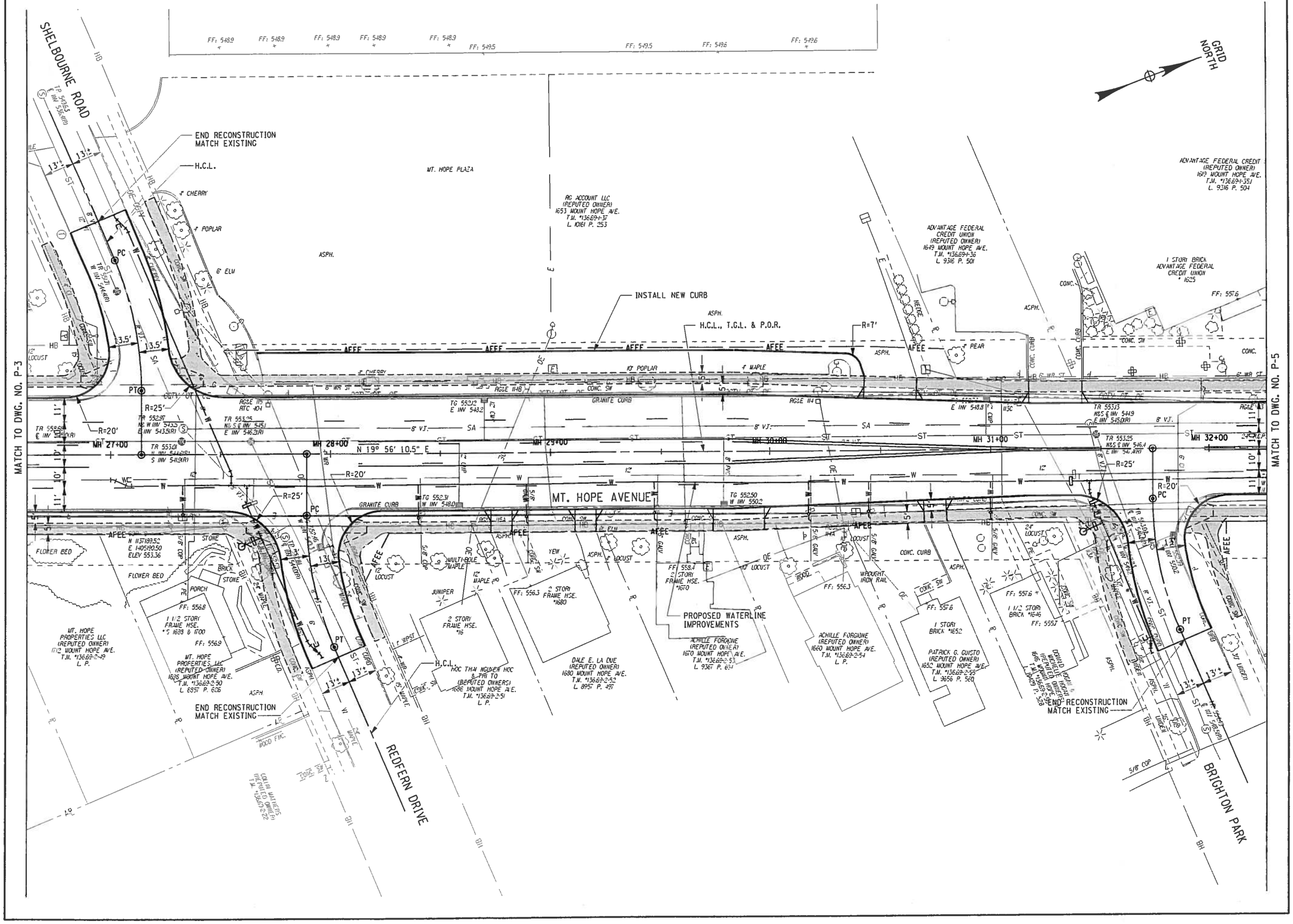
File Name: 6699ch_wk3.dgn

Drawing Number:

P-3

XX of 29





Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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Rochester, New York 14614
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REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

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Date

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PLAN

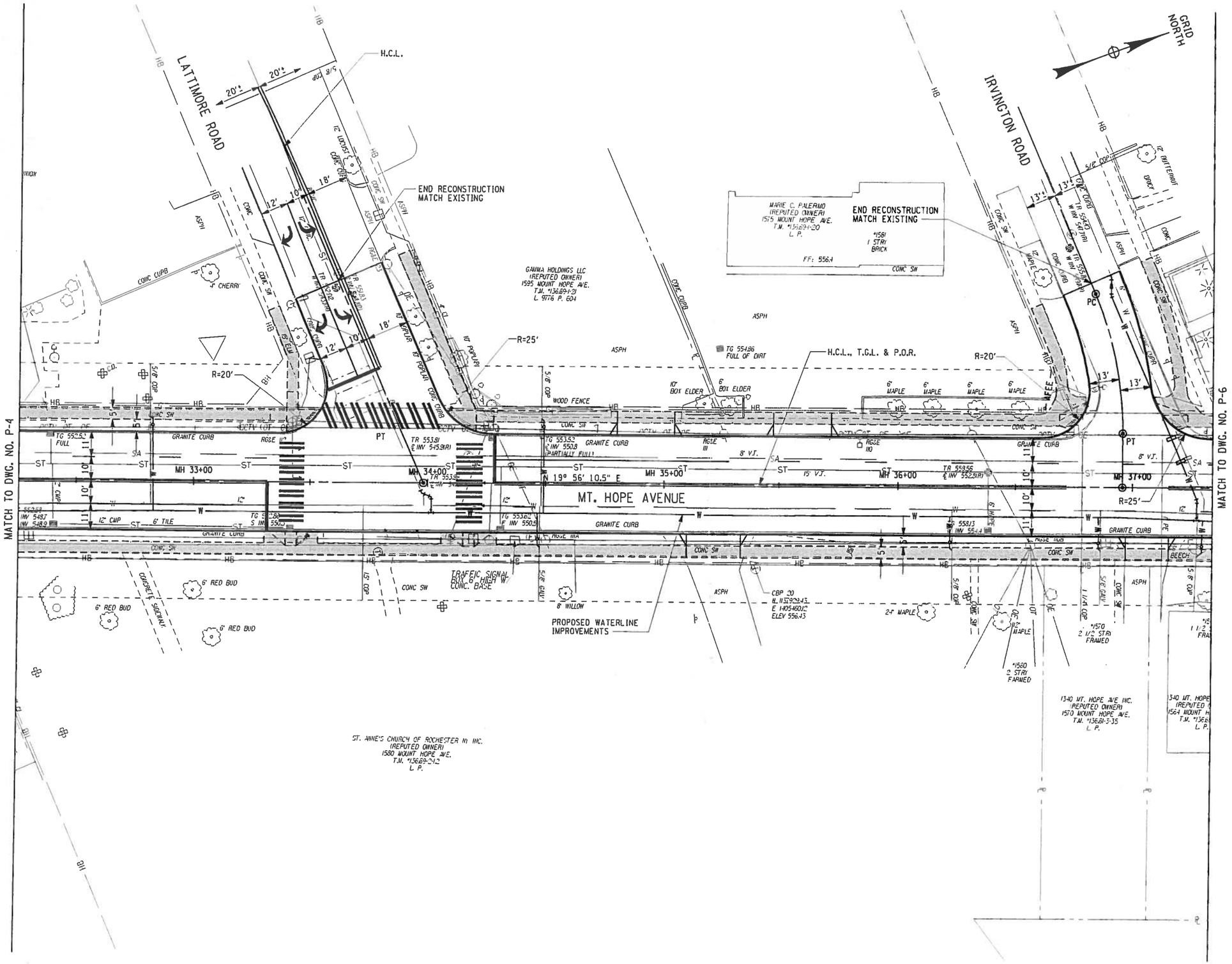
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699dh_wk3.dgn

Drawing Number:

P-4

XX of 29



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Date

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PLAN

Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699eh_wk3.dgn

Drawing Number:

P-5

XX of 29

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

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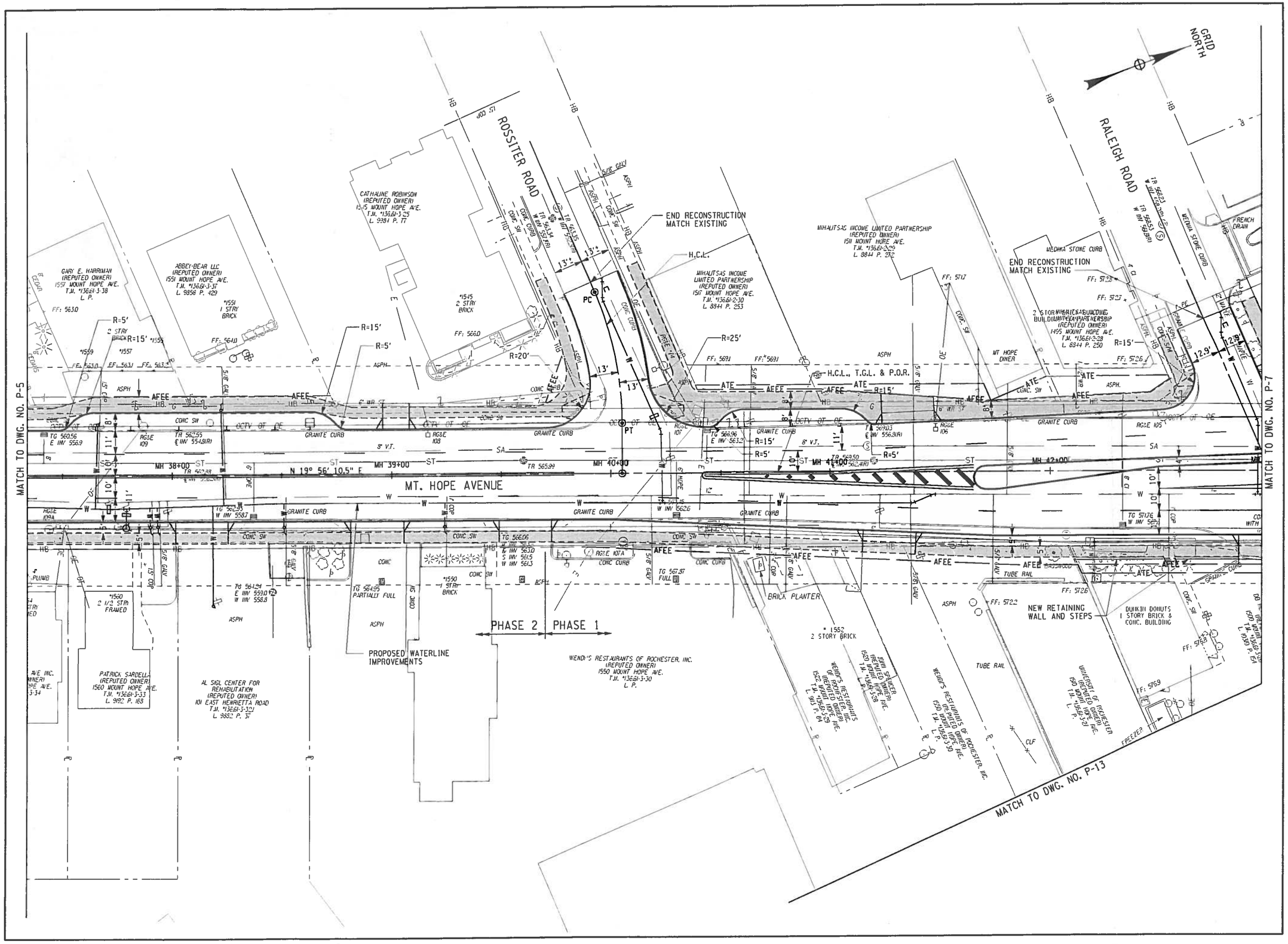
REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D



Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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REVISIONS				
NO.	DATE	DESCRIPTION	REV.	CK'D

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Date

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PLAN

Project Manager:	M.J.M.
Designed by:	D.W.T.
Drawn by:	D.W.T.
Checked by:	T.W.L.
Date Issued:	February 27, 2009
Scale:	1"=40'

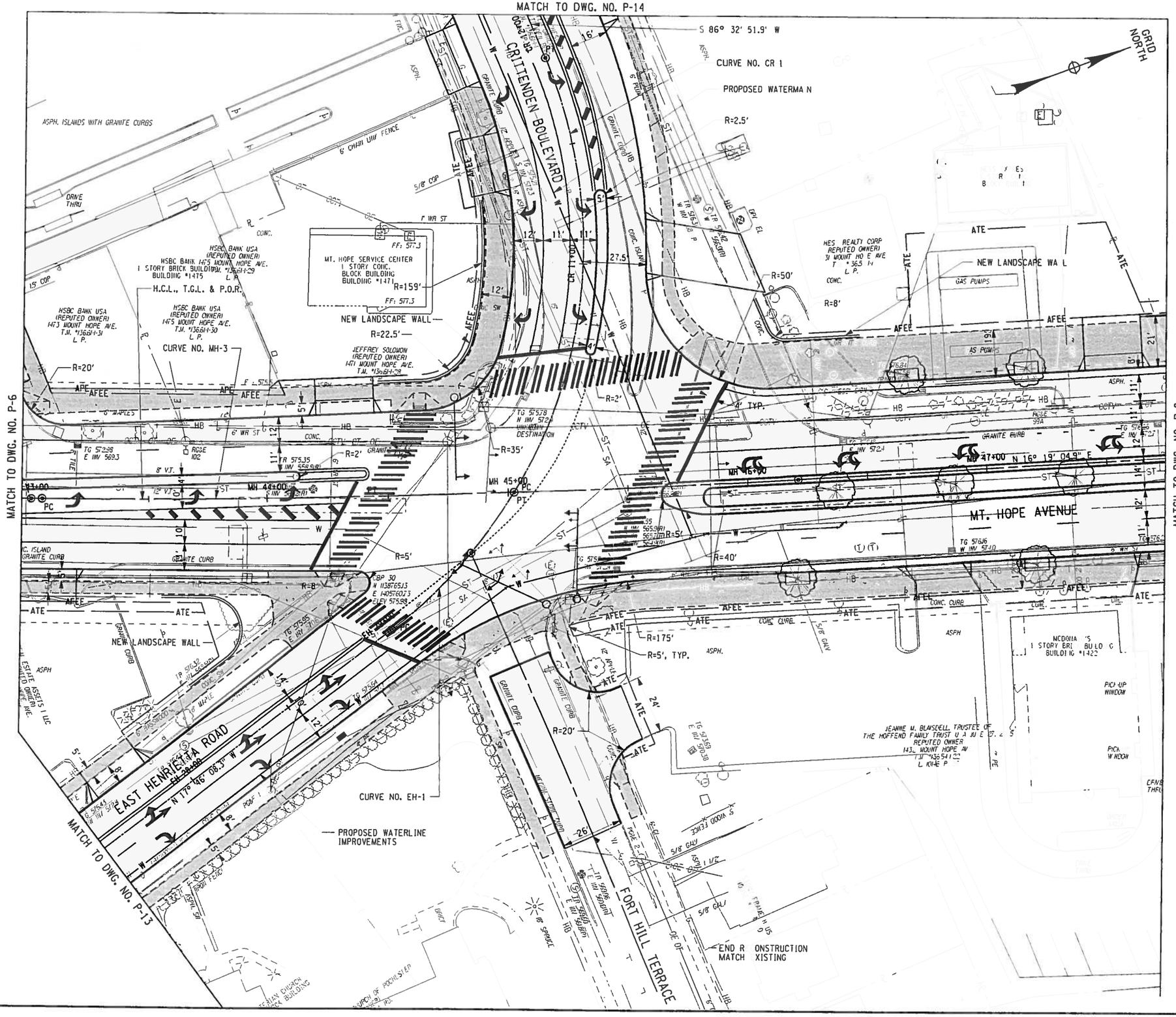
Project Number: 6699

File Name: 6699fh_wk3.dgn

Drawing Number:

P-6

XX of 29



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P.T.	STA. MH 46+21.03 N 1138960.8343 E 1405787.4860
R	5000.00'
Δ	3° 37' 05.6"
L	315.75'

CURVE NO. EH-1	
P.C.	STA. EH 29+03.10 N 1138780.2705 E 1405789.6505
P.I.	STA. EH 29+42.08 N 1138817.3921 E 1405777.7542
P.T.	STA. EH 29+80.09 N 1138847.3290 E 1405752.7878
R	200.00'
Δ	22° 03' 29.0"
L	77.00'

CURVE NO. CR-1	
P.C.	STA. CR 10+00.00 N 1138847.3290 E 1405752.7878
P.I.	STA. CR 11+01.08 N 1138924.9585 E 1405688.0473
P.T.	STA. CR 11+87.19 N 1138918.8716 E 1405587.1482
R	200.00'
Δ	53° 37' 30.8"
L	187.19

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

Department of Environmental Services

Bergmann associates
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Engineers / Architects /Planners/ Surveyors

REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

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Date

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PLAN

Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

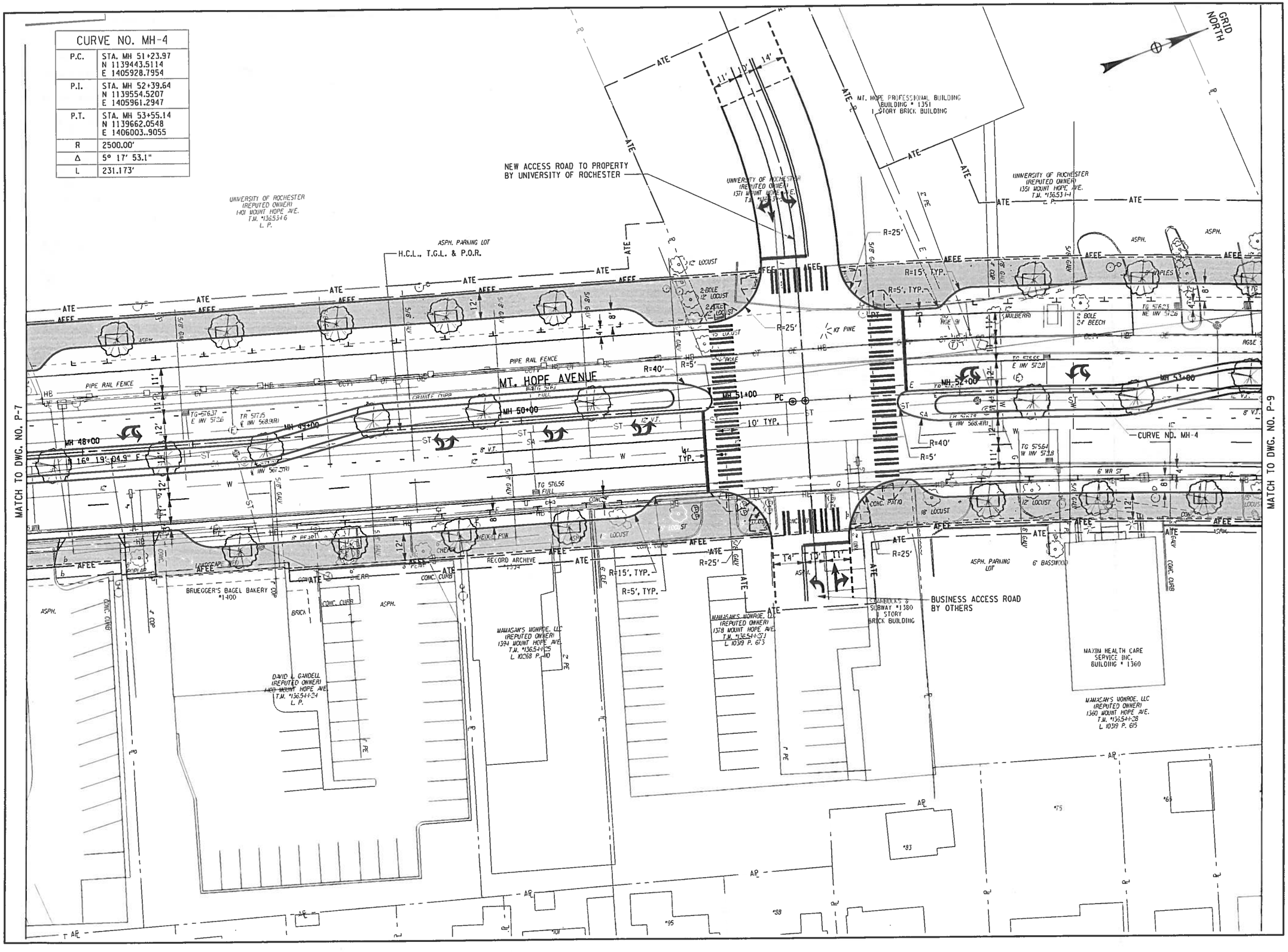
Project Number: 6699
File Name: 6699gh_wk3.dgn

Drawing Number:

P-7

XX of 29

CURVE NO. MH-4	
P.C.	STA. MH 51+23.97 N 1139443.5114 E 1405928.7954
P.I.	STA. MH 52+39.64 N 1139554.5207 E 1405961.2947
P.T.	STA. MH 53+55.14 N 1139662.0548 E 1406003..9055
R	2500.00'
Δ	5° 17' 53.1"
L	231.173'



Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

Department of Environmental Services

Bergmann associates
www.bergmannpc.com
28 East Main Street
200 First Federal Plaza
Rochester, New York 14614
585.232.5135 / 585.232.4652 fax
Engineers / Architects /Planners/ Surveyors

REVISIONS				
NO.	DATE	DESCRIPTION	REV.	CK'D

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Date

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PLAN

Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699hh_wk3.dgn

Drawing Number:

P-8

XX of 29

CURVE NO. MH-5	
P.C.	STA. MH 55+37.65 N 1139831.7259 E 1406071.1382
P.I.	STA. MH 55+96.91 N 1139886.8213 E 1406092.9699
P.T.	STA. MH 56+56.17 N 1139942.4186 E 1406113.4896
R	5000.00'
Δ	1° 21' 29.3"
L	118.52'

MATCH TO DWG. NO. P 16

MATCH TO DWG. NO. P-8

MATCH TO DWG. NO. P-17

GRID NORTH

FULL DEPTH SAWCUT

ELMWOOD AVENUE

UNIVERSITY OF ROCHESTER TOWN HOUSES

UNIVERSITY OF ROCHESTER (REPUTED OWNER) 1325 MOUNT HOPE AVE. T.M. #136.53-1-33 L. P.

H.C.L., T.C.L. & P.O.R.

ASPH. PARKING

GRANITE CURB

LANDSCAPE BED

AFEE

ATE

HB

MT. HOPE AVENUE

MH 54+00

R 21° 36' 58.0" E

MH 55+00

PC

MH 56+00

MH 57+00

MH 58+00

N 20° 15' 28.7" E

R=40'

R=15'

30" MAPLE

24" PINE

5' CHESTNUT

R=2'

R=1'

R=55'

R=25'

STA. MH 56+85.75
END RECONSTRUCTION
MATCH EXISTING

MOUNT HOPE CEMETERY
CITY OF ROCHESTER
(REPUTED OWNER)
1133 MOUNT HOPE AVE.
T.M. #136.57-1-1
L. P.

HEDGE ROW

3'X3' GRANITE BOX WITH STEEL COVER

6" CHERRY

8" APPLE

30" MAPLE

15" SPRUCE

3-BOLE 6" APPLE

4-BOLE 18" MAPLE

6" PEAR

5' TALL METAL FENCE

CONC. S/W

FULL DEPTH SAWCUT

8.5'

10'

11'

12'

CURVE NO. MH-4

BORDEAUX FINE HAIR STYLING BUILDING/ ABBOTT'S ICE CREAM #1340

ALEX L. D ANGELO & PATRICIA A. D ANGELO (REPUTED OWNERS) 1340 MOUNT HOPE AVE. T.M. #136.54-1-30.2 L. P.

#1330 MYKONOS EXPRESS GREEK CUISINE 1 1/2 STORY BLOCK BUILDING

LE THI BE WALTERS (REPUTED OWNER) 1330 MOUNT HOPE AVE. T.M. #136.54-1-32 L. 9336 P. 499

GRAVEL LANDSCAPE BED

ASPH.

3' CLF

WOOD FENCE

CONC. CURB

WOOD RAIL

END NEW SIDEWALK MATCH EXISTING

TG 57187 FULL

TG 57124 INV 567.5 CAP OVER PIPE

C/S PHARMACY

END NEW CURB MATCH EXISTING

BERKSHIRE-ROCHESTER LIMITED (REPUTED OWNER) 797 ELMWOOD AVE. T.M. #136.54-1-2 L. P.

GRAVEL LANDSCAPE BED

WOOD RAIL

ELMWOOD AVENUE

INSTALL NEW CURB

A.PH PARKING LOT

MT. H PE AVENUE
REPUTED OWNER
1.66 OUNT HOPE AVE
T.M. #136.48-1-48
OHO P. 336

BEGIN NEW CURB AND SIDEWALK

BENFANTE'S AP BUILDIN 1 STORY BU

15.6'

12'

11'

11.6'

TR 57070 N INV 563.6(IR) E INV 563.5(IR)

TR 57078 E INV 563.4(IR)

TR 57013 N INV 561.9(IR) E INV 560.7(IR)

TG 57100 E INV 568.6 S INV 567.8

TG 57366 FULL

TG 57361 W INV 570.8

TG 57114 E INV 568.4(IR)

TG 570.40 N INV 567.4 E INV 566.5

TG 570.21 W INV 567.5

CBP 6 N 1140.1.50 E 1406213.06 ELEV 57.16

CBP N 1139667.85 E 1405967.40 ELEV 577.66

TG 57685 S INV 574.0

S/S GAL

W WR ST

E COURT

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

Department of Environmental Services

Bergmann associates

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Engineers / Architects /Planners/ Surveyors

REVISIONS				
NO.	DATE	DESCRIPTION	REV.	CK'D

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PLAN

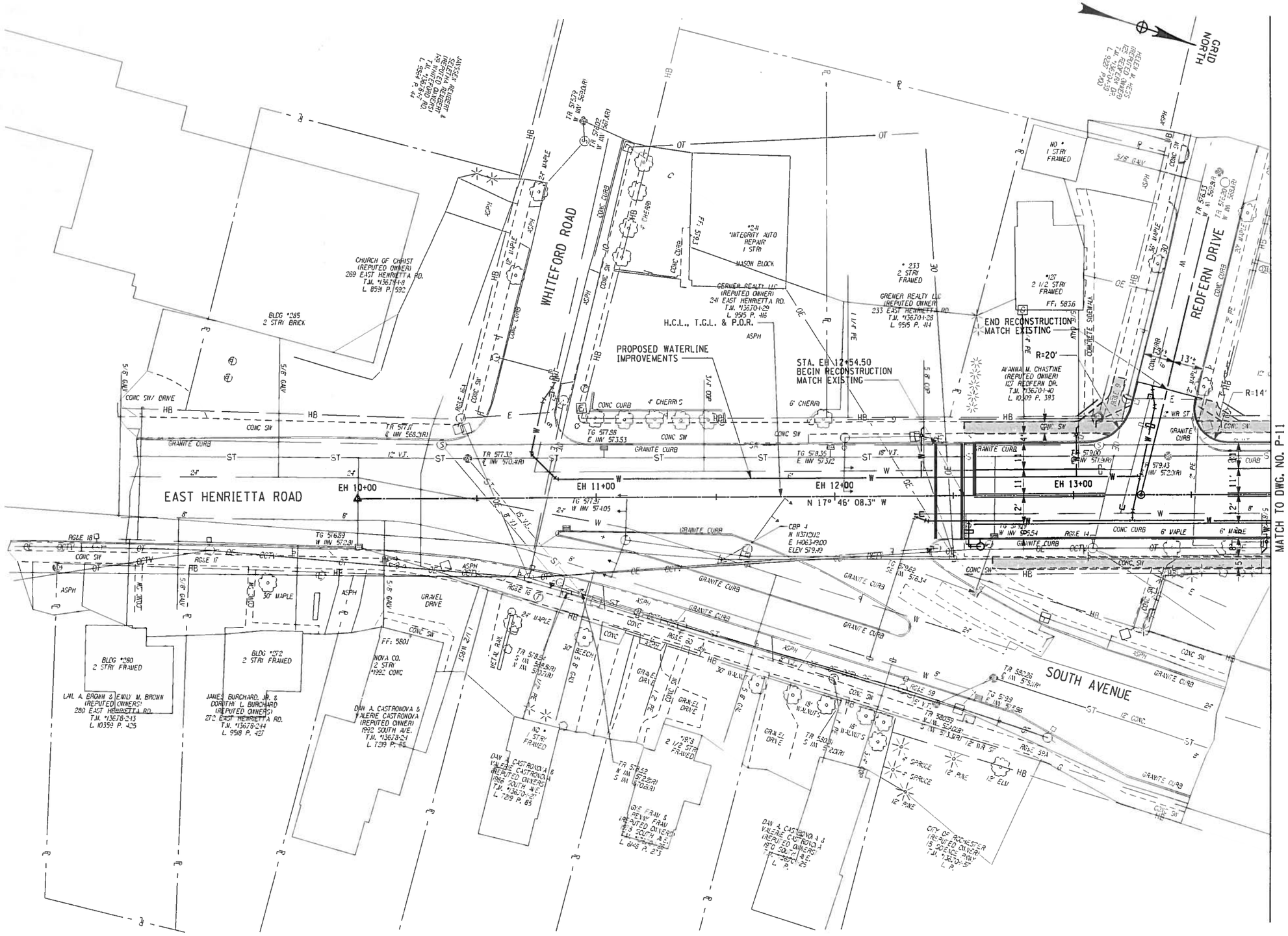
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699ih_wk3.dgn

Drawing Number:

P-9

XX of 29



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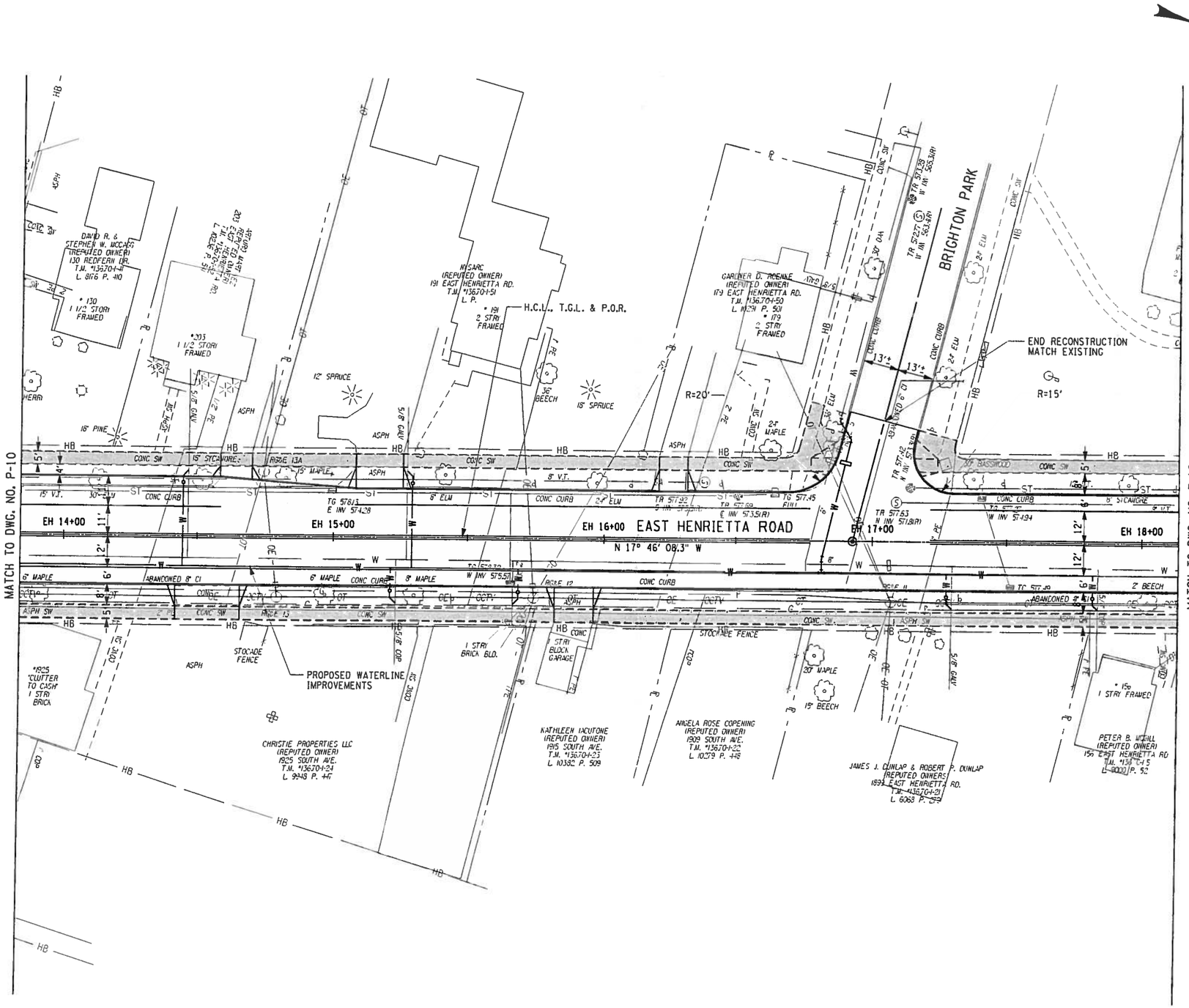
PLAN

Project Manager:	M.J.M.
Designed by:	D.W.T.
Drawn by:	D.W.T.
Checked by:	T.W.L.
Date Issued:	February 27, 2009
Scale:	1"=40'
Project Number:	6699
File Name:	6699jh_wk3.dgn
Drawing Number:	P-10

XX of 29



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PLAN

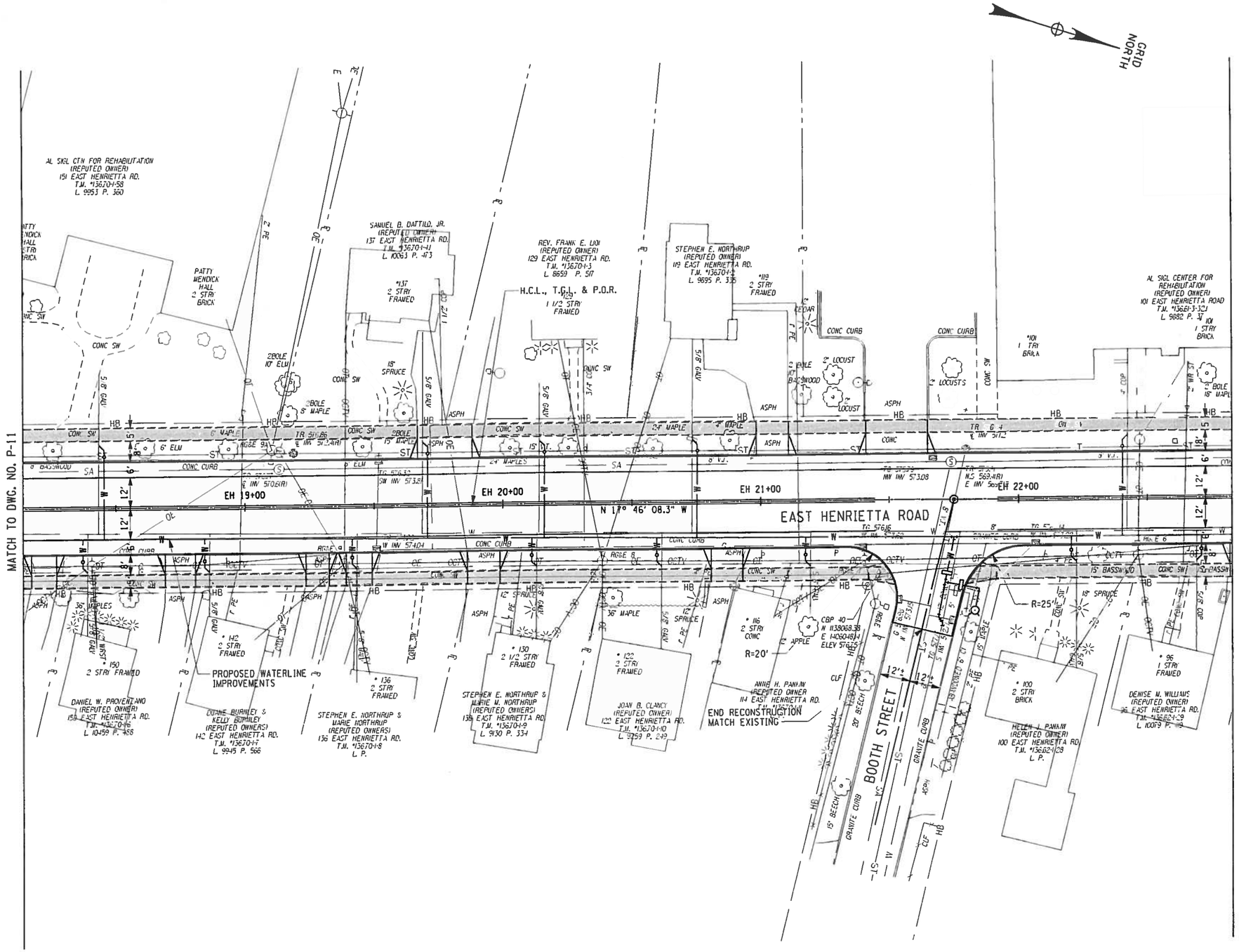
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699kh_wk3.dgn

Drawing Number:

P-11

XX of 29



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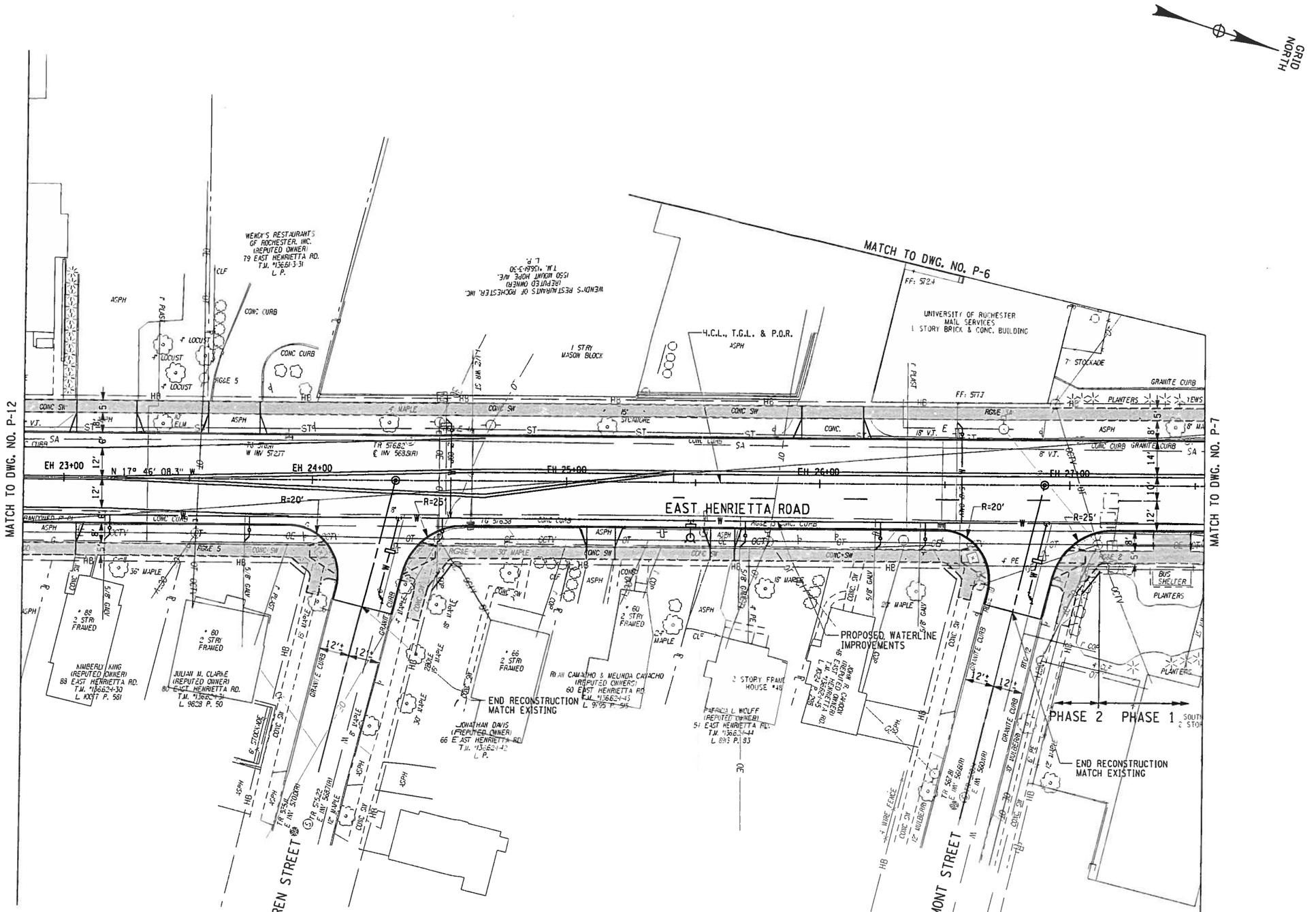
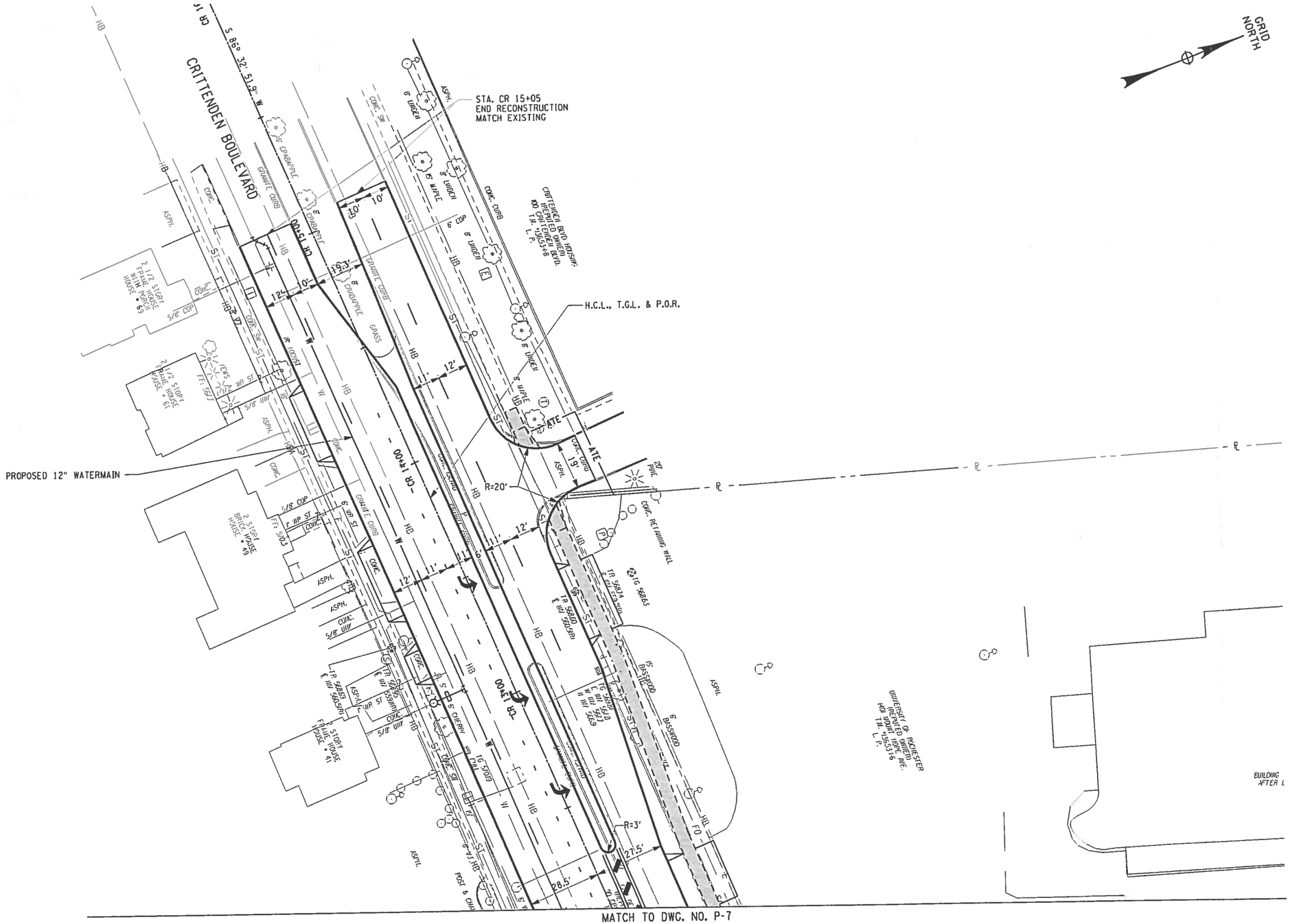
PLAN

Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699lh_wk3.dgn
Drawing Number: P-12
XX of 29


GRID NORTH
MATCH TO DWG. NO. P-12
MATCH TO DWG. NO. P-6
MATCH TO DWG. NO. P-7
EAST HENRIETTA ROAD
WARREN STREET
ROSEMONT STREET
EH 23+00
EH 24+00
EH 25+00
EH 26+00
EH 27+00
N 17° 45' 08.3" W
R=20'
R=25'
WENDY'S RESTAURANTS OF ROCHESTER, INC. (REPUTED OWNER) 79 EAST HENRIETTA RD. T.M. 136813-31 L. P.
WENDY'S RESTAURANTS OF ROCHESTER, INC. (REPUTED OWNER) 150 MOUNT HOPE AVE. T.M. 136813-30 L. P.
UNIVERSITY OF ROCHESTER MAIL SERVICES 1 STORY BRICK & CONC. BUILDING
H.C.L., T.G.L. & P.O.R.
1 STORY MASON BLOCK
7' STOCKADE
GRANITE CURB
PLANTERS
FF: 572.4
FF: 577
CONC CURB
CLF
ASPH
CONC SW
VT.
CONC.
GRANITE CURB
8' VT.
18' VT.
36" MAPLE
30" MAPLE
18" MAPLE
16" MAPLE
12" MAPLE
6" MAPLE
LOCUST
ELM
HEDGE 5
HEDGE 4
HEDGE 8
HB
SA
ST
OCTV
UF
PE
GAV
88 2 STRY FRAMED
80 2 STRY FRAMED
66 2 STRY FRAMED
60 2 STORY FRAMED
2 STORY FRAME HOUSE #48
NIMBERLY KING (REPUTED OWNER) 88 EAST HENRIETTA RD. T.M. 136824-30 L. 10017 P. 561
JULIAN M. CLARKE (REPUTED OWNER) 80 EAST HENRIETTA RD. T.M. 136824-31 L. 9828 P. 50
JONATHAN DAVIS (REPUTED OWNER) 66 EAST HENRIETTA RD. T.M. 136824-42 L. P.
RYAN CAVICCHIO & MELINDA CAVICCHIO (REPUTED OWNERS) 60 EAST HENRIETTA RD. T.M. 136824-43 L. 9755 P. 55
PATRICIA L. WOLFF (REPUTED OWNER) 54 EAST HENRIETTA RD. T.M. 136824-44 L. 895 P. 93
PROPOSED WATERLINE IMPROVEMENTS
END RECONSTRUCTION MATCH EXISTING
END RECONSTRUCTION MATCH EXISTING
PHASE 2
PHASE 1
BUS SHELTER
TR 576.82 ℄ INV 563.9(R)
TR 572.22 E INV 558.7(R)
TR 557.8 E INV 570.0(R)
TR 567.8 E INV 560.8(R)
TR 571.8 E INV 562.3(R)
TR 572.2 W INV 572.7
TR 576.8 ℄ INV 563.9(R)
TR 576.8 E INV 567.3(R)
TR 576.8 E INV 563.8(R)
TR 576.8 W INV 567.3(R)
TR 576.8 W INV 563.8(R)
TR 576.8 W INV 572.7
TR 576.8 E INV 572.7
TR 576.8 E INV 563.8(R)
TR 576.8 E INV 567.3(R)
TR 576.8 W INV 563.8(R)
TR 576.8 W INV 567.3



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PLAN

Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699nh_wk3.dgn

Drawing Number: **P-14**

XX of 29

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

Department of Environmental Services

Bergmann associates
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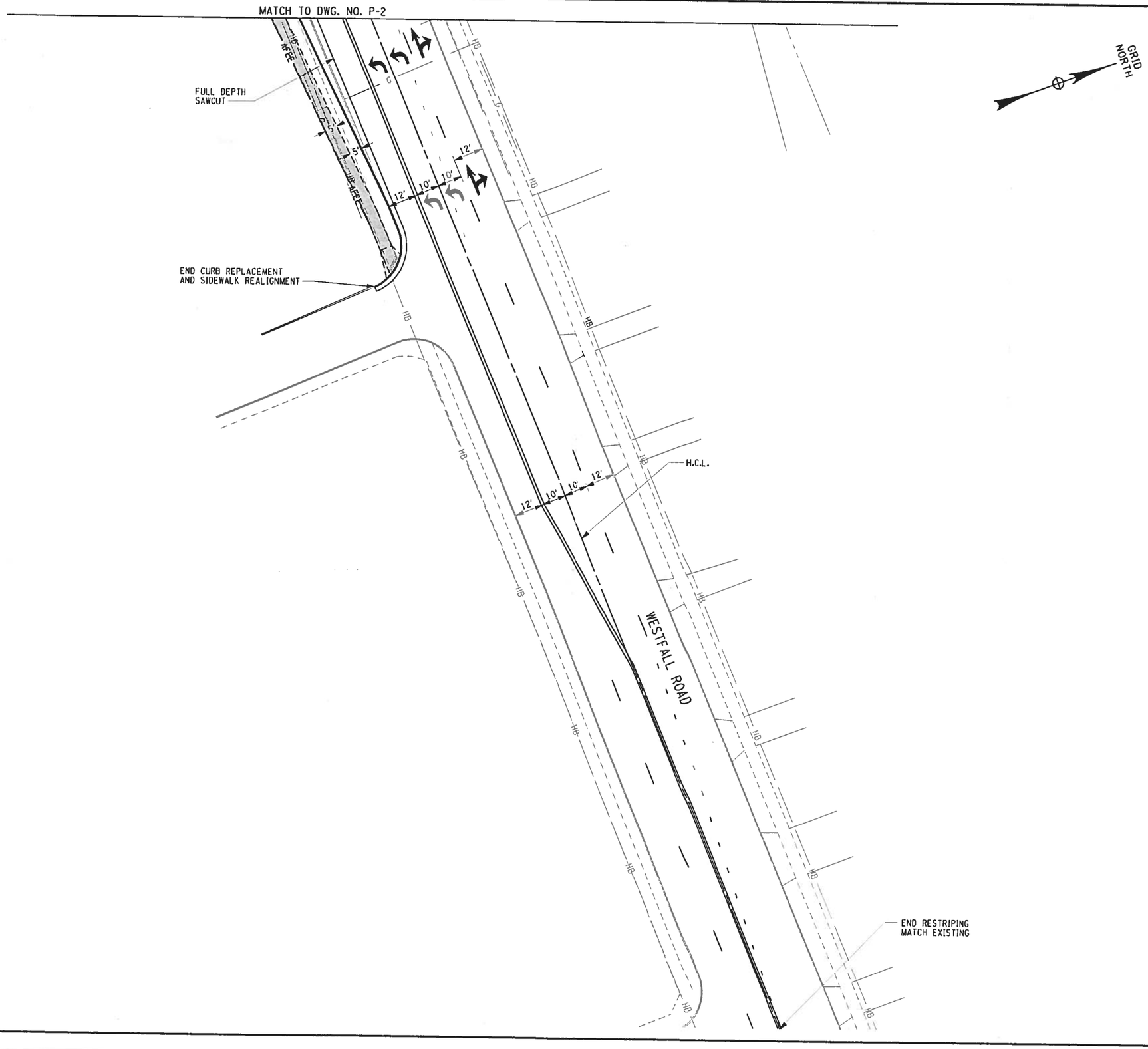
200 First Federal Plaza
Rochester, New York 14614
585.232.5135 / 585.232.4652 fax
Engineers / Architects /Planners/ Surveyors

REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D



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PLAN

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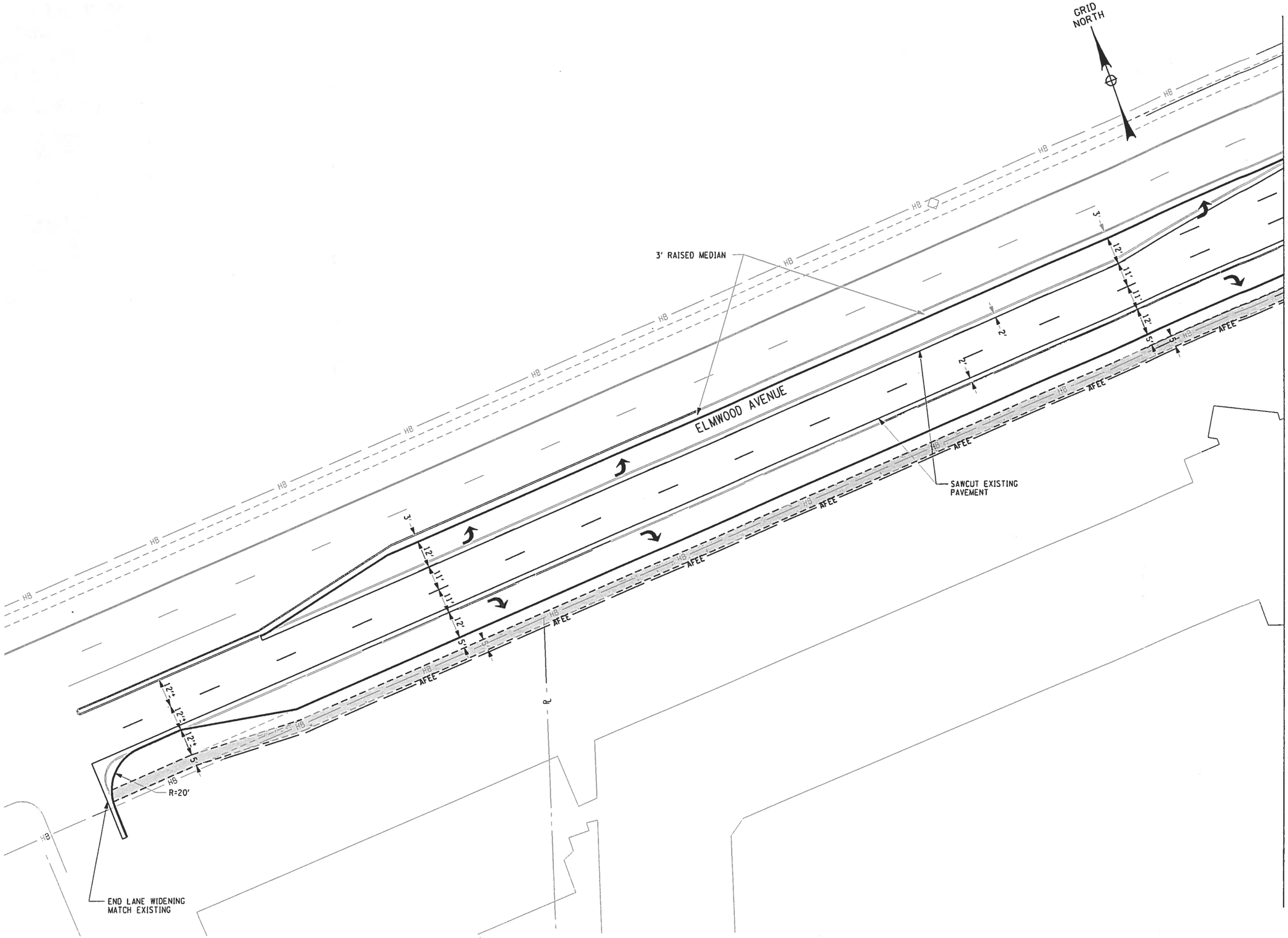
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699oh_wk3.dgn

Drawing Number:

P-15

XX of 29



Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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PLAN

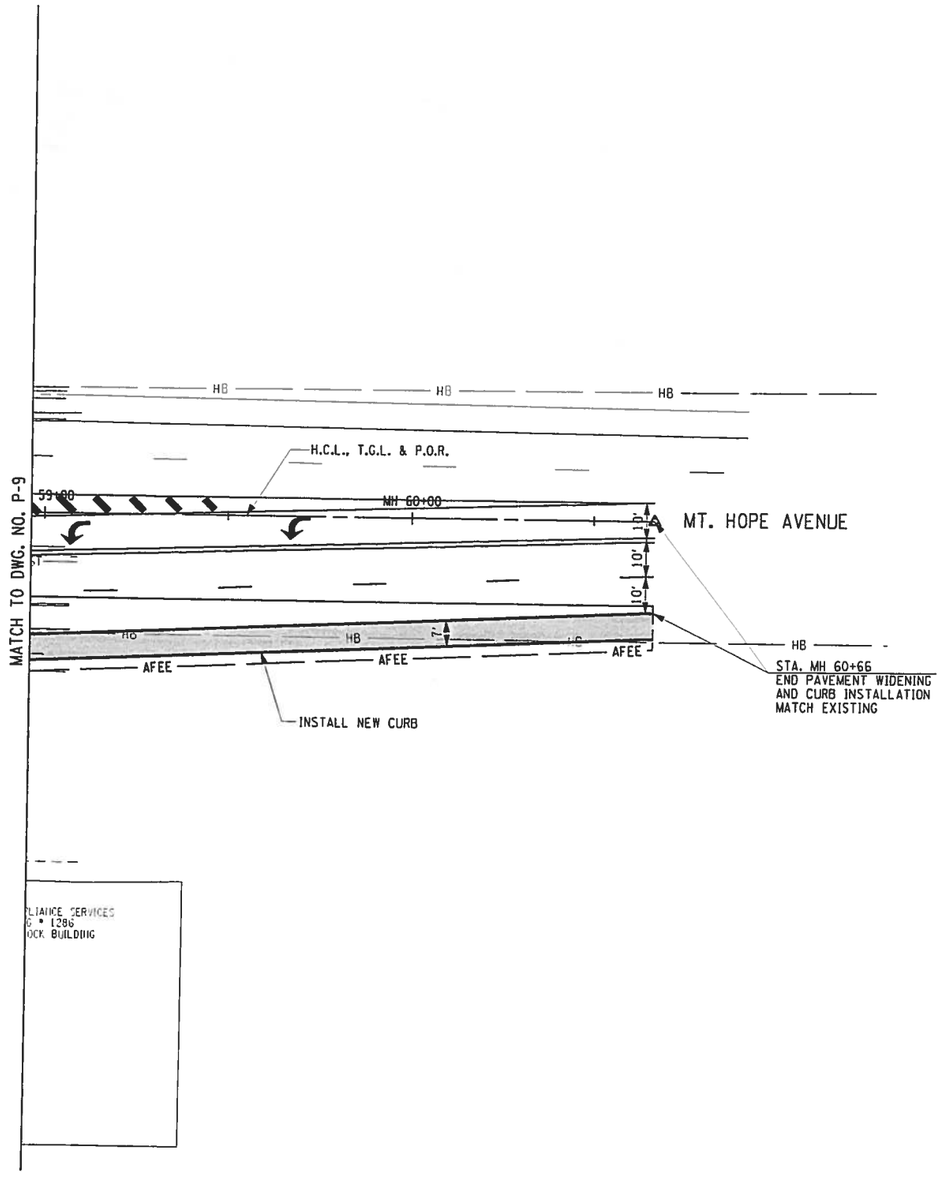
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

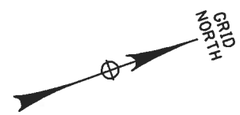
Project Number: 6699
File Name: 6699ph_wk3.dgn

Drawing Number:

P-16

XX of 29





Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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PLAN

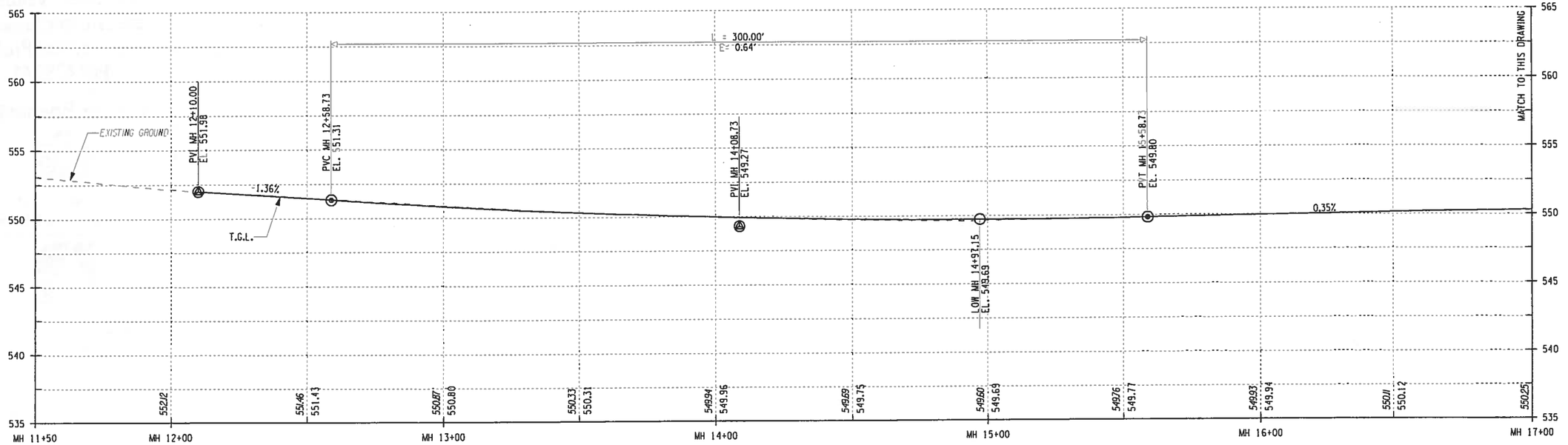
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: D.W.T.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40'

Project Number: 6699
File Name: 6699qh_wk3.dgn

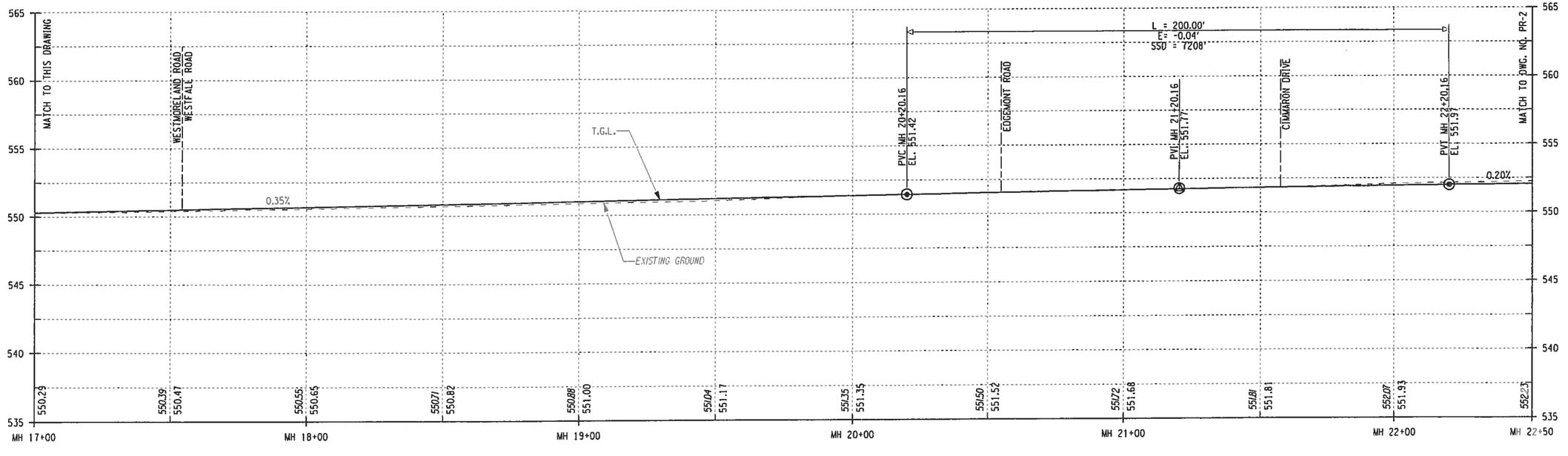
Drawing Number:

P-17

XX of 29



MT. HOPE AVENUE



MT. HOPE AVENUE

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PROFILES

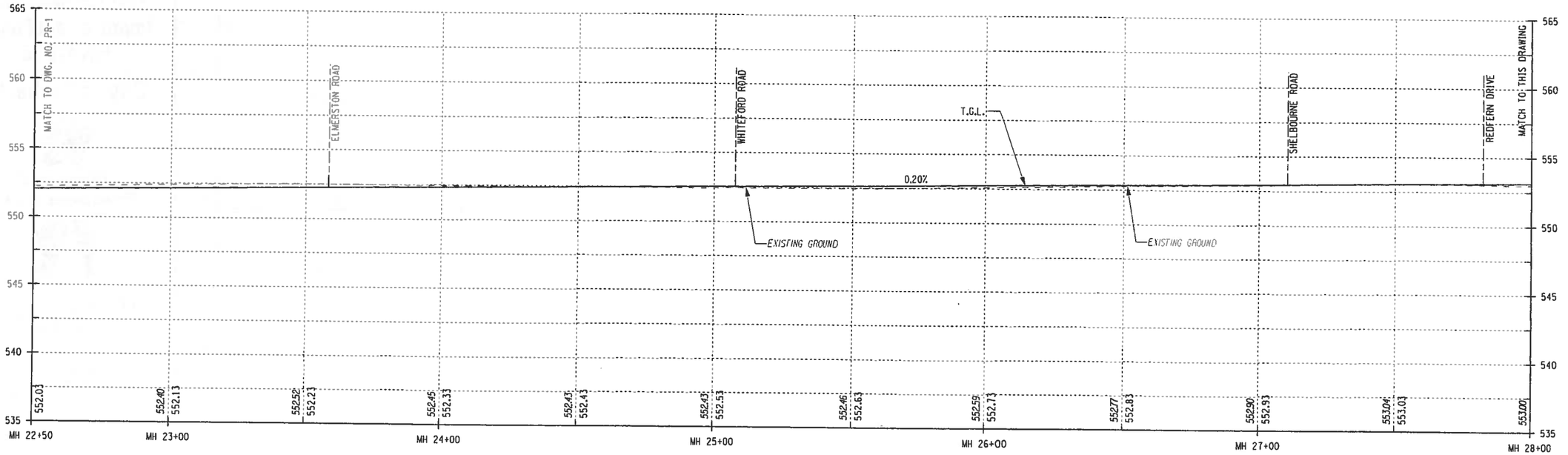
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40' H, 1"=8' V

Project Number: 6699
File Name: 6699a_pro.dgn

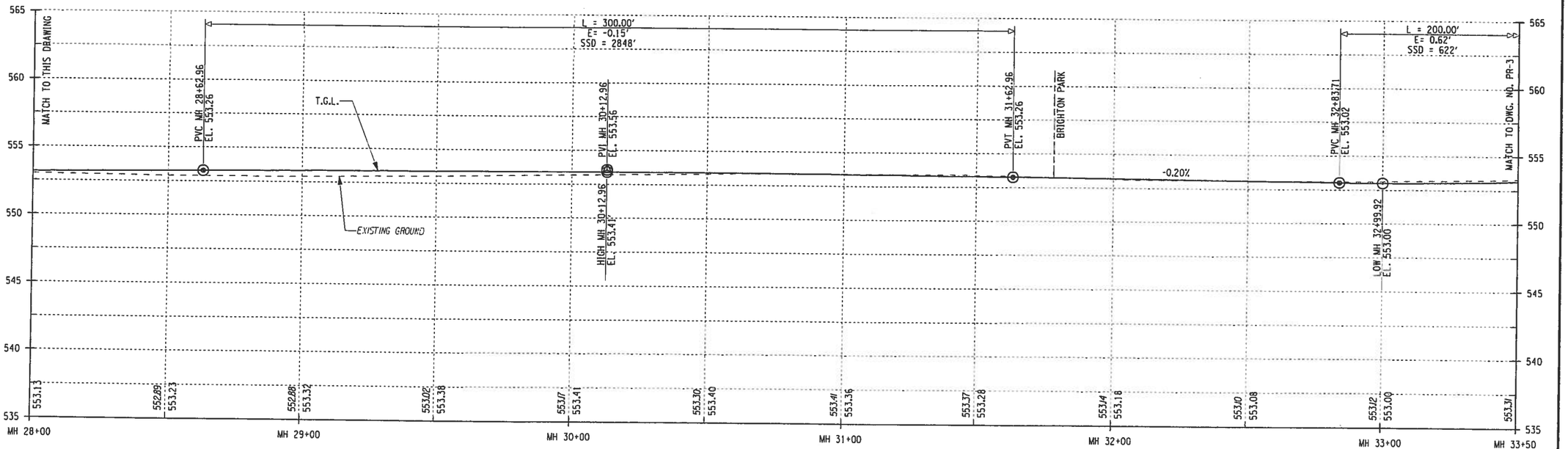
Drawing Number:

PR-1

XX of 29



MT. HOPE AVENUE



MT. HOPE AVENUE

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

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REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

Date

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PROFILES

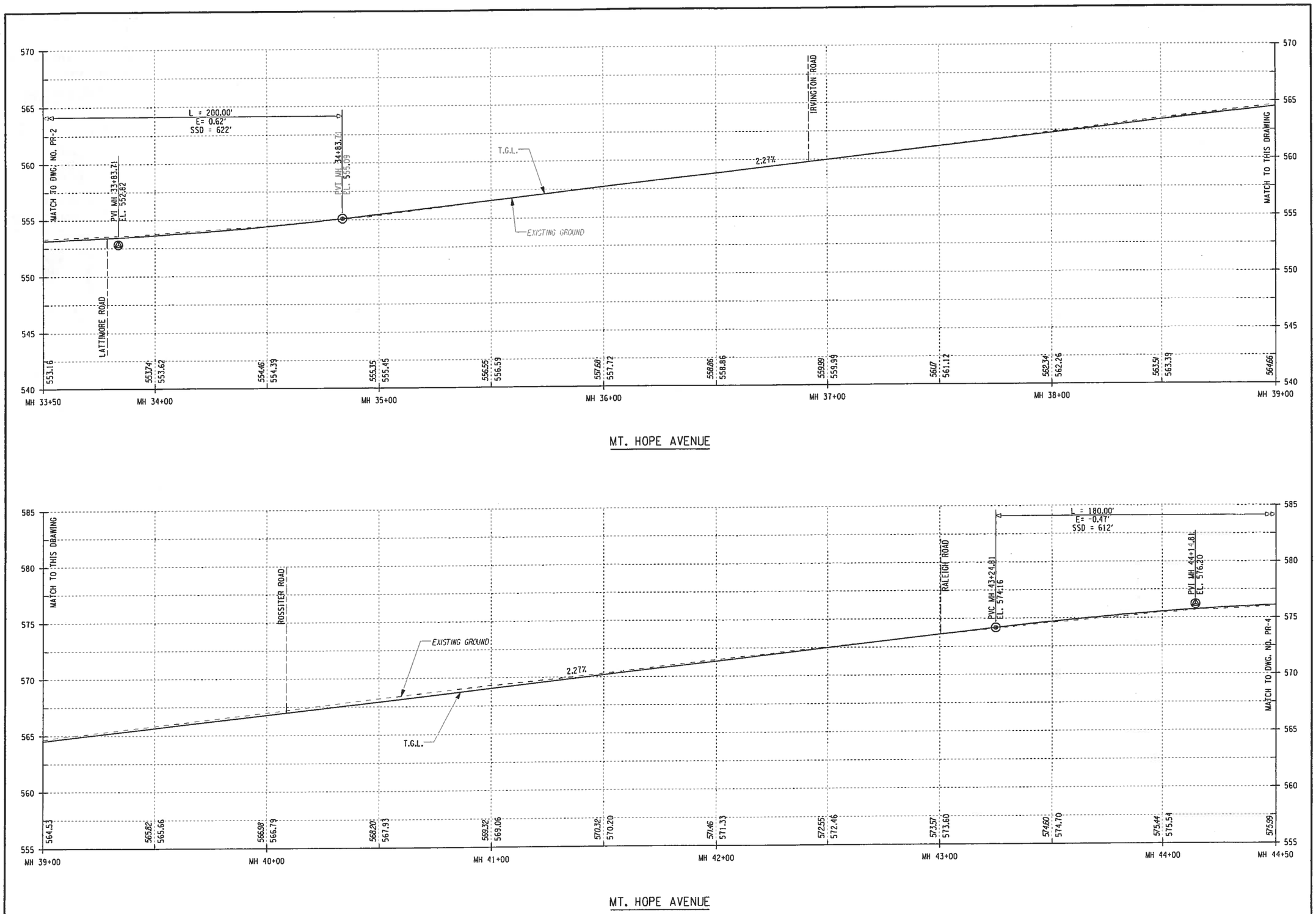
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40' H, 1"=8' V

Project Number: 6699
File Name: 6699b_pro.dgn

Drawing Number:

PR-2

XX of 29



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REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

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PROFILES

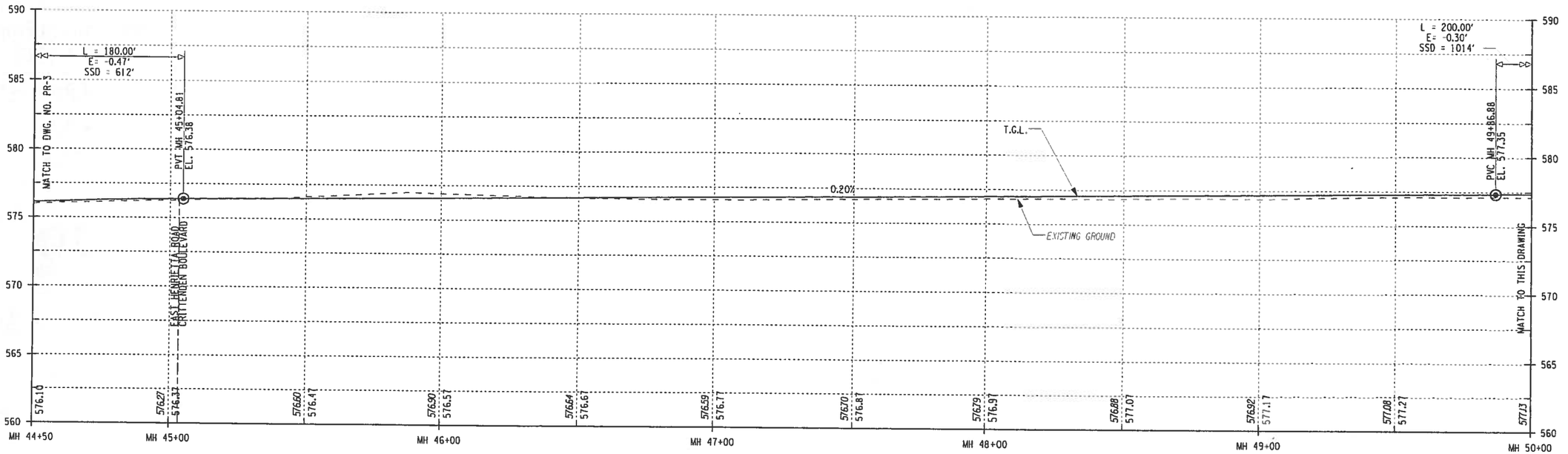
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40' H, 1"=8' V

Project Number: 6699
File Name: 6699c_pro.dgn

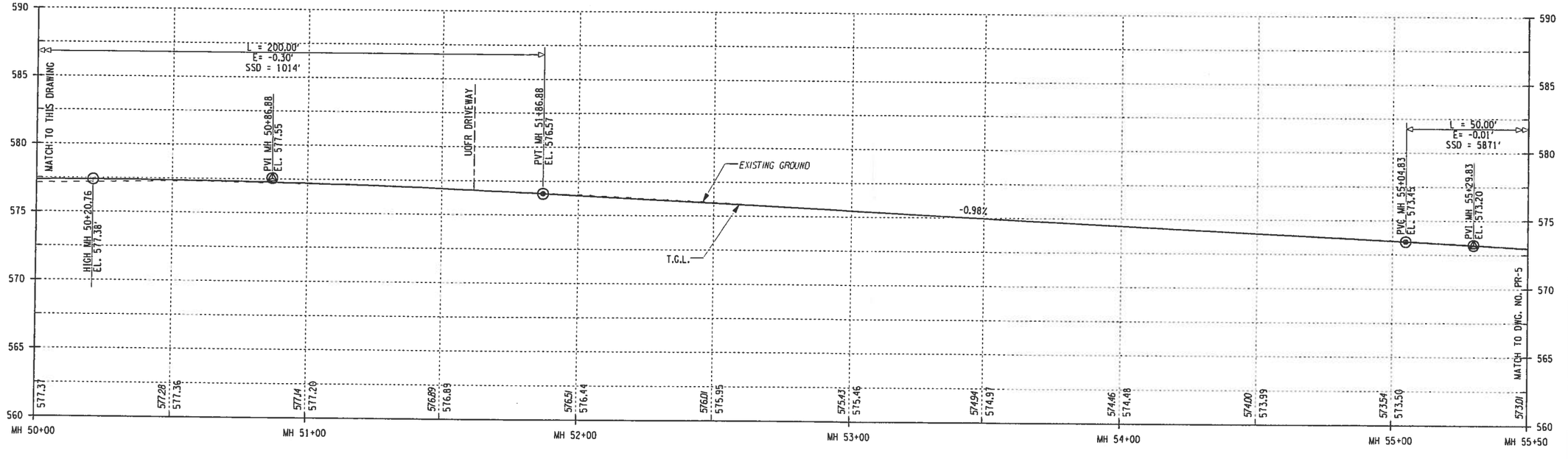
Drawing Number:

PR-3

XX of 29



MT. HOPE AVENUE



MT. HOPE AVENUE

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

Department of Environmental Services

Bergmann associates
www.bergmannpc.com
28 East Main Street
200 First Federal Plaza
Rochester, New York 14614
585.232.5135 / 585.232.4652 fax
Engineers / Architects /Planners/ Surveyors

REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

Date

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

PROFILES

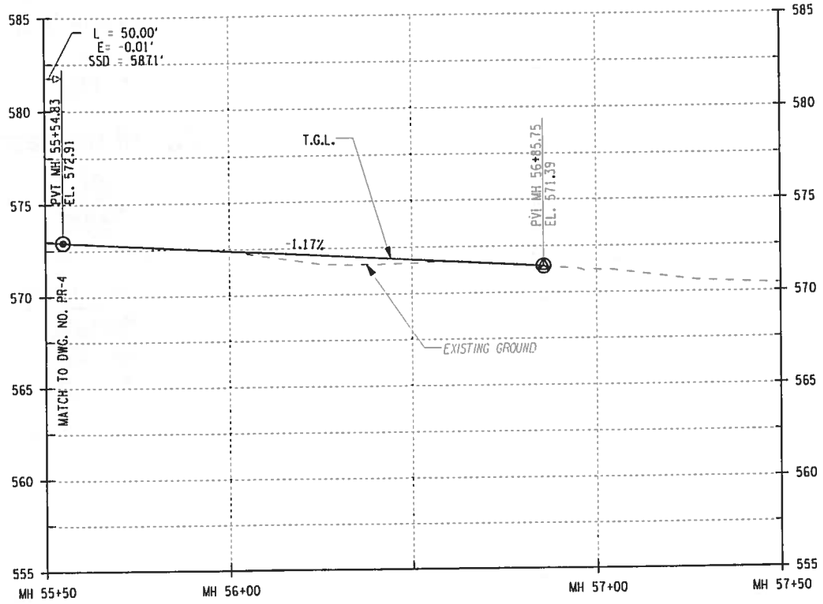
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40' H, 1"=8' V

Project Number: 6699
File Name: 6699d_pro.dgn

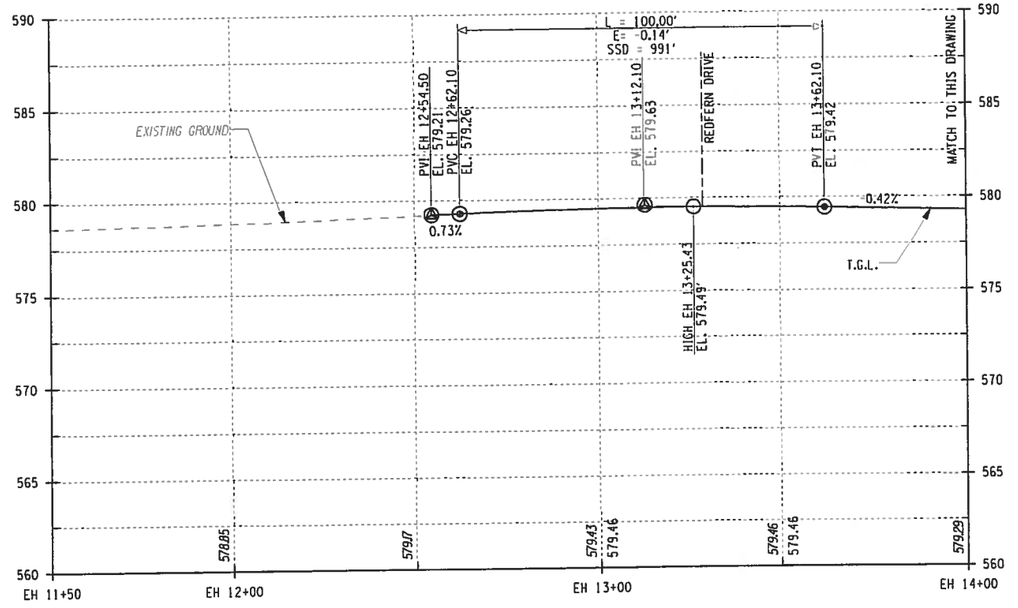
Drawing Number:

PR-4

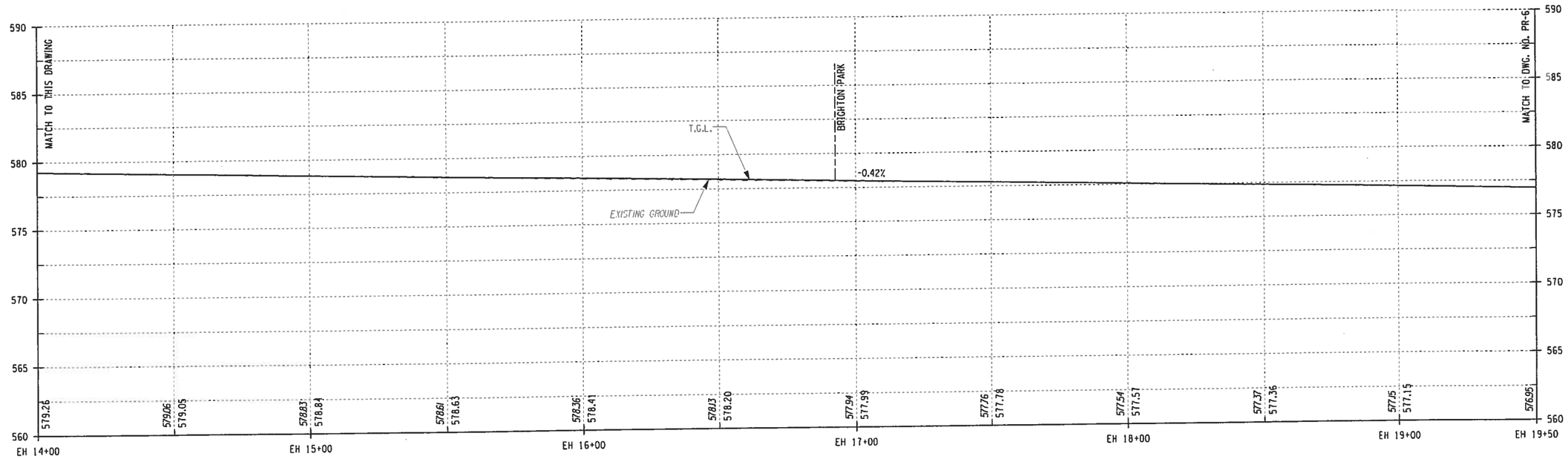
XX of 29



MT. HOPE AVENUE



EAST HENRIETTA ROAD



EAST HENRIETTA ROAD

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

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REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

Date

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PROFILES

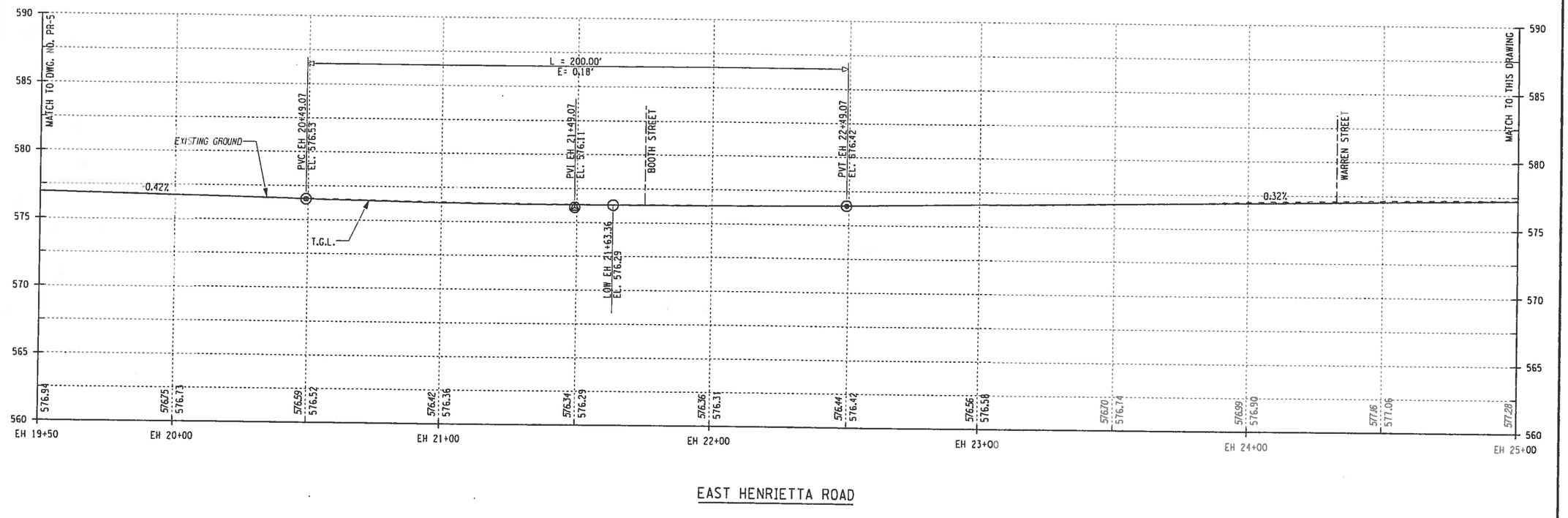
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scales: 1"=40' H, 1"=8' V

Project Number: 6699
File Name: 6699e_pro.dgn

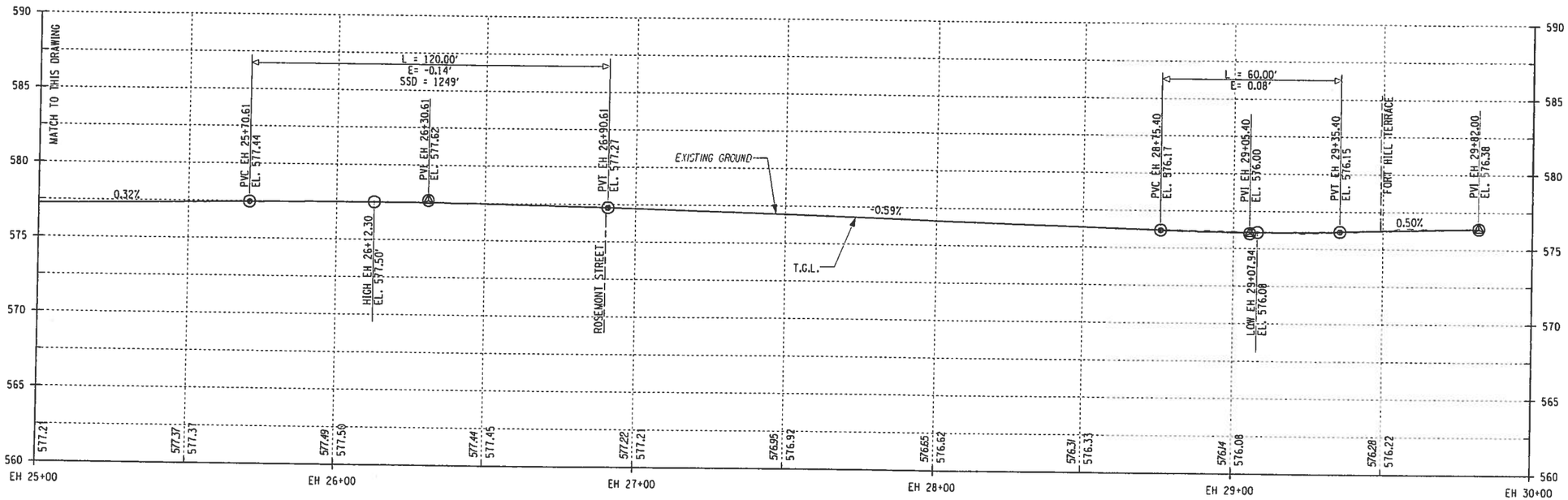
Drawing Number:

PR-5

XX of 29



EAST HENRIETTA ROAD



EAST HENRIETTA ROAD

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

Department of Environmental Services

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200 First Federal Plaza
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REVISIONS

NO.	DATE	DESCRIPTION	REV.	CK'D

Date

NOTE:
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PROFILES

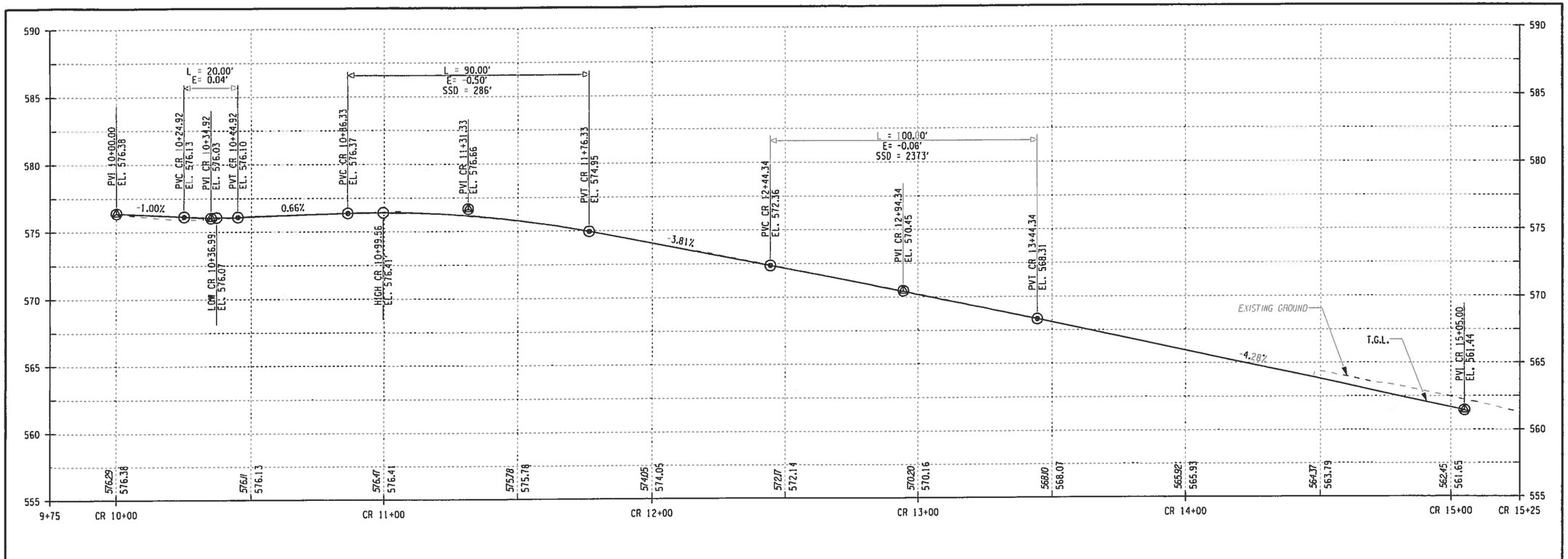
Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scales: 1"=40' H, 1"=8' V

Project Number: 6699
File Name: 6699f_pro.dgn

Drawing Number:

PR-6

XX of 29



CRITTENDEN BOULEVARD

Mt. Hope Avenue & East Henrietta Road Improvement Project PIN 4753.61

City of Rochester

Department of Environmental Services

Bergmann associates
www.bergmannpc.com
28 East Main Street
200 First Federal Plaza
Rochester, New York 14614
585.232.5135 / 585.232.4652 fax
Engineers / Architects /Planners/ Surveyors

REVISIONS				
NO.	DATE	DESCRIPTION	REV.	CK'D

Date

NOTE:
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PROFILES

Project Manager: M.J.M.
Designed by: D.W.T.
Drawn by: L.F.H.
Checked by: T.W.L.
Date Issued: February 27, 2009
Scale: 1"=40' H, 1"=8' V

Project Number: 6699
File Name: 6699g_pro.dgn

Drawing Number:

PR-7

XX of 29

APPENDIX B

Feasible Alternative Cost Estimate

MOUNT HOPE AVENUE/EAST HENRIETTA ROAD IMPROVEMENT PROJECT
Erie Canal to Elmwood Avenue
City of Rochester - DES

Conceptual Cost Estimate
Bergmann Associates - Engineers, Architects, Surveyors, PC
November, 2008

ESTIMATE IS BASED ON FALL 2009 CONSTRUCTION COSTS

Phase 1: Pavement Reconstruction (Rossiter to Elmwood) & CMAQ
includes full depth pavement reconstruction new curbs, sidewalks, drainage, street lighting & tie-in to existing Mt. Hope pavement section

		TOTAL COST	Federal Funds	State Funding	City Street Funds	CMAQ Funds	Water Debt	M.C. Traffic	Pure Waters	Private Owners
Area 2	Mount Hope Avenue: Raleigh to Elmwood (pavement reconstruction incl. recessed parking)	$6,965,000	$5,540,000	$1,039,000	$288,000		$40,000	$37,000	$21,000	
Area 4	Elmwood Avenue Improvements (Eastbound Right Turn Lane Installation)	$803,000		$121,000	$22,000	$641,000		$19,000		
Area 4	Elmwood Avenue Improvements (Eastbound Left Turn Lane Installation)	$171,000		$26,000	$9,000	$136,000		$0		
	Additional Cost to tie back into existing (Rossiter to Raleigh)	$447,000	$304,000	$57,000	$15,000		$67,000	$1,000	$3,000	
	PHASE I TOTAL	**$8,386,000**	**$5,844,000**	**$1,243,000**	**$334,000**	**$777,000**	**$107,000**	**$57,000**	**$24,000**	**$0**

Phase 2: Pavement Reconstruction (Canal to Rossiter) and East Henrietta Rd.
includes full depth pavement reconstruction new curbs, sidewalks, drainage, street lighting

Area 1	Mount Hope Avenue: Canal to Rossiter (pavement reconstruction)	$5,204,000	$3,719,000	$698,000	$187,000		$555,000	$20,000	$25,000	
Area 5	Westfall Rd. Improvements	$527,000		$79,000	$8,000	$421,000		$19,000		
Area 3	East Henrietta Road- South Avenue to Mt. Hope Avenue (pavement reconstruction)	$1,969,000	$1,161,000	$218,000	$59,000		$516,000	$1,000	$14,000	
	PHASE II TOTAL	**$7,700,000**	**$4,880,000**	**$995,000**	**$254,000**		**$1,071,000**	**$40,000**	**$39,000**	
	TOTAL:	**$16,086,000**	**$10,724,000**	**$2,238,000**	**$588,000**	**$1,198,000**	**$1,178,000**	**$97,000**	**$63,000**	**$0**

Note:
1. **Costs shown include: Constrcution cost, 8% for Engineering Design, 12% for Constr. Inspection, 8% for Contingency during construction.**
2. Costs shown include: Right of Way Costs based on $15/SF for commercial property takings and $2/SF for residential property.
3. Costs shown do not include Contaminated material removal or mitigation.
4. **Costs shown do not include $820,000 cost to install retaining wall and privacy fence at rear lots of businesses on east side of Mt. Hope Ave. between Crittenden Blvd. and Elmwood Avenue.**

Bergmann Associates

3/3/2009

MOUNT HOPE AVENUE/EAST HENRIETTA ROAD IMPROVEMENT PROJECT
Erie Canal to Elmwood Avenue
City of Rochester - DES

Conceptual Cost Estimate
Bergmann Associates - Engineers, Architects, Surveyors, PC

ESTIMATE IS BASED ON FALL 2009 CONSTRUCTION COSTS

Mount Hope Avenue: Canal to Rossiter (pavement reconstruction)

Item No.	Description of Work	Pay Unit	Unit Price	Engineer's Estimate Quantity	Engineer's Estimate Total		Federal Funds Quantity	Federal Funds Total	State Funding Quantity	State Funding Total	City Street Fund Quantity	City Street Fund Total	Water Debt Quantity	Water Debt Total	M.C. Traffic Quantity	M.C. Traffic Total	Pure Waters Quantity	Pure Waters Total	Private Owner Quantity	Private Owner Total
203.02	Unclassified Excavation and Disposal	CY	$13.50	15,725	$212,287.50	$14.60	12580	$169,830.00	2359	$31,843.13	781	$10,536.75					6	$77.63		
203.25	Stone Bedding	CY	$34.50	385	$13,282.50	$37.32	308	$10,626.00	58	$1,992.38							19	$664.13		
203.28	Select Granular Backfill (Sewer)	CY	$34.50	980	$33,810.00	$37.32	784	$27,048.00	147	$5,071.50							49	$1,690.50		
R206.04	Trench and Culvert Excavation	CY	$15.50	1,440	$22,320.00	$16.76	1152	$17,856.00	216	$3,348.00							72	$1,116.00		
304.03	Subbase Course, Type 2	CY	$29.50	7,415	$218,742.50	$31.91	5932	$174,994.00	1112	$32,811.38	369	$10,881.08					2	$56.05		
403.11	Asphalt Concrete - Type 1 Base Course	Ton	$70.00	8,750	$612,500.00	$75.71	7000	$490,000.00	1313	$91,875.00	438	$30,625.00								
403.13	Asphalt Concrete - Type 3 Binder Course	Ton	$77.00	2,300	$177,100.00	$83.28	1840	$141,680.00	345	$26,565.00	115	$8,855.00								
403.1901	Asphalt Concrete - Type 7F Top Course (HF) Marshall Design	Ton	$77.00	1,720	$132,440.00	$83.28	1376	$105,952.00	258	$19,866.00	86	$6,622.00								
520.5014	Sawcut	LF	$2.00	450	$900.00	$2.16	360	$720.00	68	$135.00	23	$45.00								
R601.0212	12" Polyvinyl Chloride Pipe , SDR-21	LF	$33.00	800	$26,400.00	$35.69	640	$21,120.00	120	$3,960.00							40	$1,320.00		
R601.0218	18" Polyvinyl Chloride Pipe , SDR-22	LF	$37.00	760	$28,120.00	$40.02	608	$22,496.00	114	$4,218.00							38	$1,406.00		
R601.0224	24" Polyvinyl Chloride Pipe , SDR-23	LF	$41.00	760	$31,160.00	$44.35	608	$24,928.00	114	$4,674.00							38	$1,558.00		
S604.31	Type B Catch Basin	EA	$1,500.00	42	$63,000.00	$1,622.40	34	$50,400.00	6	$9,450.00							2	$3,150.00		
S605.1406	6" Corrugated Polyethylene Underdrain Pipe	LF	$8.00	7,755	$62,040.00	$8.65	6204	$49,632.00	1163	$9,306.00							388	$3,102.00		
S608.12	Concrete Sidewalk & Driveway	CY	$300.00	525	$157,500.00	$324.48	420	$126,000.00	79	$23,625.00	26	$7,875.00								
608.16	Asphalt Driveway-Medium Duty	SF	$3.00	4,350	$13,050.00	$3.24	3480	$10,440.00	653	$1,957.50	218	$652.50								
S609.60	5" Stone Curb	LF	$35.00	7,030	$246,050.00	$37.86	5624	$196,840.00	1055	$36,907.50	352	$12,302.50								
S609.61	5" Radius Stone Curb	LF	$37.00	725	$26,825.00	$40.02	580	$21,460.00	109	$4,023.75	36.25	$1,341.25								
685.1004/110	Pavement Marking Stripes - 4"	LF	$0.40	8500	$3,400.00	$0.43	6800	$2,720.00	1275	$510.00					425	$170.00		$0.00		
S685.201201	Pavement Marking Stripes - 12"	LF	$1.20	520	$624.00	$1.30	416	$499.20	78	$93.60					26	$31.20		$0.00		
S685.201601	Pavement Marking Stripes - 16"	LF	$1.60	139	$222.40	$1.73	111	$177.92	21	$33.36					7	$11.12		$0.00		
	Pavement Marking Symbols & Letters	EA	$60.00	15	$900.00	$64.90	12	$720.00	2	$135.00					1	$45.00		$0.00		
	Waterline work	LS	$325,000.00	1	$325,000.00	$351,520.00							1	$325,000.00						
	New Signal (Lattimore Rd.)	LS	$195,000.00	1	$195,000.00	$210,912.00	0.8	$156,000.00	0.15	$29,250.00					0.05	$9,750.00		$0.00		
	Remove Signal	LS	$22,000.00	1	$22,000.00	$23,795.20	0.8	$17,600.00	0.15	$3,300.00					0.1	$1,100.00		$0.00		
	Signs	EA	$550.00	20	$11,000.00	$594.88	16	$8,800.00	3	$1,650.00					1	$550.00		$0.00		
	Street Lights (including conduit & pullboxes)	EA	$6,500.00	26	$169,000.00	$7,030.40	21	$135,200.00	4	$25,350.00	1	$8,450.00								
			SUBTOTAL:		*$2,804,673.90*			*$1,983,739.12*		*$371,951.09*		*$98,186.08*		*$325,000.00*		*$11,657.32*		*$14,140.30*		*$0.00*
634.01	Survey and Stakeout	LS	$56,093.48	2%	$56,093.48	$56,093.48	2%	$39,674.78	2%	$7,439.02	2%	$1,963.72	2%	$6,500.00	2%	$233.15	2%	$282.81		
	Landscaping/Trees	LS	$122,693.81	5%	$122,693.81	$122,693.81	5%	$99,186.96	5%	$18,597.55	5%	$4,909.30								
699.04	Mobilization	LS	$112,186.96	4%	$112,186.96	$112,186.96	4%	$79,349.56	4%	$14,878.04	4%	$3,927.44	4%	$13,000.00	4%	$466.29	4%	$565.61		
R619.01	Basic Maintenance and Protection of Traffic	LS	$140,233.70	5%	$140,233.70	$140,233.70	5%	$99,186.96	5%	$18,597.55	5%	$4,909.30	5%	$16,250.00	5%	$582.87	5%	$707.02		
			SUB TOTAL:		*$3,235,881.84*			*$2,301,137.38*		*$431,463.26*		*$113,895.85*		*$360,750.00*		*$12,939.63*		*$15,695.73*		*$0.00*
	Construction Cost including 15% Estimate Contingency and 5 % escalation to mid point of constr. (Spring 2010)	LS	$647,176.37	20%	***$3,883,058.21***	$3,883,058.21	20%	***$2,761,364.86***	20%	***$517,755.91***	20%	***$136,675.02***	20%	***$432,900.00***	20%	***$15,527.55***	20%	***$18,834.88***	20%	***$0.00***
	Construction Contingency (8%)	LS	$310,644.66	8%	$310,644.66	$310,644.66	8%	$220,909.19	8%	$41,420.47	8%	$10,934.00	8%	$34,632.00	8%	$1,242.20	8%	$1,506.79		
	Engineering Design (8%)	LS	$310,644.66	8%	$310,644.66	$310,644.66	8%	$220,909.19	8%	$41,420.47	8%	$10,934.00	8%	$34,632.00	8%	$1,242.20	8%	$1,506.79		
	Construction Inspection and Support (12%)	LS	$465,966.99	12%	$465,966.99	$465,966.99	12%	$331,363.78	12%	$62,130.71	12%	$16,401.00	12%	$51,948.00	12%	$1,863.31	12%	$2,260.19		
	Anticipated Right of Way Costs	LS	$230,000.00		$230,000.00	$230,000.00	80%	$184,000.00	15%	$34,500.00	5%	$11,500.00		$0.00		$0.00		$0.00		
	Right of Way Mapping and Acquisition Costs	LS	$180,000.00		$180,000.00	$180,000.00	80%	$144,000.00	15%	$27,000.00	5%	$9,000.00		$0.00		$0.00		$0.00		
	TOTAL COSTS Incl. Enginering, CI, Constr. Conting. And ROW				**$5,200,314.51**			**$3,718,547.01**		**$697,227.57**		**$186,444.02**		**$554,112.00**		**$19,875.26**		**$24,108.65**		**$0.00**

Note: Right of Way cost incl. cost for the property at $15/sf for commercial property, $2/SF for residential property

Bergmann Associates

3/3/2009

MOUNT HOPE AVENUE/EAST HENRIETTA ROAD IMPROVEMENT PROJECT
Erie Canal to Elmwood Avenue
City of Rochester - DES

Conceptual Cost Estimate
Bergmann Associates - Engineers, Architects, Surveyors, PC

ESTIMATE IS BASED ON FALL 2009 CONSTRUCTION COSTS

Mount Hope Avenue: Raleigh to Elmwood (pavement reconstruction incl. recessed parking)

Item No.	Description of Work	Pay Unit	Unit Price	Engineer's Estimate Quantity	Engineer's Estimate Total		Federal Funds Quantity	Federal Funds Total	State Funding Quantity	State Funding Total	City Street Fund Quantity	City Street Fund Total	Water Debt Quantity	Water Debt Total	M.C. Traffic Quantity	M.C. Traffic Total	Pure Waters Quantity	Pure Waters Total	Private Owners Quantity	Private Owners Total
203.02	Unclassified Excavation and Disposal	CY	$13.50	17,495	$236,182.50	$14.60	13996	$188,946.00	2624	$35,427.38	871	$11,751.75					4	$57.38		
203.25	Stone Bedding	CY	$34.50	375	$12,937.50	$37.32	300	$10,350.00	56	$1,940.63							19	$646.88		
203.28	Select Granular Backfill (Sewer)	CY	$34.50	740	$25,530.00	$37.32	592	$20,424.00	111	$3,829.50							37	$1,276.50		
R206.04	Trench and Culvert Excavation	CY	$15.50	1,100	$17,050.00	$16.76	880	$13,640.00	165	$2,557.50							55	$852.50		
304.03	Subbase Course, Type 2	CY	$29.50	5,880	$173,460.00	$31.91	4704	$138,768.00	882	$26,019.00	293	$8,643.50					1	$29.50		
403.11	Asphalt Concrete - Type 1 Base Course	Ton	$70.00	6,940	$485,800.00	$75.71	5552	$388,640.00	1041	$72,870.00	347	$24,290.00								
403.13	Asphalt Concrete - Type 3 Binder Course	Ton	$77.00	1,815	$139,755.00	$83.28	1452	$111,804.00	272	$20,963.25	91	$6,987.75								
403.1901	Asphalt Concrete - Type 7F Top Course (HF) Marshall Design	Ton	$77.00	1,370	$105,490.00	$83.28	1096	$84,392.00	206	$15,823.50	69	$5,274.50								
520.5014	Sawcut	LF	$2.00	530	$1,060.00	$2.16	424	$848.00	80	$159.00	27	$53.00								
R601.0212	12" Polyvinyl Chloride Pipe , SDR-21	LF	$33.00	1,671	$55,143.00	$35.69	1337	$44,114.40	251	$8,271.45							84	$2,757.15		
R601.0218	18" Polyvinyl Chloride Pipe , SDR-22	LF	$37.00	470	$17,390.00	$40.02	376	$13,912.00	71	$2,608.50							24	$869.50		
R601.0224	24" Polyvinyl Chloride Pipe , SDR-23	LF	$41.00	470	$19,270.00	$44.35	376	$15,416.00	71	$2,890.50							24	$963.50		
S604.31	Type B Catch Basin	EA	$1,500.00	22	$33,000.00	$1,622.40	18	$26,400.00	3	$4,950.00							1	$1,650.00		
S605.1406	6" Corrugated Polyethylene Underdrain Pipe	LF	$8.00	6,810	$54,480.00	$8.65	5448	$43,584.00	1022	$8,172.00							341	$2,724.00		
S608.12	Concrete Sidewalk & Driveway	CY	$300.00	623	$186,900.00	$324.48	498	$149,520.00	93	$28,035.00	31	$9,345.00								
608.16	Asphalt Driveway-Medium Duty	SF	$3.00	1,600	$4,800.00	$3.24	1280	$3,840.00	240	$720.00	80	$240.00								
S609.60	5" Stone Curb	LF	$35.00	8,820	$308,700.00	$37.86	7056	$246,960.00	1323	$46,305.00	441	$15,435.00								
S609.61	5" Radius Stone Curb	LF	$37.00	850	$31,450.00	$40.02	680	$25,160.00	128	$4,717.50	42.5	$1,572.50								
685.1004/110	Pavement Marking Stripes - 4"	LF	$0.40	3550	$1,420.00	$0.43	2840	$1,136.00	533	$213.00					177.5	$71.00		$0.00		
S685.201201	Pavement Marking Stripes - 12"	LF	$1.20	2640	$3,168.00	$1.30	2112	$2,534.40	396	$475.20					132	$158.40		$0.00		
S685.201601	Pavement Marking Stripes - 16"	LF	$1.60	410	$656.00	$1.73	328	$524.80	62	$98.40					20.5	$32.80		$0.00		
	Pavement Marking Symbols & Letters	EA	$60.00	28	$1,680.00	$64.90	22.4	$1,344.00	4	$252.00					1.4	$84.00		$0.00		
	Waterline work	LS	$23,000.00	1	$23,000.00	$24,876.80							1	$23,000.00						
	New Signal (Crittenden Road and Mid-Block)	LS	$195,000.00	2	$390,000.00	$210,912.00	1.6	$312,000.00	0.3	$58,500.00					0.1	$19,500.00		$0.00		
	Remove Signal	LS	$22,000.00	1	$22,000.00	$23,795.20	0.8	$17,600.00	0.15	$3,300.00					0.1	$1,100.00		$0.00		
	Signs	EA	$550.00	10	$5,500.00	$594.88	8	$4,400.00	1.5	$825.00					0.5	$275.00		$0.00		
	3 FT. High brick faced screen wall at Crittenden Intersection	LF	$200.00	680	$136,000.00	$216.32	544	$108,800.00	102	$20,400.00	34.0	$6,800.00						$0.00		
	Street Lights (including conduit & pullboxes)	EA	$6,500.00	16	$104,000.00	$7,030.40	13	$83,200.00	2	$15,600.00	1	$5,200.00								
				SUBTOTAL:	***$2,595,822.00***			***$2,058,257.60***		***$385,923.30***		***$95,593.00***		***$23,000.00***		***$21,221.20***		***$11,826.90***		***$0.00***
634.01	Survey and Stakeout	LS	$51,916.44	2%	$51,916.44		2%	$41,165.15	2%	$7,718.47	2%	$1,911.86	2%	$460.00	2%	$424.42	2%	$236.54		
	Landscaping/Trees	LS	$126,988.70	5%	$126,988.70	$126,988.70	5%	$102,912.88	5%	$19,296.17	5%	$4,779.65								
699.04	Mobilization	LS	$103,832.88	4%	$103,832.88		4%	$82,330.30	4%	$15,436.93	4%	$3,823.72	4%	$920.00	4%	$848.85	4%	$473.08		
R619.01	Basic Maintenance and Protection of Traffic	LS	$129,791.10	5%	$129,791.10		5%	$102,912.88	5%	$19,296.17	5%	$4,779.65	5%	$1,150.00	5%	$1,061.06	5%	$591.35		
				TOTAL:	***$3,008,351.12***			***$2,387,578.82***		***$447,671.03***		***$110,887.88***		***$25,530.00***		***$23,555.53***		***$13,127.86***		***$0.00***
Construction Cost including 15% Estimate Contingency and 5 % escalation to mid point of constr. (Spring 2010)		LS	$601,670.22	20%	***$3,610,021.34***	$3,610,021.34	20%	***$2,865,094.58***	20%	***$537,205.23***	20%	***$133,065.46***	20%	***$30,636.00***	20%	***$28,266.64***	20%	***$15,753.43***	20%	***$0.00***
	Construction Contingency (8%)	LS	$288,801.71	8%	$288,801.71	$288,801.71	8%	$229,207.57	8%	$42,976.42	8%	$10,645.24	8%	$2,450.88	8%	$2,261.33	8%	$1,260.27		
	Engineering Design (8%)	LS	$288,801.71	8%	$288,801.71	$288,801.71	8%	$229,207.57	8%	$42,976.42	8%	$10,645.24	8%	$2,450.88	8%	$2,261.33	8%	$1,260.27		
	Construction Inspection and Support (12%)	LS	$433,202.56	12%	$433,202.56	$433,202.56	12%	$343,811.35	12%	$64,464.63	12%	$15,967.85	12%	$3,676.32	12%	$3,392.00	12%	$1,890.41		
	Anticipated Right of Way Costs	LS	$2,100,000.00		$2,100,000.00	$2,100,000.00	80%	$1,680,000.00	15%	$315,000.00	5%	$105,000.00		$0.00		$0.00		$0.00		
	Right of Way Mapping and Acquisition Costs	LS	$240,000.00		$240,000.00	$240,000.00	80%	$192,000.00	15%	$36,000.00	5%	$12,000.00		$0.00		$0.00		$0.00		
	TOTAL COSTS incl. Enginering, CI, Constr. Conting. And ROW				**$6,960,827.31**			**$5,539,321.06**		**$1,038,622.70**		**$287,323.78**		**$39,214.08**		**$36,181.30**		**$20,164.39**		**$0.00**

Note: Right of Way cost incl. cost for the property at $15/sf for commercial property, $2/SF for residential property

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MOUNT HOPE AVENUE/EAST HENRIETTA ROAD IMPROVEMENT PROJECT
Erie Canal to Elmwood Avenue
City of Rochester - DES

Conceptual Cost Estimate
Bergmann Associates - Engineers, Architects, Surveyors, PC

ESTIMATE IS BASED ON FALL 2009 CONSTRUCTION COSTS

East Henrietta Road- South Avenue to Mt. Hope Avenue (pavement reconstruction)

Item No.	Description of Work	Pay Unit	Unit Price	Engineer's Estimate Quantity	Engineer's Estimate Total		Federal Funds Quantity	Federal Funds Total	State Funding Quantity	State Funding Total	City Street Fund Quantity	City Street Fund Total	Water Debt Quantity	Water Debt Total	M.C. Traffic Quantity	M.C. Traffic Total	Pure Waters Quantity	Pure Waters Total	Private Owners Quantity	Private Owners Total
203.02	Unclassified Excavation and Disposal	CY	$13.50	5,380	$72,630.00	$14.60	4304	$58,104.00	807	$10,894.50	266	$3,584.25					4	$47.25		
203.25	Stone Bedding	CY	$34.50	305	$10,522.50	$37.32	244	$8,418.00	46	$1,578.38							15	$526.13		
203.28	Select Granular Backfill (Sewer)	CY	$34.50	550	$18,975.00	$37.32	440	$15,180.00	83	$2,846.25							28	$948.75		
R206.04	Trench and Culvert Excavation	CY	$15.50	830	$12,865.00	$16.76	664	$10,292.00	125	$1,929.75							42	$643.25		
304.03	Subbase Course, Type 2	CY	$29.50	2,595	$76,552.50	$31.91	2076	$61,242.00	389	$11,482.88	129	$3,805.50					1	$22.13		
403.11	Asphalt Concrete - Type 1 Base Course	Ton	$70.00	2,900	$203,000.00	$75.71	2320	$162,400.00	435	$30,450.00	145	$10,150.00								
403.13	Asphalt Concrete - Type 3 Binder Course	Ton	$77.00	760	$58,520.00	$83.28	608	$46,816.00	114	$8,778.00	38	$2,926.00								
403.1901	Asphalt Concrete - Type 7F Top Course (HF) Marshall Design	Ton	$77.00	565	$43,505.00	$83.28	452	$34,804.00	85	$6,525.75	28	$2,175.25								
520.5014	Sawcut	LF	$2.00	175	$350.00	$2.16	140	$280.00	26	$52.50	9	$17.50								
R601.0212	12" Polyvinyl Chloride Pipe , SDR-21	LF	$33.00	825	$27,225.00	$35.69	660	$21,780.00	124	$4,083.75							41	$1,361.25		
R601.0218	18" Polyvinyl Chloride Pipe , SDR-22	LF	$37.00	535	$19,795.00	$40.02	428	$15,836.00	80	$2,969.25							27	$989.75		
R601.0224	24" Polyvinyl Chloride Pipe , SDR-23	LF	$41.00	535	$21,935.00	$44.35	428	$17,548.00	80	$3,290.25							27	$1,096.75		
S604.31	Type B Catch Basin	EA	$1,500.00	16	$24,000.00	$1,622.40	13	$19,200.00	2	$3,600.00							1	$1,200.00		
S605.1406	6" Corrugated Polyethylene Underdrain Pipe	LF	$8.00	3,300	$26,400.00	$8.65	2640	$21,120.00	495	$3,960.00							165	$1,320.00		
S608.12	Concrete Sidewalk & Driveway	CY	$300.00	300	$90,000.00	$324.48	240	$72,000.00	45	$13,500.00	15	$4,500.00								
608.16	Asphalt Driveway-Medium Duty	SF	$3.00	2,380	$7,140.00	$3.24	1904	$5,712.00	357	$1,071.00	119	$357.00								
S609.60	5" Stone Curb	LF	$35.00	3,000	$105,000.00	$37.86	2400	$84,000.00	450	$15,750.00	150	$5,250.00								
S609.61	5" Radius Stone Curb	LF	$37.00	300	$11,100.00	$40.02	240	$8,880.00	45	$1,665.00	15	$555.00								
685.1004/110	Pavement Marking Stripes - 4"	LF	$0.40	6445	$2,578.00	$0.43	5156	$2,062.40	967	$386.70					322	$128.90		$0.00		
S685.201201	Pavement Marking Stripes - 12"	LF	$1.20	550	$660.00	$1.30	440	$528.00	83	$99.00					28	$33.00		$0.00		
	Pavement Marking Symbols & Letters	EA	$60.00	4	$240.00	$64.90	3	$192.00	1	$36.00					0	$12.00		$0.00		
	Waterline work	LS	$302,500.00	1	$302,500.00	$327,184.00							1	$302,500.00						
				SUBTOTAL:	***$1,135,493.00***			***$666,394.40***		***$124,948.95***		***$33,320.50***		***$302,500.00***		***$173.90***		***$8,155.25***		***$0.00***
634.01	Survey and Stakeout	LS	$22,709.86	2%	$22,709.86		2%	$13,327.89	2%	$2,498.98	2%	$666.41	2%	$6,050.00	2%	$3.48	2%	$163.11		
699.04	Mobilization	LS	$45,419.72	4%	$45,419.72		4%	$26,655.78	4%	$4,997.96	4%	$1,332.82	4%	$12,100.00	4%	$6.96	4%	$326.21		
R619.01	Basic Maintenance and Protection of Traffic	LS	$56,774.65	5%	$56,774.65		5%	$33,319.72	5%	$6,247.45	5%	$1,666.03	5%	$15,125.00	5%	$8.70	5%	$407.76		
				TOTAL:	***$1,260,397.23***			***$739,697.78***		***$138,693.33***		***$36,985.76***		***$335,775.00***		***$193.03***		***$9,052.33***		***$0.00***
	Construction Cost including 15% Estimate Contingency and 5 % escalation to mid point of constr. (Spring 2010)	LS	$252,079.45	20%	***$1,512,476.68***		20%	***$887,637.34***	20%	***$166,432.00***	20%	***$44,382.91***	20%	***$402,930.00***	20%	***$231.63***	20%	***$10,862.79***	20%	***$0.00***
	Construction Contingency (8%)	LS	$120,998.13	8%	$120,998.13	$120,998.13	8%	$71,010.99	8%	$13,314.56	8%	$3,550.63	8%	$32,234.40	8%	$18.53	8%	$869.02		
	Engineering Design (8%)	LS	$120,998.13	8%	$120,998.13	$120,998.13	8%	$71,010.99	8%	$13,314.56	8%	$3,550.63	8%	$32,234.40	8%	$18.53	8%	$869.02		
	Construction Inspection and Support (12%)	LS	$181,497.20	12%	$181,497.20	$181,497.20	12%	$106,516.48	12%	$19,971.84	12%	$5,325.95	12%	$48,351.60	12%	$27.80	12%	$1,303.54		
	Anticipated Right of Way Costs	LS	$5,000.00		$5,000.00	$5,000.00	80%	$4,000.00	15%	$750.00	5%	$250.00		$0.00		$0.00		$0.00		
	Right of Way Mapping and Acquisition Costs	LS	$25,000.00		$25,000.00	$25,000.00	80%	$20,000.00	15%	$3,750.00	5%	$1,250.00		$0.00		$0.00		$0.00		
	TOTAL COSTS Incl. Enginering, CI, Constr. Conting. And ROW				**$1,965,970.15**			**$1,160,175.80**		**$217,532.96**		**$58,310.12**		**$515,750.40**		**$296.49**		**$13,904.38**		**$0.00**

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3/3/2009

MOUNT HOPE AVENUE/EAST HENRIETTA ROAD IMPROVEMENT PROJECT
Erie Canal to Elmwood Avenue
City of Rochester - DES

Conceptual Cost Estimate
Bergmann Associates - Engineers, Architects, Surveyors, PC

ESTIMATE IS BASED ON FALL 2009 CONSTRUCTION COSTS

Elmwood Avenue Improvements (Eastbound Right Turn Lane Installation)

Item No.	Description of Work	Pay Unit	Unit Price	Engineer's Estimate Quantity	Engineer's Estimate Total		CMAQ Funding Quantity	CMAQ Funding Total	State Funding Quantity	State Funding Total	City Street Fund Quantity	City Street Fund Total	Water Debt Quantity	Water Debt Total	M.C. Traffic Quantity	M.C. Traffic Total	Pure Waters Quantity	Pure Waters Total	Private Owners Quantity	Private Owners Total
203.02	Unclassified Excavation and Disposal	CY	$13.50	750	$10,125.00	$14.60	600	$8,100.00	113	$1,518.75	38	$506.25								
203.25	Stone Bedding	CY	$34.50	170	$5,865.00	$37.32	136	$4,692.00	26	$879.75	9	$293.25								
203.28	Select Granular Backfill (Sewer)	CY	$34.50	354	$12,213.00	$37.32	283	$9,770.40	53	$1,831.95	18	$610.65								
R206.04	Trench and Culvert Excavation	CY	$15.50	530	$8,215.00	$16.76	424	$6,572.00	80	$1,232.25	27	$410.75								
304.03	Subbase Course, Type 2	CY	$29.50	360	$10,620.00	$31.91	288	$8,496.00	54	$1,593.00	18	$531.00								
403.11	Asphalt Concrete - Type 1 Base Course	Ton	$70.00	380	$26,600.00	$75.71	304	$21,280.00	57	$3,990.00	19	$1,330.00								
403.13	Asphalt Concrete - Type 3 Binder Course	Ton	$77.00	100	$7,700.00	$83.28	80	$6,160.00	15	$1,155.00	5	$385.00								
403.1901	Asphalt Concrete - Type 7F Top Course (HF) Marshall Design	Ton	$77.00	320	$24,640.00	$83.28	256	$19,712.00	48	$3,696.00	16	$1,232.00								
490.1	Production cold milling of Bituminous. Concrete	SY	$4.00	2,850	$11,400.00	$4.33	2280	$9,120.00	428	$1,710.00	143	$570.00								
520.5014	Sawcut	LF	$2.00	2,250	$4,500.00	$2.16	1800	$3,600.00	338	$675.00	113	$225.00								
R601.0212	12" Polyvinyl Chloride Pipe , SDR-21	LF	$33.00	184	$6,072.00	$35.69	147	$4,857.60	28	$910.80	9	$303.60								
R601.0218	18" Polyvinyl Chloride Pipe , SDR-22	LF	$37.00	380	$14,060.00	$40.02	304	$11,248.00	57	$2,109.00	19	$703.00								
R601.0224	24" Polyvinyl Chloride Pipe , SDR-23	LF	$41.00	380	$15,580.00	$44.35	304	$12,464.00	57	$2,337.00	19	$779.00								
S604.31	Type B Catch Basin	EA	$1,500.00	4	$6,000.00	$1,622.40	3	$4,800.00	1	$900.00	0	$300.00								
S605.1406	6" Corrugated Polyethylene Underdrain Pipe	LF	$8.00	730	$5,840.00	$8.65	584	$4,672.00	110	$876.00	37	$292.00								
S608.12	Concrete Sidewalk & Driveway	CY	$300.00	56	$16,800.00	$324.48	45	$13,440.00	8	$2,520.00	3	$840.00								
S609.60	5" Stone Curb	LF	$35.00	700	$24,500.00	$37.86	560	$19,600.00	105	$3,675.00	35	$1,225.00								
S609.61	5" Radius Stone Curb	LF	$37.00	30	$1,110.00	$40.02	24	$888.00	5	$166.50	2	$55.50								
685.1004/110	Pavement Marking Stripes - 4"	LF	$0.40	2,240	$896.00	$0.43	1792	$716.80	336	$134.40	112	$44.80								
S685.201201	Pavement Marking Stripes - 12"	LF	$1.20	180	$216.00	$1.30	144	$172.80	27	$32.40	9	$10.80								
S685.201601	Pavement Marking Stripes - 16"	LF	$1.75	52	$91.00	$1.89	42	$72.80	8	$13.65	3	$4.55								
	New Signal (Mount Hope at Elmwood Avneue)	LS	$195,000.00	1	$195,000.00	$210,912.00	0.8	$156,000.00	0.15	$29,250.00					0.05	$9,750.00				
	Remove Signal	LS	$22,000.00	1	$22,000.00	$23,795.20	0.8	$17,600.00	0.15	$3,300.00					0.05	$1,100.00				
	Pavement Marking Symbols & Letters	EA	$65.00	8	$520.00	$70.30	6	$416.00	1	$78.00	0	$26.00								
	Street Lights (including conduit & pullboxes)	EA	$6,500.00	6	$39,000.00	$7,030.40	5	$31,200.00	1	$5,850.00	0	$1,950.00								
				SUBTOTAL:	***$469,563.00***			***$375,650.40***		***$70,434.45***		***$12,628.15***				***$10,850.00***				
634.01	Survey and Stakeout	LS	$9,391.26	2%	$9,391.26		2%	$7,513.01	2%	$1,408.69	2%	$252.56			2%	$217.00				
699.04	Mobilization	LS	$18,782.52	4%	$18,782.52		4%	$15,026.02	4%	$2,817.38	4%	$505.13			4%	$434.00				
R619.01	Basic Maintenance and Protection of Traffic	LS	$23,478.15	5%	$23,478.15		5%	$18,782.52	5%	$3,521.72	5%	$631.41			5%	$542.50				
				TOTAL:	***$521,214.93***			***$416,971.94***		***$78,182.24***		***$14,017.25***				***$12,043.50***				
Construction Cost Including 15% Estimate Contingency and 5 % escalation to mid point of constr. (Spring 2010)		LS	$104,242.99	20%	***$625,457.92***		20%	***$500,366.33***	20%	***$93,818.69***	20%	***$16,820.70***			20%	***$14,452.20***				
	Construction Contingency (8%)	LS	$50,036.63	8%	$50,036.63	$50,036.63	8%	$40,029.31	8%	$7,505.49	8%	$1,345.66	8%	$0.00	8%	$1,156.18	8%	$0.00	8%	$0.00
	Engineering Design (8%)	LS	$50,036.63	8%	$50,036.63	$50,036.63	8%	$40,029.31	8%	$7,505.49	8%	$1,345.66	8%	$0.00	8%	$1,156.18	8%	$0.00	8%	$0.00
	Construction Inspection and Support (12%)	LS	$75,054.95	12%	$75,054.95	$75,054.95	12%	$60,043.96	12%	$11,258.24	12%	$2,018.48	12%	$0.00	12%	$1,734.26	12%	$0.00	12%	$0.00
	Anticipated Right of Way Costs	LS	$0.00		$0.00	$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TOTAL COSTS Incl. Enginering, CI, Constr. Conting. And ROW					**$800,586.13**			**$640,468.91**		**$120,087.92**		**$21,530.49**		**$0.00**		**$18,498.82**		**$0.00**		**$0.00**

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MOUNT HOPE AVENUE/EAST HENRIETTA ROAD IMPROVEMENT PROJECT
Erie Canal to Elmwood Avenue
City of Rochester - DES

Conceptual Cost Estimate
Bergmann Associates - Engineers, Architects, Surveyors, PC

ESTIMATE IS BASED ON FALL 2009 CONSTRUCTION COSTS

Elmwood Avenue Improvements (Eastbound Left Turn Lane Installation)

Item No.	Description of Work	Pay Unit	Unit Price	Engineer's Estimate Quantity	Engineer's Estimate Total		CMAQ Funding Quantity	CMAQ Funding Total	State Funding Quantity	State Funding Total	City Street Fund Quantity	City Street Fund Total	Water Debt Quantity	Water Debt Total	M.C. Traffic Quantity	M.C. Traffic Total	Pure Waters Quantity	Pure Waters Total	Private Owners Quantity	Private Owners Total
203.02	Unclassified Excavation and Disposal	CY	$13.50	470	$6,345.00	$14.60	376	$5,076.00	71	$951.75	24	$317.25								
203.25	Stone Bedding	CY	$34.50	0	$0.00	$37.32	0	$0.00	0	$0.00	0	$0.00								
203.28	Select Granular Backfill (Sewer)	CY	$34.50	0	$0.00	$37.32	0	$0.00	0	$0.00	0	$0.00								
R206.04	Trench and Culvert Excavation	CY	$15.50	0	$0.00	$16.76	0	$0.00	0	$0.00	0	$0.00								
304.03	Subbase Course, Type 2	CY	$29.50	260	$7,670.00	$31.91	208	$6,136.00	39	$1,150.50	13	$383.50								
403.11	Asphalt Concrete - Type 1 Base Course	Ton	$70.00	255	$17,850.00	$75.71	204	$14,280.00	38	$2,677.50	13	$892.50								
403.13	Asphalt Concrete - Type 3 Binder Course	Ton	$77.00	70	$5,390.00	$83.28	56	$4,312.00	11	$808.50	4	$269.50								
403.1901	Asphalt Concrete - Type 7F Top Course (HF) Marshall Design	Ton	$77.00	55	$4,235.00	$83.28	44	$3,388.00	8	$635.25	3	$211.75								
490.1	Production cold milling of Bituminous. Concrete	SY	$4.00	0	$0.00	$4.33	0	$0.00	0	$0.00	0	$0.00								
520.5014	Sawcut	LF	$2.00	525	$1,050.00	$2.16	420	$840.00	79	$157.50	26	$52.50								
R601.0212	12" Polyvinyl Chloride Pipe , SDR-21	LF	$33.00	0	$0.00	$35.69	0	$0.00	0	$0.00	0	$0.00								
R601.0218	18" Polyvinyl Chloride Pipe , SDR-22	LF	$37.00	0	$0.00	$40.02	0	$0.00	0	$0.00	0	$0.00								
R601.0224	24" Polyvinyl Chloride Pipe , SDR-23	LF	$41.00	0	$0.00	$44.35	0	$0.00	0	$0.00	0	$0.00								
S604.31	Type B Catch Basin	EA	$1,500.00	0	$0.00	$1,622.40	0	$0.00	0	$0.00	0	$0.00								
S605.1406	6" Corrugated Polyethylene Underdrain Pipe	LF	$8.00	610	$4,880.00	$8.65	488	$3,904.00	92	$732.00	31	$244.00								
S608.12	Concrete Sidewalk & Driveway	CY	$300.00	25	$7,500.00	$324.48	20	$6,000.00	4	$1,125.00	1	$375.00								
S609.60	5" Stone Curb	LF	$35.00	520	$18,200.00	$37.86	416	$14,560.00	78	$2,730.00	26	$910.00								
S609.61	5" Radius Stone Curb	LF	$37.00	0	$0.00	$40.02	0	$0.00	0	$0.00	0	$0.00								
685.1004/110	Pavement Marking Stripes - 4"	LF	$0.40	175	$70.00	$0.43	140	$56.00	26	$10.50	9	$3.50								
S685.201201	Pavement Marking Stripes - 12"	LF	$1.20	0	$0.00	$1.30	0	$0.00	0	$0.00	0	$0.00								
S685.201601	Pavement Marking Stripes - 16"	LF	$1.75	0	$0.00	$1.89	0	$0.00	0	$0.00	0	$0.00								
	New Signal	LS	$195,000.00	0	$0.00	$210,912.00	0	$0.00	0	$0.00	0	$0.00			0	$0.00				
	Remove Signal	LS	$22,000.00	0	$0.00	$23,795.20	0	$0.00	0	$0.00	0.0	$0.00			0.00	$0.00				
	Remove Existing Lights	EA	$500.00	0	$0.00	$540.80	0	$0.00	0	$0.00	0.0	$0.00			0.00	$0.00				
	Pavement Marking Symbols & Letters	EA	$65.00	5	$325.00	$70.30	4	$260.00	1	$48.75	0	$16.25								
	Street Lights (including conduit & pullboxes)	EA	$6,500.00	4	$26,000.00	$7,030.40	3	$20,800.00	1	$3,900.00	0	$1,300.00								
				SUBTOTAL:	***$99,515.00***			***$79,612.00***		***$14,927.25***		***$4,975.75***				***$0.00***				
634.01	Survey and Stakeout	LS	$1,990.30	2%	$1,990.30		2%	$1,592.24	2%	$298.55	2%	$99.52			2%	$0.00				
699.04	Mobilization	LS	$3,980.60	4%	$3,980.60		4%	$3,184.48	4%	$597.09	4%	$199.03			4%	$0.00				
R619.01	Basic Maintenance and Protection of Traffic	LS	$4,975.75	5%	$4,975.75		5%	$3,980.60	5%	$746.36	5%	$248.79			5%	$0.00				
				TOTAL:	***$110,461.65***			***$88,369.32***		***$16,569.25***		***$5,523.08***				***$0.00***				
Construction Cost including 15% Estimate Contingency and 5 % escalation to mid point of constr. (Spring 2010)		LS	$22,092.33	20%	***$132,553.98***		20%	***$106,043.18***	20%	***$19,883.10***	20%	***$6,627.70***			20%	***$0.00***				
	Construction Contingency (8%)	LS	$10,604.32	8%	$10,604.32	$10,604.32	8%	$8,483.45	8%	$1,590.65	8%	$530.22	8%	$0.00	8%	$0.00	8%	$0.00	8%	$0.00
	Engineering Design (8%)	LS	$10,604.32	8%	$10,604.32	$10,604.32	8%	$8,483.45	8%	$1,590.65	8%	$530.22	8%	$0.00	8%	$0.00	8%	$0.00	8%	$0.00
	Construction Inspection and Support (12%)	LS	$15,906.48	12%	$15,906.48	$15,906.48	12%	$12,725.18	12%	$2,385.97	12%	$795.32	12%	$0.00	12%	$0.00	12%	$0.00	12%	$0.00
	Anticipated Right of Way Costs	LS	$0.00		$0.00	$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
TOTAL COSTS Incl. Enginering, CI, Constr. Conting. And ROW					**$169,669.09**			**$135,735.28**		**$25,450.36**		**$8,483.45**		**$0.00**		**$0.00**		**$0.00**		**$0.00**

Bergmann Associates

3/3/2009

MOUNT HOPE AVENUE/EAST HENRIETTA ROAD IMPROVEMENT PROJECT
Erie Canal to Elmwood Avenue
City of Rochester - DES

Conceptual Cost Estimate
Bergmann Associates - Engineers, Architects, Surveyors, PC

ESTIMATE IS BASED ON FALL 2009 CONSTRUCTION COSTS

Westfall Rd. Improvements

Item No.	Description of Work	Pay Unit	Unit Price	Engineer's Estimate Quantity	Engineer's Estimate Total		CMAQ Funding Quantity	CMAQ Funding Total	State Funding Quantity	State Funding Total	City Street Fund Quantity	City Street Fund Total	Water Debt Quantity	Water Debt Total	M.C. Traffic Quantity	M.C. Traffic Total	Pure Waters Quantity	Pure Waters Total	Private Owners Quantity	Private Owners Total
203.02	Unclassified Excavation and Disposal	CY	$13.50	345	$4,657.50	$14.60	276	$3,726.00	52	$698.63	17	$232.88								
203.25	Stone Bedding	CY	$34.50	10	$345.00	$37.32	8	$276.00	2	$51.75	1	$17.25								
203.28	Select Granular Backfill (Sewer)	CY	$34.50	18	$621.00	$37.32	14	$496.80	3	$93.15	1	$31.05								
R206.04	Trench and Culvert Excavation	CY	$15.50	32	$496.00	$16.76	26	$396.80	5	$74.40	2	$24.80								
304.03	Subbase Course, Type 2	CY	$29.50	173	$5,103.50	$31.91	138	$4,082.80	26	$765.53	9	$255.18								
403.11	Asphalt Concrete - Type 1 Base Course	Ton	$70.00	205	$14,350.00	$75.71	164	$11,480.00	31	$2,152.50	10	$717.50								
403.13	Asphalt Concrete - Type 3 Binder Course	Ton	$77.00	55	$4,235.00	$83.28	44	$3,388.00	8	$635.25	3	$211.75								
403.1901	Asphalt Concrete - Type 7F Top Course (HF) Marshall Design	Ton	$77.00	250	$19,250.00	$83.28	200	$15,400.00	38	$2,887.50	13	$962.50								
520.5014	Sawcut	LF	$2.00	227	$454.00	$2.16	182	$363.20	34	$68.10	11	$22.70								
R601.0212	12" Polyvinyl Chloride Pipe , SDR-21	LF	$33.00	75	$2,475.00	$35.69	60	$1,980.00	11	$371.25	4	$123.75								
S604.31	Type B Catch Basin	EA	$1,500.00	1	$1,500.00	$1,622.40	1	$1,200.00	0	$225.00	0	$75.00								
S605.1406	6" Corrugated Polyethylene Underdrain Pipe	LF	$8.00	270	$2,160.00	$8.65	216	$1,728.00	41	$324.00	14	$108.00								
S608.12	Concrete Sidewalk & Driveway	CY	$300.00	20	$6,000.00	$324.48	16	$4,800.00	3	$900.00	1	$300.00								
S609.60	5" Stone Curb	LF	$35.00	195	$6,825.00	$37.86	156	$5,460.00	29	$1,023.75	10	$341.25								
S609.61	5" Radius Stone Curb	LF	$37.00	75	$2,775.00	$40.02	60	$2,220.00	11	$416.25	4	$138.75								
685.1004/110	Pavement Marking Stripes - 4"	LF	$0.40	1,750	$700.00	$0.43	1400	$560.00	263	$105.00	88	$35.00								
	Pavement Marking Symbols & Letters	EA	$65.00	12	$780.00	$70.30	10	$624.00	2	$117.00	1	$39.00								
	New Signal (Westfall/Mt. Hope)	LS	$195,000.00	1	$195,000.00	$210,912.00	0.8	$156,000.00	0.15	$29,250.00					0.05	$9,750.00				
	Remove Exist Signal	LS	$22,000.00	1	$22,000.00	$23,795.20	0.8	$17,600.00	0.15	$3,300.00					0.05	$1,100.00				
	Street Lights (including conduit & pullboxes)	EA	$6,500.00	1	$6,500.00	$7,030.40	0.8	$5,200.00	0.2	$975.00	0.1	$325.00								
				SUBTOTAL:	***$296,227.00***			***$236,981.60***		***$44,434.05***		***$3,961.35***				***$10,850.00***				
634.01	Survey and Stakeout	LS	$5,924.54	2%	$5,924.54		2%	$4,739.63	2%	$888.68	2%	$79.23			2%	$217.00				
699.04	Mobilization	LS	$11,849.08	4%	$11,849.08		4%	$9,479.26	4%	$1,777.36	4%	$158.45			4%	$434.00				
R619.01	Basic Maintenance and Protection of Traffic	LS	$14,811.35	5%	$14,811.35		5%	$11,849.08	5%	$2,221.70	5%	$198.07			5%	$542.50				
				TOTAL:	***$328,811.97***			***$263,049.58***		***$49,321.80***		***$4,397.10***				***$12,043.50***				
Construction Cost including 15% Estimate Contingency and 5 % escalation to mid point of constr. (Spring 2010)		LS	$65,762.39	20%	***$394,574.36***		20%	***$315,659.49***	20%	***$59,186.15***	20%	***$5,276.52***			20%	***$14,452.20***				
	Construction Contingency (8%)	LS	$31,565.95	8%	$31,565.95	$31,565.95	8%	$25,252.76	8%	$4,734.89	8%	$422.12	8%	$0.00	8%	$1,156.18	8%	$0.00	8%	$0.00
	Engineering Design (8%)	LS	$31,565.95	8%	$31,565.95	$31,565.95	8%	$25,252.76	8%	$4,734.89	8%	$422.12	8%	$0.00	8%	$1,156.18	8%	$0.00	8%	$0.00
	Construction Inspection and Support (12%)	LS	$47,348.92	12%	$47,348.92	$47,348.92	12%	$37,879.14	12%	$7,102.34	12%	$633.18	12%	$0.00	12%	$1,734.26	12%	$0.00	12%	$0.00
	Anticipated Right of Way Costs	LS	$20,000.00		$20,000.00	$20,000.00	80%	$16,000.00	15%	$3,000.00	5%	$1,000.00		$0.00		$0.00		$0.00		$0.00
	TOTAL COSTS Incl. Enginering, CI, Constr. Conting. And ROW				**$525,055.19**			**$420,044.15**		**$78,758.28**		**$7,753.94**		**$0.00**		**$18,498.82**		**$0.00**		**$0.00**

Bergmann Associates

3/3/2009

MOUNT HOPE AVENUE/EAST HENRIETTA ROAD IMPROVEMENT PROJECT
Erie Canal to Elmwood Avenue
City of Rochester - DES

Conceptual Cost Estimate
Bergmann Associates - Engineers, Architects, Surveyors, PC

ESTIMATE IS BASED ON FALL 2009 CONSTRUCTION COSTS

Mount Hope Avenue: Raleigh to Rossiter Tie into existing

Item No.	Description of Work	Pay Unit	Unit Price	Engineer's Estimate Quantity	Engineer's Estimate Total		Federal Funds Quantity	Federal Funds Total	State Funding Quantity	State Funding Total	City Street Fund Quantity	City Street Fund Total	Water Debt Quantity	Water Debt Total	M.C. Traffic Quantity	M.C. Traffic Total	Pure Waters Quantity	Pure Waters Total	Private Owners Quantity	Private Owners Total
203.02	Unclassified Excavation and Disposal	CY	$13.50	1,500	$20,250.00	$14.60	1200	$16,200.00	225	$3,037.50	75	$1,012.50								
203.25	Stone Bedding	CY	$34.50	47	$1,621.50	$37.32	38	$1,297.20	7	$243.23							2	$81.08		
203.28	Select Granular Backfill (Sewer)	CY	$34.50	95	$3,277.50	$37.32	76	$2,622.00	14	$491.63							5	$163.88		
R206.04	Trench and Culvert Excavation	CY	$15.50	140	$2,170.00	$16.76	112	$1,736.00	21	$325.50							7	$108.50		
304.03	Subbase Course, Type 2	CY	$29.50	660	$19,470.00	$31.91	528	$15,576.00	99	$2,920.50	33	$973.50								
403.11	Asphalt Concrete - Type 1 Base Course	Ton	$70.00	782	$54,740.00	$75.71	626	$43,792.00	117	$8,211.00	39	$2,737.00								
403.13	Asphalt Concrete - Type 3 Binder Course	Ton	$77.00	205	$15,785.00	$83.28	164	$12,628.00	31	$2,367.75	10	$789.25								
403.1901	Asphalt Concrete - Type 7F Top Course (HF) Marshall Design	Ton	$77.00	155	$11,935.00	$83.28	124	$9,548.00	23	$1,790.25	8	$596.75								
520.5014	Sawcut	LF	$2.00	68	$136.00	$2.16	54	$108.80	10	$20.40	3	$6.80								
R601.0212	12" Polyvinyl Chloride Pipe , SDR-21	LF	$33.00	210	$6,930.00	$35.69	168	$5,544.00	32	$1,039.50							11	$346.50		
R601.0218	18" Polyvinyl Chloride Pipe , SDR-22	LF	$37.00	60	$2,220.00	$40.02	48	$1,776.00	9	$333.00							3	$111.00		
R601.0224	24" Polyvinyl Chloride Pipe , SDR-23	LF	$41.00	60	$2,460.00	$44.35	48	$1,968.00	9	$369.00							3	$123.00		
S604.31	Type B Catch Basin	EA	$1,500.00	5	$7,500.00	$1,622.40	4	$6,000.00	1	$1,125.00							0	$375.00		
S605.1406	6" Corrugated Polyethylene Underdrain Pipe	LF	$8.00	670	$5,360.00	$8.65	536	$4,288.00	101	$804.00							34	$268.00		
S608.12	Concrete Sidewalk & Driveway	CY	$300.00	65	$19,500.00	$324.48	52	$15,600.00	10	$2,925.00	3	$975.00								
608.16	Asphalt Driveway-Medium Duty	SF	$3.00	200	$600.00	$3.24	160	$480.00	30	$90.00	10	$30.00								
S609.60	5" Stone Curb	LF	$35.00	595	$20,825.00	$37.86	476	$16,660.00	89	$3,123.75	30	$1,041.25								
S609.61	5" Radius Stone Curb	LF	$37.00	105	$3,885.00	$40.02	84	$3,108.00	16	$582.75	5.25	$194.25								
685.1004/110	Pavement Marking Stripes - 4"	LF	$0.40	395	$158.00	$0.43	316	$126.40	59	$23.70					19.75	$7.90		$0.00		
S685.201201	Pavement Marking Stripes - 12"	LF	$1.20	250	$300.00	$1.30	200	$240.00	38	$45.00					12.5	$15.00		$0.00		
	Waterline work	LS	$38,850.00	1	$38,850.00	$42,020.16							1	$38,850.00						
	Signs	EA	$550.00	1	$550.00	$594.88	0.8	$440.00	0.15	$82.50					0.05	$27.50		$0.00		
	Street Lights (including conduit & pullboxes)	EA	$6,500.00	2	$13,000.00	$7,030.40	2	$10,400.00	0	$1,950.00										
				SUBTOTAL:	***$251,523.00***			***$170,138.40***		***$31,900.95***		***$8,356.30***		***$38,850.00***		***$50.40***		***$1,576.95***		***$0.00***
634.01	Survey and Stakeout	LS	$5,030.46	2%	$5,030.46		2%	$3,402.77	2%	$638.02	2%	$167.13	2%	$777.00	2%	$1.01	2%	$31.54		
	Landscaping/Trees	LS	$10,552.28	5%	$10,552.28	$10,519.78	5%	$8,506.92	5%	$1,595.05	5%	$417.82								
699.04	Mobilization	LS	$10,060.92	4%	$10,060.92		4%	$6,805.54	4%	$1,276.04	4%	$334.25	4%	$1,554.00	4%	$2.02	4%	$63.08		
R619.01	Basic Maintenance and Protection of Traffic	LS	$12,576.15	5%	$12,576.15		5%	$8,506.92	5%	$1,595.05	5%	$417.82	5%	$1,942.50	5%	$2.52	5%	$78.85		
				TOTAL:	***$289,742.81***			***$197,360.54***		***$37,005.10***		***$9,693.31***		***$43,123.50***		***$55.94***		***$1,750.41***		***$0.00***
	Construction Cost including 15% Estimate Contingency and 5 % escalation to mid point of constr. (Spring 2010)	LS	$57,948.56	20%	***$347,691.38***	$346,786.58	20%	***$236,832.65***	20%	***$44,406.12***	20%	***$11,631.97***	20%	***$51,748.20***	20%	***$67.13***	20%	***$2,100.50***	20%	***$0.00***
	Construction Contingency (8%)	LS	$27,815.31	8%	$27,815.31	$27,742.93	8%	$18,946.61	8%	$3,552.49	8%	$930.56	8%	$4,139.86	8%	$5.37	8%	$168.04		
	Engineering Design (8%)	LS	$27,815.31	8%	$27,815.31	$27,742.93	8%	$18,946.61	8%	$3,552.49	8%	$930.56	8%	$4,139.86	8%	$5.37	8%	$168.04		
	Construction Inspection and Support (12%)	LS	$41,722.97	12%	$41,722.97	$41,614.39	12%	$28,419.92	12%	$5,328.73	12%	$1,395.84	12%	$6,209.78	12%	$8.06	12%	$252.06		
	TOTAL COSTS Incl. Enginering, CI, Constr. Conting. And ROW				**$445,044.96**			**$303,145.80**		**$56,839.84**		**$14,888.92**		**$66,237.70**		**$85.93**		**$2,688.64**		**$0.00**

Note: Right of Way cost incl. cost for the property at $15/sf for commercial property, $2/SF for residential property

APPENDIX C

Correspondence

U.S. Department
of Transportation
Federal Highway Administration

New York Division

Leo W. O'Brien Federal Building, Suite 719
Clinton Avenue & North Pearl Street
Albany, NY 12207

March 18, 2009

In Reply Refer To:
HDO-NY

Mr. R. J. Papaj, Regional Local Project Liaison
New York State Department of Transportation, Region 4
1530 Jefferson Road
Rochester, NY 14623-3161

Subject: Mount Hope Avenue and East Henrietta Road Improvements
City of Rochester, Monroe County
PIN # 4753.61

Dear Mr. Papaj:

Reference your February 12, 2009 letter requesting concurrence that the subject project meets the requirements for a Categorical Exclusion with Documentation and Section 106 determination regarding potential impacts to cultural resources in, or eligible for inclusion in the National Register of Historic places. In that regard, we have reviewed the December 2008 pre-Final Design Report.

We have reviewed SHPO updated opinion and have determined that this project will have *No Effect* on cultural resources in, or eligible for inclusion in the National Register of Historic places as stated in their January 26, 2009 letter. The requirements of 36 CFR Part 800 have been met.

We also concur with the Categorical Exclusion with Documentation classification as the applicant has demonstrated that the criteria for Categorical Exclusions in accordance with 23 CFR 771.117 are satisfied, and that significant environmental affects will not result.

If you have any questions, please contact me at (518) 431-4125, ext 243.

Sincerely,

Valeriya Remezova
Area Engineer

cc: K. O'Buckley, P.E., Regional Director, Region 4
J. Bordwell, DQAB, POD 23, NYSDOT

MOVING THE
AMERICAN
ECONOMY

David A. Paterson
Governor

Carol Ash
Commissioner

New York State Office of Parks,
Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643
www.nysparks.com

January 26, 2009

Mark Lester
Bergmann Associates
28 East Main St
200 First Federal Plaza
Rochester, New York 14614-1909

Re: FHWA,DOT
Mt Hope Ave and East Henrietta Rd PIN 4753.61
Mt Hope Ave and East Henrietta Rd/ROCHESTER, Monroe County
07PR02511

Dear Mr. Lester:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based upon this review, it is the SHPO's opinion that your project will have No Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Director

An Equal Opportunity/Affirmative Action Agency

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Eliot Spitzer
Governor

Carol Ash
Commissioner

New York State Office of Parks,
Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643
www.nysparks.com

June 29, 2007

Mark Lester
Bergmann Associates
28 East Main St
Rochester, New York 14608

Re: FHWA,DOT
Mt Hope Ave and East Henrietta Rd.
Rd/ROCHESTER, Monroe County
07PR02511/PIN 4753.61

Dear Mr. Lester:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966.

Based upon this review, it is the SHPO's opinion that your project will have No Adverse Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Director

An Equal Opportunity/Affirmative Action Agency

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National Marine Fisheries Service
Habitat Conservation Division
Milford Field Office, 212 Rogers Avenue
Milford, Connecticut 06460

TO: James F. Boggs
Sr. Environmental Scientist
Bergmann Associates
200 First Federal Plaza
28 East Main Street
Rochester, New York 14614-1909

DATE: 22 February 2006

SUBJECT: **Reconstruction of Mt. Hope Avenue and East Henrietta Road; PIN 4753.61; Elmwood Avenue to Erie Canal; City of Rochester, Monroe County, New York**

Diane Rusanowsky
(Reviewing Biologist)

WE have completed our review of the subject information request and offer the following preliminary comments pursuant to the Endangered Species Act, the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act:

Endangered and Threatened Species

___XX__ No endangered or threatened species under the jurisdiction of NOAA Fisheries Service in the *immediate* project area.

_____ Endangered or threatened species under the jurisdiction of NOAA Fisheries Service's jurisdiction may be present in the project area. For details, please contact:

Ms. Mary Colligan
ARA for Protected Resources
One Blackburn Drive
Gloucester, MA 01930

Fish and Wildlife Coordination Act Species

___XX___ The following may be present in the general project area: Anadromous and resident fish, forage and benthic species in nearby aquatic habitats

Please contact the appropriate Regional Office of the New York State Department of Environmental Conservation to confirm the presence of specific anadromous or resident aquatic populations.
Habitat use by some species or life stages may be seasonal (e.g. over-wintering.)

Essential Fish Habitat

_____ Aquatic habitats in the project vicinity have been designated as Essential Fish Habitat (EFH) for one or more species and life stages. When details of the project are made available and permit applications have been made, conservation recommendations may be given. For a listing of EFH and further information, please go to our website at: http://www.nero.nmfs.gov/ro/doc/webintro.html . Based on the information provided to date, it is not possible to determine whether or not an EFH assessment will be necessary.

___XX_____ No EFH presently designated in the immediate project area.

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **FAX:** (518) 402-8925

RECEIVED
FEB 23 2006
BY:

Denise M. Sheehan
Commissioner

February 21, 2006

Proj. No. _____
Org. J. BOGGS
Enc. 11 INC
Full Copy _____
Copies to CWP

James F Boggs
Bergmann Associates
200 First Federal Pl, 28 East Main St.
Rochester, NY 14614-1909

Dear Mr. Boggs:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to an Environmental Assessment for the proposed Road Reconstruction, PIN 4753.61, Mt. Hope Ave and East Henrietta Rd, area as indicated on the map you provided, located in Rochester, Monroe County.

We have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

Betty Ketcham

Betty A. Ketcham, Information Services
New York Natural Heritage Program

Enc.
cc: Reg. 8, Wildlife Mgr.

Monroe County

Federally Listed Endangered and Threatened Species and Candidate Species

This list represents the best available information regarding known or likely County occurrences of Federally-listed and candidate species and is subject to change as new information becomes available.

Common Name	Scientific Name	Status
Bog turtle (Riga and Sweden Townships)	*Clemmys muhlenbergii*	T

E=Endangered T=Threatened P=Proposed C=Candidate

Information current as of: 7/10/2007

Print Species List

Non-Standard Feature Justification – Mt. Hope Avenue lane widths

NON-STANDARD FEATURE JUSTIFICATION (in accordance with HDM '2.8)			
1. Description of Non-Standard Feature			
Type of Feature (e.g., horizontal curve radius):	10 ft. wide interior travel lanes. 11 ft. wide curbside lanes will be provided.		
Location:	Mt. Hope Avenue Crittenden Boulevard south to Westfall Rd.		
Standard Value:	11 ft. min.	Design Speed:	35mph
Existing Value:	10 ft.	Safe Operating Speed:	35mph
Proposed Value:	10 ft.	Safe Operating Speed:	35mph
2. Accident Analysis			
Current Accident Rate:	9.28 acc./mvm: Critenden Blvd. to Lattimore Rd. 5.47 acc./mvm: Lattimore Rd. to Westfall Rd		
Statewide Rate:	2.19 acc./mvm		
Is the non-standard feature a contributing factor?	No. There are no apparent accident trends or individual accidents related to the lane width.		
Potential for Future Accidents and Accident Severity:	The potential for future accidents or severity of accidents will not increase as a result of retaining the existing lane width.		
3. Cost Estimates			
Cost to Fully Meet Standards:	The cost to widen the interior lanes from 10 ft. to 11 ft. is approximately $200,000 for additional pavement and Right of Way acquisition. However, there is already restricted R.O.W. and buildings and residences which are in very close to the nearly 30,000 vehicles which travel this roadway on a daily basis. Widening the roadway an additional foot on each lane only pushes the roadway closer to the front of the buildings and houses and would likely be viewed as untenable by the businesses and residents along this corridor.		

Cost(s) For Incremental Improvements:	Incremental improvements are not possible given the aforementioned right of way constrains and locations of ouses and buildings.
4. Mitigation (e.g., increased superelevation and speed change lane length for a non-standard ramp radius):	
	The proposed improved signal operations, new pavement surface and pavement striping could be considered as minor mitigation features.
5. Compatibility with Adjacent Segments & Future Plans:	
	The proposed 10 ft. wide travel lanes match the existing lane widths and configuration on the northern end of the project. On the southern end of the project the 10 ft. wide lanes extend from the Westfall Road intersection southerly to the I-390 interchange where they are widened to 12 feet.
6. Other Factors (e.g., Social, Economic & Environmental):	
	The city of Rochester has reviewed the issues with widening the roadway to provide the 11 ft. lane widths or reduction of the tree lawn area and has determined that retaining the 10 ft. wide interior lane widths is in the best interest of the City and it's residents.
7. Proposed Treatment (i.e., Recommendation):	
	Proposed treatment includes retaining the 10 ft. wide interior travel lanes on Mt. Hope Avenue between Crittenden Blvd. and Westfall Rd. (approximately 2800 ft.)

Non-Standard Feature Justification – Mt. Hope Avenue lane widths

NON-STANDARD FEATURE JUSTIFICATION (in accordance with HDM '2.8)			
8. Description of Non-Standard Feature			
Type of Feature (e.g., horizontal curve radius):	200 ft. curve radius		
Location:	Mt. Hope Avenue/Crittenden Boulevard/E. Henrietta Rd, intersection		
Standard Value:	443 ft. min.	Design Speed:	35mph
Existing Value:	170 ft.	Safe Operating Speed:	35mph
Proposed Value:	200 ft.	Safe Operating Speed:	35mph
9. Accident Analysis			
Current Accident Rate:	1.22 acc./mev: Mt. Hope Ave./Critenden Blvd./E. Henrietta Rd. intersection		
Statewide Rate:	0.6 acc./mev		
Is the non-standard feature a contributing factor?	No. The highest percentage of accident types are rear end, followed by right angle, left turn and overtaking. There are no apparent accident trends or individual accidents related to the curve radius.		
Potential for Future Accidents and Accident Severity:	The potential for future accidents or severity of accidents will not increase as a result of only slightly improving the curve radius.		
10. Cost Estimates			
Cost to Fully Meet Standards:	Approximately $600,000 for additional Right of Way acquisition in the form of parcel takings (26,000 S.F.) which would be required from local businesses and residents at this intersection. Meeting this requirement would also require relocating at least one business.		
Cost(s) For Incremental Improvements:	Incremental improvements beyond what is proposed would require relocating at least one business.		
11. Mitigation (e.g., increased superelevation and speed change lane length for a non-standard ramp radius):			
The proposed improved signal operations, re-aligned intersections, new pavement surface and pavement striping could be considered as minor mitigation features.			

12. Compatibility with Adjacent Segments & Future Plans:	
	The proposed 200 ft. curve radius improves the existing intersection configuration and is compatible with the adjacent highway improvements.
13. Other Factors (e.g., Social, Economic & Environmental):	
	The City of Rochester has met with the adjacent property owners concerning widening the roadway to provide the 443 ft. curve radius and was viewed as unacceptable to the adjacent owners. The City of Rochester has agreed with this minor improvement of the curve radius.
14. Proposed Treatment (i.e., Recommendation):	
	Proposed treatment includes providing the 200 ft. curve radius

CITY OF ROCHESTER, NEW YORK
County of Monroe
NOTICE OF ENVIRONMENTAL DETERMINATION

Issued in accordance with Article 8 of the New York State Environmental Conservation Law and Chapter 48 of the Rochester Municipal Code.

NEGATIVE DECLARATION: The proposed action is one which will not have an effect on the environment.

ACTION:

Classification:	Type I
Description:	Zoning Map Amendment, Zoning Text Amendment, Official Map Amendment and Street Improvement Project

PROJECT:

Title:	Mt. Hope Corridor Improvements and Rezoning
Location:	Mt. Hope Avenue between Cook Street and Rossiter Road/Raleigh Street
Applicant:	Mayor Robert J. Duffy
Description:	To rezone the properties at 1256-1510 Mt. Hope Avenue (even), 1325-1521 Mt. Hope Avenue (odd), 30 E. Henrietta Road, 683 Elmwood Avenue, and 793-797 Elmwood Avenue from C-2 Community Center, and 35 Crittenden Boulevard, and 22 and 25 Raleigh Street from R-1 Low Density Residential, to Collegetown Village District (C-V District); to amend the Zoning Text by adding the Collegetown Village District (C-V District) regulations to the Zoning Code and to make modifications to the major site plan review triggers; to amend the official map by acquiring and dedicating portions of private property as public right-of-way for street improvement purposes; and, to commence a street improvement project including new street pavement and widening, sidewalks, on-street parking, access management, a raised median, street trees, signalized intersection improvements and other street amenities.

REASON(S) FOR DETERMINATION: The project site does not contain sensitive natural features (e.g., wetlands, steep slopes, erodible soils, wildlife habitat, etc.). No significant impacts are anticipated with respect to water or air quality. Community facilities/services (e.g., water supply, energy supply, public safety, waste disposal and transportation) are adequate to accommodate and service the proposed project. The project will not significantly affect historic or archeological resources and is an improvement to the growth and character of the community. The project is consistent with the University of Rochester Master Plan. The Rochester Environmental Commission (REC) indicated that based on the information provided, the proposal is not likely to cause significant adverse impacts to the environment. The Project Review Committee (PRC) is supportive of the proposed Collegetown Village (C-V) regulations and the underlying concepts.

LEAD AGENCY: **Mayor Robert J. Duffy**

AGENCY CONTACT PERSON: **Zina Lagonegro, Senior Planner, Buildings and Zoning, 30 Church Street, Room 125B, Rochester, NY 14614, (585) 428-7054**

DATE ISSUED: **November 24, 2008**

This declaration and supporting information is on file and available for public inspection with the Bureau of Buildings & Zoning, Room 125-B, City Hall, 30 Church Street, Rochester, NY 14614.

FILE REFERENCE NUMBER: **M-02-08-09/T-02-07-08**

DISTRIBUTION: Mayor, City Clerk/City Council, City Planning Commission
Involved Agencies

PART III
IMPACT EVALUATION

Mt. Hope Avenue Street Improvement Project and Zoning Map and Text Amendment

IMPACT DESCRIPTION: Aesthetic and Historic Resources

A portion of the Mt. Hope Cemetery located at the northwest corner of Elmwood Avenue and Mt. Hope Avenue is listed on the National Register of Historic Places. In accordance with the State Environmental Quality Review Act (SEQR) Part 617.4(b)(9), any Unlisted action occurring wholly or partially within, or substantially contiguous to, any historic building, structure, facility, site or district or prehistoric site that is listed on the National Register of Historic Places is a Type I Action.

MITIGATION MEASURES INCORPORATED IN PROJECT:

It is unlikely that the proposed street reconstruction project or the zoning map, text or official map amendments will have a significant impact on the use or future development/redevelopment of the Mt. Hope Cemetery.

The project information was provided to the State Historic Preservation Office (SHPO) for review and comment. In a letter dated June 29, 2007, SHPO concluded that the project will have no adverse effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places.

MITIGATION MEASURES THAT COULD BE INCORPORATED:
None

IMPORTANCE OF IMPACT:
The project is not likely to present significant adverse impacts on historic resources due to the nature of the concepts incorporated into the C-V district regulations and the street improvement project.

PART III
IMPACT EVALUATION

Mt. Hope Avenue Street Improvement Project and Zoning Map and Text Amendment

IMPACT DESCRIPTION: Traffic Impacts

The City of Rochester Department of Environmental Services prepared a design report for the Mt. Hope Avenue Corridor between Elmwood Avenue and Crittenden Boulevard which includes the subject project area. The street improvement project includes new street pavement and widening, sidewalks, parcel acquisitions and dedications, on-street parking, access management, raised median, street trees, signalized intersection improvements and other street amenities.

The intent of the street improvement project is to reduce the high accident rates along the project corridor, which has the highest accident rates in Monroe County. There are 53 commercial and residential strips of properties where right-of-way takings will occur in order to improve the level of service, safety, and mobility needs of people and goods throughout the corridor.

The anticipated increase in traffic is due to the standard annual traffic growth between current traffic levels and the estimated time of completion and traffic growth associated with the planned University of Rochester Collegetown development and east side roadway re-development. The capital roadway project will not increase traffic volumes within the study area.

MITIGATION MEASURES INCORPORATED IN PROJECT:

1. Short term impacts to businesses and pedestrians may occur during the street reconstruction project. Techniques such as "A plus B Bidding" construction schedule incentives, temporary parking area(s) and temporary pavement installations to maintain access during construction will be utilized.
2. On site maintenance of traffic and staged construction are anticipated. Traffic flow will be maintained by a single lane of traffic in each direction along Mt. Hope Avenue and East Henrietta Road during all construction operations. Emergency services, including emergency medical vehicles traveling to and from nearby hospitals, will be given priority to get through the corridor.
3. Access to all residential and business driveways will be maintained during construction. A clearly marked traveled way will be delineated through the use of temporary pavement markings, traffic signage and construction barricades.
4. Pedestrian traffic would be maintained at all times on at least one side of the roadway.
5. Traffic signals will also be maintained during construction. The need for restricted construction operations during the AM and PM peak traffic movements will be considered during the preparation of the detailed maintenance and protection of traffic plan.

MITIGATION MEASURES THAT COULD BE INCORPORATED:

Additional mitigation measures will be implemented on a case-by-case basis as approved by the City of Rochester, Department of Environmental Services-Construction Office.

IMPORTANCE OF IMPACT:

The project is not likely to present significant adverse impacts on the character of the community due to the public safety aspects that have been incorporated into the street improvement project.

PART III
IMPACT EVALUATION

Mt. Hope Avenue Street Improvement Project and Zoning Map and Text Amendment

IMPACT DESCRIPTION: Growth and Character of Community and Neighborhood

In the spring and summer of 2007 the City Zoning Office was reviewing a proposal made by a private developer to construct a Starbuck's Restaurant with a drive-through on the east side of Mt. Hope Avenue. Just before issuance of final approval a request for a similar use, a Tim Horton's with a drive-through, was submitted by a private developer for the parcel directly adjacent to the proposed Starbuck's location.

In November 2007, a Draft Design Report was issued by the City of Rochester, U.S. Department of Transportation and the NYS Department of Transportation for the *Mt. Hope Avenue and East Henrietta Road Improvements* which revealed the public safety hazards of multiple curb cuts and traffic patterns associated with the land uses in the segment of Mt. Hope Avenue between Crittenden Boulevard and Elmwood Avenue. The Draft Design Report incited controversy in the neighborhood that was revealed in a letter, dated November 19, 2007, from the President of the Mt. Hope Business Association to the City Engineer. That combined with two separate development proposals for restaurants with drive-through windows on adjacent parcels would have an impact on the already existing traffic problems and, in turn, the affect of the street reconstruction project on the proposed developments needed to be further assessed before any land use decisions could be rendered.

Further analysis of the existing and proposed land uses along the corridor revealed the potential for cumulative visual and operational impacts of several singular uses (e.g., Starbuck's, Tim Horton's, Subway, McDonald's) operating independently with separate curb cuts, parking areas and drive-through components which can cause vehicular congestion and vehicle to vehicle and vehicle to pedestrian conflicts. Large paved areas and numerous curb cuts involved with drive-through establishments create substantial gaps between buildings which interfere with a dense, vibrant urban streetscape and substantially impedes a safe and pleasing pedestrian environment.

In addition, the University of Rochester owns the properties on the west side of Mt. Hope Avenue between Elmwood Avenue and Crittenden Road and had been in the process of finalizing a new Master Plan to guide development of its University and Medical Center campuses including the parcels along Mt. Hope Avenue. Submission of the Master Plan was anticipated in the spring of 2008. The U of R had a vision of creating a "college town" theme for the area with high-density, mixed-use development that is pedestrian and bicycle friendly.

The release of the Design Report, the impending release of the U of R Master Plan, the subsequent response from the Business Association and the evaluation of existing and proposed land uses along the Mt. Hope corridor brought to the City's attention the significant traffic problems in the neighborhood and the need for alternatives analysis. That combined with two separate development proposals for restaurants with drive-through windows on adjacent parcels would have an impact on the already existing traffic problems and, in turn, the affect of the street reconstruction project on the proposed developments must be further assessed before any land use decisions could be rendered.

IMPACT DESCRIPTION: Growth and Character of Community and Neighborhood (continued):

In response to these issues, a six month moratorium was approved by City Council in March 2008, for the purpose of conducting a land use, transportation and planning study along the Mt. Hope Avenue corridor between Elmwood Avenue and Raleigh Street. In response to the adoption of a six month moratorium, the Mt. Hope Task Force was established, which included representatives from various city departments, South East Area Coalition (SEAC), Mt. Hope Avenue businesses, Upper Mt. Hope neighbors, Citygate, and the University of Rochester, to oversee the progress of moratorium activities and findings. In addition, three internal city staff subcommittees were created; Transportation, Public Participation, and Code, to initiate the study of the Mt. Hope corridor. Several neighborhood and business meetings had been held throughout the process.

The University's Master Plan has recently been released to the City for review which proposes a mixed-use, "college town" theme for these properties. The development of the new Collegetown Village (C-V) District zoning regulations has been developed with the goals of the University of Rochester Master Plan in mind, as well as advancing the goals of the business community and that of the residents. The character on the east side of Mt. Hope will support, if not mimic the desired character of the west side of the street within the U of R Master Plan area.

MITIGATION MEASURES INCORPORATED IN PROJECT:

The development of the Collegetown Village District regulations and the proposed street improvement project has been completed with intense business and resident involvement from inception of the moratorium in January of 2008. The project concepts of shared parking, access management at the rear of the businesses along the east side of Mt. Hope Avenue, the reduction in the number of driveway curb cuts along the corridor, inclusion of on-street parking, a center median, landscaping and streetscape amenities have been agreed upon by all project participants to improve vehicular/pedestrian safety and circulation; foster high density, multi-story, built-up development; transform the Mt. Hope Corridor to a dense mixed-use urban center; and, foster and improve community character.

The C-V district regulations include building placement and design standards for new development Site Plan Review approval is required under certain circumstances, and Special Permit approval is required for drive-through uses.

MITIGATION MEASURES THAT COULD BE INCORPORATED:
None

IMPORTANCE OF IMPACT:
The project is not likely to present significant adverse impacts on the character of the community due to the concepts, design criteria, and public safety aspects that have been incorporated into the C-V district regulations and the street improvement project.

Memorandum of Understanding
For Shared Parking and Driveway Access
Mt. Hope Avenue Improvement Project
Elmwood Avenue to Rossiter Road
NYSDOT PIN 4753.21 - City of Rochester P.C. 09101

PARTIES TO THIS MEMORANDUM OF UNDERSTANDING are **Mamasan's Monroe LLC** as owner of three parcels located at 1360, 1378 and 1394 Mt. Hope Avenue, Rochester, NY, herein after "Mamasans" and **David L. Gandell** as owner of 1400 Mt. Hope Avenue, Rochester, NY, hereinafter "Brueggers" and **Jeanne M. Blaisdell, Trustee of Hoffend Family Trust** as owner of 1432 Mt. Hope Avenue, Rochester, NY, hereinafter "McDonalds" and **the City of Rochester**, a municipal corporation duly organized under the laws of the State of New York, hereinafter "the City".

WHEREAS, the City is implementing a locally administered, Federal aid highway improvement project on Mt. Hope Avenue which is being designed to reduce traffic accidents; improve vehicular, pedestrian and bicycle safety; improve the pavement condition and ride quality; improve traffic flow and lessen vehicular congestion; and improve and enhance the public pedestrian realm; and

WHEREAS, a high vehicular accident rate exists between Elmwood Avenue and Crittenden Boulevard which is caused both by corridor congestion and customer turns which are being made into and out of driveways and parking lots of the businesses in the corridor; and

WHEREAS, to mitigate the high accident rate the City is proposing to construct a raised, center median which will permit only right turns to be made into and out of the businesses' driveways in the corridor; and

WHEREAS, while the alteration of access to the businesses which results from the median is mitigated by allowing signal-protected, u-turn movements at intersections, the private parties to this Memorandum of Understanding desire additional access to a signalized intersection for their customers; and

WHEREAS, the City has agreed to make a good-faith effort to facilitate this additional access and to have that access in place and functioning before the start of major portions of the construction of the highway improvement project; and

WHEREAS, the City is adopting a new collegetown zoning regulation in the Mt. Hope area which will encourage an urban-build environment to create a strong street edge with dense, mixed-use development, enhanced sidewalk areas which will accommodate café seating and vehicular access management which will limit the curb cuts across the enhanced sidewalks.

NOW THEREFORE, the parties to this Memorandum of Understanding agree to the following:

Section 1. The City plans to locate the new traffic signal which is being constructed as part of the highway improvement project to align with a new 35' wide, three-lane access driveway (a 10' and an 11' westbound lane exiting onto Mt. Hope Avenue and one 14' inbound lane) which will be located on the Mamasans property. The northern edge of the new 35' wide access driveway will be located ten feet south of the south face of the existing building in which Starbucks is currently located. The traffic signal will allow safe access between either direction of Mt. Hope Avenue and the Mamasans property.

Section 2. Mamasans, Brueggers and McDonalds will each donate permanent easements for access purposes to the City along the eastern boundary of each of the parcels. For Mamasans, Brueggers and the northern portion of McDonalds the easements will generally each be 50' wide. The eastern 8' of each easement will be used to construct a retaining wall, screening fence, curbing or guide rail, and necessary storm drainage facilities which will separate Mamasans, Brueggers and McDonalds from the backyards of the residences along Westview Terrace. Adjacent to, and west of, that 8' zone will be 18' of perpendicular, shared parking and a 24' wide, two-way, interconnected parking lot access aisle. At the southern end of McDonalds, where the easement is adjacent to the rear and side yards of Ft. Hill Terrace properties, the easement will be 27' wide and not require space for the retaining wall nor will it contain any perpendicular parking. Attachment A is the Concept Parking Plan and is part of this Memorandum of Understanding.

Memorandum of Understanding
For Shared Parking and Driveway Access
Mt. Hope Avenue Improvement Project
Elmwood Avenue to Rossiter Road
NYSDOT PIN 4753.21 - City of Rochester P.C. 09101

Section 3. Mamasans will donate a 35' wide permanent easement for access purposes to the City. The easement will be over the access driveway discussed in Section 1 and will extend from Mt. Hope Avenue on the west and join on the eastern edge to the easement on the Mamasans property described in Section 2. The boundary of that easement is shown on Attachment A. Also Mamasans agrees that it will allow one shared business/public parking sign, approved by City Zoning, to be located in the vicinity of this easement near Mt. Hope Avenue.

Section 4. McDonalds is considering purchase of a property on Ft. Hill Terrace for assemblage into their existing site. That possible purchase is a private real estate transaction not involving the City. In addition, the plan assumes that Mamasans is demolishing the current Subway location and McDonalds is demolishing the Ft. Hill Terrace building. This Memorandum assumes both the assemblage to the McDonalds property and the demolitions of the Subway and Ft. Hill Terrace buildings. Also, the City agrees to include the abandonment of the westernmost 100 feet of Ft. Hill Terrace as part of the draft Design Report for the highway improvement project.

Section 5. The approximate permanent easement areas described in Section 2 and 3 are 8,609 ft^2 for 1360 Mt. Hope Avenue; 10,338 ft^2 for 1378 Mt. Hope Avenue; 3,000 ft^2 for 1394 Mt. Hope Avenue; 7,711 ft^2 for 1400 Mt. Hope Avenue and 11,157 ft^2 for 1432 Mt. Hope Avenue.

Section 6. The 24' wide, two-way, interconnected parking lot access aisle which is described in Section 2 is expected to extend from Ft. Hill Terrace to the north boundary of 1360 Mt. Hope Avenue. The total length of the 24' wide access aisle is about 820' of which 396' (48%) is on Mamasans' properties, 154' (19%) is on Brueggers' property and 270' (33%) is on McDonalds' property.

Section 7. The City will request that a portion of the cost to create the shared access driveway and parking described in Sections 2 and 3 be funded as an aid-eligible part of the highway improvement project. Precedent exists of other similar access management elements which have been deemed eligible on past Federal-aid projects. The City also agrees that it will explore other funding options to facilitate the construction of these elements.

Section 8. The parking within the easement areas is shared, public parking which may be used by any employee or customer of any area business or church. The parking will consist of sixty spaces as shown on Attachment A. The parking will be regulated as 2-hour parking. Special permits may be issued to employees of businesses located on the properties of Mamasans, Brueggers and McDonalds to allow for longer-term employee parking.

Section 9. The City agrees to establish, and Mamasans, Brueggers and McDonalds agree to enter into, a Neighborhood Commercial Parking Lot Assessment District which will encompass the easements described in Sections 2 and 3. The City will establish the District for a fifteen year period. The District will be established to pay for operating and maintenance costs associated with the infrastructure being built within the easement areas. Those costs are expected to include pavement striping, snow plowing, costs to monitor the parking, energy costs for the lighting, liability insurance for the facilities and maintenance of the areas around the retaining wall, fence and guiderail.

Section 10. The Neighborhood Commercial Parking Lot Assessment District will be in substantial accordance with Resolutions 79-15 and 79-16 which were adopted by Rochester City Council on January 23, 1979. The allocation of the maintenance costs among Mamasans, Brueggers and McDonalds will be based upon the following percentages: Mamasans 38%; Brueggers 23%; and McDonalds 39%.

Memorandum of Understanding
For Shared Parking and Driveway Access
Mt. Hope Avenue Improvement Project
Elmwood Avenue to Rossiter Road
NYSDOT PIN 4753.21 - City of Rochester P.C. 09101

Section 11. Mamasans, Brueggers and McDonalds agree to identify one individual who will act as the liaison to the City for the Assessment District. That individual will be responsible for preparing the yearly budget for the District, for payment of the various bills from suppliers of the maintenance services, energy costs and insurance premiums for the District, and for submittal of claim vouchers to the City for those bills.

Section 12. In consideration of the terms of this Memorandum of Understanding, the City agrees to reduce, by fifteen percent (15%), the land assessed values of the properties identified herein. The amount of reduction to the land assessed value will also be reflected in the total assessed value of the properties. The proposed reduction will commence on the next February 1st (Taxable Status Date) following execution of this Memorandum, filing of all requisite easements and creation, by City Council, of the Parking Assessment District. In subsequent Citywide reassessments, the 15% reduction will be eliminated however the land encumbered by the easements will not be considered in the land valuation. The proposed reduction in the land assessed value, whether it is the 15% reduction in the overall land valuation or the elimination of the valuation on encumbered land, will end upon the next Taxable Status Date following the termination of the Parking Assessment District. Any improvements located on the portion of the properties not encumbered by the easements will be assessed at their full market value on the next Taxable Status Date.

Section 13. The City agrees to make a good-faith effort to have the facilities identified in this Memorandum of Understanding in place and functional before the start of major portions of the construction of the highway improvement project. This will enable easier customer access to the businesses during the construction period.

Section 14. It is understood that the benefits or encumbrances discussed herein will inure to the respective named parcels, and the allocation of the benefits or encumbrances to the tenants of the named parcels shall be between landlord and tenant.

Section 15. The parties to this Memorandum of Understanding are aware that other properties may be included in the Assessment District in the future if the interconnected parking lot access aisle is extended further to the north.

In recognition of, and concurrence in, these understandings, the parties below affix their signatures to this document.

Mamasan's Monroe LLC	**Date**	**David L. Gandell**	**Date**
Jeanne M. Blaisdell **Trustee of Hoffend Family Trust**	**Date**	**R. Carlos Carballada, Comm/EDD** **City of Rochester**	**Date**

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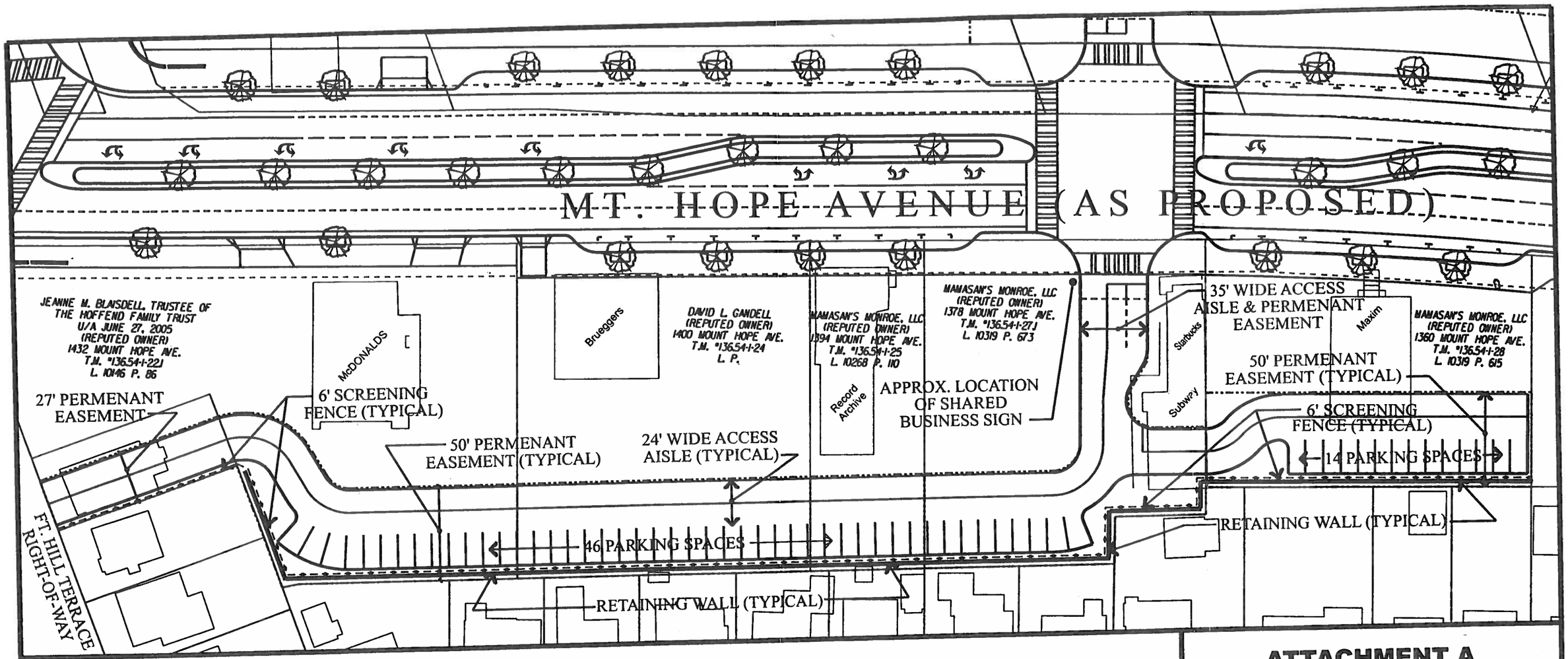


ATTACHMENT A

MEMORANDUM OF UNDERSTANDING
for
SHARED PARKING & DRIVEWAY ACCESS

CONCEPT PARKING PLAN

Dated: November 19, 2008

0 25 50 75 100
SCALE IN FEET

Bergmann associates
architects // engineers // planners

March 3, 2009

Mr. Rob Kozartis, P.E
Monroe County Dept. of Transportation
50 West Main Street
Rochester, NY 14614

Re: Response to Pre- Final Design Report Comments
Mt. Hope Avenue and East Henrietta Rd. Improvement Project
Project ID #09101
PIN 4753.61

Dear Rob:

In response to the Pre-Final Design Report Comment letter dated February 2, 2009 that we received from your office, we offer the following responses for your consideration:

Westfall Road Intersection

1. **Comment:** Clarify Text in report regarding improvements at this intersection – *no reference in text to dual left turns proposed, but dual lefts shown on plans.*
   Response: Dual westbound left turns are proposed for this intersection. The text in the report has by modified accordingly.

2. **Comment**: Split phase operation recommended to minimize poor line of sight concerns of EB left turns from WB thru's.
   Response: Split phasing the intersection will result in a v/c ratio of 1.90 for the westbound through/right movement and a level of service F with 444 seconds of delay during the AM peak hour. The overall intersection level of service would drop from "C" to "E" during AM peak. No significant changes during PM peak as a result of split phasing. Because of the poor level of service resulting from the split phasing we do not recommend using split phasing, instead we will provide a short (20ft.) long eastbound left turn queue to improve the sight lines between the eastbound Lefts and westbound thru traffic. Also, the Eastbound left turn movement will be a protected move and the westbound movement will be a protected/permitted movement.

3. **Comment**: Crosswalk not recommended on south side of intersection with dual left operation.
   Response: The City would like to retain this crosswalk and since we can provide adequate time in the signal operation for the pedestrians to cross the street at that location we will retain this crosswalk.

4. **Comment:** Is throat width enough to accommodate dual lefts? Verify with turning template.
   Response: The proposed throat width is wide enough to accommodate a single unit truck and a passenger car or two passenger cars. We have attached turning templates for both vehicles.

Crittenden Blvd. Intersection

1. **Comment:** Good idea eliminating Fort Hill Terrace leg from intersection.
   Response: Agreed.

2. **Comment:** Consider restricting left turn move from E. Henrietta Road to Mt. Hope southbound to further simplify the intersection.
   Response: This movement will be retained to allow westbound vehicles on E. Henrietta Rd. to access businesses (Mt. Hope Diner, Wendy's etc) which are just south of the intersection.

3. **Comment:** Recommend prohibiting U-turns from Mt. Hope northbound left turn lane.
   Response: Agreed, northbound U-turns will be prohibited by appropriate signage at this intersection.

4. **Comment:** Median opposite Raleigh Road – concern with U turns to / from Dunkin Donuts, or northbound motorists from Raleigh. May need to consider U-turn prohibition.
   Response: Southbound U-turns at the south end of the raised median near Raleigh Road will be prohibited. Appropriate signage will be installed.

New Middle Intersection

1. **Comment:** MCDOT concurs with installing this signal to manage access, allow U-turns & assist pedestrians.
   Response: So Noted.

2. **Comment:** Southbound left/U-turn pocket length should be extended – one truck turning will block the southbound thru lane.
   Response: Based on our discussions, we extended the southbound left turn queue pocket by 25 feet to provide a total queue length of 100 feet. In order to accomplish this we also shortened the northbound left turn pocket for the Elmwood Ave intersection by 25 feet.

3. **Comment:** Make sure text in report clearly states this will be a privately owned signal, and easements from driveway owners will be required for MCDOT to perform minor maintenance. Major maintenance or repairs is responsibility of owner.
   Response: This decision will require further review and discussion during detailed design. Based on our discussions, we understand that MCDOT would like the signal to be privately owned which constitutes the following:
   Private owner would be responsible for:

- Actually own the signal (similar to the signals that U of R currently owns)
- Pay electric costs (approx. $160/yr)
- Complete any major maintenance (replacing controller, repair accident damage etc.)

The County would be responsible for:

- 5% share of construction cost
- Provide minor maintenance (change bulbs, repair ped. buttons etc.)

We understand that all parties agree that a signal is required at the mid block location. However, the ownership and maintenance of the signal will need to be further reviewed and discussed in detail with the potential private owners (City, U of R & property owners on eastside of Mt. Hope) before they are willing to assume ownership. We will have this detailed discussion during the detailed phase of the project.

4. **Comment:** Recommend modeling the eastbound and westbound approaches as two lane.
   Response: The eastbound and west bound approaches are modeled and are shown on the plans as a left turn lane and a thru right turn lane in each direction.

Elmwood Avenue Intersection

1. **Comment**: Recommend extending EB left turn pocket to match new EB right turn pocket – otherwise, through queues will continue to block left turn lane as currently happens. Should modify statement in report (work needed to improve intersection is beyond scope of project).
   Response: Based on our discussions, we have included extending the left turn pocket in the proposed plans if funding (ie: CMAQ) is available.

2. **Comment**: Confirm synchro model has both NB/SB left turns with permitted/protected phasing as described in text – protected currently shown in report for SB left turn. Intersection will be monitored and adjustments made if permissive/protected causes accident problems.

   Response: Synchro model has been revised to show permitted/protected for northbound/southbound left turn movements.

General

1. **Comment**: Statements like "highest accident rates in Monroe County…" or "…busiest intersections in Monroe County…" should be clarified to say "…for intersections under MCDOT jurisdiction."
   Response: Report has been revised.

Schedule:

1. **Comment:** MCDOT's Westfall Road project is 2011 start of construction
   Response: So Noted.

2. **Comment:** Is the Mt. Hope project realistically going to be ready for the 2010 construction season as stated?
   Response: Yes, we anticipate beginning construction in Spring, 2010.

Intersection Operations:

1. **Comment:** MCDOT recommended criteria is that no v/c ratios should exceed 1.0. Failure for brief periods each day may be acceptable, with some limits. For example, vehicle queues shouldn't extend to next signalized intersection, or turn lane pockets shouldn't overflow to block thru lanes.
   Response: Under 2030 Build Conditions all intersections will operate with v/c ratios less than 1.0; with the exception of the Elmwood intersection. Turn pockets have been designed to accommodate 95% vehicle queues where possible. The 95% vehicle queue results from the revised Synchro files have been entered into the attached spreadsheet to assist in your review.

   Comment: FYI – MCDOT switched to a 120 cycle length in January – no need to change synchro model for report. In reality, things will operate slightly better than currently shown.
   Response: Agreed.

   Comment: Comparing accident rates to NYSDOT and MCDOT – is this necessary?
   Response: Yes, NYSDOT requires that accident rates be compared to their average accidents rates.

   Comment: Traffic cameras have been installed and are operating at Mt. Hope Crittenden / E. Henrietta and Mt. Hope / Westfall.
   Response: So Noted. These cameras will be relocated as necessary when the signals are reconstructed.

   Comment: Synchro printouts didn't typically show predicted queue lengths – critical with designing curbed median storage pockets.
   Response: A working up to date Syncro model was provided to MCDOT for information and review. Also, a queue length table for the project area intersections has been included in Appendix C of the report. Furthermore, the Synchro printouts in Appendix C have been revised based on our recent discussions and now include the vehicle queue lengths.

Please contact Mark McAnany or myself at 232-5137 x308 if you have any questions or comments.

Sincerely,

BERGMANN ASSOCIATES

Tom Lichtenthal, P.E.
Sr. Project Engineer

C: Mark McAnany, BA w/ enc.
Paul Way , City of Rochester w/ enc.
Rick Papaj, NYSDOT w/ enc.
BA Project file 6699.00

QUEUE LENGTH RESULTS (FEET)

Mt. Hope
Revised 02/26/2009

AM PEAK HOUR RESULTS

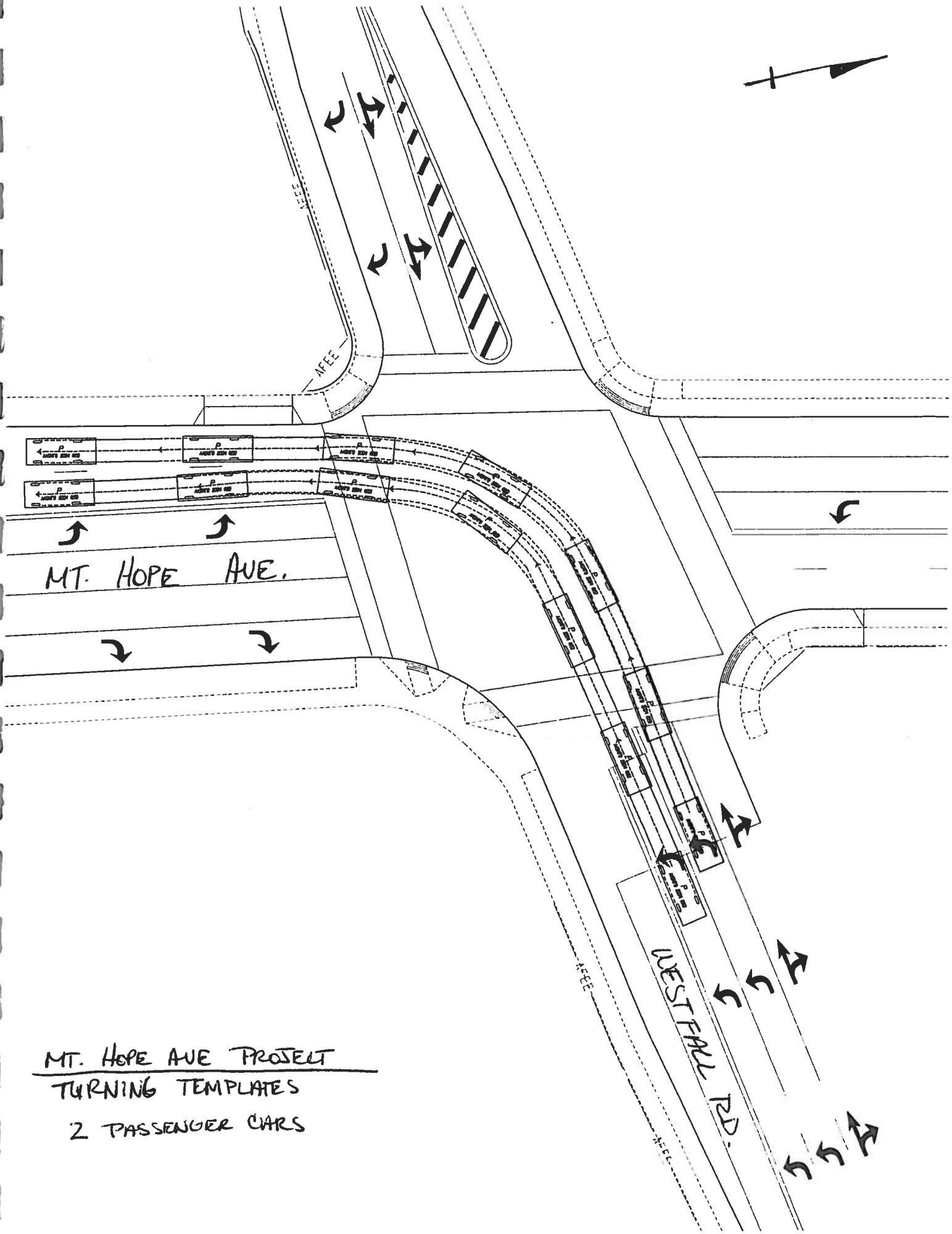
Intersection	Eastbound Left	Eastbound Through	Eastbound Right	Westbound Left	Westbound Through	Northbound Left	Northbound Through	Northbound Right	Southbound Left	Southbound Through	Southeast Right	Northwest Left	Northwest Right
Elmwood *Storage Length*	#338 *620*	#425	165 *630*	#565 *300*	#850	m#419 *315*	266		44 *280*	#645			
Middle Access Drive *Storage Length*	44 *75*	32		79 *50*	44	m68 *150*	m448		m122 *100*	m234			
Crittenden/East Hen. *Storage Length*	97 *365*	147	33			#156 *180*	#386		m#480 *290*	410		m#349 *315*	m171
Lattimore *Storage Length*	18						148			7			
Westfall *Storage Length*	18 *20*	183	41 *55*	#139 *290*	350	72 *115*	326	91 *195*	133 *225*	73			
East Hen / South *Storage Length*						#788	246			256	m147		

PM PEAK HOUR RESULTS

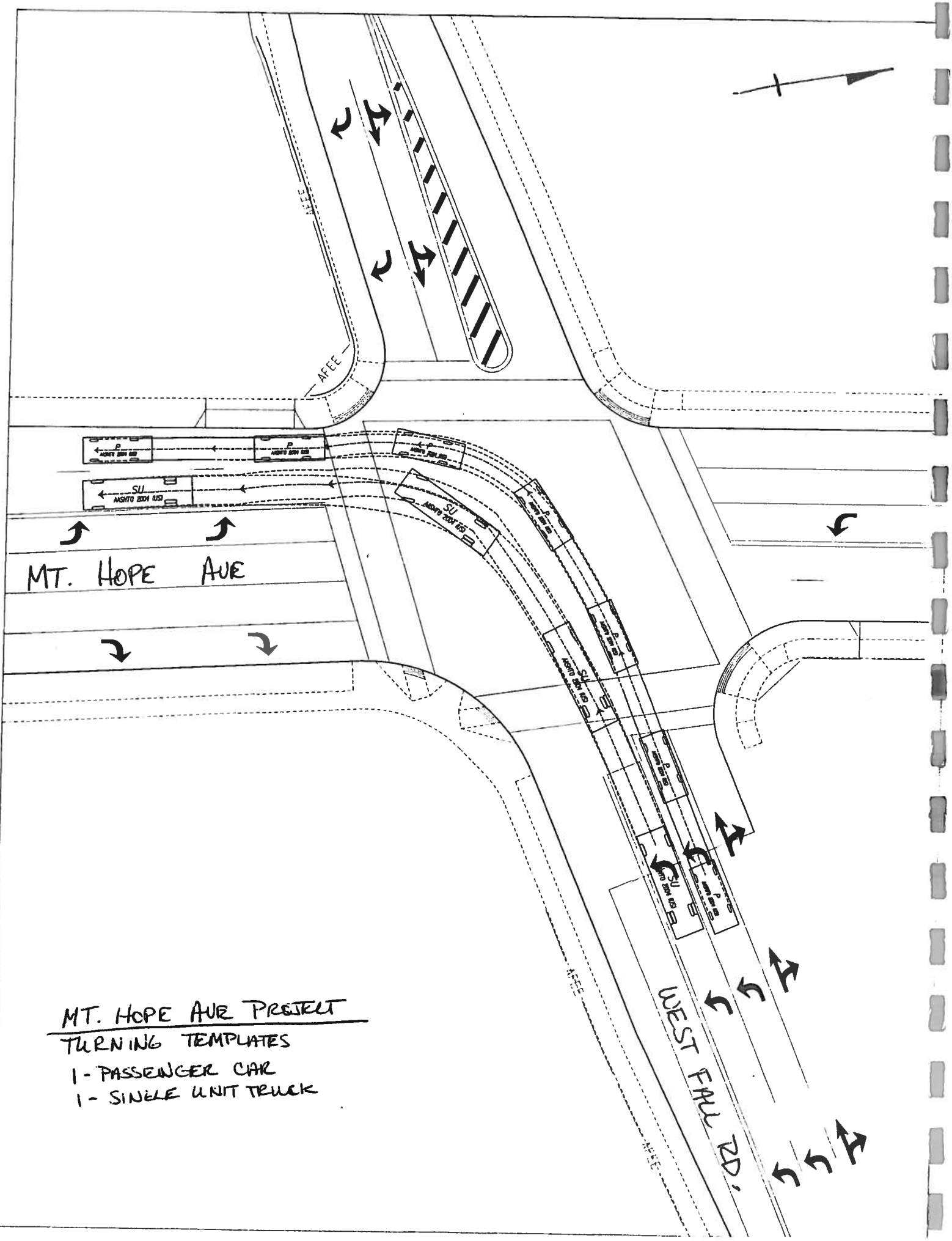
Intersection	Eastbound Left	Eastbound Through	Eastbound Right	Westbound Left	Westbound Through	Northbound Left	Northbound Through	Northbound Right	Southbound Left	Southbound Through	Southeast Right	Northwest Left	Northwest Right
Elmwood *Storage Length*	#669 *620*	#817	199 *630*	#375 *300*	#635	m#332 *315*	#754		#175 *280*	#695			
Middle Access Drive *Storage Length*	124 *75*	64		80 *50*	32	m155 *150*	m573		m55 *100*	m545			
Crittenden/East Hen. *Storage Length*	#356 *365*	332	47			m40 *180*	#351		#496 *290*	454		95 *315*	45
Lattimore *Storage Length*	241						396			127			
Westfall *Storage Length*	26 *20*	298	#299 *55*	#310 *290*	198	54 *115*	297	19 *195*	m67 *225*	#751			
East Hen / South *Storage Length*						299	289			430	m206		

m = Volume for 95% queue is metered by upstream signal
 # = 95% queue exceeds capacity, queue may be longer. Result shown is after two cycles

Queue exceeds entered storage



MT. HOPE AVE PROJECT
TURNING TEMPLATES
2 PASSENGER CARS



MT. HOPE AVE PROJECT

TURNING TEMPLATES

1 - PASSENGER CAR

1 - SINGLE UNIT TRUCK

APPENDIX D

Traffic Analysis and Accident Data

Chapter 2 Traffic Analysis

SRF & Associates

3495 Winton Place
Building E, Suite 110
Rochester, New York 14623
www.SRFA.net

File Name : SpeedStudy.CrittElmwood
Site Code : 00000000
Start Date : 6/25/2007
Page No : 1

Class	Vehicle Count	85 Percentile	10 MPH Pace Speed	Number in Pace	Percent in Pace	Number of Vehicles Over 55 MPH	Percent of Vehicles Over 55 MPH	Average Speed	Number of Vehicles Over 55 MPH	Percent of Vehicles Over 55 MPH
Northbound	40	32	20 - 29	29	72	0	0	26	0	0
Southbound	40	30	22 - 31	34	85	0	0	26	0	0
Summary	80	31	22 - 31	62	78	0	0	26	0	0

SRF & Associates

3495 Winton Place
Building E, Suite 110
Rochester, New York 14623
www.SRFA.net

File Name : SpeedStudy.WstflLattimore
Site Code : 00000000
Start Date : 6/25/2007
Page No : 1

Class	Vehicle Count	85 Percentile	10 MPH Pace Speed	Number in Pace	Percent in Pace	Number of Vehicles Over 30 MPH	Percent of Vehicles Over 30 MPH	Average Speed	Number of Vehicles Over 30 MPH	Percent of Vehicles Over 30 MPH
Northbound	64	37	28 - 37	50	78	44	69	33	44	69
Southbound	64	39	31 - 40	53	83	57	89	35	57	89
Summary	128	39	30 - 39	97	76	101	79	34	101	79

Arterial Level of Service: NB Mt Hope

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Lattimore	III	30	39.3	3.0	42.3	0.31	26.3	B
E Henrietta	III	30	28.6	30.0	58.6	0.23	13.8	E
Elmwood	III	30	27.8	15.2	43.0	0.22	18.3	C
Total	III		95.7	48.2	143.9	0.75	18.8	C

Arterial Level of Service: SB Mt Hope

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Elmwood	III	30	55.7	43.1	98.8	0.44	16.0	D
Crittenden	III	30	27.8	24.5	52.3	0.22	15.1	D
Lattimore	III	30	28.6	0.2	28.8	0.23	28.1	B
Westfall	III	30	39.3	9.0	48.3	0.31	23.0	C
Total	III		151.4	76.8	228.2	1.19	18.8	C

Arterial Level of Service: NB Mt Hope

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Lattimore	III	30	39.3	5.0	44.3	0.31	25.1	B
E Henrietta	III	30	28.6	24.8	53.4	0.23	15.2	D
Elmwood	III	30	27.8	42.3	70.1	0.22	11.2	E
Total	III		95.7	72.1	167.8	0.75	16.2	D

Arterial Level of Service: SB Mt Hope

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Elmwood	III	30	55.7	41.4	97.1	0.44	16.3	D
Crittenden	III	30	27.8	24.0	51.8	0.22	15.2	D
Lattimore	III	30	28.6	0.9	29.5	0.23	27.5	B
Westfall	III	30	39.3	19.3	58.6	0.31	19.0	C
Total	III		151.4	85.6	237.0	1.19	18.1	C

Arterial Level of Service: NB Mt Hope

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Lattimore	III	30	39.3	7.0	46.3	0.31	24.0	B
E Henrietta	III	30	28.6	60.0	88.6	0.23	9.1	F
Elmwood	III	30	27.8	22.1	49.9	0.22	15.8	D
Total	III		95.7	89.1	184.8	0.75	14.7	D

Arterial Level of Service: SB Mt Hope

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Elmwood	III	30	55.7	167.3	223.0	0.44	7.1	F
Crittenden	III	30	27.8	68.0	95.8	0.22	8.2	F
Lattimore	III	30	28.6	1.1	29.7	0.23	27.3	B
Westfall	III	30	39.3	16.4	55.7	0.31	20.0	C
Total	III		151.4	252.8	404.2	1.19	10.6	E

Arterial Level of Service: NB Mt Hope

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Lattimore	III	30	39.3	5.6	44.9	0.31	24.8	B
E Henrietta	III	30	28.6	53.1	81.7	0.23	9.9	F
Elmwood	III	30	27.8	127.2	155.0	0.22	5.1	F
Total	III		95.7	185.9	281.6	0.75	9.6	F

Arterial Level of Service: SB Mt Hope

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Elmwood	III	30	55.7	111.8	167.5	0.44	9.4	F
Crittenden	III	30	27.8	28.4	56.2	0.22	14.0	D
Lattimore	III	30	28.6	1.1	29.7	0.23	27.3	B
Westfall	III	30	39.3	49.9	89.2	0.31	12.5	E
Total	III		151.4	191.2	342.6	1.19	12.5	E

SRF & Associates
3495 Winton Place, E-110
Rochester, NY 14623
File Name : W.Driveway_Crittenden-Elmwood_AM
Site Code : 00025006
Start Date : 1/31/2006
Page No : 1

Groups Printed- Unshifted

	Mt Hope Ave Southbound				Westbound				Mt Hope Ave Northbound				Driveway Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00	0	150	2	0	0	0	0	0	0	129	0	0	1	0	0	0	282
07:15	0	200	5	0	0	0	0	0	1	152	0	0	0	0	1	0	359
07:30	0	200	2	0	0	0	0	0	0	131	0	0	0	0	0	0	333
07:45	0	353	12	0	0	0	0	0	2	207	0	0	0	0	0	0	574
Total	0	903	21	0	0	0	0	0	3	619	0	0	1	0	1	0	1548
08:00	0	280	14	0	0	0	0	0	2	251	0	0	0	0	0	0	547
08:15	0	269	8	0	0	0	0	0	0	246	0	0	2	0	0	0	525
08:30	0	267	7	0	0	0	0	0	0	208	0	0	1	0	0	0	483
08:45	0	234	10	0	0	0	0	0	3	231	0	0	0	0	1	0	479
Total	0	1050	39	0	0	0	0	0	5	936	0	0	3	0	1	0	2034
Grand Total	0	1953	60	0	0	0	0	0	8	1555	0	0	4	0	2	0	3582
Apprch %	0.0	97.0	3.0	0.0	0.0	0.0	0.0	0.0	0.5	99.5	0.0	0.0	66.7	0.0	33.3	0.0	
Total %	0.0	54.5	1.7	0.0	0.0	0.0	0.0	0.0	0.2	43.4	0.0	0.0	0.1	0.0	0.1	0.0	

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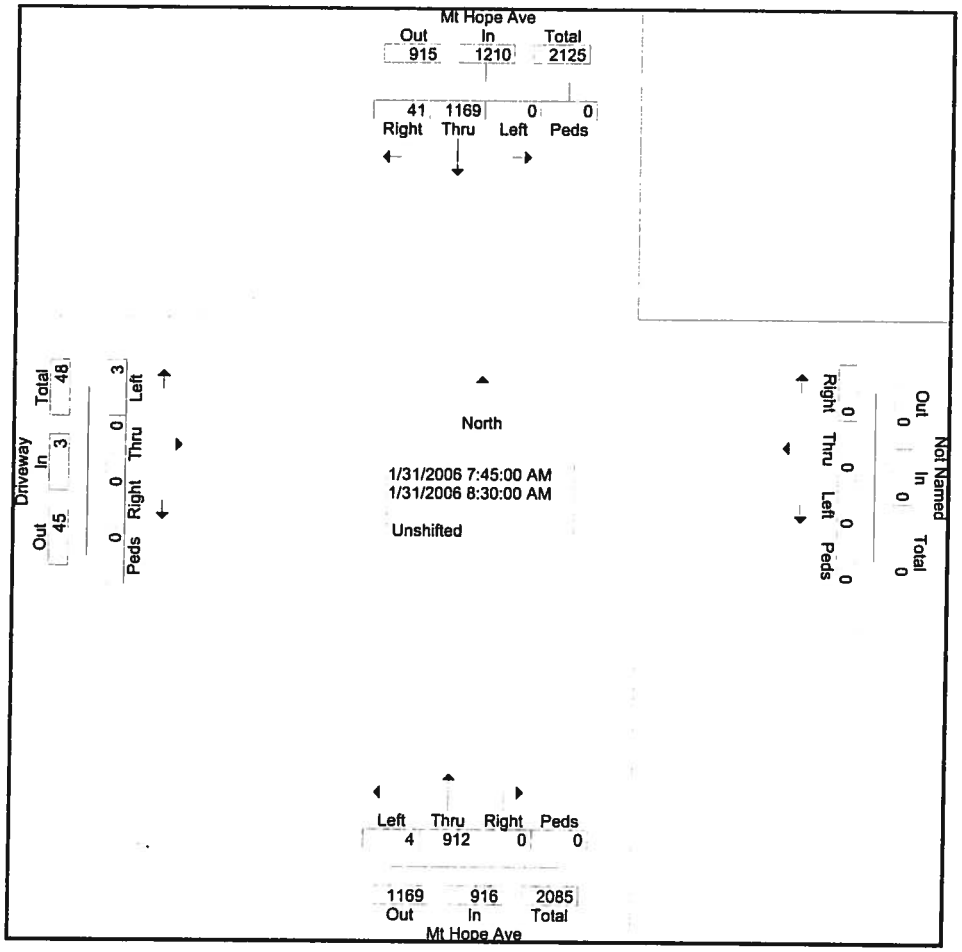
3495 Winton Place, E-110
Rochester, NY 14623
File Name : W.Driveway_Crittenden-Elmwood_AM
Site Code : 00025006
Start Date : 1/31/2006
Page No : 2

Start Time	Mt Hope Ave Southbound Left	Thru	Right	Peds	App. Total	Westbound Left	Thru	Right	Peds	App. Total	Mt Hope Ave Northbound Left	Thru	Right	Peds	App. Total	Driveway Eastbound Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 to 08:45 - Peak 1 of 1																					
Intersection	07:45																				
Volume	0	1169	41	0	1210	0	0	0	0	0	4	912	0	0	916	3	0	0	0	3	2129
Percent	0.0	96.6	3.4	0.0		0.0	0.0	0.0	0.0		0.4	99.6	0.0	0.0		100.0	0.0	0.0	0.0		
07:45 Volume	0	353	12	0	365	0	0	0	0	0	2	207	0	0	209	0	0	0	0	0	574
Peak Factor																					0.927
High Int.	07:45					6:45:00 AM					08:00					08:15					
Volume	0	353	12	0	365	0	0	0	0	0	2	251	0	0	253	2	0	0	0	2	
Peak Factor					0.829										0.905					0.375	



SRF & Associates
3495 Winton Place, Bldg E, Suite 110
Rochester, New York 14623
Phone: 585.272.4660

File Name : Mt.Hope.Westfall.PM
Site Code : 00025006
Start Date : 9/13/2005
Page No : 1

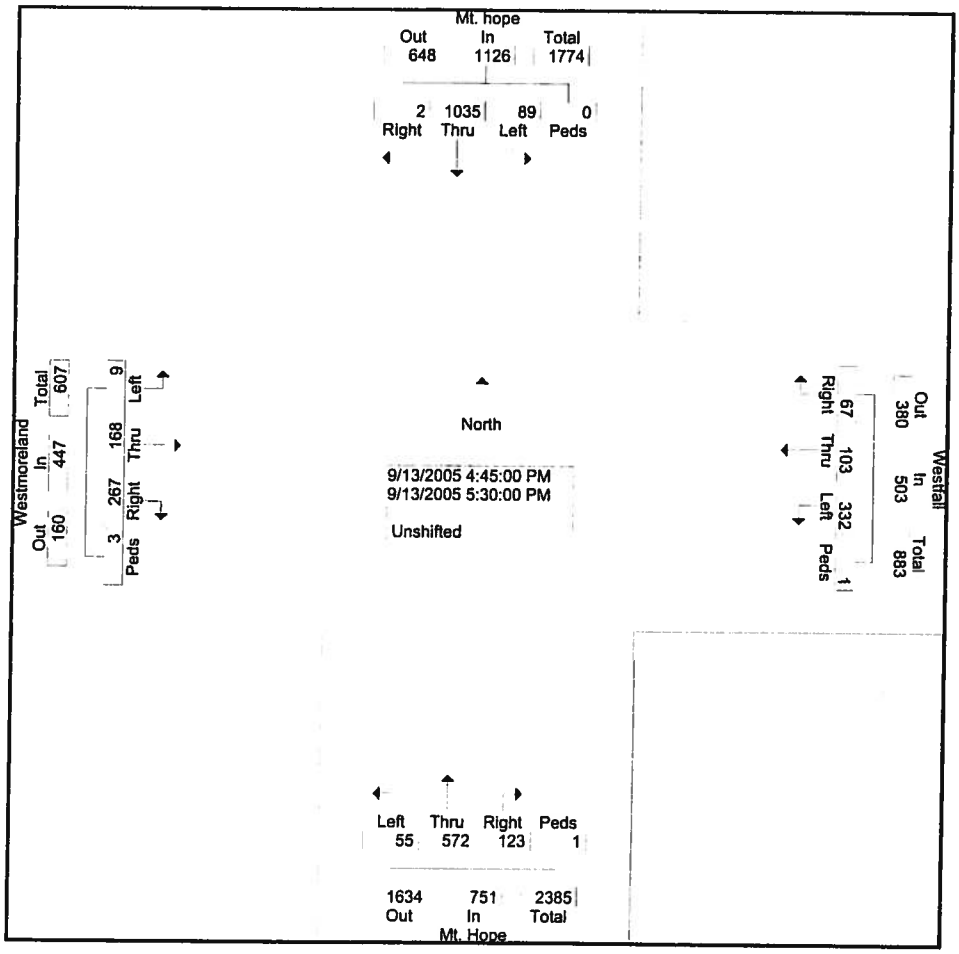
Groups Printed- Unshifted

	Mt. hope Southbound				Westfall Westbound				Mt. Hope Northbound				Westmoreland Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	0	194	22	0	27	25	84	0	25	151	13	0	36	27	1	3	608
04:15 PM	6	194	24	0	21	24	69	1	34	161	16	0	47	38	3	1	639
04:30 PM	3	220	20	0	16	23	86	0	24	147	6	0	51	33	3	0	632
04:45 PM	0	245	22	0	15	39	83	0	30	143	11	0	76	50	0	2	716
Total	9	853	88	0	79	111	322	1	113	602	46	0	210	148	7	6	2595
05:00 PM	0	240	22	0	24	24	104	1	38	132	16	0	56	41	3	0	701
05:15 PM	0	267	18	0	13	21	80	0	29	153	9	1	90	45	2	0	728
05:30 PM	2	283	27	0	15	19	65	0	26	144	19	0	45	32	4	1	682
05:45 PM	4	201	14	0	22	25	45	0	25	135	12	0	36	37	4	0	560
Total	6	991	81	0	74	89	294	1	118	564	56	1	227	155	13	1	2671
Grand Total	15	1844	169	0	153	200	616	2	231	1166	102	1	437	303	20	7	5266
Apprch %	0.7	90.9	8.3	0.0	15.8	20.6	63.4	0.2	15.4	77.7	6.8	0.1	57.0	39.5	2.6	0.9	
Total %	0.3	35.0	3.2	0.0	2.9	3.8	11.7	0.0	4.4	22.1	1.9	0.0	8.3	5.8	0.4	0.1	

SRF & Associates
3495 Winton Place, Bldg E, Suite 110
Rochester, New York 14623
Phone: 585.272.4660

File Name : Mt.Hope.Westfall.PM
Site Code : 00025006
Start Date : 9/13/2005
Page No : 2

Start Time	Mt. hope Southbound Right	Thru	Left	Peds	App. Total	Westfall Westbound Right	Thru	Left	Peds	App. Total	Mt. Hope Northbound Right	Thru	Left	Peds	App. Total	Westmoreland Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	2	1035	89	0	1126	67	103	332	1	503	123	572	55	1	751	267	168	9	3	447	2827
Percent	0.2	91.9	7.9	0.0		13.3	20.5	66.0	0.2		16.4	76.2	7.3	0.1		59.7	37.6	2.0	0.7		
05:15 Volume	0	267	18	0	285	13	21	80	0	114	29	153	9	1	192	90	45	2	0	137	728
Peak Factor																					0.971
High Int.	05:30 PM					05:00 PM					05:15 PM					05:15 PM					
Volume	2	283	27	0	312	24	24	104	1	153	29	153	9	1	192	90	45	2	0	137	
Peak Factor					0.902					0.822					0.978					0.816	



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Phone: 585.272.4660

File Name : Mt.Hope.Westfall.AM
Site Code : 00025006
Start Date : 9/14/2005
Page No : 1

Groups Printed- Unshifted

	Mt. Hope Southbound				Westfall Westbound				Mt. Hope Northbound				Westmoreland Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	3	62	9	0	20	32	15	0	49	89	15	0	8	10	0	0	312
07:15 AM	2	105	5	0	24	51	29	0	64	96	11	0	9	17	0	0	413
07:30 AM	1	107	16	0	31	57	27	0	65	136	20	0	15	27	1	0	503
07:45 AM	1	146	30	0	22	63	39	0	90	179	21	0	10	32	1	0	634
Total	7	420	60	0	97	203	110	0	268	500	67	0	42	86	2	0	1862
08:00 AM	0	162	24	0	22	59	44	0	75	177	39	0	9	37	1	1	650
08:15 AM	0	96	28	0	33	43	51	0	79	183	22	0	18	30	2	1	586
08:30 AM	0	126	33	0	23	32	42	0	86	136	14	0	9	26	3	0	530
08:45 AM	2	150	31	0	22	53	50	0	78	139	18	0	10	30	4	0	587
Total	2	534	116	0	100	187	187	0	318	635	93	0	46	123	10	2	2353
Grand Total	9	954	176	0	197	390	297	0	586	1135	160	0	88	209	12	2	4215
Apprch %	0.8	83.8	15.5	0.0	22.3	44.1	33.6	0.0	31.2	60.3	8.5	0.0	28.3	67.2	3.9	0.6	
Total %	0.2	22.6	4.2	0.0	4.7	9.3	7.0	0.0	13.9	26.9	3.8	0.0	2.1	5.0	0.3	0.0	

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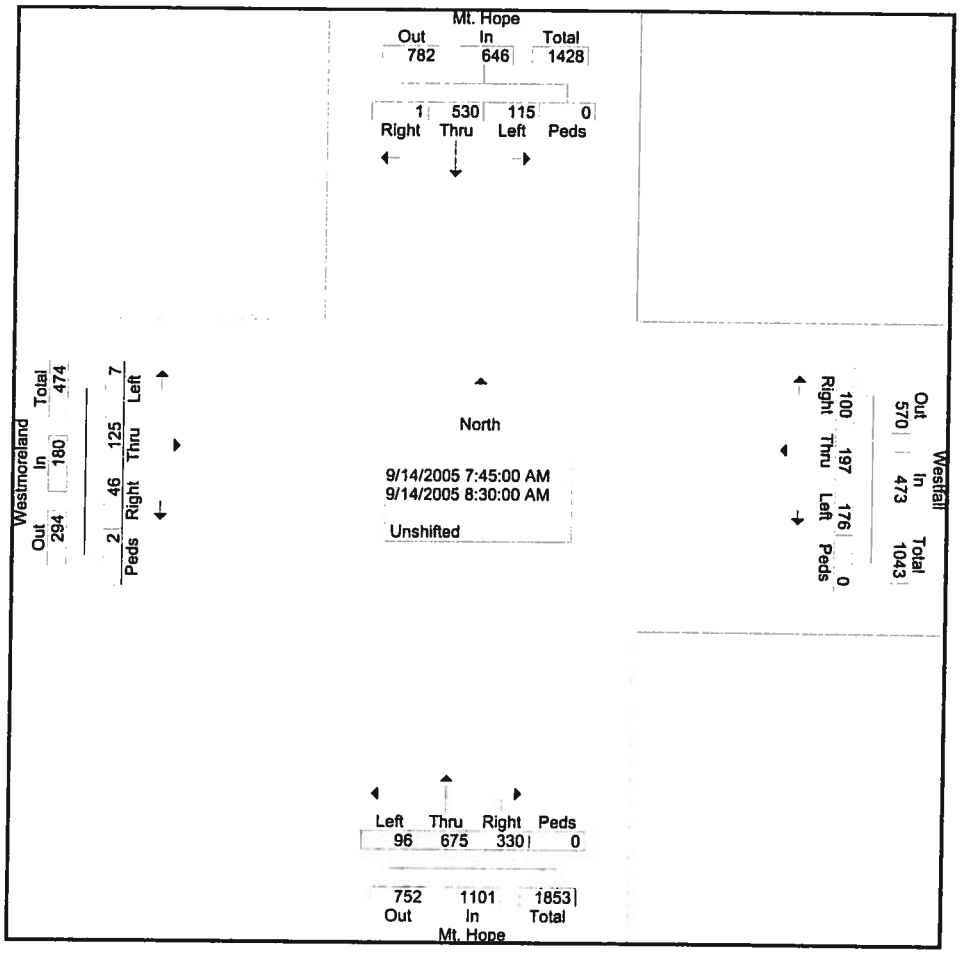
File Name : Mt.Hope.Westfall.AM
Site Code : 00025006
Start Date : 9/14/2005
Page No : 2

Start Time	Mt. Hope Southbound Right	Thru	Left	Peds	App. Total	Westfall Westbound Right	Thru	Left	Peds	App. Total	Mt. Hope Northbound Right	Thru	Left	Peds	App. Total	Westmoreland Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	1	530	115	0	646	100	197	176	0	473	330	675	96	0	1101	46	125	7	2	180	2400
Percent	0.2	82.0	17.8	0.0		21.1	41.6	37.2	0.0		30.0	61.3	8.7	0.0		25.6	69.4	3.9	1.1		
08:00 Volume	0	162	24	0	186	22	59	44	0	125	75	177	39	0	291	9	37	1	1	48	650
Peak Factor																					0.923
High Int.	08:00 AM					08:15 AM					08:00 AM					08:15 AM					
Volume	0	162	24	0	186	33	43	51	0	127	75	177	39	0	291	18	30	2	1	51	
Peak Factor					0.868					0.931					0.946					0.882	



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File Name : Mt.Hope.Lattimore.PM
Site Code : 00025006
Start Date : 9/13/2005
Page No : 1

Groups Printed- Unshifted

	Mt. Hope Southbound				Lattimore Westbound				Mt. Hope Northbound				Lattimore Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	11	170	0	0	0	12	1	0	3	167	14	0	16	18	13	0	425
04:15 PM	6	168	0	0	0	0	0	0	0	176	12	0	23	0	11	0	396
04:30 PM	4	204	0	0	0	0	0	0	0	160	8	0	36	0	19	0	431
04:45 PM	3	196	0	0	0	0	0	0	0	153	12	0	30	0	35	0	429
Total	24	738	0	0	0	12	1	0	3	656	46	0	105	18	78	0	1681
05:00 PM	5	230	0	0	0	0	0	0	0	145	10	0	21	0	27	0	438
05:15 PM	3	243	0	0	0	0	0	0	0	166	7	0	26	0	26	0	471
05:30 PM	3	228	0	0	0	0	0	0	0	158	5	0	29	0	11	0	434
05:45 PM	4	199	0	0	0	0	0	0	0	172	8	0	12	0	12	0	407
Total	15	900	0	0	0	0	0	0	0	641	30	0	88	0	76	0	1750
Grand Total	39	1638	0	0	0	12	1	0	3	1297	76	0	193	18	154	0	3431
Apprch %	2.3	97.7	0.0	0.0	0.0	92.3	7.7	0.0	0.2	94.3	5.5	0.0	52.9	4.9	42.2	0.0	
Total %	1.1	47.7	0.0	0.0	0.0	0.3	0.0	0.0	0.1	37.8	2.2	0.0	5.6	0.5	4.5	0.0	

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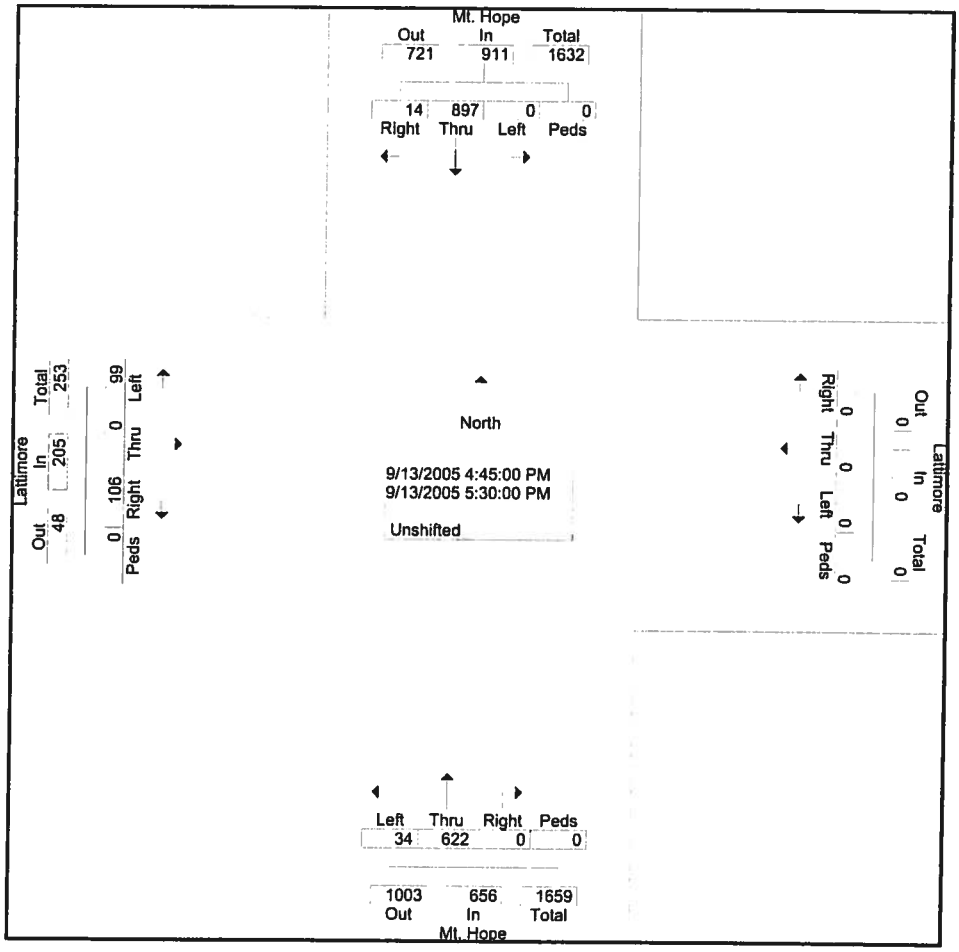
File Name : Mt.Hope.Lattimore.PM
Site Code : 00025006
Start Date : 9/13/2005
Page No : 2

Start Time	Mt. Hope Southbound Right	Thru	Left	Peds	App. Total	Lattimore Westbound Right	Thru	Left	Peds	App. Total	Mt. Hope Northbound Right	Thru	Left	Peds	App. Total	Lattimore Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	14	897	0	0	911	0	0	0	0	0	0	622	34	0	656	106	0	99	0	205	1772
Percent	1.5	98.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	94.8	5.2	0.0		51.7	0.0	48.3	0.0		
05:15 Volume	3	243	0	0	246	0	0	0	0	0	0	166	7	0	173	26	0	26	0	52	471
Peak Factor																					0.941
High Int.	05:15 PM					3:45:00 PM					05:15 PM					04:45 PM					
Volume	3	243	0	0	246	0	0	0	0	0	0	166	7	0	173	30	0	35	0	65	
Peak Factor					0.926										0.948					0.788	



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File Name : Mt.Hope.Lattimore.AM
Site Code : 00025006
Start Date : 9/14/2005
Page No : 1

Groups Printed- Unshifted

	Mt. Hope Southbound				Lattimore Westbound				Mt. Hope Northbound				Lattimore Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	5	62	0	0	0	18	1	0	1	65	20	0	6	10	3	0	191
07:15 AM	4	92	0	0	0	0	0	0	0	115	20	0	8	0	4	0	243
07:30 AM	16	147	0	0	0	0	0	0	0	117	25	0	6	0	1	0	312
07:45 AM	23	173	0	1	0	0	0	0	0	172	36	0	5	0	0	0	410
Total	48	474	0	1	0	18	1	0	1	469	101	0	25	10	8	0	1156
08:00 AM	14	148	0	0	0	0	0	0	0	170	35	0	3	0	2	0	372
08:15 AM	18	117	0	0	0	0	0	0	0	170	23	0	9	0	6	0	343
08:30 AM	15	144	0	0	0	0	0	0	0	113	23	0	8	0	6	0	309
08:45 AM	15	148	0	0	0	0	0	0	0	163	24	0	10	0	7	0	367
Total	62	557	0	0	0	0	0	0	0	616	105	0	30	0	21	0	1391
Grand Total	110	1031	0	1	0	18	1	0	1	1085	206	0	55	10	29	0	2547
Apprch %	9.6	90.3	0.0	0.1	0.0	94.7	5.3	0.0	0.1	84.0	15.9	0.0	58.5	10.6	30.9	0.0	
Total %	4.3	40.5	0.0	0.0	0.0	0.7	0.0	0.0	0.0	42.6	8.1	0.0	2.2	0.4	1.1	0.0	

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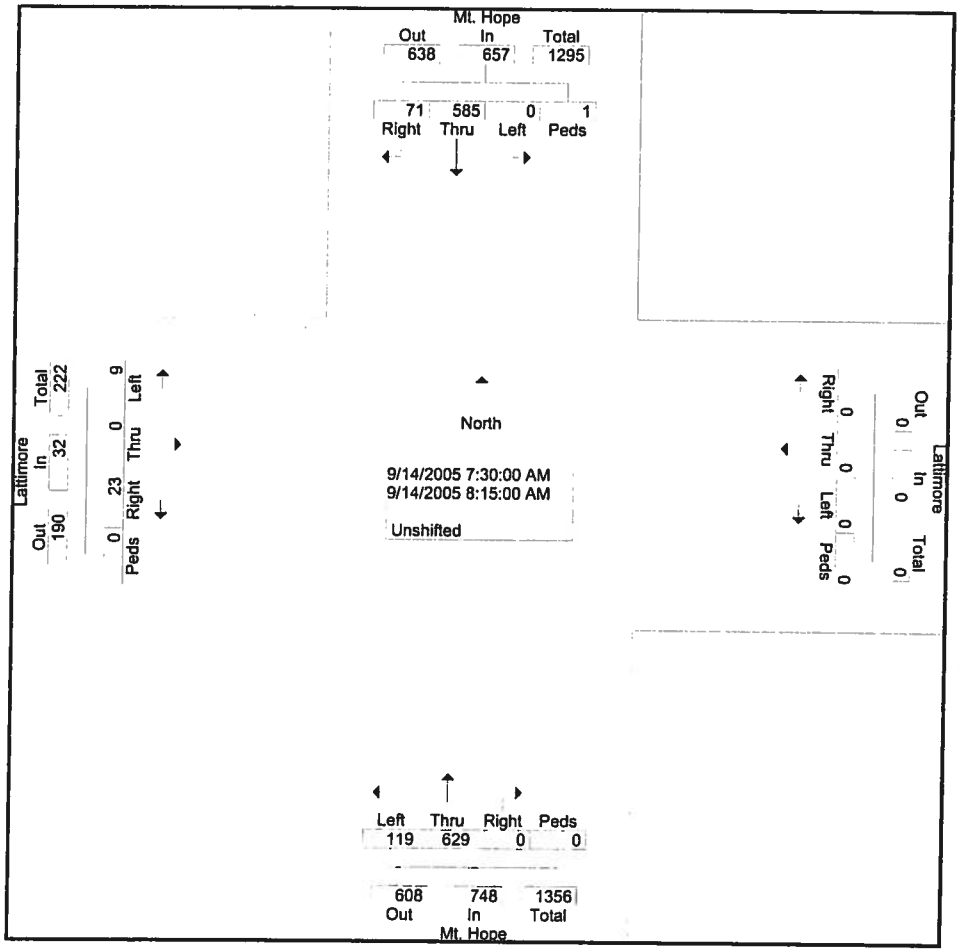
File Name : Mt.Hope.Lattimore.AM
Site Code : 00025006
Start Date : 9/14/2005
Page No : 2

Start Time	Mt. Hope Southbound Right	Thru	Left	Peds	App. Total	Lattimore Westbound Right	Thru	Left	Peds	App. Total	Mt. Hope Northbound Right	Thru	Left	Peds	App. Total	Lattimore Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	71	585	0	1	657	0	0	0	0	0	0	629	119	0	748	23	0	9	0	32	1437
Percent	10.8	89.0	0.0	0.2		0.0	0.0	0.0	0.0		0.0	84.1	15.9	0.0		71.9	0.0	28.1	0.0		
07:45 Volume	23	173	0	1	197	0	0	0	0	0	0	172	36	0	208	5	0	0	0	5	410
Peak Factor																					0.876
High Int.	07:45 AM					6:45:00 AM					07:45 AM					08:15 AM					
Volume	23	173	0	1	197	0	0	0	0	0	0	172	36	0	208	9	0	6	0	15	
Peak Factor					0.834										0.899					0.533	



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File Name : Mt.Hope.Elmwood.PM
Site Code : 00250061
Start Date : 9/12/2005
Page No : 1

Groups Printed- Unshifted

	Mt. hope Southbound				Elmwood Westbound				Mt. Hope Northbound				Elmwood Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	38	154	10	0	5	130	48	0	51	189	24	0	30	130	67	0	876
04:15 PM	53	188	22	0	4	153	35	0	66	196	47	0	45	165	65	0	1039
04:30 PM	34	186	21	0	1	172	48	0	56	198	40	0	21	224	74	0	1075
04:45 PM	31	235	12	0	4	162	48	0	81	222	30	0	30	246	103	0	1204
Total	156	763	65	0	14	617	179	0	254	805	141	0	126	765	309	0	4194
05:00 PM	64	200	18	0	5	176	41	0	88	218	44	0	26	280	79	0	1239
05:15 PM	37	229	21	0	2	123	54	0	78	232	39	0	38	243	97	0	1193
05:30 PM	35	231	30	0	3	137	51	0	65	196	37	0	22	153	80	0	1040
05:45 PM	50	146	15	0	5	119	32	0	59	165	30	0	23	198	60	0	902
Total	186	806	84	0	15	555	178	0	290	811	150	0	109	874	316	0	4374
Grand Total	342	1569	149	0	29	1172	357	0	544	1616	291	0	235	1639	625	0	8568
Apprch %	16.6	76.2	7.2	0.0	1.9	75.2	22.9	0.0	22.2	65.9	11.9	0.0	9.4	65.6	25.0	0.0	
Total %	4.0	18.3	1.7	0.0	0.3	13.7	4.2	0.0	6.3	18.9	3.4	0.0	2.7	19.1	7.3	0.0	

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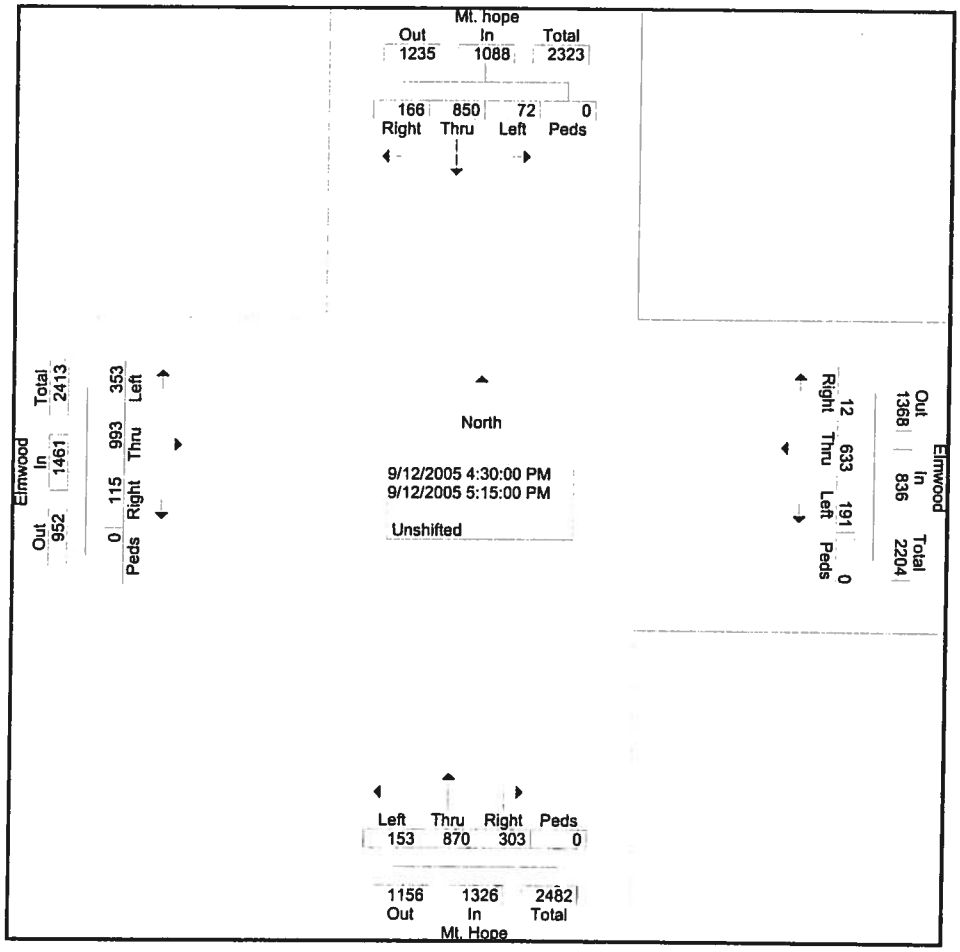
File Name : Mt.Hope.Elmwood.PM
Site Code : 00250061
Start Date : 9/12/2005
Page No : 2

Start Time	Mt. hope Southbound Right	Thru	Left	Peds	App. Total	Elmwood Westbound Right	Thru	Left	Peds	App. Total	Mt. Hope Northbound Right	Thru	Left	Peds	App. Total	Elmwood Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	166	850	72	0	1088	12	633	191	0	836	303	870	153	0	1326	115	993	353	0	1461	4711
Percent	15.3	78.1	6.6	0.0		1.4	75.7	22.8	0.0		22.9	65.6	11.5	0.0		7.9	68.0	24.2	0.0		
05:00 Volume	64	200	18	0	282	5	176	41	0	222	88	218	44	0	350	26	280	79	0	385	1239
Peak Factor																					0.951
High Int.	05:15 PM					05:00 PM					05:00 PM					05:00 PM					
Volume	37	229	21	0	287	5	176	41	0	222	88	218	44	0	350	26	280	79	0	385	
Peak Factor					0.948					0.941					0.947					0.949	



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File Name : Mt.Hope.Elmwood.AM
Site Code : 00250061
Start Date : 9/13/2005
Page No : 1

Groups Printed- Unshifted

	Mt. hope Southbound				Elmwood Westbound				Mt. Hope Northbound				Elmwood Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	49	99	8	0	2	129	55	0	18	93	17	0	17	76	36	0	599
07:15 AM	41	124	5	0	3	155	63	0	11	125	32	0	13	106	39	0	717
07:30 AM	53	188	11	0	1	256	105	0	29	165	28	1	30	142	56	0	1065
07:45 AM	68	276	11	0	1	312	103	0	24	226	31	0	26	170	59	0	1307
Total	211	687	35	0	7	852	326	0	82	609	108	1	86	494	190	0	3688
08:00 AM	120	271	18	0	1	322	135	0	30	225	39	0	21	179	45	0	1406
08:15 AM	67	210	14	0	1	281	84	0	33	160	31	0	35	161	40	0	1117
08:30 AM	56	176	9	0	6	254	96	0	34	181	33	0	19	134	56	0	1054
08:45 AM	70	227	9	0	4	252	87	0	36	183	47	0	38	152	62	0	1167
Total	313	884	50	0	12	1109	402	0	133	749	150	0	113	626	203	0	4744
Grand Total	524	1571	85	0	19	1961	728	0	215	1358	258	1	199	1120	393	0	8432
Apprch %	24.0	72.1	3.9	0.0	0.7	72.4	26.9	0.0	11.7	74.1	14.1	0.1	11.6	65.4	23.0	0.0	
Total %	6.2	18.6	1.0	0.0	0.2	23.3	8.6	0.0	2.5	16.1	3.1	0.0	2.4	13.3	4.7	0.0	

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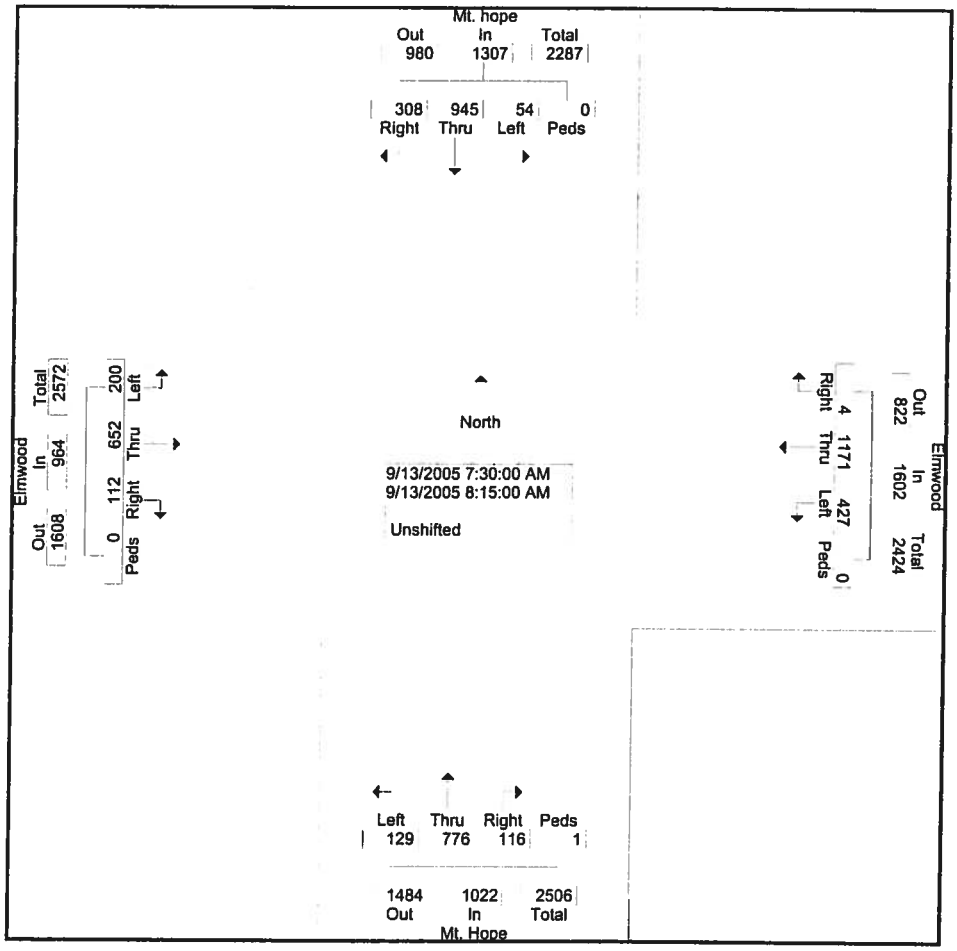
File Name : Mt.Hope.Elmwood.AM
Site Code : 00250061
Start Date : 9/13/2005
Page No : 2

Start Time	Mt. hope Southbound Right	Thru	Left	Peds	App. Total	Elmwood Westbound Right	Thru	Left	Peds	App. Total	Mt. Hope Northbound Right	Thru	Left	Peds	App. Total	Elmwood Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	308	945	54	0	1307	4	1171	427	0	1602	116	776	129	1	1022	112	652	200	0	964	4895
Percent	23.6	72.3	4.1	0.0		0.2	73.1	26.7	0.0		11.4	75.9	12.6	0.1		11.6	67.6	20.7	0.0		
08:00 Volume	120	271	18	0	409	1	322	135	0	458	30	225	39	0	294	21	179	45	0	245	1406
Peak Factor																					0.870
High Int.	08:00 AM					08:00 AM					08:00 AM					07:45 AM					
Volume	120	271	18	0	409	1	322	135	0	458	30	225	39	0	294	26	170	59	0	255	
Peak Factor					0.799					0.874					0.869					0.945	



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File Name : Mt.Hope.Crittenden.PM
Site Code : 25006111
Start Date : 9/12/2005
Page No : 1

Groups Printed- Unshifted

	Mt. Hope Southbound				Crittendedn Westbound				Mt. Hope Northbound				Crittenden Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	15	141	50	0	30	30	8	0	0	120	31	0	36	41	59	0	561
04:15 PM	17	156	61	0	30	28	7	0	11	168	26	0	32	49	51	0	636
04:30 PM	17	150	64	0	48	28	0	0	0	137	17	0	40	60	61	3	625
04:45 PM	17	182	56	0	40	31	1	0	0	168	22	0	39	66	75	0	697
Total	66	629	231	0	148	117	16	0	11	593	96	0	147	216	246	3	2519
05:00 PM	13	149	67	0	45	27	3	0	0	130	16	0	30	78	79	0	637
05:15 PM	11	194	76	0	38	36	0	0	1	168	25	0	33	77	73	0	732
05:30 PM	15	196	77	0	36	26	4	0	1	132	22	0	42	55	46	0	652
05:45 PM	13	135	69	0	32	28	2	0	0	139	26	0	28	62	53	0	587
Total	52	674	289	0	151	117	9	0	2	569	89	0	133	272	251	0	2608
Grand Total	118	1303	520	0	299	234	25	0	13	1162	185	0	280	488	497	3	5127
Apprch %	6.1	67.1	26.8	0.0	53.6	41.9	4.5	0.0	1.0	85.4	13.6	0.0	22.1	38.5	39.2	0.2	
Total %	2.3	25.4	10.1	0.0	5.8	4.6	0.5	0.0	0.3	22.7	3.6	0.0	5.5	9.5	9.7	0.1	

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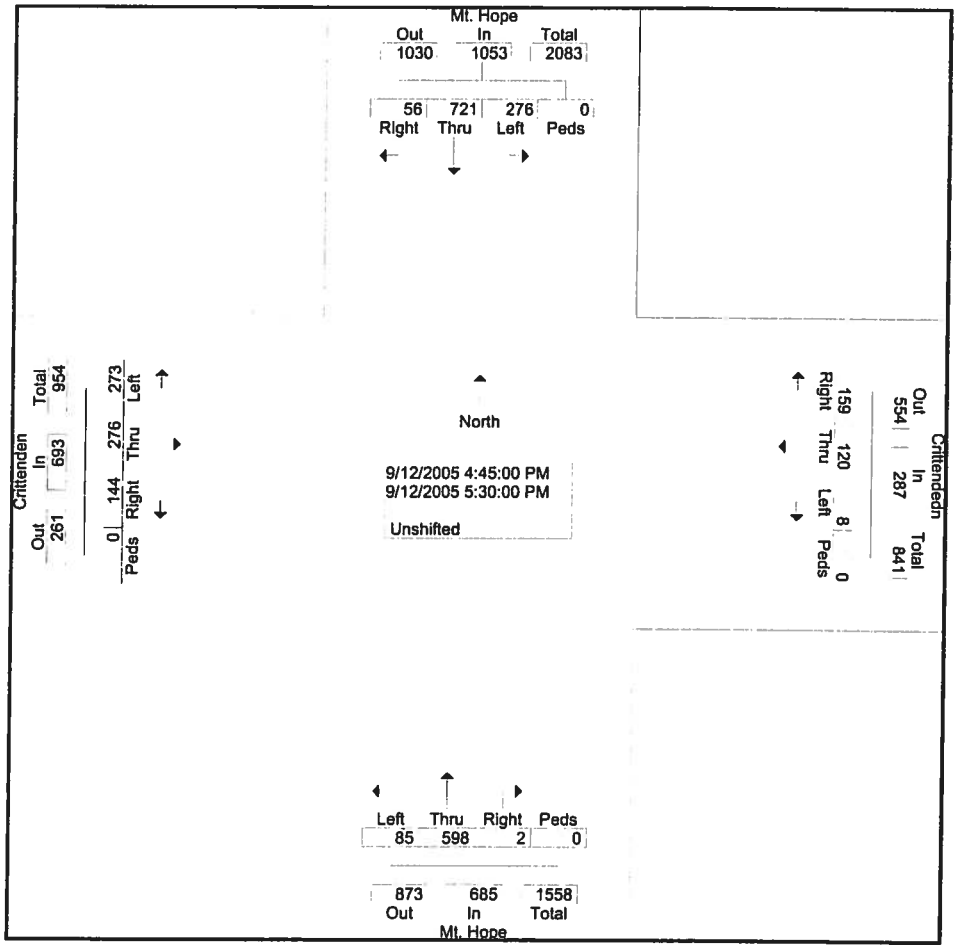
File Name : Mt.Hope.Crittenden.PM
Site Code : 25006111
Start Date : 9/12/2005

Start Time	Mt. Hope Southbound Right	Thru	Left	Peds	App. Total	Crittendedn Westbound Right	Thru	Left	Peds	App. Total	Mt. Hope Northbound Right	Thru	Left	Peds	App. Total	Crittenden Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	56	721	276	0	1053	159	120	8	0	287	2	598	85	0	685	144	276	273	0	693	2718
Percent	5.3	68.5	26.2	0.0		55.4	41.8	2.8	0.0		0.3	87.3	12.4	0.0		20.8	39.8	39.4	0.0		
05:15 Volume	11	194	76	0	281	38	36	0	0	74	1	168	25	0	194	33	77	73	0	183	732
Peak Factor																					0.928
High Int.	05:30 PM					05:00 PM					05:15 PM					05:00 PM					
Volume	15	196	77	0	288	45	27	3	0	75	1	168	25	0	194	30	78	79	0	187	
Peak Factor					0.914					0.957					0.883					0.926	



SRF & Associates
3495 Winton Place, Bldg E, Suite 110
Rochester, New York 14623
Phone: 585.272.4660

File Name : Mt.Hope.Crittenden.AM
Site Code : 25006222
Start Date : 9/13/2005
Page No : 1

Groups Printed- Unshifted

	Mt. Hope Southbound				Crittenden Westbound				Mt. Hope Northbound				Crittenden Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	39	75	32	0	37	48	1	0	4	84	16	0	7	20	17	0	380
07:15 AM	31	96	35	0	48	40	0	0	6	88	11	0	17	21	16	0	409
07:30 AM	58	167	68	0	70	64	0	0	0	124	24	0	14	41	20	0	650
07:45 AM	52	174	81	0	65	90	0	0	0	152	33	0	25	42	35	0	749
Total	180	512	216	0	220	242	1	0	10	448	84	0	63	124	88	0	2188
08:00 AM	46	146	59	0	69	71	0	0	0	167	34	0	21	30	21	0	664
08:15 AM	38	124	57	0	66	62	0	0	0	118	25	0	21	34	20	0	565
08:30 AM	49	160	48	0	67	69	0	0	1	126	26	0	17	25	23	4	615
08:45 AM	40	129	60	0	87	72	0	0	0	122	24	0	15	35	27	0	611
Total	173	559	224	0	289	274	0	0	1	533	109	0	74	124	91	4	2455
Grand Total	353	1071	440	0	509	516	1	0	11	981	193	0	137	248	179	4	4643
Apprch %	18.9	57.5	23.6	0.0	49.6	50.3	0.1	0.0	0.9	82.8	16.3	0.0	24.1	43.7	31.5	0.7	
Total %	7.6	23.1	9.5	0.0	11.0	11.1	0.0	0.0	0.2	21.1	4.2	0.0	3.0	5.3	3.9	0.1	

SRF & Associates
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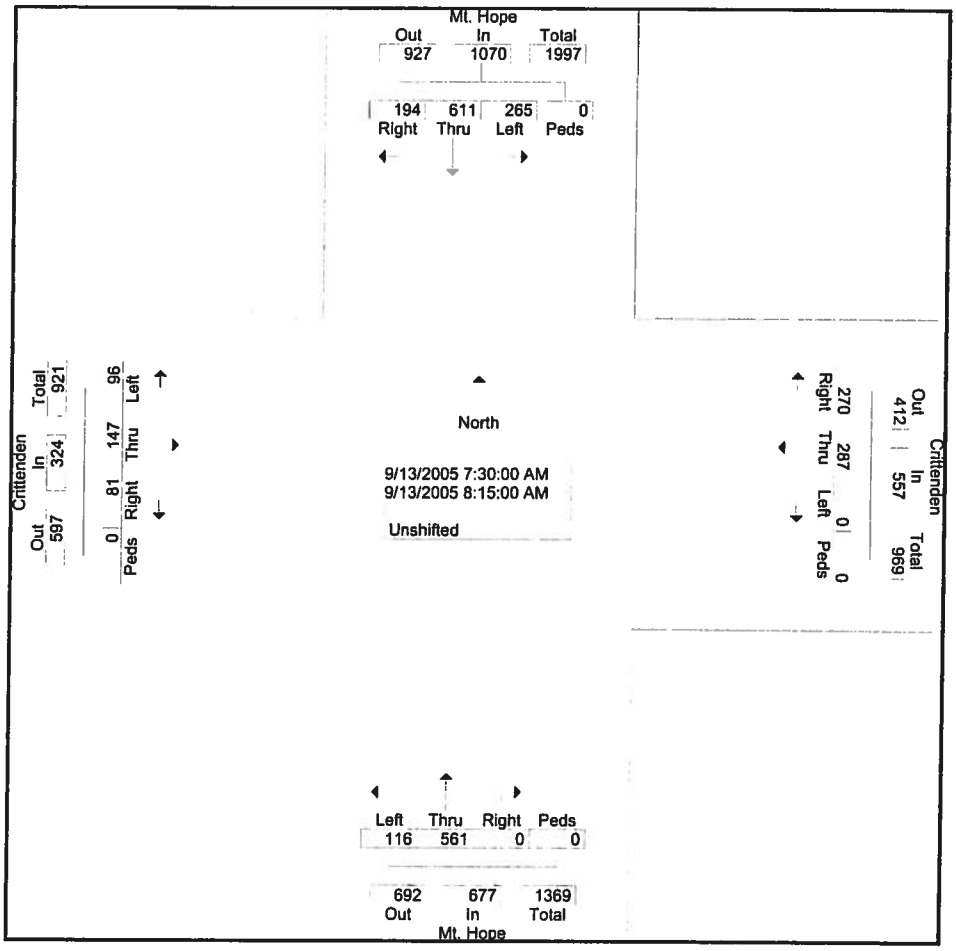
File Name : Mt.Hope.Crittenden.AM
Site Code : 25006222
Start Date : 9/13/2005

Start Time	Mt. Hope Southbound Right	Thru	Left	Peds	App. Total	Crittenden Westbound Right	Thru	Left	Peds	App. Total	Mt. Hope Northbound Right	Thru	Left	Peds	App. Total	Crittenden Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	194	611	265	0	1070	270	287	0	0	557	0	561	116	0	677	81	147	96	0	324	2628
Percent	18.1	57.1	24.8	0.0		48.5	51.5	0.0	0.0		0.0	82.9	17.1	0.0		25.0	45.4	29.6	0.0		
07:45 Volume	52	174	81	0	307	65	90	0	0	155	0	152	33	0	185	25	42	35	0	102	749
Peak Factor																					0.877
High Int.	07:45 AM					07:45 AM					08:00 AM					07:45 AM					
Volume	52	174	81	0	307	65	90	0	0	155	0	167	34	0	201	25	42	35	0	102	
Peak Factor					0.871					0.898					0.842					0.794	



SRF & Associates
3495 Winton Place, Bldg E, Suite 110
Rochester, New York 14623
Phone: 585.272.4660

File Name : EastHenrietta.South.PM
Site Code : 02500605
Start Date : 9/13/2005
Page No : 1

Groups Printed- Unshifted

	East Henrietta Southbound				South Ave. Westbound				East Henrietta Northbound				Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	0	107	0	0	0	0	171	0	106	108	0	1	0	0	0	0	493
04:15 PM	0	120	0	0	0	0	145	0	124	92	0	0	0	0	0	0	481
04:30 PM	0	128	0	0	0	0	172	0	107	81	0	1	0	0	0	0	489
04:45 PM	0	128	0	0	0	0	177	0	125	96	0	0	0	0	0	0	526
Total	0	483	0	0	0	0	665	0	462	377	0	2	0	0	0	0	1989
05:00 PM	0	120	0	0	0	0	153	0	137	78	1	1	0	0	0	0	490
05:15 PM	0	148	0	0	0	0	180	0	120	106	0	0	0	0	0	0	554
05:30 PM	0	112	0	0	0	0	151	0	117	98	0	0	0	0	0	0	478
05:45 PM	0	101	0	0	0	0	134	0	114	85	0	0	0	0	0	0	434
Total	0	481	0	0	0	0	618	0	488	367	1	1	0	0	0	0	1956
Grand Total	0	964	0	0	0	0	1283	0	950	744	1	3	0	0	0	0	3945
Apprch %	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	55.9	43.8	0.1	0.2	0.0	0.0	0.0	0.0	
Total %	0.0	24.4	0.0	0.0	0.0	0.0	32.5	0.0	24.1	18.9	0.0	0.1	0.0	0.0	0.0	0.0	

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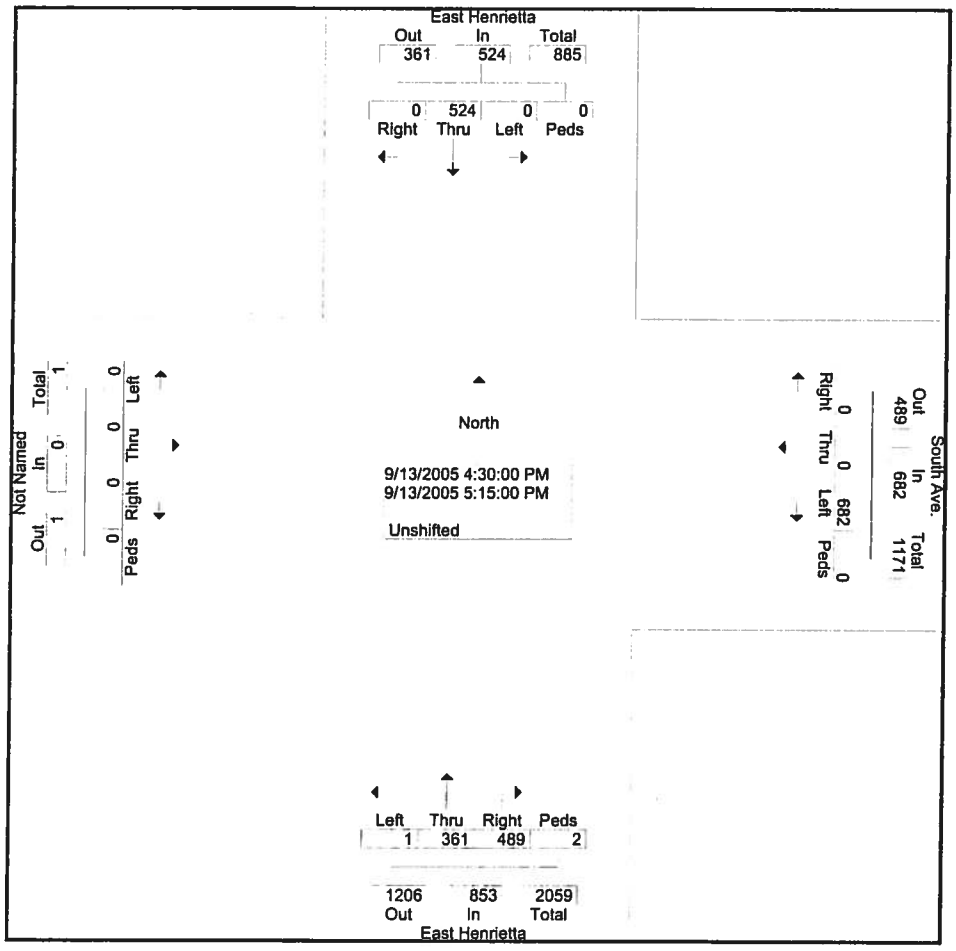
Rochester, New York 14623
Phone: 585.272.4660

File Name : EastHenrietta.South.PM
Site Code : 02500605
Start Date : 9/13/2005

Start Time	East Henrietta Southbound Right	Thru	Left	Peds	App. Total	South Ave. Westbound Right	Thru	Left	Peds	App. Total	East Henrietta Northbound Right	Thru	Left	Peds	App. Total	Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	0	524	0	0	524	0	0	682	0	682	489	361	1	2	853	0	0	0	0	0	2059
Percent	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		57.3	42.3	0.1	0.2		0.0	0.0	0.0	0.0		
05:15 Volume	0	148	0	0	148	0	0	180	0	180	120	106	0	0	226	0	0	0	0	0	554
Peak Factor																					0.929
High Int.	05:15 PM					05:15 PM					05:15 PM					3:45:00 PM					
Volume	0	148	0	0	148	0	0	180	0	180	120	106	0	0	226						
Peak Factor					0.885					0.947					0.944						



SRF & Associates
3495 Winton Place, Bldg E, Suite 110
Rochester, New York 14623
Phone: 585.272.4660

File Name : EastHenrietta.South.AM
Site Code : 02500605
Start Date : 9/14/2005
Page No : 1

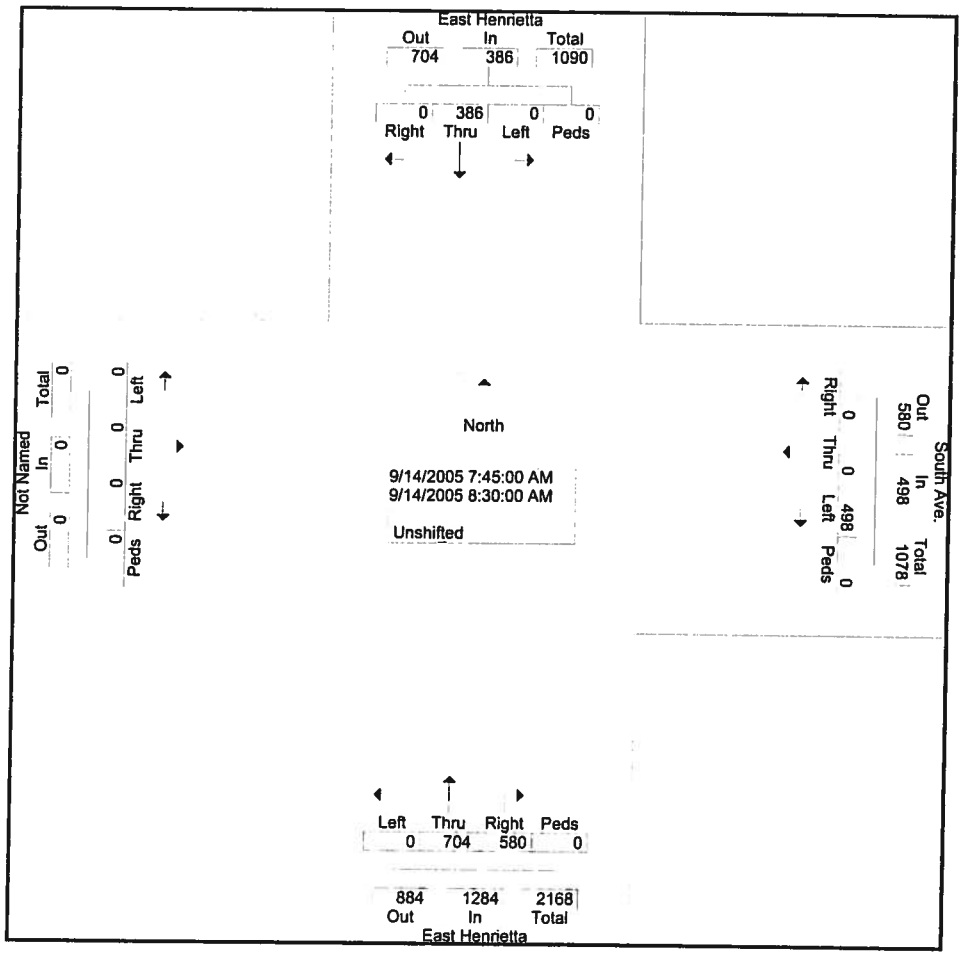
Groups Printed- Unshifted

	East Henrietta Southbound				South Ave. Westbound				East Henrietta Northbound				Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	58	0	0	0	0	66	0	119	115	0	0	0	0	0	0	358
07:15 AM	0	72	0	0	0	0	86	0	109	135	0	1	0	0	0	0	403
07:30 AM	0	86	0	0	0	0	110	0	136	182	0	0	0	0	0	0	514
07:45 AM	0	103	0	0	0	0	169	0	135	178	0	0	0	0	0	0	585
Total	0	319	0	0	0	0	431	0	499	610	0	1	0	0	0	0	1860
08:00 AM	0	97	0	0	0	0	115	0	167	165	0	0	0	0	0	0	544
08:15 AM	0	97	0	0	0	0	100	0	139	178	0	0	0	0	0	0	514
08:30 AM	0	89	0	0	0	0	114	0	139	183	0	0	0	0	0	0	525
08:45 AM	0	103	0	0	0	0	154	0	125	138	0	0	0	0	0	0	520
Total	0	386	0	0	0	0	483	0	570	664	0	0	0	0	0	0	2103
Grand Total	0	705	0	0	0	0	914	0	1069	1274	0	1	0	0	0	0	3963
Apprch %	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	45.6	54.4	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	17.8	0.0	0.0	0.0	0.0	23.1	0.0	27.0	32.1	0.0	0.0	0.0	0.0	0.0	0.0	

SRF & Associates
3495 Winton Place, Bldg E, Suite 110
Rochester, New York 14623
Phone: 585.272.4660

File Name : EastHenrietta.South.AM
Site Code : 02500605
Start Date : 9/14/2005

Start Time	East Henrietta Southbound Right	Thru	Left	Peds	App. Total	South Ave. Westbound Right	Thru	Left	Peds	App. Total	East Henrietta Northbound Right	Thru	Left	Peds	App. Total	Eastbound Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	0	386	0	0	386	0	0	498	0	498	580	704	0	0	1284	0	0	0	0	0	2168
Percent	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		45.2	54.8	0.0	0.0		0.0	0.0	0.0	0.0		
07:45 Volume	0	103	0	0	103	0	0	169	0	169	135	178	0	0	313	0	0	0	0	0	585
Peak Factor																					0.926
High Int.	07:45 AM					07:45 AM					08:00 AM					6:45:00 AM					
Volume	0	103	0	0	103	0	0	169	0	169	167	165	0	0	332						
Peak Factor					0.937					0.737					0.967						



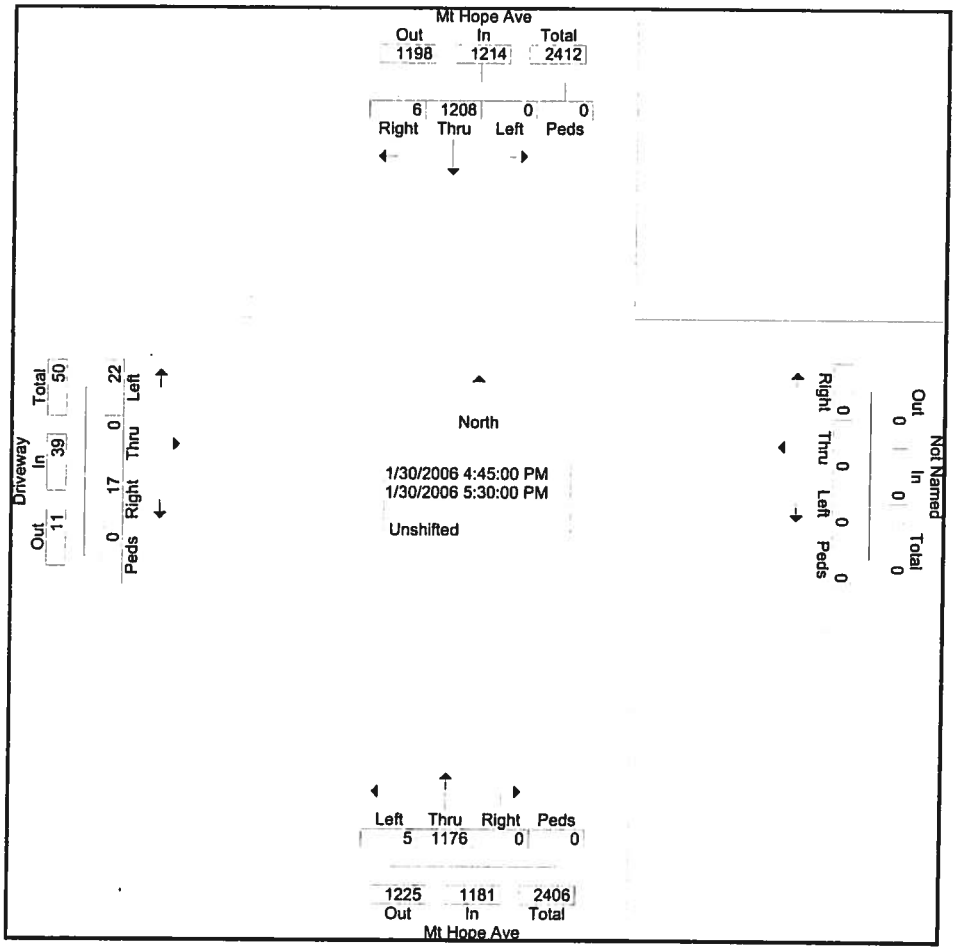
SRF & Associates
3495 Winton Place, E-110
Rochester, NY 14623 : W.Driveway_Crittenden-Elmwood_PM
Site Code : 00025006
Start Date : 1/30/2006
Page No : 1

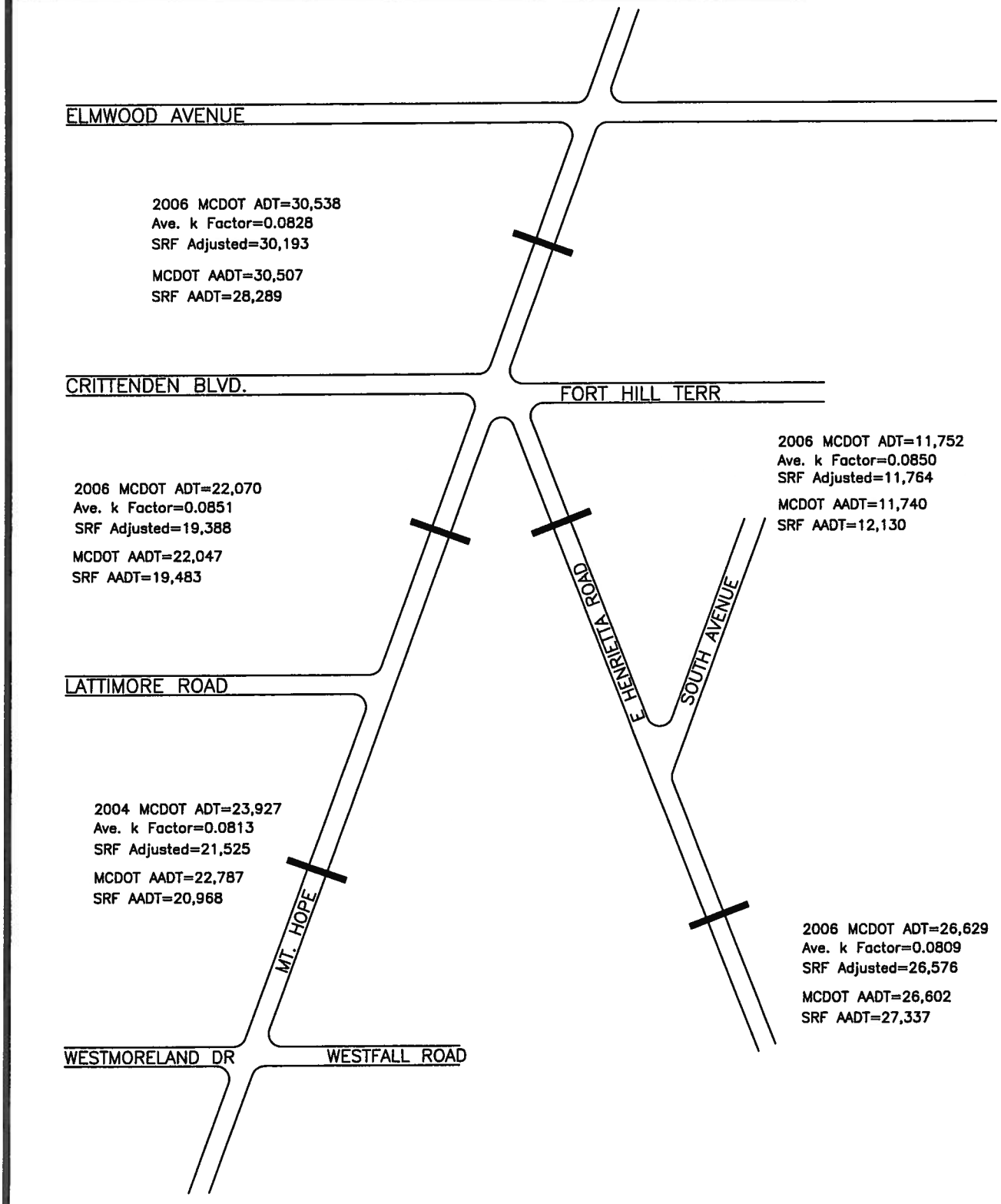
Groups Printed- Unshifted

	Mt Hope Ave Southbound				Westbound				Mt Hope Ave Northbound				Driveway Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
16:00	0	237	0	0	0	0	0	0	1	294	0	0	2	0	2	0	536
16:15	0	254	0	0	0	0	0	0	0	268	0	0	2	0	3	0	527
16:30	0	247	0	0	0	0	0	0	2	269	0	0	4	0	1	0	523
16:45	0	287	1	0	0	0	0	0	1	284	0	0	4	0	5	0	582
Total	0	1025	1	0	0	0	0	0	4	1115	0	0	12	0	11	0	2168
17:00	0	285	1	0	0	0	0	0	0	262	0	0	8	0	4	0	560
17:15	0	351	1	0	0	0	0	0	1	314	0	0	4	0	5	0	676
17:30	0	285	3	0	0	0	0	0	3	316	0	0	6	0	3	0	616
17:45	0	260	0	0	0	0	0	0	1	298	0	0	7	0	3	0	569
Total	0	1181	5	0	0	0	0	0	5	1190	0	0	25	0	15	0	2421
Grand Total	0	2206	6	0	0	0	0	0	9	2305	0	0	37	0	26	0	4589
Apprch %	0.0	99.7	0.3	0.0	0.0	0.0	0.0	0.0	0.4	99.6	0.0	0.0	58.7	0.0	41.3	0.0	
Total %	0.0	48.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	50.2	0.0	0.0	0.8	0.0	0.6	0.0	

SRF & Associates
3495 Winton Place, E-110
Rochester, NY 14623
File Name : W.Driveway_Crittenden-Elmwood_PM
Site Code : 00025006
Start Date : 1/30/2006
Page No : 2

Start Time	Mt Hope Ave Southbound Left	Thru	Right	Peds	App. Total	Westbound Left	Thru	Right	Peds	App. Total	Mt Hope Ave Northbound Left	Thru	Right	Peds	App. Total	Driveway Eastbound Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 16:00 to 17:45 - Peak 1 of 1																					
Intersection	16:45																				
Volume	0	1208	6	0	1214	0	0	0	0	0	5	1176	0	0	1181	22	0	17	0	39	2434
Percent	0.0	99.5	0.5	0.0		0.0	0.0	0.0	0.0		0.4	99.6	0.0	0.0		56.4	0.0	43.6	0.0		
17:15 Volume	0	351	1	0	352	0	0	0	0	0	1	314	0	0	315	4	0	5	0	9	676
Peak Factor																					0.900
High Int.	17:15					3:45:00 PM					17:30					17:00					
Volume	0	351	1	0	352	0	0	0	0	0	3	316	0	0	319	8	0	4	0	12	
Peak Factor					0.862										0.926					0.813	





N

KEY
CARS PER DAY

APPENDIX

AADT CALCULATIONS

MT. HOPE / E. HENRIETTA STUDY
CITY OF ROCHESTER, NEW YORK

SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants

STATION: **430124**

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 15A** ROAD NAME:
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 38
DATE OF COUNT: 09/16/2004
NOTES LANE 1: NB Travel Lane 30 MPH
NOTES LANE 2: NB Passing Lane 30 MPH
COUNT TAKEN BY: ORG CODE: TST INITIALS: TST

FROM: **WESTFALL RD**
REC. SERIAL #: 0463
PLACEMENT: 100' S of South Ave
@ REF MARKER: 15A43042001
ADDL DATA:
COUNT TYPE: VEHICLES
PROCESSED BY: ORG CODE: MJL INITIALS: JML

TO: **SOUTH AVE**
FUNC. CLASS: 16
NHS: no
JURIS: City
CC Stn:
BATCH ID: DOT-MJLR4WW38axl

COUNTY: **Monroe**
CITY: **ROCHESTER**
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1 PM	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M																											
7	T																											
8	W																											
9	T																											
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F	100	48	38	29	45	155	543	939	1060	851	776	855	871	881	918	845	859	800	673	574	567	432	309	244			
18	S	136	90	61	31	44	96	263	306	333	411	473	542	600	518	553	928	814	744	658	564	425	449	346	297	13334	1060	8
19	S	162	96	60	28	31	41	201	240	190	354	351	400	480	510	578	598	614	526	596	496	434	383	341	300	8745	614	16
20	M	78	26	27	21	47	152	520	936	1104	945	726	768	901	863	873	564	464	471	501	459	378	240	218	202	7219	578	14
21	T	97	39	22	19	45	154	545	937	1114	879	721	799	890	869	906	863	802	785	644	581	501	438	252	217	13070	1104	8
22	W	76	34	21	16	52	135	589	956	1077	880	792	753	880	858	871	855	853	832	648	579	527	465	300	191	13286	1114	8
23	T																901	827	848	685	574	570	451	330	217	13393	1077	8
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

91	40	27	21	47	148	549	942	1089	889	754	794	890	863	883	866	835	816	662	577	541	446	298	217	ADT 13285

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor	ESTIMATED
7	153	4	87	1089	8%	1.000	1.016	**AADT 13076**

ROUTE #: **NY 15A** ROAD NAME:
STATION: **430124** STATE DIR CODE: **1**

FROM: **WESTFALL RD**
PLACEMENT: **100' S of South Ave**

TO: **SOUTH AVE**

COUNTY: **Monroe**
DATE OF COUNT: **09/16/2004**

STATION: **430124**

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 15A** ROAD NAME:
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 38
DATE OF COUNT: 09/16/2004
NOTES LANE 1: SB Travel Lane 30 MPH
NOTES LANE 2: SB Passing Lane 30 MPH
COUNT TAKEN BY: ORG CODE: TST INITIALS: TST

FROM: **WESTFALL RD**
REC. SERIAL #: 0405
PLACEMENT: 100' S of South Ave
@ REF MARKER: 15A43042001
ADDL DATA:
COUNT TYPE: VEHICLES
PROCESSED BY: ORG CODE: MJL INITIALS: JML

TO: **SOUTH AVE**
FUNC. CLASS: 16
NHS: no
JURIS: City
CC Stn:
BATCH ID: DOT-MJLR4WW38axl

COUNTY: **Monroe**
CITY: **ROCHESTER**
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1 AM	1 TO 2 AM	2 TO 3 AM	3 TO 4 AM	4 TO 5 AM	5 TO 6 AM	6 TO 7 AM	7 TO 8 AM	8 TO 9 AM	9 TO 10 AM	10 TO 11 AM	11 TO 12 AM	12 TO 1 PM	1 TO 2 PM	2 TO 3 PM	3 TO 4 PM	4 TO 5 PM	5 TO 6 PM	6 TO 7 PM	7 TO 8 PM	8 TO 9 PM	9 TO 10 PM	10 TO 11 PM	11 TO 12 PM	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M																											
7	T																											
8	W																											
9	T																											
10	F																											
11	S																											
12	S																											
13	M																											
14	T																											
15	W																											
16	T																											
17	F	95	62	51	33	36	123	308	711	809	743	727	863	982	851	890	986	1066	1040	749	539	444	301	234	235			
18	S	129	95	87	36	34	65	143	242	345	347	360	422	476	457	439	974	996	999	658	580	429	293	276	236	12725	999	17
19	S	138	78	95	44	32	31	103	195	231	286	345	358	375	424	420	443	431	394	411	370	304	222	202	220	6674	476	12
20	M	65	45	19	22	33	92	263	489	551	509	508	559	594	555	576	413	418	363	289	314	258	179	149	137	5675	424	13
21	T	111	39	24	25	28	104	250	503	584	498	529	560	611	595	655	630	580	575	481	399	368	286	167	171	8537	630	15
22	W	71	33	26	26	24	97	272	501	546	525	503	593	609	609	642	589	595	623	523	403	375	297	211	200	8932	655	14
23	T																598	603	630	546	440	352	309	224	192	8971	642	14
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																								ADT
92	45	34	28	29	108	273	551	622	569	567	644	605	586	624	701	711	717	575	445	385	298	209	200	9618

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
7	153	4	87	717	7%	1.000	1.016

ESTIMATED

AADT

9467

ROUTE #: **NY 15A** ROAD NAME:
STATION: **430124** STATE DIR CODE: **2**

FROM: **WESTFALL RD**
PLACEMENT: **100' S of South Ave**

TO: **SOUTH AVE**

COUNTY: **Monroe**
DATE OF COUNT: 09/16/2004

New York State Department of Transportation
Classification Count Average Weekday Data Report

ROUTE #: NY 15A ROAD NAME:
COUNTY NAME: Monroe
REGION CODE: 4
FROM: WESTFALL RD
TO: SOUTH AVE
REF-MARKER: 15A43042001
END MILEPOINT: 0420043 NO. OF LANES: 4
FUNC-CLASS: 16 HPMS NO:
STATION NO: 0124
COUNT TAKEN BY: ORG CODE: TST INITIALS: TST
PROCESSED BY: ORG CODE: MJL INITIALS: JML

YEAR: 2004
MONTH: September

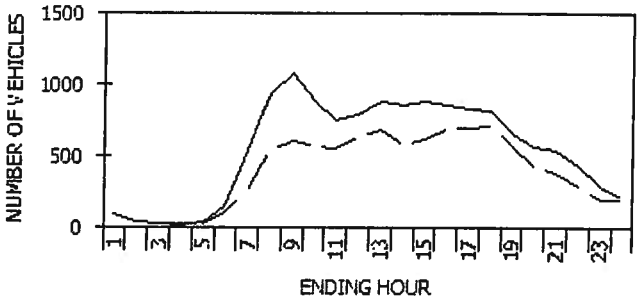
STATION: 430124

BATCH ID: DOT-MJLR4WW38axl

DIRECTION	North	South	TOTAL
NUMBER OF VEHICLES	13271	9635	22906
NUMBER OF AXLES	26782	19480	46261
% HEAVY VEHICLES (F4-F13)	3.74%	4.03%	3.86%
% TRUCKS AND BUSES (F3-F13)	15.88%	16.05%	15.95%
AXLE CORRECTION FACTOR	0.99	0.99	0.99

	VEHICLE CLASS	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	TOTAL
	NO. OF AXLES	2	2	2	2.5	2	3	4	3.5	5	6	5	6	8.75	
ENDING HOUR	1:00	0	81	7	2	1	0	0	0	0	0	0	0	0	91
	2:00	0	37	2	0	0	0	0	0	1	0	0	0	0	40
	3:00	0	26	0	0	0	0	0	0	0	0	0	0	0	26
	4:00	0	18	2	0	0	0	0	0	0	0	0	0	0	20
	5:00	0	39	4	0	4	0	0	0	0	0	0	0	0	47
	6:00	1	110	26	2	7	1	0	0	1	0	0	0	0	148
	7:00	2	442	78	10	12	2	0	4	0	0	0	0	0	550
	8:00	3	786	110	14	18	2	0	8	1	0	1	0	0	943
	9:00	2	896	139	12	26	2	0	10	1	0	0	0	0	1088
	10:00	2	706	134	6	33	2	0	6	0	0	0	0	0	889
DIRECTION	11:00	0	596	124	8	14	2	0	6	0	1	0	0	0	751
North	12:00	3	634	120	7	21	3	0	4	1	0	0	0	0	793
	13:00	2	738	114	7	16	2	0	5	1	0	0	0	0	885
	14:00	3	703	118	10	21	0	0	4	1	1	2	0	0	863
	15:00	2	707	120	10	32	1	1	7	1	0	1	0	0	882
	16:00	2	729	104	12	15	1	0	3	0	0	0	0	0	866
	17:00	4	720	86	7	14	0	0	3	0	0	0	0	0	834
	18:00	6	716	75	6	8	2	0	4	0	0	0	0	0	817
	19:00	1	577	68	7	6	1	0	2	0	0	0	0	0	662
	20:00	3	510	54	2	4	2	0	2	0	0	0	0	0	577
	21:00	2	483	51	0	2	1	0	1	0	0	0	0	0	540
	22:00	4	403	32	2	2	1	0	1	0	0	0	0	0	445
	23:00	0	270	24	2	2	0	0	0	0	0	0	0	0	298
	24:00	0	194	20	1	1	0	0	0	0	0	0	0	0	216
	TOTAL VEHICLES	**42**	**11121**	**1612**	**127**	**259**	**25**	**1**	**70**	**8**	**2**	**4**	**0**	**0**	**13271**
	TOTAL AXLES	84	22242	3224	318	518	75	4	245	40	12	20	0	0	26782
	1:00	0	79	12	0	0	0	0	0	0	0	0	0	0	91
ENDING HOUR	2:00	1	38	5	0	0	0	0	0	0	0	0	0	0	44
	3:00	0	30	2	0	0	0	0	0	0	0	0	0	0	32
	4:00	0	23	2	0	1	0	0	0	0	0	0	0	0	26
	5:00	0	23	2	0	2	0	0	0	0	0	0	0	0	27
	6:00	0	87	13	1	2	0	0	1	0	0	0	0	0	104
	7:00	1	227	29	5	7	1	0	1	0	0	0	0	0	271
	8:00	4	460	58	8	9	0	0	6	1	0	0	0	0	546
	9:00	4	511	72	8	16	1	0	5	0	0	0	0	0	617
	10:00	4	455	80	6	14	1	0	6	0	0	0	0	0	566
	11:00	4	460	72	6	14	1	0	7	0	0	0	0	0	564
DIRECTION	12:00	6	526	79	8	12	3	0	6	0	0	0	0	0	640
South	13:00	5	570	90	7	13	1	0	7	0	0	0	0	0	693
	14:00	6	480	74	5	11	0	0	6	0	0	0	0	0	582
	15:00	5	501	86	7	16	0	0	6	0	0	0	0	0	621
	16:00	6	566	89	7	18	2	0	6	0	0	0	0	0	694
	17:00	5	585	86	7	11	1	0	7	1	1	0	0	0	704
	18:00	8	607	71	6	9	1	0	8	0	0	1	0	0	711
	19:00	4	488	65	4	9	0	0	4	0	0	0	0	0	574
	20:00	4	375	49	4	6	1	0	3	1	0	0	0	0	443
	21:00	4	325	42	4	4	0	0	3	1	0	0	0	0	383
	22:00	3	251	34	3	4	0	0	2	1	0	0	0	0	298
	23:00	0	177	24	2	4	0	0	0	0	0	0	0	0	207
	24:00	0	171	22	0	4	0	0	0	0	0	0	0	0	197
	TOTAL VEHICLES	**74**	**8015**	**1158**	**98**	**186**	**13**	**0**	**84**	**5**	**1**	**1**	**0**	**0**	**9635**
	TOTAL AXLES	148	16030	2316	245	372	39	0	294	25	6	5	0	0	19480
	GRAND TOTAL VEHICLES	**116**	**19136**	**2770**	**225**	**445**	**38**	**1**	**154**	**13**	**3**	**5**	**0**	**0**	**22906**
	GRAND TOTAL AXLES	232	38272	5540	562	890	114	4	539	65	18	25	0	0	46262

TRAFFIC FLOW BY DIRECTION



— North - -South

PEAK HOUR DATA

DIRECTION	HOUR	COUNT	2-WAY	HOUR	COUNT
North	9	1088	A.M.	9	1705
South	18	711	P.M.	13	1578

VEHICLE CLASSIFICATION CODES:

F1. Motorcycles
F2. Autos*
F3. 2 Axle, 4-Tire Pickups, Vans, Motorhomes*
F4. Buses
F5. 2 Axle, 6-Tire Single Unit Trucks
F6. 3 Axle Single Unit Trucks
F7. 4 or More Axle Single Unit Trucks
F8. 4 or Less Axle Vehicles, One Unit is a Truck
F9. 5 Axle Double Unit Vehicles, One Unit is a Truck
F10. 6 or More Double Unit Vehicles, One Unit is a Truck
F11. 5 or Less Axle Multi-Unit Trucks
F12. 6 Axle Multi-Unit Trucks
F13. 7 or More Axle Multi-Unit Trucks

* INCLUDING THOSE HAULING TRAILERS

FUNCTIONAL CLASS CODES:

RURAL	URBAN	SYSTEM
01	11	PRINCIPAL ARTERIAL-INTERSTATE
02	12	PRINCIPAL ARTERIAL-EXPRESSWAY
02	14	PRINCIPAL ARTERIAL-OTHER
06	16	MINOR ARTERIAL
07	17	MAJOR COLLECTOR
08	17	MINOR COLLECTOR
09	19	LOCAL SYSTEM

SOURCE: NYSDOT DATA SERVICES BUREAU

New York State Department of Transportation
Speed Count Average Weekday Report

Station: 430124
Route #: NY 15A Road name:
From: WESTFALL RD
To: SOUTH AVE
Direction: North
Lanes: 1, 2

Start date: Thu 09/16/2004 15:00
End date: Wed 09/22/2004 23:45
County: Monroe
Town: ROCHESTER
Speed limit: 30

Count duration: 153 hours
Functional class: 16
Factor group: 30
Batch ID: DOT-MJLR4WW38axl
Count taken by: Org: TST Init: TST
Processed by: Org: MJL Init: JML

Speeds, mph

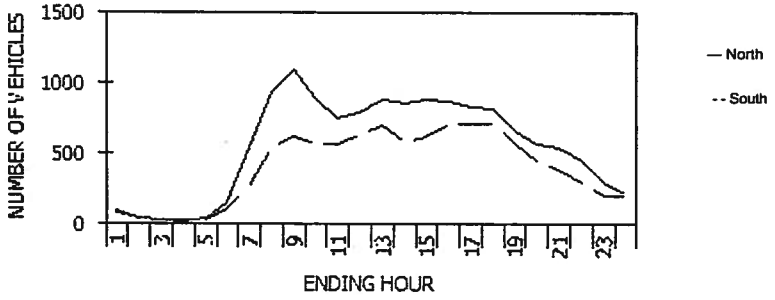
Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	8	5	13	32	21	7	2	1	0	0	0	0	0	3.4	1.1	0.0	0.0	0.0	29.0	32.9	39.3	89
2:00	5	0	5	15	10	4	2	0	0	0	0	0	0	4.9	0.0	0.0	0.0	0.0	28.8	33.6	40.0	41
3:00	4	1	5	9	6	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	26.4	31.7	37.6	26
4:00	3	1	4	5	5	3	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	27.2	32.6	39.9	21
5:00	4	1	5	15	15	7	2	0	0	0	0	0	0	4.1	0.0	0.0	0.0	0.0	30.7	34.9	41.2	49
6:00	10	7	28	51	45	6	1	0	0	0	0	0	0	0.7	0.0	0.0	0.0	0.0	29.5	32.9	38.4	148
7:00	80	57	106	183	104	18	3	0	0	0	0	0	0	0.5	0.0	0.0	0.0	0.0	25.9	30.9	37.1	551
8:00	182	118	257	272	99	14	1	0	0	0	0	0	0	0.1	0.0	0.0	0.0	0.0	23.8	28.4	34.5	943
9:00	176	147	325	336	98	10	1	0	0	0	0	0	0	0.1	0.0	0.0	0.0	0.0	24.4	28.5	34.2	1093
10:00	109	108	269	286	103	15	1	0	0	0	0	0	0	0.1	0.0	0.0	0.0	0.0	25.7	29.3	34.8	891
11:00	75	73	209	276	106	14	1	0	0	0	0	0	0	0.1	0.0	0.0	0.0	0.0	26.8	30.4	35.4	754
12:00	90	68	228	282	112	14	1	0	0	0	0	0	0	0.1	0.0	0.0	0.0	0.0	26.4	30.3	35.4	795
13:00	102	98	264	307	102	12	2	0	0	0	0	0	0	0.2	0.0	0.0	0.0	0.0	26.0	29.7	34.8	887
14:00	90	80	212	339	123	21	1	0	0	0	0	0	0	0.1	0.0	0.0	0.0	0.0	26.9	30.8	35.7	866
15:00	90	94	273	320	96	13	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	26.4	29.8	34.7	886
16:00	101	82	224	312	125	24	1	0	0	0	0	0	0	0.1	0.0	0.0	0.0	0.0	26.4	30.5	35.8	869
17:00	87	64	222	315	125	22	2	0	0	0	0	0	0	0.2	0.0	0.0	0.0	0.0	27.0	30.8	36.0	837
18:00	92	81	219	290	118	18	2	0	0	0	0	0	0	0.2	0.0	0.0	0.0	0.0	26.5	30.4	35.7	820
19:00	73	45	173	233	111	28	2	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	27.0	30.9	36.9	665
20:00	66	50	148	188	104	18	3	0	0	0	0	0	0	0.5	0.0	0.0	0.0	0.0	26.7	30.7	36.9	577
21:00	63	54	152	190	69	12	2	0	0	0	0	0	0	0.4	0.0	0.0	0.0	0.0	26.2	30.1	35.2	542
22:00	51	50	118	155	60	11	2	0	0	0	0	0	0	0.4	0.0	0.0	0.0	0.0	26.3	30.2	35.5	447
23:00	29	20	66	100	66	17	1	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	27.9	31.8	38.0	299
24:00	14	17	46	78	50	12	2	0	0	0	0	0	0	0.9	0.0	0.0	0.0	0.0	29.1	32.1	38.2	219
Avg. Daily Total	1604	1321	3571	4589	1873	321	35	1	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	26.2	30.2	35.7	13315
Percent	12.0%	9.9%	26.8%	34.5%	14.1%	2.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	12.0%	22.0%	48.8%	83.3%	97.3%	99.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	67	55	149	191	78	13	1	0	0	0	0	0	0									555

	Avg. Speed	50th% Speed	85th% Speed
North	26.2	30.2	35.7
South	26.2	29.5	36.1

Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	9	1093	A.M.	9	1715
South	18	716	P.M.	13	1585

TRAFFIC FLOW BY DIRECTION



New York State Department of Transportation
Speed Count Average Weekday Report

Station: 430124
Route #: NY 15A Road name:
From: WESTFALL RD
To: SOUTH AVE
Direction: South
Lanes: 1, 2

Start date: Thu 09/16/2004 15:00
End date: Wed 09/22/2004 23:45
County: Monroe
Town: ROCHESTER
Speed limit: 30

Count duration: 153 hours
Functional class: 16
Factor group: 30
Batch ID: DOT-MJLR4WW38axl
Count taken by: Org: TST Init: TST
Processed by: Org: MJL Init: JML

Speeds, mph

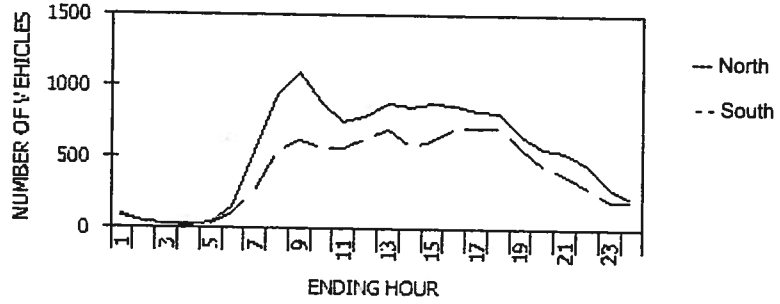
Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	7	9	20	30	21	5	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	28.3	31.7	38.0	92
2:00	3	3	11	16	8	3	1	0	0	0	0	0	0	2.2	0.0	0.0	0.0	0.0	28.9	31.8	38.3	45
3:00	2	2	6	12	8	2	0	1	0	0	0	0	0	3.0	3.0	0.0	0.0	0.0	29.8	32.8	38.8	33
4:00	2	3	8	8	5	2	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	28.0	30.7	37.8	28
5:00	2	3	10	8	6	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	27.9	30.0	37.1	30
6:00	7	10	31	33	21	5	1	1	0	0	0	0	0	1.8	0.9	0.0	0.0	0.0	28.5	31.0	37.8	109
7:00	23	25	77	86	49	10	4	0	0	0	0	0	0	1.5	0.0	0.0	0.0	0.0	27.7	30.7	37.3	274
8:00	50	58	166	170	81	20	5	0	0	0	0	0	0	0.9	0.0	0.0	0.0	0.0	27.1	30.1	36.5	550
9:00	58	81	192	181	84	21	5	0	0	0	0	0	0	0.8	0.0	0.0	0.0	0.0	26.6	29.5	36.0	622
10:00	56	79	174	162	78	15	4	0	0	0	0	0	0	0.7	0.0	0.0	0.0	0.0	26.4	29.3	35.8	568
11:00	58	83	161	163	78	20	5	0	0	0	0	0	0	0.9	0.0	0.0	0.0	0.0	26.3	29.5	36.2	568
12:00	70	100	196	165	88	18	6	0	0	0	0	0	0	0.9	0.0	0.0	0.0	0.0	25.9	28.9	35.9	643
13:00	94	128	191	180	86	16	3	0	0	0	0	0	0	0.4	0.0	0.0	0.0	0.0	25.0	28.4	35.1	698
14:00	55	77	172	174	85	17	6	0	0	0	0	0	0	1.0	0.0	0.0	0.0	0.0	26.7	29.7	36.2	586
15:00	64	91	179	178	89	18	5	0	0	0	0	0	0	0.8	0.0	0.0	0.0	0.0	26.3	29.4	36.1	624
16:00	95	116	212	175	83	16	4	0	0	0	0	0	0	0.6	0.0	0.0	0.0	0.0	25.0	28.3	35.0	701
17:00	104	126	214	177	71	16	3	0	0	0	0	0	0	0.4	0.0	0.0	0.0	0.0	24.6	28.0	34.6	711
18:00	119	116	213	172	76	16	4	0	0	0	0	0	0	0.6	0.0	0.0	0.0	0.0	24.2	27.9	34.7	716
19:00	51	62	163	173	102	20	4	0	0	0	0	0	0	0.7	0.0	0.0	0.0	0.0	27.2	30.4	37.0	575
20:00	36	48	128	144	70	17	4	0	0	0	0	0	0	0.9	0.0	0.0	0.0	0.0	27.5	30.4	36.8	447
21:00	27	39	110	141	54	10	3	0	0	0	0	0	0	0.8	0.0	0.0	0.0	0.0	27.8	30.6	35.9	384
22:00	24	28	82	105	48	10	2	0	0	0	0	0	0	0.7	0.0	0.0	0.0	0.0	27.6	30.8	36.6	299
23:00	16	18	53	74	37	9	2	0	0	0	0	0	0	1.0	0.0	0.0	0.0	0.0	28.1	31.2	37.3	209
24:00	15	16	53	69	36	8	1	0	0	0	0	0	0	0.5	0.0	0.0	0.0	0.0	28.1	31.1	37.2	198
Avg. Daily Total	1038	1321	2822	2796	1364	295	72	2	0	0	0	0	0	0.8	0.0	0.0	0.0	0.0	26.2	29.5	36.1	9710
Percent	10.7%	13.6%	29.1%	28.8%	14.0%	3.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	10.7%	24.3%	53.4%	82.2%	96.2%	99.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	43	55	118	116	57	12	3	0	0	0	0	0	0									405

	Avg. Speed	50th% Speed	85th% Speed
North	26.2	30.2	35.7
South	26.2	29.5	36.1

Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	9	1093	A.M.	9	1715
South	18	716	P.M.	13	1585

TRAFFIC FLOW BY DIRECTION



STATION: **430138**

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 15** ROAD NAME:
DIRECTION: Northbound FACTOR GROUP: 30
STATE DIR CODE: 1 WK OF YR: 29
DATE OF COUNT: 07/13/2005
NOTES LANE 0: NB One Lane 30 MPH

COUNT TAKEN BY: ORG CODE: TST INITIALS: TST

FROM: **ELMWOOD AVE**
REC. SERIAL #: 0396
PLACEMENT: 100' N of Stewart St
@ REF MARKER: 15 43032012
ADDL DATA:
COUNT TYPE: VEHICLES
PROCESSED BY: ORG CODE: DOT INITIALS: TGB

TO: **HIGHLAND AVE**
FUNC. CLASS: 14
NHS: yes
JURIS: City
CC Stn:
BATCH ID: DOT-MJLWW28B-Reg4-7Day

COUNTY: **Monroe**
CITY: **ROCHESTER**
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		AM												PM														
1	F																											
2	S																											
3	S																											
4	M																											
5	T																											
6	W																											
7	T																											
8	F																											
9	S																											
10	S																											
11	M																											
12	T																											
13	W												607	732	766	779	813	866	866	618	602	461	438	325	303			
14	T	161	91	57	34	34	94	308	609	864	656	446	631	669	804	778	768	542	472	405	381	333	327	230	271	9965	864	8
15	F	170	63	69	31	37	76	233	378	431	353	366	404	465	501	458	457	429	431	346	382	341	336	317	288	7362	501	13
16	S	247	142	96	50	42	57	117	205	251	284	298	307	334	383	341	364	355	409	425	613	391	295	297	236	6539	613	19
17	S	195	96	69	51	38	29	65	165	222	219	238	256	266	279	291	327	298	278	418	354	266	274	214	169	5077	418	18
18	M	127	70	40	28	28	70	208	312	386	348	338	347	434	408	413	408	451	409	384	356	351	316	229	231	6692	451	16
19	T	130	77	41	30	39	83	205	344	396	374	338	372	420	440	386	438	444	432	348	337	309	296	228	237	6744	444	16
20	W	146	72																									
21	T																											
22	F																											
23	S																											
24	S																											
25	M																											
26	T																											
27	W																											
28	T																											
29	F																											
30	S																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

																									ADT
152	76	56	32	37	84	238	411	519	433	372	472	564	604	589	607	576	545	439	419	364	344	253	260	8446

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
8	159	5	93	607	7%	1.000	1.059

ESTIMATED (one way)

AADT
7975

STATION: **430138**

New York State Department of Transportation

Traffic Count Hourly Report

ROUTE #: **NY 15** ROAD NAME:
DIRECTION: Southbound FACTOR GROUP: 30
STATE DIR CODE: 2 WK OF YR: 29
DATE OF COUNT: 07/13/2005
NOTES LANE 0: SB One Lane 30 MPH

COUNT TAKEN BY: ORG CODE: TST INITIALS: TST

FROM: **ELMWOOD AVE**
REC. SERIAL #: 0469
PLACEMENT: 100' N of Stewart St
@ REF MARKER: 15 43032012
ADDL DATA:
COUNT TYPE: VEHICLES
PROCESSED BY: ORG CODE: DOT INITIALS: TGB

TO: **HIGHLAND AVE**
FUNC. CLASS: 14
NHS: yes
JURIS: City
CC Stn:
BATCH ID: DOT-MJLWW28B-Reg4-7Day

COUNTY: **Monroe**
CITY: **ROCHESTER**
BIN:
RR CROSSING:
HPMS SAMPLE:

DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		AM												PM														
1	F																											
2	S																											
3	S																											
4	M																											
5	T																											
6	W																											
7	T																											
8	F																											
9	S																											
10	S																											
11	M																											
12	T																											
13	W																											
14	T	114	76	50	46	51	129	397	724	889	757	661	610	799	823	771	820	839	981	586	465	381	384	326	244			
15	F	129	71	81	49	50	120	417	677	822	706	655	639	795	792	762	781	804	1099	688	476	437	318	252	257	11994	1099	17
16	S	190	137	168	83	55	74	185	279	299	434	460	748	901	827	776	867	862	999	720	499	381	374	416	329	12476	999	17
17	S	163	125	136	87	57	52	134	192	184	229	321	547	568	604	647	578	528	782	690	552	380	246	266	219	8971	782	17
18	M	94	52	29	26	47	113	384	683	875	680	603	455	501	540	551	499	566	511	433	344	289	287	221	169	7046	566	16
19	T	154	71	47	38	41	122	385	671	666	514	586	651	766	756	719	803	794	1012	597	418	413	312	254	249	11330	1012	17
20	W	131	65										678	856	819	797	814	802	977	634	462	342	293	281	232	11282	977	17
21	T																											
22	F																											
23	S																											
24	S																											
25	M																											
26	T																											
27	W																											
28	T																											
29	F																											
30	S																											
31	S																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

132	71	59	44	47	124	396	689	813	664	626	665	804	798	762	804	810	1017	626	455	393	327	278	246	ADT 11650

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor	ESTIMATED (one way)
8	159	5	93	1017	9%	1.000	1.059	**AADT 11001**

ROUTE #: **NY 15** ROAD NAME:
STATION: **430138** STATE DIR CODE: **2**

FROM: **ELMWOOD AVE**
PLACEMENT: **100' N of Stewart St**

TO: **HIGHLAND AVE**

COUNTY: **Monroe**
DATE OF COUNT: **07/13/2005**

New York State Department of Transportation
Classification Count Average Weekday Data Report

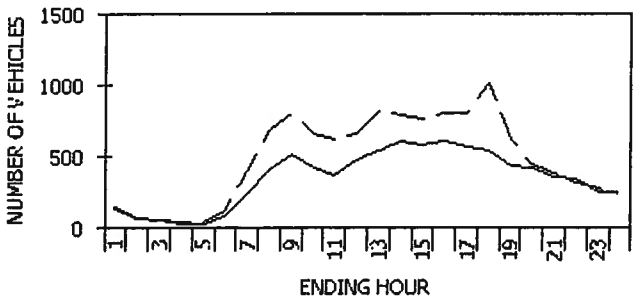
ROUTE #:	NY 15	ROAD NAME:		YEAR: 2005	STATION: 430138
COUNTY NAME:	Monroe			MONTH: July	
REGION CODE:	4				
FROM:	ELMWOOD AVE				
TO:	HIGHLAND AVE				
REF-MARKER:	15 43032012				
END MILEPOINT:	0311407	NO. OF LANES:	2		
FUNC-CLASS:	14	HPMS NO:			
STATION NO:	0138				
COUNT TAKEN BY:	ORG CODE: TST INITIALS: TST				
PROCESSED BY:	ORG CODE: DOT INITIALS: TGB				

BATCH ID: DOT-MJLWW28B-Reg4-7Day

DIRECTION	North	South	TOTAL
NUMBER OF VEHICLES	8418	11655	20073
NUMBER OF AXLES	16897	23463	40360
% HEAVY VEHICLES (F4-F13)	2.17%	2.53%	2.38%
% TRUCKS AND BUSES (F3-F13)	15.16%	15.69%	15.47%
AXLE CORRECTION FACTOR	1.00	0.99	0.99

	VEHICLE CLASS	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	TOTAL
	NO. OF AXLES	2	2	2	2.5	2	3	4	3.5	5	6	5	6	8.75	
ENDING HOUR	1:00	1	131	18	0	1	0	0	0	0	0	0	0	0	151
	2:00	0	65	10	0	0	0	0	0	0	0	0	0	0	75
	3:00	0	47	8	0	0	0	0	0	0	0	0	0	0	55
	4:00	0	27	4	0	0	0	0	0	0	0	0	0	0	31
	5:00	0	31	6	0	0	0	0	0	0	0	0	0	0	37
	6:00	0	71	11	0	2	0	0	0	0	0	0	0	0	84
	7:00	0	198	35	3	2	0	0	0	0	0	0	0	0	238
	8:00	1	346	53	4	6	0	0	1	0	0	0	0	0	411
	9:00	0	438	64	4	9	0	0	2	0	0	0	0	0	517
	10:00	0	357	60	5	8	0	0	1	0	0	0	0	0	431
DIRECTION	11:00	0	310	52	4	5	0	0	1	0	0	0	0	0	372
North	12:00	1	393	66	4	7	1	0	1	0	0	0	0	0	473
	13:00	0	458	74	5	5	0	0	1	1	0	0	0	0	544
	14:00	1	504	84	5	8	0	0	2	0	0	0	0	0	604
	15:00	2	492	82	4	7	1	0	2	0	0	0	0	0	590
	16:00	1	514	80	4	5	0	0	2	0	0	0	0	0	606
	17:00	1	496	68	4	5	0	0	2	0	0	0	0	0	576
	18:00	1	468	67	4	5	0	0	0	0	0	0	0	0	545
	19:00	0	378	53	3	5	0	0	0	0	0	0	0	0	439
	20:00	2	358	52	4	4	0	0	0	0	0	0	0	0	420
	21:00	0	311	45	3	4	0	0	0	0	0	0	0	0	363
	22:00	1	296	40	3	4	0	0	0	0	0	0	0	0	344
	23:00	0	217	31	2	2	0	0	0	0	0	0	0	0	252
	24:00	0	224	30	3	3	0	0	0	0	0	0	0	0	260
	TOTAL VEHICLES	12	7130	1093	68	97	2	0	15	1	0	0	0	0	8418
	TOTAL AXLES	24	14260	2186	170	194	6	0	52	5	0	0	0	0	16897
ENDING HOUR	1:00	1	116	14	0	1	0	0	0	0	0	0	0	0	132
	2:00	0	62	7	0	1	0	0	0	0	0	0	0	0	70
	3:00	0	49	9	0	1	0	0	0	0	0	0	0	0	59
	4:00	0	39	4	0	0	0	0	1	0	0	0	0	0	44
	5:00	0	40	6	1	0	0	0	0	0	0	0	0	0	47
	6:00	0	105	13	2	2	1	0	1	0	0	0	0	0	124
	7:00	2	334	48	5	4	0	0	2	0	0	0	0	0	395
	8:00	4	599	68	6	8	0	0	2	1	0	0	0	0	688
	9:00	2	680	105	6	13	0	0	5	0	0	0	0	0	811
	10:00	1	542	96	5	16	0	0	5	0	0	0	0	0	665
	11:00	3	518	85	7	10	0	0	3	0	0	0	0	0	626
DIRECTION	12:00	6	520	112	6	14	1	0	5	0	0	0	0	0	664
South	13:00	15	664	116	4	13	1	0	8	1	0	0	0	0	822
	14:00	15	643	116	6	11	1	0	4	0	0	0	0	0	796
	15:00	5	609	122	5	15	1	0	4	1	0	0	0	0	762
	16:00	8	636	133	6	13	1	0	6	1	0	0	0	0	804
	17:00	4	678	112	2	10	0	0	3	0	0	0	0	0	809
	18:00	6	890	103	3	6	0	0	4	1	1	1	0	0	1015
	19:00	6	548	65	2	4	0	0	2	0	0	0	0	0	627
	20:00	7	388	51	0	4	0	0	2	1	0	0	0	0	453
	21:00	6	330	52	2	3	0	0	0	0	0	0	0	0	393
	22:00	3	287	34	1	1	0	0	0	0	0	0	0	0	326
	23:00	2	243	30	1	1	0	0	1	0	0	0	0	0	278
	24:00	2	208	33	0	2	0	0	0	0	0	0	0	0	245
	TOTAL VEHICLES	98	9728	1534	70	153	6	0	58	6	1	1	0	0	11655
	TOTAL AXLES	196	19456	3068	175	306	18	0	203	30	6	5	0	0	23463
	GRAND TOTAL VEHICLES	110	16858	2627	138	250	8	0	73	7	1	1	0	0	20073
	GRAND TOTAL AXLES	220	33716	5254	345	500	24	0	256	35	6	5	0	0	40360

TRAFFIC FLOW BY DIRECTION



— North - -South

PEAK HOUR DATA

DIRECTION	HOUR	COUNT	2-WAY	HOUR	COUNT
North	16	606	A.M.	9	1328
South	18	1015	P.M.	18	1560

VEHICLE CLASSIFICATION CODES:

F1. Motorcycles
F2. Autos*
F3. 2 Axle, 4-Tire Pickups, Vans, Motorhomes*
F4. Buses
F5. 2 Axle, 6-Tire Single Unit Trucks
F6. 3 Axle Single Unit Trucks
F7. 4 or More Axle Single Unit Trucks
F8. 4 or Less Axle Vehicles, One Unit is a Truck
F9. 5 Axle Double Unit Vehicles, One Unit is a Truck
F10. 6 or More Double Unit Vehicles, One Unit is a Truck
F11. 5 or Less Axle Multi-Unit Trucks
F12. 6 Axle Multi-Unit Trucks
F13. 7 or More Axle Multi-Unit Trucks

* INCLUDING THOSE HAULING TRAILERS

FUNCTIONAL CLASS CODES:

RURAL	URBAN	SYSTEM
01	11	PRINCIPAL ARTERIAL-INTERSTATE
02	12	PRINCIPAL ARTERIAL-EXPRESSWAY
02	14	PRINCIPAL ARTERIAL-OTHER
06	16	MINOR ARTERIAL
07	17	MAJOR COLLECTOR
08	17	MINOR COLLECTOR
09	19	LOCAL SYSTEM

SOURCE: NYSDOT DATA SERVICES BUREAU

New York State Department of Transportation
Speed Count Average Weekday Report

Station: 430138
Route #: NY 15 Road name:
From: ELMWOOD AVE
To: HIGHLAND AVE
Direction: North

Start date: Wed 07/13/2005 11:00
End date: Tue 07/19/2005 10:45
County: Monroe
Town: ROCHESTER
Speed limit: 30

Count duration: 144 hours
Functional class: 14
Factor group: 30
Batch ID: DOT-MJLWW28B-Reg4-7Day
Count taken by: Org: TST Init: TST
Processed by: Org: DOT Init: TGB

Speeds, mph

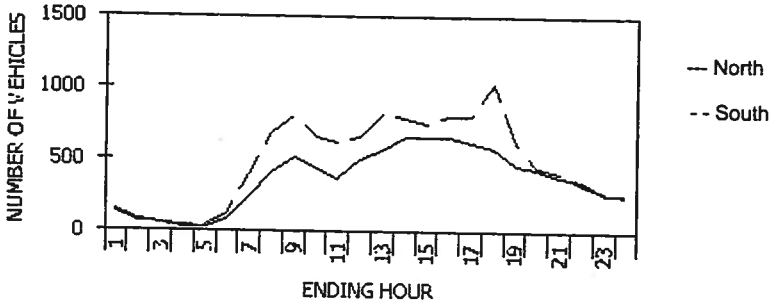
Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	7	13	38	53	34	9	1	0	0	0	0	0	0	0.6	0.0	0.0	0.0	0.0	29.5	31.9	38.1	155
2:00	3	7	19	24	18	6	1	0	0	0	0	0	0	1.3	0.0	0.0	0.0	0.0	29.9	32.1	38.7	78
3:00	2	5	12	16	17	3	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	30.1	32.7	38.5	55
4:00	1	3	8	11	8	1	1	0	0	0	0	0	0	3.0	0.0	0.0	0.0	0.0	30.1	32.1	38.2	33
5:00	2	3	8	11	8	2	1	0	0	0	0	0	0	2.9	0.0	0.0	0.0	0.0	29.3	32.1	38.6	35
6:00	3	6	18	26	23	7	1	1	0	0	0	0	0	2.4	1.2	0.0	0.0	0.0	30.7	33.0	39.2	85
7:00	10	20	56	78	58	17	4	0	0	0	0	0	0	1.6	0.0	0.0	0.0	0.0	30.0	32.3	38.7	243
8:00	18	36	94	146	89	24	4	0	0	0	0	0	0	1.0	0.0	0.0	0.0	0.0	29.6	32.0	38.2	411
9:00	28	57	161	172	83	17	3	0	0	0	0	0	0	0.6	0.0	0.0	0.0	0.0	28.2	30.5	36.5	521
10:00	22	43	132	146	73	17	3	0	0	0	0	0	0	0.7	0.0	0.0	0.0	0.0	28.6	30.8	36.9	436
11:00	33	58	109	109	51	11	4	0	0	0	0	0	0	1.1	0.0	0.0	0.0	0.0	26.6	29.5	36.0	375
12:00	34	45	143	168	86	20	4	0	0	0	0	0	0	0.8	0.0	0.0	0.0	0.0	28.1	30.9	37.1	500
13:00	70	99	168	159	64	15	2	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	25.4	28.6	34.9	577
14:00	48	111	245	172	71	12	2	0	0	0	0	0	0	0.3	0.0	0.0	0.0	0.0	26.5	28.6	34.6	661
15:00	39	84	230	200	81	20	3	0	0	0	0	0	0	0.5	0.0	0.0	0.0	0.0	27.5	29.5	35.4	657
16:00	46	69	216	209	100	19	4	1	0	0	0	0	0	0.8	0.2	0.0	0.0	0.0	27.6	30.1	36.3	664
17:00	28	59	189	211	107	26	4	0	0	0	0	0	0	0.6	0.0	0.0	0.0	0.0	28.8	30.9	37.1	624
18:00	28	62	187	192	93	20	3	0	0	0	0	0	0	0.5	0.0	0.0	0.0	0.0	28.4	30.5	36.6	585
19:00	26	39	121	164	93	23	6	0	0	0	0	0	0	1.3	0.0	0.0	0.0	0.0	29.0	31.6	37.8	472
20:00	24	39	130	146	86	18	3	0	0	0	0	0	0	0.7	0.0	0.0	0.0	0.0	28.7	31.1	37.4	446
21:00	21	37	109	134	65	15	3	0	0	0	0	0	0	0.8	0.0	0.0	0.0	0.0	28.5	31.0	37.0	384
22:00	17	29	100	132	63	16	4	0	0	0	0	0	0	1.1	0.0	0.0	0.0	0.0	29.1	31.4	37.3	361
23:00	11	21	63	96	56	12	5	0	0	0	0	0	0	1.9	0.0	0.0	0.0	0.0	29.7	32.0	38.0	264
24:00	11	24	62	96	62	11	2	0	0	0	0	0	0	0.7	0.0	0.0	0.0	0.0	29.6	32.0	37.9	268
Avg. Daily Total	532	969	2618	2871	1489	341	68	2	0	0	0	0	0	0.8	0.0	0.0	0.0	0.0	28.2	30.6	37.0	8890
Percent	6.0%	10.9%	29.4%	32.3%	16.7%	3.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	6.0%	16.9%	46.3%	78.6%	95.4%	99.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	22	40	109	120	62	14	3	0	0	0	0	0	0									370

	Avg. Speed	50th% Speed	85th% Speed
North	28.2	30.6	37.0
South	30.4	34.7	39.9

Peak Hour Data

Direction	Hour	Count		Hour	Count
North	16	664	2-way A.M.	9	1334
South	18	1031	P.M.	18	1616

TRAFFIC FLOW BY DIRECTION



New York State Department of Transportation
Speed Count Average Weekday Report

Station: 430138
Route #: NY 15 Road name:
From: ELMWOOD AVE
To: HIGHLAND AVE
Direction: South

Start date: Wed 07/13/2005 11:00
End date: Tue 07/19/2005 10:45
County: Monroe
Town: ROCHESTER
Speed limit: 30

Count duration: 144 hours
Functional class: 14
Factor group: 30
Batch ID: DOT-MJLWW28B-Reg4-7Day
Count taken by: Org: TST Init: TST
Processed by: Org: DOT Init: TGB

Speeds, mph

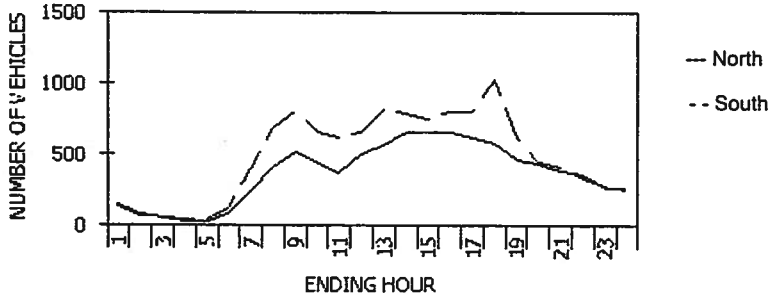
Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	4	2	7	22	57	36	4	0	0	0	0	0	0	3.0	0.0	0.0	0.0	0.0	35.0	37.8	42.9	132
2:00	2	1	3	16	24	18	5	2	0	0	0	0	0	9.9	2.8	0.0	0.0	0.0	35.5	37.9	44.0	71
3:00	0	0	1	9	23	20	5	1	0	0	0	0	0	10.2	1.7	0.0	0.0	0.0	38.8	39.3	44.3	59
4:00	0	1	1	6	19	10	6	1	1	0	0	0	0	17.8	4.4	2.2	0.0	0.0	38.5	38.9	46.1	45
5:00	1	1	0	11	10	17	5	2	1	0	0	0	0	16.7	6.3	2.1	0.0	0.0	37.3	40.3	45.8	48
6:00	0	1	3	11	55	36	11	3	2	0	0	0	1	13.8	4.9	2.4	0.8	0.8	39.2	39.3	44.8	123
7:00	2	5	11	60	170	116	26	4	1	0	0	0	0	7.8	1.3	0.3	0.0	0.0	37.5	38.6	43.8	395
8:00	4	8	36	177	312	130	19	2	0	0	0	0	0	3.1	0.3	0.0	0.0	0.0	35.8	37.0	41.9	688
9:00	26	22	85	266	319	85	9	1	0	0	0	0	0	1.2	0.1	0.0	0.0	0.0	32.6	35.2	39.6	813
10:00	52	31	49	186	252	84	10	1	0	0	0	0	0	1.7	0.2	0.0	0.0	0.0	30.6	35.3	40.0	665
11:00	52	38	70	152	217	87	8	0	0	0	0	0	0	1.3	0.0	0.0	0.0	0.0	30.0	35.0	40.1	624
12:00	55	48	83	191	210	70	6	0	0	0	0	0	0	0.9	0.0	0.0	0.0	0.0	29.4	33.9	39.5	663
13:00	144	127	122	204	176	38	5	0	0	0	0	0	0	0.6	0.0	0.0	0.0	0.0	24.8	30.4	37.8	816
14:00	104	71	121	226	213	53	4	0	0	0	0	0	0	0.5	0.0	0.0	0.0	0.0	27.0	32.3	38.6	792
15:00	45	35	96	223	265	81	6	0	0	0	0	0	0	0.8	0.0	0.0	0.0	0.0	30.8	34.5	39.6	751
16:00	45	61	103	270	253	64	5	1	0	0	0	0	0	0.7	0.1	0.0	0.0	0.0	30.2	33.6	39.1	802
17:00	52	60	108	266	256	64	6	0	0	0	0	0	0	0.7	0.0	0.0	0.0	0.0	29.9	33.5	39.0	812
18:00	124	108	200	308	231	55	5	0	0	0	0	0	0	0.5	0.0	0.0	0.0	0.0	26.8	31.4	38.0	1031
19:00	33	34	54	158	243	89	11	1	0	0	0	0	0	1.9	0.2	0.0	0.0	0.0	31.7	35.7	40.5	623
20:00	42	19	38	96	175	72	11	0	0	0	0	0	0	2.4	0.0	0.0	0.0	0.0	30.4	36.0	41.1	453
21:00	30	18	39	113	149	51	8	2	0	0	0	0	0	2.4	0.5	0.0	0.0	0.0	30.8	35.2	40.0	410
22:00	18	16	26	100	120	50	6	2	0	0	0	0	0	2.4	0.6	0.0	0.0	0.0	31.8	35.4	40.8	338
23:00	6	6	20	84	112	39	8	2	0	0	0	0	0	3.6	0.7	0.0	0.0	0.0	34.0	36.1	41.0	277
24:00	1	6	14	57	107	55	7	2	0	0	0	0	0	3.6	0.8	0.0	0.0	0.0	35.9	37.2	42.5	249
Avg. Daily Total	842	719	1290	3212	3968	1420	196	27	5	0	0	0	1	2.0	0.3	0.0	0.0	0.0	30.4	34.7	39.9	11680
Percent	7.2%	6.2%	11.0%	27.5%	34.0%	12.2%	1.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	7.2%	13.4%	24.4%	51.9%	85.9%	98.0%	99.7%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	35	30	54	134	165	59	8	1	0	0	0	0	0									487

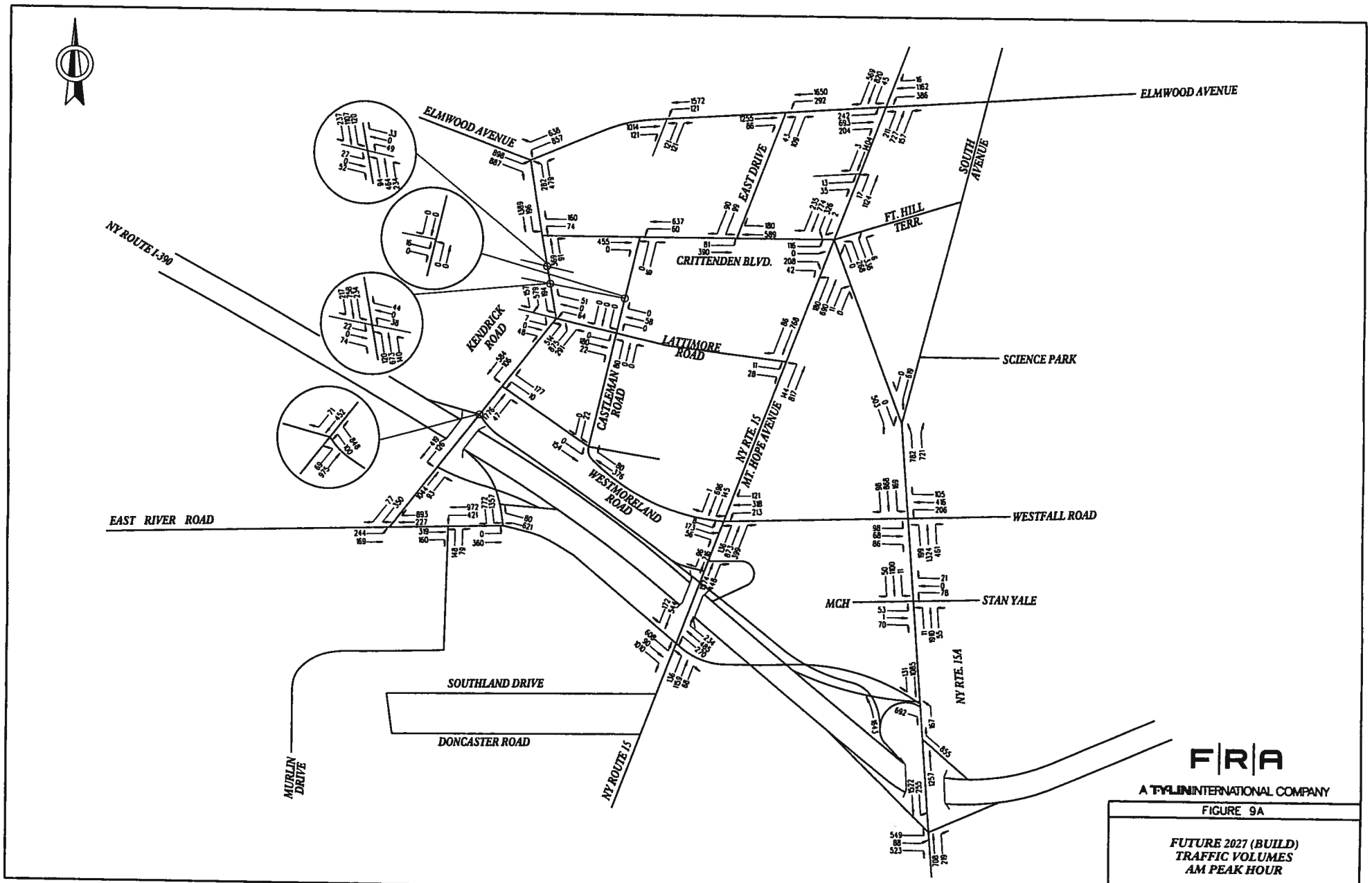
	Avg. Speed	50th% Speed	85th% Speed
North	28.2	30.6	37.0
South	30.4	34.7	39.9

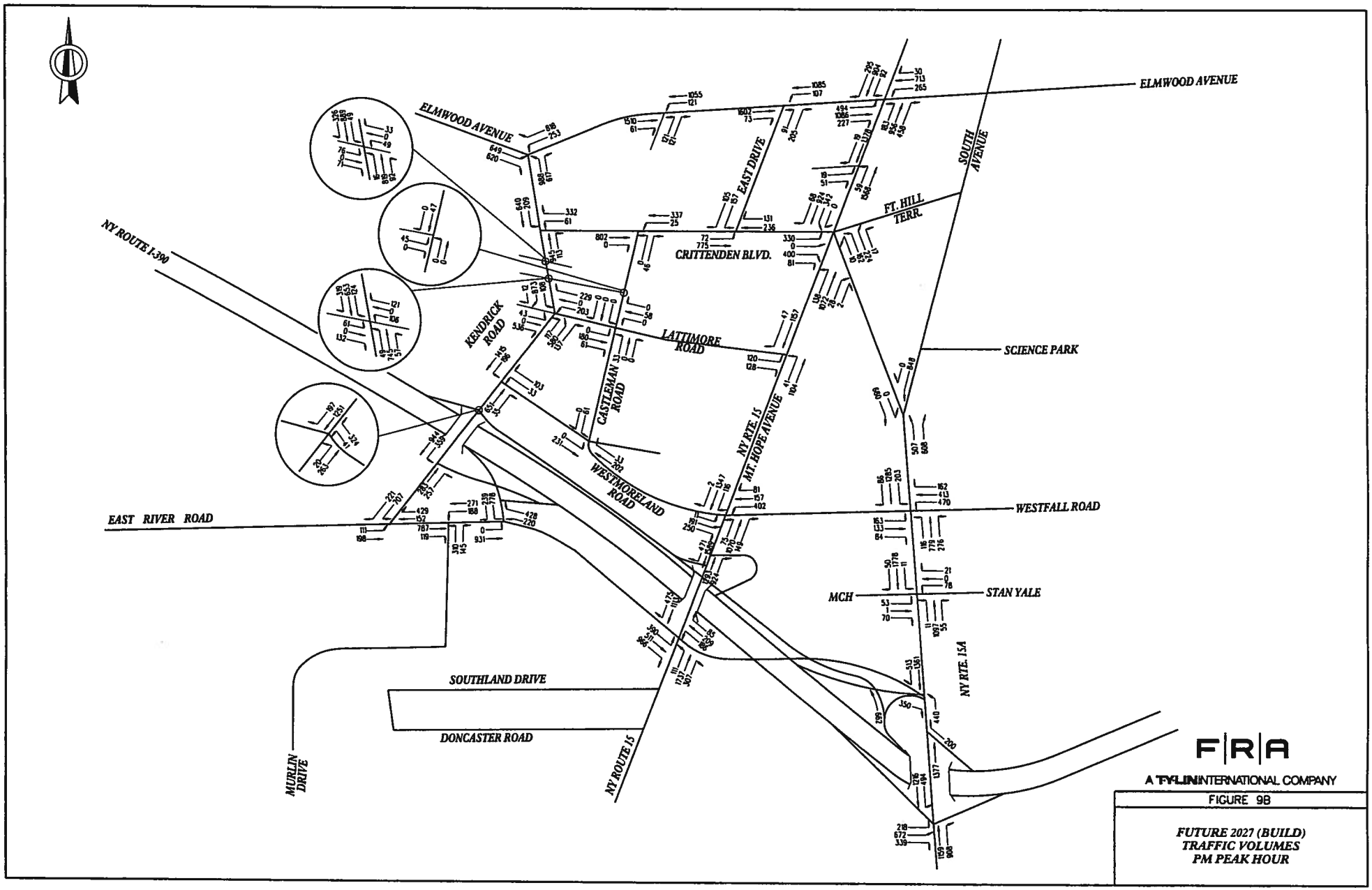
Peak Hour Data

Direction	Hour	Count	2-way	Hour	Count
North	16	664	A.M.	9	1334
South	18	1031	P.M.	18	1616

TRAFFIC FLOW BY DIRECTION




ELMWOOD AVENUE
ELMWOOD AVENUE
NY ROUTE I-390
EAST DRIVE
SOUTH AVENUE
FT. HILL TERR.
CRITTENDEN BLVD.
KENDRICK ROAD
LATTIMORE ROAD
CASTLEMAN ROAD
NY RTE. 15
MT. HOPE AVENUE
SCIENCE PARK
WESTMORELAND ROAD
EAST RIVER ROAD
WESTFALL ROAD
MCH
STAN YALE
NY RTE. 15A
SOUTHLAND DRIVE
DONCASTER ROAD
MURLIN DRIVE
NY ROUTE 15
F|R|A
A TYLIN INTERNATIONAL COMPANY
FIGURE 9A
FUTURE 2027 (BUILD)
TRAFFIC VOLUMES
AM PEAK HOUR


ELMWOOD AVENUE
ELMWOOD AVENUE
NY ROUTE I-390
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KENDRICK ROAD
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MURLIN DRIVE
NY ROUTE 15
F|R|A
A TYLIN INTERNATIONAL COMPANY
FIGURE 9B
FUTURE 2027 (BUILD)
TRAFFIC VOLUMES
PM PEAK HOUR

SRF ASSOCIATES
WWW.SRFA.NET
Traffic Engineering & Planning Consultants

Documentation of Ambient Traffic Volume Growth
Mt. Hope Corridor

NYSDOT ADT Data

Roadway	Segment	1983	1995	1997	1998	2001	2003	2004	Annual Growth
Route 15	City Line - Route 15A	15700	18500		19500	19700			1.27%
Route 15	Route 15A - Elmwood Ave.	19300		24900		23700		24800	1.20%
								Average	1.24%

Roadway	Segment	1984	1988	1997	2000	2001	2003	2004	Annual Growth
Route 15A	City Line - Westfall		27900		29000		31700		0.85%
Route 15A	Westfall - South Ave	18700				25500		22500	0.93%
								Average	0.89%

MCDOT Data

Roadway	Segment	1994	1995	1998	1999	2002	2003	2004	Annual Growth
Route 15	S of Crittenden	20063		22096		20220			0.10%
Route 15	S of Elmwood	25990		31966		30142			1.87%
Route 15	N of Westfall	21770		23523				23927	0.95%
								Average	0.97%

GTC Data

Roadway	Segment	Average % Change*	% per year
Route 15	Mt. Hope Northbound	6.8	0.34
Route 15	Mt. Hope Southbound	7.6	0.38
Route 15	E. Hen. Northbound	8.9	0.45
Route 15	E. Hen. Southbound	11.2	0.56

* Compares 2005 to 2025 volumes

Average 0.433 %

Westfall - MCDOT Data

2002	10058	
1998	15414	
1994	9879	1998 to 1980
1985	12255	1.42%
1980	11953	

Mount Hope Avenue Traffic Trends

Date	Year	Road	Location	1 Way Pk	2 Way Pk	ADT	4 Yr Growth
7/30/2002	2002	E. HENRIETTA RD.	FORT HILL TER. S OF	561	915	11462.50	-1.79 %
10/6/1998	1998	E. HENRIETTA RD.	FORT HILL TER. S OF	660	1172	12345.50	4.25 %
8/2/1994	1994	E. HENRIETTA RD.	FORT HILL TER. S OF	485	845	10551.67	
			Long Term Annual Growth			**1.08 %**	
5/19/2004	2004	ELMWOOD AVE.	MT. HOPE AVE. W OF	1203	2146	25176.50	2.81 %
9/8/1999	1999	ELMWOOD AVE.	MT. HOPE AVE. W OF	1213	1985	22075.50	3.82 %
8/2/1994	1994	ELMWOOD AVE.	MT. HOPE AVE. W OF	997	1694	18533.33	
			Long Term Annual Growth			**3.58 %**	
5/19/2004	2004	ELMWOOD AVE.	PLYMOUTH AVE. W OF	1141	1568	14716.00	-2.79 %
9/8/1999	1999	ELMWOOD AVE.	PLYMOUTH AVE. W OF	1287	1711	17097.50	15.25 %
8/23/1994	1994	ELMWOOD AVE.	PLYMOUTH AVE. W OF	984	1227	9701.50	
			Long Term Annual Growth			**5.17 %**	
8/21/2002	2002	MT. HOPE AVE.	CRITTENDEN BLVD S OF	949	1840	20220.00	-2.12 %
7/28/1998	1998	MT. HOPE AVE.	CRITTENDEN BLVD S OF	970	1803	22096.00	2.53 %
8/2/1994	1994	MT. HOPE AVE.	CRITTENDEN BLVD S OF	921	1583	20063.00	
			Long Term Annual Growth			**0.10 %**	
7/30/2002	2002	MT. HOPE AVE.	ELMWOOD AVE. S OF	1215	2363	30142.00	-1.43 %
8/4/1998	1998	MT. HOPE AVE.	ELMWOOD AVE. S OF	1379	2678	31966.00	5.75 %
8/23/1994	1994	MT. HOPE AVE.	ELMWOOD AVE. S OF	1141	2024	25990.33	
			Long Term Annual Growth			**2.00 %**	
5/19/2004	2004	MT. HOPE AVE.	WESTFALL RD. N OF	1129	1951	23927.00	0.29 %
7/28/1998	1998	MT. HOPE AVE.	WESTFALL RD. N OF	1115	1910	23522.50	2.01 %
8/2/1994	1994	MT. HOPE AVE.	WESTFALL RD. N OF	933	1764	21770.33	
			Long Term Annual Growth			**0.94 %**	
			Average annual growth for all locations			**2.14 %**	

ROUTE NUMBER	END MILE POINT	COUNT LOC REFERENCE MARKER	SECTION LENGTH	SECTION ENDS AT	LATEST COUNT EST AADT	YR	-------PREVIOUS COUNTS------ EST AADT	YR	EST AADT	YR	EST AADT	YR	COUNT STATION NUMBER
				REGION 4 COUNTY 3 MONROE									
15	0310470	15 43031013	4.18	RT 251 MANNS COR	5650	**	5450	02	3450	99	3500	98	0032
15	0310493	15 43031048	0.23	RT 390I IS UNDER WITH CONN	12000	**	11700	03	12200	00	10800	97	0034
15	0310627	15 43031057	1.34	MARTIN RD	5350	04	5750	01	5400	00	4500	98	0759
15	0310735	15 43031067	1.08	START 253 OLAP	6300	**	6050	01	5250	98	5450	95	0033
15	0310872	15 43031088	1.37	END 253 OLAP	20900	**	20500	03	16800	00	14400	97	0035
15	0310942	15 43031088	0.70	CALKINS RD	16200	**	15900	03	12900	00	12200	98	0771
15	0311080	15 43031108	1.48	RT 252	25900	**	25100	02	20600	98	25000	95	0036
15	0311140	15 43031112	0.50	TOWN LINE RD	32600	**	32200	03	28900	96	24800	92	0037
15	0311213	15 43031117	0.73	CRITTENDEN RD	32500	**	31500	02	33900	98	29700	94	0775
15	0311267	15 43031122	0.54	ACC RT 390I	36200	**	32800	97	29800	95	30000	92	0165
15	0311274	15 43031127	0.07	ROCHESTER S CITY LN	21600	**	21000	02	22900	98	21500	96	0031
15	0311337	15 43032005	0.63	RT 15A	18400	04	19700	01	19500	98	18500	95	0038
15	0311359	15 43032008	0.22	ELMWOOD AVE	24800	04	23700	01	24900	97	23600	93	0039
15	0311407	15 43032012	0.48	HIGHLAND AVE	21400	**	20500	01	20100	97	20400	94	0138
15	0311481	15 43032019	0.74	FORD ST	19300	04	18400	01	19700	97	19500	95	0139
15	0311505	15 43032021	0.24	AVERILL AVE	15200	**	14500	01	16300	98	14900	95	0140
15	0311556	15 43032026	0.51	CLINTON AVE	14700	04	10000	01	12300	96	14400	93	0040
15	0311584	15 43032030	0.28	RT 31 END 15	28600	**	28200	03	22100	98	10900	94	0340
				REGION 4 COUNTY 2 LIVINGSTON									
15A			0.00	RT 15 SPRINGWATER									
15A	0110242	15A42011024	2.42	ONTARIO CO LINE	2300	**	2150	00	2200	97	1900	94	0481
				REGION 4 COUNTY 4 ONTARIO									
15A	0210648	15A44021022	6.48	LIVINGSTON CO LN 2ND TIME	2800	04	2450	01	1950	95	2100	92	0482
				REGION 4 COUNTY 2 LIVINGSTON									
15A	0310191	15A42031012	1.91	START 20A OLAP HEMLOCK	3000	**	2850	02	2750	99	2850	96	0483
15A	0310396	15A42031036	2.05	END 20A OLAP	3850	04	4100	01	4350	98	4250	93	0484
15A	0310888	15A42031093	5.92	RTS 5 20 LIMA	5350	**	5250	03	4950	00	4500	98	0485
15A	0311258	15A42031122	2.70	MONROE CO LINE	7600	**	7450	03	8850	01	7000	98	0486
				REGION 4 COUNTY 3 MONROE									
15A	0410021	15A43041001	0.21	CR 63 HONEOYE FALLS RD	6200	**	5950	02	6700	97	7400	94	0739
15A	0410347	15A43041009	3.26	PHELPS RD CR 76	8300	04	7150	01	8200	98	7600	95	0487
15A	0410417	15A43041039	0.70	WEST RUSH RD	8050	04	9050	00	7900	97	8950	94	0754
15A	0410456	15A43041044	0.39	RT 251	9200	04	15300	01	10700	98	9900	95	0041
15A	0410817	15A43031050	1.61	TOWN LINE RD CR 87	4350	**	4300	03	4000	00	4050	97	0757
15A	0410925	15A43041080	3.08	RT 253 HENRIETTA	10100	**	9800	02	6350	99	5400	96	0175
15A	0410995	15A43041085	0.70	CALKINS RD	17400	04	16800	01	16400	98	15800	95	0489
15A	0411102	15A43041105	1.07	ACC RT 390I	22600	**	21500	01	19600	96	21000	93	0216
15A	0411124	15A43041112	0.22	RT 252	23300	04	24000	01	21500	98	20200	95	0490
15A	0411189	15A43041118	0.65	TOWNLINE RD CR 85	27100	**	26300	02	27100	97	23400	96	0089
15A	0411270	15A43041122	0.81	ACC RT 390I	32300	04	26100	01	25700	97	23900	95	0168
15A	0411295	15A43041130	0.25	ROCHESTER S CITY LN	27700	04	22900	01	26900	96	27900	93	0774
15A	0411325	15A43041131	0.30	WESTFALL RD	32300	**	31700	03	29000	00	27900	97	0491

GTC Model Volumes for Mt. Hope Ave. & East Henrietta Rd. (City of Rochester)

2005, 2015 and 2025 PM Peak Hour TransCAD Models

Mt. Hope Avenue (Northbound)

From	(Node)	To	(Node)	2005 PM	2015 PM	2025 PM	Change (2025-2005) PM	% Change PM
I-390 / City Line	*1092*	Westfall Rd.	*1128*	814	836	851	37	4.5
Westfall Rd.	*1128*	E. Henrietta Rd. / Crittenden Blvd.	*1126*	540	538	547	7	1.3
E. Henrietta Rd. / Crittenden Blvd.	*1126*	Elmwood Ave.	*1151*	1,089	1,156	1,210	121	11.1

Average % change: 6.8

Mt. Hope Avenue (Southbound)

From	(Node)	To	(Node)	2005 PM	2015 PM	2025 PM	Change (2025-2005) PM	% Change PM
Elmwood Ave	*1151*	E. Henrietta Rd. / Crittenden Blvd.	*2822*	894	931	953	59	6.6
E. Henrietta Rd. / Crittenden Blvd.	*2822*	Westfall Rd.	*1128*	620	642	666	46	7.4
Westfall Rd.	*1128*	I-390 / City Line	*1092*	1,459	1,522	1,579	120	8.2

Average % change: 7.6

E. Henrietta Road (Northbound)

From	(Node)	To	(Node)	2005 PM	2015 PM	2025 PM	Change (2025-2005) PM	% Change PM
South Ave.	*329*	Mt. Hope Ave.	*1126*	497	531	541	44	8.9

Average % change: 8.9

E. Henrietta Road (Southbound)

From	(Node)	To	(Node)	2005 PM	2015 PM	2025 PM	Change (2025-2005) PM	% Change PM
Mt. Hope Ave.	*1126*	South Ave.	*329*	784	830	872	88	11.2

Average % change: 11.2

Note: these are "raw" model volumes (i.e., they have not been factored to be comparable to traffic count data)

11/1/2005

MT. HOPE / ELMWOOD TURNING MOVEMENT COUNT COMPARISON

		northbound			southbound			eastbound			westbound		
date	peak	left	thru	right	left	thru	right	left	thru	right	left	thru	right
1997	AM	139	617	133	30	588	225	139	445	124	327	728	6
2003	AM	152	673	145	33	641	245	152	485	135	356	794	7
2005	AM	129	776	116	54	945	308	200	652	112	427	1171	4
2006	AM	172	595	128	37	673	305	155	532	164	319	826	13

		northbound			southbound			eastbound			westbound		
date	peak	left	thru	right	left	thru	right	left	thru	right	left	thru	right
1997	PM	141	658	354	50	780	171	260	761	153	213	472	5
2002	PM	184	793	298	53	705	180	260	668	163	224	469	5
2003	PM	192	825	310	85	737	185	266	688	171	235	483	5
2005	PM	153	870	303	72	850	166	353	993	115	191	633	12
2006	PM	144	777	376	76	732	176	283	791	181	219	528	25

Level of Service Criteria

Highway Capacity Manual 2000

SIGNALIZED INTERSECTIONS

Level of Service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level of Service for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15 minute analysis period. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 20
C	20 – 35
D	35 – 55
E	55 – 80
F	>80

UNSIGNALIZED INTERSECTIONS

Level of Service for unsignalized intersections is also defined in terms of delay. However, the delay criteria are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. The total delay threshold for any given Level of Service is less for an unsignalized intersection than for a signalized intersection. The ranges are as follows:

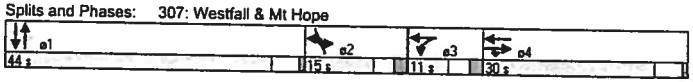
Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 - 50
F	>50

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		75	0		0	125		200	125		0
Storage Lanes	0		1	1		0	1		1	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.949				0.850			
Flt Protected		0.997		0.950			0.950			0.950		
Satd. Flow (prot)	0	1857	1583	1770	1768	0	1770	3539	1583	1770	3539	0
Flt Permitted		0.979		0.573			0.316			0.262		
Satd. Flow (perm)	0	1824	1583	1067	1768	0	589	3539	1583	488	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			52		30				351			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			876			379			1632	
Travel Time (s)		9.5			19.9			8.6			37.1	
Volume (vph)	7	125	46	176	197	100	96	675	330	115	530	1
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.93	0.93	0.93	0.94	0.94	0.94	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	8	142	52	189	212	108	102	718	351	134	616	1
Lane Group Flow (vph)	0	150	52	189	320	0	102	718	351	134	617	0
Turn Type	Perm		custom	pm+pt			pm+pt		Perm	pm+pt		
Protected Phases		4	4	3	3 4		2	1		2	1	
Permitted Phases	4		4	3 4			1		1	1		
Total Split (s)	30.0	30.0	30.0	11.0	41.0	0.0	15.0	44.0	44.0	15.0	44.0	0.0
Act Effct Green (s)		17.4	17.4	28.9	31.9		59.1	50.6	50.6	59.1	50.6	
Actuated g/C Ratio		0.17	0.17	0.29	0.32		0.59	0.51	0.51	0.59	0.51	
v/c Ratio		0.47	0.16	0.49	0.55		0.23	0.40	0.36	0.34	0.34	
Control Delay		40.9	10.0	30.2	28.6		11.6	17.1	3.0	6.2	9.0	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		40.9	10.0	30.2	28.6		11.6	17.1	3.0	6.2	9.0	
LOS		D	A	C	C		B	B	A	A	A	
Approach Delay		33.0			29.2			12.4			8.5	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 92 (92%), Referenced to phase 1:NBSB, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 16.1 Intersection LOS: B
Intersection Capacity Utilization 61.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 307: Westfall & Mt Hope

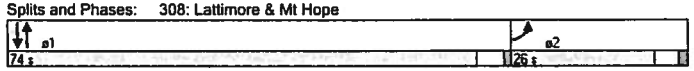


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50	50	50	
Trailing Detector (ft)	0		0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.903				0.984	
Flt Protected	0.986			0.992		
Satd. Flow (prot)	1659	0	0	3511	3483	0
Flt Permitted	0.986			0.693		
Satd. Flow (perm)	1659	0	0	2453	3483	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	43				32	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	407			1632	1189	
Travel Time (s)	9.3			37.1	27.0	
Volume (vph)	9	23	119	629	585	71
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.53	0.53	0.89	0.89	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	17	43	134	707	705	86
Lane Group Flow (vph)	60	0	0	841	791	0
Turn Type			Perm			
Protected Phases	2			1	1	
Permitted Phases			1			
Total Split (s)	26.0	0.0	74.0	74.0	74.0	0.0
Act Effct Green (s)	9.2			87.6	87.6	
Actuated g/C Ratio	0.09			0.88	0.88	
v/c Ratio	0.31			0.39	0.26	
Control Delay	22.8			3.0	0.2	
Queue Delay	0.0			0.0	0.0	
Total Delay	22.8			3.0	0.2	
LOS	C			A	A	
Approach Delay	22.8			3.0	0.2	
Approach LOS	C			A	A	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 33 (33%), Referenced to phase 1:NBSB, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.39
Intersection Signal Delay: 2.4 Intersection LOS: A
Intersection Capacity Utilization 54.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 308: Lattimore & Mt Hope



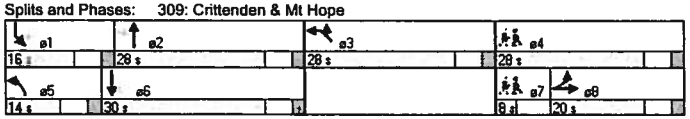
Lane Group	EBL	EBT	EBR	EBR2	NBL	NBT	NBR	SBL2	SBL	SBT	SBR	NWL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		0%
Storage Length (ft)	125		0		125		0		125		0	0
Storage Lanes	1		1		1		0		1		0	1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50		50	50		50	50	50		50
Trailing Detector (ft)	0	0	0		0	0		0	0	0		0
Turning Speed (mph)	15		9	9	15		9	15	15		9	15
Lane Util. Factor	0.95	0.91	0.95	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.851	0.850			0.998				0.999		
Flt Protected	0.950				0.950				0.950			0.950
Satd. Flow (prot)	1681	1443	1504	0	1770	3532	0	0	1770	3536	0	1770
Flt Permitted	0.950				0.167				0.148			0.950
Satd. Flow (perm)	1681	1443	1504	0	311	3532	0	0	276	3536	0	1770
Right Turn on Red				Yes							Yes	
Satd. Flow (RTOR)			81							1		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30				30				30		30
Link Distance (ft)		603				1189				1155		1862
Travel Time (s)		13.7				27.0				26.3		42.3
Volume (vph)	96	1	147	81	116	561	9	2	265	611	5	287
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.79	0.79	0.79	0.79	0.84	0.84	0.84	0.87	0.87	0.87	0.87	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		0%
Adj. Flow (vph)	122	1	186	103	138	668	11	2	305	702	6	322
Lane Group Flow (vph)	122	132	158	0	138	679	0	0	307	708	0	322
Turn Type	Split		Perm		pm+pt			custom	pm+pt			
Protected Phases	8	8			5	2			1	6		3
Permitted Phases		8	8		2			1	6			
Total Split (s)	20.0	20.0	20.0	0.0	14.0	28.0	0.0	16.0	16.0	30.0	0.0	28.0
Act Effct Green (s)	20.8	20.8	20.8		36.3	25.8			45.8	32.7		24.0
Actuated g/C Ratio	0.21	0.21	0.21		0.36	0.26			0.46	0.33		0.24
v/c Ratio	0.35	0.44	0.42		0.52	0.74			0.80	0.61		0.76
Control Delay	35.8	38.6	20.0		32.1	30.0			28.4	24.5		59.6
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay	35.8	38.6	20.0		32.1	30.0			28.4	24.5		59.6
LOS	D	D	B		C	C			C	C		E
Approach Delay		30.6				30.4				25.7		61.9
Approach LOS		C				C				C		E
Intersection Summary												

Lane Group	NWR	NWR2	ø4	ø7
Lane Configurations				
Ideal Flow (vphpl)	1900	1900		
Lane Width (ft)	12	12		
Grade (%)				
Storage Length (ft)	0			
Storage Lanes	1			
Total Lost Time (s)	3.0	3.0		
Leading Detector (ft)	50			
Trailing Detector (ft)	0			
Turning Speed (mph)	9	9		
Lane Util. Factor	1.00	1.00		
Ped Bike Factor				
Frt	0.850			
Flt Protected				
Satd. Flow (prot)	1583	0		
Flt Permitted				
Satd. Flow (perm)	1583	0		
Right Turn on Red		Yes		
Satd. Flow (RTOR)	1			
Headway Factor	1.00	1.00		
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Volume (vph)	270	5		
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor	0.89	0.89		
Growth Factor	100%	100%		
Heavy Vehicles (%)	2%	2%		
Bus Blockages (#/hr)	0	0		
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)	303	6		
Lane Group Flow (vph)	309	0		
Turn Type	custom			
Protected Phases	3		4	7
Permitted Phases	3			
Total Split (s)	28.0	0.0	28.0	8.0
Act Effct Green (s)	24.0			
Actuated g/C Ratio	0.24			
v/c Ratio	0.81			
Control Delay	64.3			
Queue Delay	0.0			
Total Delay	64.3			
LOS	E			
Approach Delay				
Approach LOS				

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 52 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 35.7 Intersection LOS: D
Intersection Capacity Utilization 71.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 309: Crittenden & Mt Hope

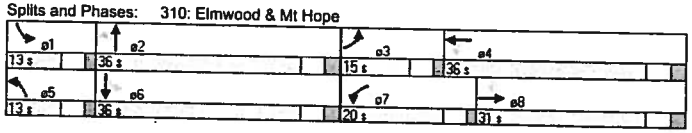


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	125		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.965			0.998			0.973			0.953	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3415	0	1770	3532	0	1770	3444	0	1770	3373	0
Flt Permitted	0.143			0.129			0.121			0.139		
Satd. Flow (perm)	266	3415	0	240	3532	0	225	3444	0	259	3373	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			2			27			78	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1418			846			1155			323	
Travel Time (s)		27.6			16.5			26.3			7.3	
Volume (vph)	155	532	164	319	826	13	172	595	128	37	673	305
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.85	0.85	0.85	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	172	591	182	362	939	15	202	700	151	41	748	339
Lane Group Flow (vph)	172	773	0	362	954	0	202	851	0	41	1087	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Total Split (s)	15.0	31.0	0.0	20.0	36.0	0.0	13.0	36.0	0.0	13.0	36.0	0.0
Act Effct Green (s)	38.4	27.3		47.3	33.2		45.8	39.8		41.4	33.6	
Actuated g/C Ratio	0.38	0.27		0.47	0.33		0.46	0.40		0.41	0.34	
v/c Ratio	0.64	0.80		0.97	0.81		0.78	0.61		0.18	0.92	
Control Delay	30.0	39.3		67.2	37.1		33.5	15.2		17.0	43.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	30.0	39.3		67.2	37.1		33.5	15.2		17.0	43.1	
LOS	C	D		E	D		C	B		B	D	
Approach Delay		37.6			45.4			18.7			42.2	
Approach LOS		D			D			B			D	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 95 (95%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 36.6 Intersection LOS: D
Intersection Capacity Utilization 88.8% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 310: Elmwood & Mt Hope

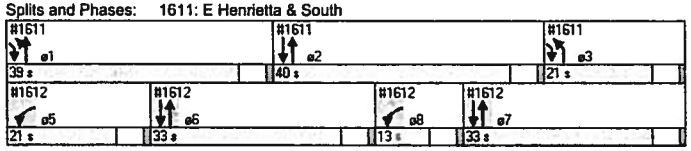


Lane Group	NBL	NBT	SBT	SBR	SEL	SER	ø1	ø3	ø5	ø6	ø7	ø8
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900						
Lane Width (ft)	12	12	12	12	12	12						
Grade (%)		0%	0%		0%							
Storage Length (ft)	0			0	0	0						
Storage Lanes	0			0	0	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0						
Leading Detector (ft)	50	50	50			50						
Trailing Detector (ft)	0	0	0			0						
Turning Speed (mph)	15			9	15	9						
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.88						
Ped Bike Factor												
Frt						0.850						
Flt Protected	0.950											
Satd. Flow (prot)	1736	1827	3471	0	0	2733						
Flt Permitted	0.950											
Satd. Flow (perm)	1736	1827	3471	0	0	2733						
Right Turn on Red				Yes		Yes						
Satd. Flow (RTOR)						166						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00						
Link Speed (mph)		30	30		30							
Link Distance (ft)		416	244		1862							
Travel Time (s)		9.5	5.5		42.3							
Volume (vph)	704	580	498	0	0	386						
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.73	0.73	0.93	0.93						
Growth Factor	100%	100%	100%	100%	100%	100%						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%						
Bus Blockages (#/hr)	0	0	0	0	0	0						
Parking (#/hr)												
Mid-Block Traffic (%)		0%	0%		0%							
Adj. Flow (vph)	733	604	682	0	0	415						
Lane Group Flow (vph)	733	604	682	0	0	415						
Turn Type		custom										
Protected Phases	1 3	1 2	2			1 3	1	3	5	6	7	8
Permitted Phases		1				1 3						
Total Split (s)	60.0	79.0	40.0	0.0	0.0	60.0	39.0	21.0	21.0	33.0	33.0	13.0
Act Effct Green (s)	67.0	69.1	27.0			67.0						
Actuated g/C Ratio	0.67	0.69	0.27			0.67						
v/c Ratio	0.63	0.48	0.73			0.22						
Control Delay	13.5	8.7	37.1			5.2						
Queue Delay	0.0	0.3	1.5			0.0						
Total Delay	13.5	9.0	38.6			5.2						
LOS	B	A	D			A						
Approach Delay		11.5	38.6									
Approach LOS		B	D									

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBTL and 5:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 18.0 Intersection LOS: B
Intersection Capacity Utilization 59.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1611: E Henrietta & South

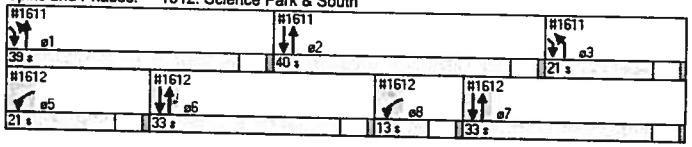


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1	ø2	ø3	ø5	ø7
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	12	12	12	12	12	12					
Grade (%)	0%		0%			0%					
Storage Length (ft)	0	0		0	0						
Storage Lanes	1	1		0	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0					
Leading Detector (ft)	50	50	50		50	50					
Trailing Detector (ft)	0	0	0		0	0					
Turning Speed (mph)	15	9		9	15						
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95					
Ped Bike Factor											
Frt		0.850	0.980								
Flt Protected	0.950					0.995					
Satd. Flow (prot)	1770	1583	1825	0	0	3522					
Flt Permitted	0.950					0.822					
Satd. Flow (perm)	1770	1583	1825	0	0	2909					
Right Turn on Red		Yes		Yes							
Satd. Flow (RTOR)		3	15								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00					
Link Speed (mph)	30		30			30					
Link Distance (ft)	396		244			2781					
Travel Time (s)	9.0		5.5			63.2					
Volume (vph)	11	3	510	87	50	501					
Confl. Peds. (#/hr)											
Confl. Bikes (#/hr)											
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95					
Growth Factor	100%	100%	100%	100%	100%	100%					
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%					
Bus Blockages (#/hr)	0	0	0	0	0	0					
Parking (#/hr)											
Mid-Block Traffic (%)	0%		0%			0%					
Adj. Flow (vph)	12	3	537	92	53	527					
Lane Group Flow (vph)	12	3	629	0	0	580					
Turn Type		custom			custom						
Protected Phases	5 8		6 7			6 7	1	2	3	5	7
Permitted Phases		8			6						
Total Split (s)	34.0	13.0	66.0	0.0	33.0	66.0	39.0	40.0	21.0	21.0	33.0
Act Effct Green (s)	29.2	8.1	67.2			67.2					
Actuated g/C Ratio	0.29	0.08	0.67			0.67					
v/c Ratio	0.02	0.02	0.51			0.30					
Control Delay	13.9	28.7	13.0			5.4					
Queue Delay	0.0	0.0	1.7			0.2					
Total Delay	13.9	28.7	14.7			5.6					
LOS	B	C	B			A					
Approach Delay	16.9		14.7			5.6					
Approach LOS	B		B			A					

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBTL and 5:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 10.4 Intersection LOS: B
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1612: Science Park & South

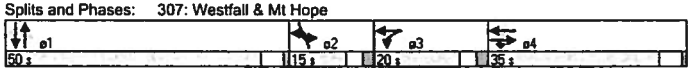


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		75	0		0	125		200	125		0
Storage Lanes	0		1	1		0	1		1	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.941				0.850			
Flt Protected		0.997		0.950			0.950			0.950		
Satd. Flow (prot)	0	1857	1583	1770	1753	0	1770	3539	1583	1770	3539	0
Flt Permitted		0.983		0.445			0.085			0.318		
Satd. Flow (perm)	0	1831	1583	829	1753	0	158	3539	1583	592	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		34				127			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			1751			379			1632	
Travel Time (s)		9.5			39.8			8.6			37.1	
Volume (vph)	9	168	267	332	103	67	55	572	123	89	1035	2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.81	0.81	0.82	0.82	0.82	0.97	0.97	0.97	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	11	207	330	405	126	82	57	590	127	99	1150	2
Lane Group Flow (vph)	0	218	330	405	208	0	57	590	127	99	1152	0
Turn Type	Perm		custom	pm+pt			pm+pt		Perm	pm+pt		
Protected Phases		4	4	3	3 4		2	1		2	1	
Permitted Phases	4		4	3 4			1		1	1		
Total Split (s)	35.0	35.0	35.0	20.0	55.0	0.0	15.0	50.0	50.0	15.0	50.0	0.0
Act Effct Green (s)		23.6	23.6	45.1	48.1		62.9	55.4	55.4	62.9	55.4	
Actuated g/C Ratio		0.20	0.20	0.38	0.40		0.52	0.46	0.46	0.52	0.46	
v/c Ratio		0.61	0.70	0.84	0.29		0.31	0.36	0.16	0.26	0.71	
Control Delay		50.2	24.6	45.2	20.3		31.9	22.7	4.3	10.5	19.3	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		50.2	24.6	45.2	20.3		31.9	22.7	4.3	10.5	19.3	
LOS		D	C	D	C		C	C	A	B	B	
Approach Delay		34.8			36.8			20.4			18.6	
Approach LOS		C			D			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 82 (68%), Referenced to phase 1:NBSB, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 25.3 Intersection LOS: C
Intersection Capacity Utilization 73.9% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 307: Westfall & Mt Hope

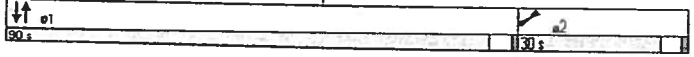


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50	50	50	
Trailing Detector (ft)	0		0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.930				0.998	
Flt Protected	0.976			0.997		
Satd. Flow (prot)	1691	0	0	3529	3532	0
Flt Permitted	0.976			0.855		
Satd. Flow (perm)	1691	0	0	3026	3532	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	41				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	407			1632	1189	
Travel Time (s)	9.3			37.1	27.0	
Volume (vph)	99	106	34	622	897	14
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.94	0.94	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	127	136	36	662	975	15
Lane Group Flow (vph)	263	0	0	698	990	0
Turn Type			Perm			
Protected Phases	2			1	1	
Permitted Phases			1			
Total Split (s)	30.0	0.0	90.0	90.0	90.0	0.0
Act Effct Green (s)	22.1			91.9	91.9	
Actuated g/C Ratio	0.18			0.77	0.77	
v/c Ratio	0.76			0.30	0.37	
Control Delay	53.2			5.0	0.9	
Queue Delay	0.0			0.0	0.0	
Total Delay	53.2			5.0	0.9	
LOS	D			A	A	
Approach Delay	53.2			5.0	0.9	
Approach LOS	D			A	A	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 9.4 Intersection LOS: A
Intersection Capacity Utilization 61.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 308: Lattimore & Mt Hope



Lane Group	EBL	EBT	EBR	EBR2	NBL	NBT	NBR	NBR2	SBL	SBT	SBR	NWL2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		
Storage Length (ft)	125		0		125		0		125		0	
Storage Lanes	1		1		1		0		1		0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50		50	50			50	50		50
Trailing Detector (ft)	0	0	0		0	0			0	0		0
Turning Speed (mph)	15		9	9	15		9	9	15		9	15
Lane Util. Factor	0.95	0.91	0.95	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.883	0.850			0.994				0.989		
Flt Protected	0.950	0.989			0.950				0.950			
Satd. Flow (prot)	1681	1480	1504	0	1770	3518	0	0	1770	3500	0	0
Flt Permitted	0.950	0.989			0.248				0.125			
Satd. Flow (perm)	1681	1480	1504	0	462	3518	0	0	233	3500	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			55							8		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30				30				30		
Link Distance (ft)		603				1189				1155		
Travel Time (s)		13.7				27.0				26.3		
Volume (vph)	273	0	276	144	85	598	23	2	276	721	56	8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.91	0.91	0.91	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		
Adj. Flow (vph)	297	0	300	157	97	680	26	2	303	792	62	8
Lane Group Flow (vph)	241	252	261	0	97	708	0	0	303	854	0	0
Turn Type	Split		Perm		pm+pt				pm+pt			Split
Protected Phases	8	8			5	2			1	6		3
Permitted Phases		8	8		2				6			
Total Split (s)	25.0	25.0	25.0	0.0	15.0	32.0	0.0	0.0	30.0	47.0	0.0	25.0
Act Effct Green (s)	22.0	22.0	22.0		44.0	34.9			59.0	46.8		
Actuated g/C Ratio	0.18	0.18	0.18		0.37	0.29			0.49	0.39		
v/c Ratio	0.78	0.93	0.81		0.36	0.69			0.79	0.62		
Control Delay	65.3	88.2	57.5		15.0	24.8			24.7	24.0		
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0	0.0		
Total Delay	65.3	88.2	57.5		15.0	24.8			24.7	24.0		
LOS	E	F	E		B	C			C	C		
Approach Delay		70.2				23.6				24.2		
Approach LOS		E				C				C		

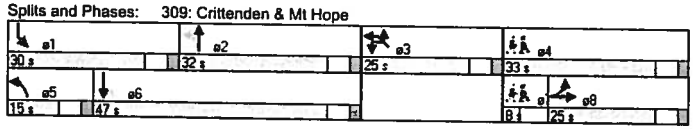
Intersection Summary

Lane Group	NWL	NWR	NWR2	ø4	ø7
Lane Configurations					
Ideal Flow (vphpl)	1900	1900	1900		
Lane Width (ft)	12	12	12		
Grade (%)	0%				
Storage Length (ft)	0	0			
Storage Lanes	1	1			
Total Lost Time (s)	3.0	3.0	3.0		
Leading Detector (ft)	50	50			
Trailing Detector (ft)	0	0			
Turning Speed (mph)	15	9	9		
Lane Util. Factor	1.00	1.00	1.00		
Ped Bike Factor					
Frt		0.850			
Flt Protected	0.950				
Satd. Flow (prot)	1770	1583	0		
Flt Permitted	0.950				
Satd. Flow (perm)	1770	1583	0		
Right Turn on Red			Yes		
Satd. Flow (RTOR)		3			
Headway Factor	1.00	1.00	1.00		
Link Speed (mph)	30				
Link Distance (ft)	1862				
Travel Time (s)	42.3				
Volume (vph)	120	159	14		
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor	0.95	0.95	0.95		
Growth Factor	100%	100%	100%		
Heavy Vehicles (%)	2%	2%	2%		
Bus Blockages (#/hr)	0	0	0		
Parking (#/hr)					
Mid-Block Traffic (%)	0%				
Adj. Flow (vph)	126	167	15		
Lane Group Flow (vph)	134	182	0		
Turn Type		custom			
Protected Phases	3	3		4	7
Permitted Phases		3			
Total Split (s)	25.0	25.0	0.0	33.0	8.0
Act Effct Green (s)	19.7	19.7			
Actuated g/C Ratio	0.16	0.16			
v/c Ratio	0.46	0.69			
Control Delay	79.5	89.9			
Queue Delay	0.0	0.0			
Total Delay	79.5	89.9			
LOS	E	F			
Approach Delay	85.5				
Approach LOS	F				

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 32 (27%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 41.9 Intersection LOS: D
Intersection Capacity Utilization 64.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 309: Crittenden & Mt Hope

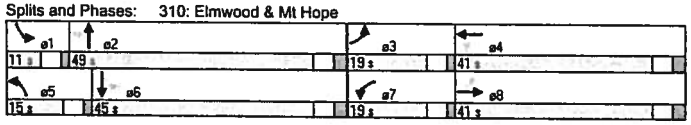


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	125		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.972			0.993			0.951			0.971	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3440	0	1770	3514	0	1770	3366	0	1770	3437	0
Flt Permitted	0.236			0.105			0.089			0.095		
Satd. Flow (perm)	440	3440	0	196	3514	0	166	3366	0	177	3437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			4			79			27	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1418			846			1155			323	
Travel Time (s)		27.6			16.5			26.3			7.3	
Volume (vph)	283	791	181	219	528	25	144	777	376	76	732	176
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.86	0.86	0.86	0.92	0.92	0.92	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	314	879	201	255	614	29	157	845	409	85	822	198
Lane Group Flow (vph)	314	1080	0	255	643	0	157	1254	0	85	1020	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Total Split (s)	19.0	41.0	0.0	19.0	41.0	0.0	15.0	49.0	0.0	11.0	45.0	0.0
Act Effct Green (s)	54.1	38.2		53.9	38.1		57.0	48.2		50.3	42.5	
Actuated g/C Ratio	0.45	0.32		0.45	0.32		0.48	0.40		0.42	0.35	
v/c Ratio	0.84	0.97		0.86	0.57		0.67	0.90		0.48	0.83	
Control Delay	42.0	60.9		57.3	36.4		32.3	42.3		27.2	41.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	42.0	60.9		57.3	36.4		32.3	42.3		27.2	41.4	
LOS	D	E		E	D		C	D		C	D	
Approach Delay		56.7			42.4			41.1			40.3	
Approach LOS		E			D			D			D	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 86 (72%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 45.7 Intersection LOS: D
Intersection Capacity Utilization 90.8% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 310: Elmwood & Mt Hope

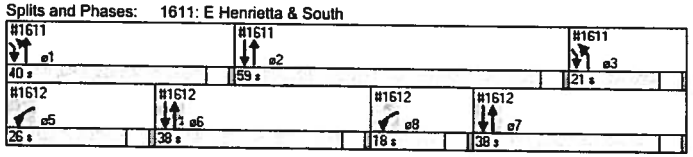


Lane Group	NBL	NBT	SBT	SBR	SEL	SER	ø1	ø3	ø5	ø6	ø7	ø8
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900						
Lane Width (ft)	12	12	12	12	12	12						
Grade (%)		0%	0%		0%							
Storage Length (ft)	0			0	0	0						
Storage Lanes	0			0	0	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0						
Leading Detector (ft)	50	50	50			50						
Trailing Detector (ft)	0	0	0			0						
Turning Speed (mph)	15			9	15	9						
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.88						
Ped Bike Factor												
Frt						0.850						
Flt Protected	0.950											
Satd. Flow (prot)	1736	1827	3471	0	0	2733						
Flt Permitted	0.950											
Satd. Flow (perm)	1736	1827	3471	0	0	2733						
Right Turn on Red				Yes		Yes						
Satd. Flow (RTOR)						247						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00						
Link Speed (mph)		30	30		30							
Link Distance (ft)		832	244		1862							
Travel Time (s)		18.9	5.5		42.3							
Volume (vph)	361	489	682	0	0	524						
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.88	0.88						
Growth Factor	100%	100%	100%	100%	100%	100%						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%						
Bus Blockages (#/hr)	0	0	0	0	0	0						
Parking (#/hr)												
Mid-Block Traffic (%)		0%	0%		0%							
Adj. Flow (vph)	384	520	726	0	0	595						
Lane Group Flow (vph)	384	520	726	0	0	595						
Turn Type		custom										
Protected Phases	1 3	1 2	2			1 3	1	3	5	6	7	8
Permitted Phases		1				1 3						
Total Split (s)	61.0	99.0	59.0	0.0	0.0	61.0	40.0	21.0	26.0	38.0	38.0	18.0
Act Effct Green (s)	80.2	85.0	33.8			80.2						
Actuated g/C Ratio	0.67	0.71	0.28			0.67						
v/c Ratio	0.33	0.40	0.74			0.31						
Control Delay	9.9	9.3	46.5			10.7						
Queue Delay	0.0	0.0	0.4			0.0						
Total Delay	9.9	9.3	46.9			10.7						
LOS	A	A	D			B						
Approach Delay		9.6	46.9									
Approach LOS		A	D									

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 1:NBTL and 6:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 22.0 Intersection LOS: C
Intersection Capacity Utilization 45.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1611: E Henrietta & South

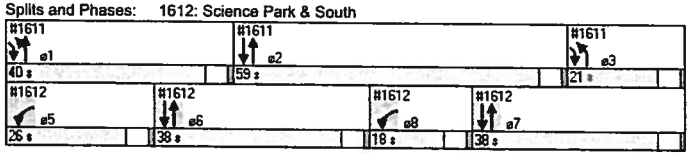


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1	ø2	ø3	ø5	ø7
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	12	12	12	12	12	12					
Grade (%)	0%		0%			0%					
Storage Length (ft)	0	0		0	0						
Storage Lanes	1	1		0	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0					
Leading Detector (ft)	50	50	50		50	50					
Trailing Detector (ft)	0	0	0		0	0					
Turning Speed (mph)	15	9		9	15						
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95					
Ped Bike Factor											
Frt		0.850	0.998								
Flt Protected	0.950					0.999					
Satd. Flow (prot)	1770	1583	1859	0	0	3536					
Flt Permitted	0.950					0.948					
Satd. Flow (perm)	1770	1583	1859	0	0	3355					
Right Turn on Red		Yes		Yes							
Satd. Flow (RTOR)		55	1								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00					
Link Speed (mph)	30		30			30					
Link Distance (ft)	396		244			2781					
Travel Time (s)	9.0		5.5			63.2					
Volume (vph)	109	52	503	9	8	626					
Confl. Peds. (#/hr)											
Confl. Bikes (#/hr)											
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95					
Growth Factor	100%	100%	100%	100%	100%	100%					
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%					
Bus Blockages (#/hr)	0	0	0	0	0	0					
Parking (#/hr)											
Mid-Block Traffic (%)	0%		0%			0%					
Adj. Flow (vph)	115	55	529	9	8	659					
Lane Group Flow (vph)	115	55	538	0	0	667					
Turn Type		custom			custom						
Protected Phases	5 8		6 7			6 7	1	2	3	5	7
Permitted Phases		8			6						
Total Split (s)	44.0	18.0	76.0	0.0	38.0	76.0	40.0	59.0	21.0	26.0	38.0
Act Effct Green (s)	21.7	11.7	86.3			86.3					
Actuated g/C Ratio	0.18	0.10	0.72			0.72					
v/c Ratio	0.36	0.27	0.40			0.28					
Control Delay	26.1	16.2	6.6			3.4					
Queue Delay	0.3	0.0	0.4			0.2					
Total Delay	26.4	16.2	7.0			3.6					
LOS	C	B	A			A					
Approach Delay	23.1		7.0			3.6					
Approach LOS	C		A			A					

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 1:NBTL and 6:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 7.4 Intersection LOS: A
Intersection Capacity Utilization 39.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1612: Science Park & South

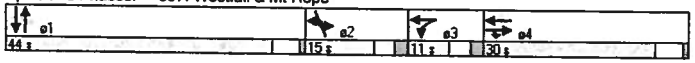


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		75	0		0	125		200	125		0
Storage Lanes	0		1	1		0	1		1	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.949				0.850			
Flt Protected		0.998		0.950			0.950			0.950		
Satd. Flow (prot)	0	1859	1583	1770	1768	0	1770	3539	1583	1770	3539	0
Flt Permitted		0.974		0.441			0.225			0.168		
Satd. Flow (perm)	0	1814	1583	821	1768	0	419	3539	1583	313	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			58		29				459			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			876			379			1632	
Travel Time (s)		9.5			19.9			8.6			37.1	
Volume (vph)	9	193	59	272	304	154	123	866	509	177	680	1
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.93	0.93	0.93	0.94	0.94	0.94	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	10	219	67	292	327	166	131	921	541	206	791	1
Lane Group Flow (vph)	0	229	67	292	493	0	131	921	541	206	792	0
Turn Type	Perm		custom	pm+pt			pm+pt		Perm	pm+pt		
Protected Phases		4	4	3	3 4		2	1		2	1	
Permitted Phases	4		4	3 4			1		1	1		
Total Split (s)	30.0	30.0	30.0	11.0	41.0	0.0	15.0	44.0	44.0	15.0	44.0	0.0
Act Effct Green (s)		22.9	22.9	32.5	35.5		55.5	45.1	45.1	55.5	45.1	
Actuated g/C Ratio		0.23	0.23	0.32	0.36		0.56	0.45	0.45	0.56	0.45	
v/c Ratio		0.55	0.16	0.82	0.76		0.35	0.58	0.56	0.63	0.50	
Control Delay		38.4	10.4	46.7	35.2		18.3	23.1	6.3	18.9	16.4	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		38.4	10.4	46.7	35.2		18.3	23.1	6.3	18.9	16.4	
LOS		D	B	D	D		B	C	A	B	B	
Approach Delay		32.1			39.4			17.0			16.9	
Approach LOS		C			D			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 92 (92%), Referenced to phase 1:NBSB, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 23.0 Intersection LOS: C
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 307: Westfall & Mt Hope

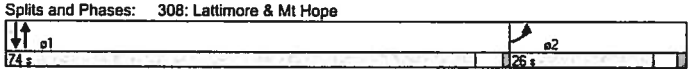


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50	50	50	
Trailing Detector (ft)	0		0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.905				0.984	
Flt Protected	0.985			0.992		
Satd. Flow (prot)	1660	0	0	3511	3483	0
Flt Permitted	0.985			0.609		
Satd. Flow (perm)	1660	0	0	2155	3483	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	55				32	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	407			1632	1189	
Travel Time (s)	9.3			37.1	27.0	
Volume (vph)	12	29	153	807	750	91
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.53	0.53	0.89	0.89	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	23	55	172	907	904	110
Lane Group Flow (vph)	78	0	0	1079	1014	0
Turn Type			Perm			
Protected Phases	2			1	1	
Permitted Phases			1			
Total Split (s)	26.0	0.0	74.0	74.0	74.0	0.0
Act Effct Green (s)	9.5			87.3	87.3	
Actuated g/C Ratio	0.10			0.87	0.87	
v/c Ratio	0.38			0.57	0.33	
Control Delay	22.4			7.0	1.1	
Queue Delay	0.0			0.0	0.0	
Total Delay	22.4			7.0	1.1	
LOS	C			A	A	
Approach Delay	22.4			7.0	1.1	
Approach LOS	C			A	A	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 33 (33%), Referenced to phase 1:NBSB, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 4.8 Intersection LOS: A
Intersection Capacity Utilization 65.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 308: Lattimore & Mt Hope



Lane Group	EBL	EBT	EBR	EBR2	NBL	NBT	NBR	SBL2	SBL	SBT	SBR	NWL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		0%
Storage Length (ft)	125		0		125		0		125		0	0
Storage Lanes	1		1		1		0		1		0	1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50		50	50		50	50	50		50
Trailing Detector (ft)	0	0	0		0	0		0	0	0		0
Turning Speed (mph)	15		9	9	15		9	15	15		9	15
Lane Util. Factor	0.95	0.91	0.95	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.851	0.850			0.998				0.964		
Flt Protected	0.950				0.950				0.950			0.950
Satd. Flow (prot)	1681	1443	1504	0	1770	3532	0	0	1770	3412	0	1770
Flt Permitted	0.950				0.160				0.148			0.950
Satd. Flow (perm)	1681	1443	1504	0	298	3532	0	0	276	3412	0	1770
Right Turn on Red				Yes							Yes	
Satd. Flow (RTOR)			87							42		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30				30				30		30
Link Distance (ft)		603				1189				1155		1862
Travel Time (s)		13.7				27.0				26.3		42.3
Volume (vph)	123	1	189	104	149	719	12	3	340	784	249	368
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.79	0.79	0.79	0.79	0.84	0.84	0.84	0.87	0.87	0.87	0.87	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		0%
Adj. Flow (vph)	156	1	239	132	177	856	14	3	391	901	286	413
Lane Group Flow (vph)	156	174	198	0	177	870	0	0	394	1187	0	413
Turn Type	Split		Perm		pm+pt			custom	pm+pt			
Protected Phases	8	8			5	2			1	6		3
Permitted Phases		8	8		2			1	6			
Total Split (s)	20.0	20.0	20.0	0.0	14.0	28.0	0.0	16.0	16.0	30.0	0.0	28.0
Act Effct Green (s)	20.3	20.3	20.3		36.4	25.0			45.3	31.3		25.0
Actuated g/C Ratio	0.20	0.20	0.20		0.36	0.25			0.45	0.31		0.25
v/c Ratio	0.46	0.59	0.53		0.64	0.99			1.01	1.08		0.93
Control Delay	38.7	44.1	24.2		36.8	60.0			44.4	68.0		61.2
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay	38.7	44.1	24.2		36.8	60.0			44.4	68.0		61.2
LOS	D	D	C		D	E			D	E		E
Approach Delay		35.0				56.1				62.1		67.9
Approach LOS		D				E				E		E

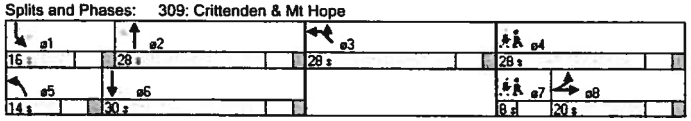
Intersection Summary

Lane Group	NWR	NWR2	ø4	ø7
Lane Configurations				
Ideal Flow (vphpl)	1900	1900		
Lane Width (ft)	12	12		
Grade (%)				
Storage Length (ft)	0			
Storage Lanes	1			
Total Lost Time (s)	3.0	3.0		
Leading Detector (ft)	50			
Trailing Detector (ft)	0			
Turning Speed (mph)	9	9		
Lane Util. Factor	1.00	1.00		
Ped Bike Factor				
Frt	0.850			
Flt Protected				
Satd. Flow (prot)	1583	0		
Flt Permitted				
Satd. Flow (perm)	1583	0		
Right Turn on Red		Yes		
Satd. Flow (RTOR)	1			
Headway Factor	1.00	1.00		
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Volume (vph)	346	6		
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor	0.89	0.89		
Growth Factor	100%	100%		
Heavy Vehicles (%)	2%	2%		
Bus Blockages (#/hr)	0	0		
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)	389	7		
Lane Group Flow (vph)	396	0		
Turn Type	custom			
Protected Phases	3		4	7
Permitted Phases	3			
Total Split (s)	28.0	0.0	28.0	8.0
Act Effct Green (s)	25.0			
Actuated g/C Ratio	0.25			
v/c Ratio	1.00			
Control Delay	74.9			
Queue Delay	0.0			
Total Delay	74.9			
LOS	E			
Approach Delay				
Approach LOS				

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 52 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 58.1 Intersection LOS: E
Intersection Capacity Utilization 85.2% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 309: Crittenden & Mt Hope

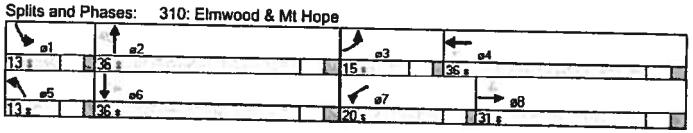


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	125		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.965			0.998			0.973			0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3415	0	1770	3532	0	1770	3444	0	1770	3337	0
Flt Permitted	0.143			0.129			0.121			0.121		
Satd. Flow (perm)	266	3415	0	240	3532	0	225	3444	0	225	3337	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			2			27			141	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1418			846			1155			323	
Travel Time (s)		27.6			16.5			26.3			7.3	
Volume (vph)	270	926	285	408	1437	23	220	763	164	64	863	531
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.85	0.85	0.85	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	300	1029	317	464	1633	26	259	898	193	71	959	590
Lane Group Flow (vph)	300	1346	0	464	1659	0	259	1091	0	71	1549	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Total Split (s)	15.0	31.0	0.0	20.0	36.0	0.0	13.0	36.0	0.0	13.0	36.0	0.0
Act Effct Green (s)	40.0	28.0		48.0	33.0		44.4	36.4		41.5	33.0	
Actuated g/C Ratio	0.40	0.28		0.48	0.33		0.44	0.36		0.42	0.33	
v/c Ratio	1.05	1.37		1.24	1.42		1.02	0.86		0.32	1.30	
Control Delay	93.1	201.1		154.6	223.8		66.0	22.1		19.2	167.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	93.1	201.1		154.6	223.8		66.0	22.1		19.2	167.3	
LOS	F	F		F	F		E	C		B	F	
Approach Delay		181.4			208.7			30.6			160.8	
Approach LOS		F			F			C			F	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 95 (95%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.42
Intersection Signal Delay: 154.8 Intersection LOS: F
Intersection Capacity Utilization 123.7% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 310: Elmwood & Mt Hope

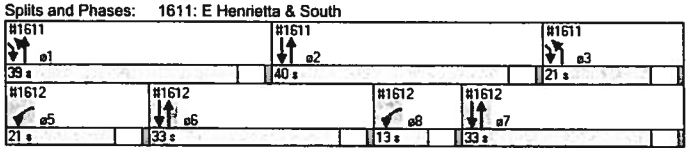


Lane Group	NBL	NBT	SBT	SBR	SEL	SER	ø1	ø3	ø5	ø6	ø7	ø8
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900						
Lane Width (ft)	12	12	12	12	12	12						
Grade (%)		0%	0%		0%							
Storage Length (ft)	0			0	0	0						
Storage Lanes	0			0	0	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0						
Leading Detector (ft)	50	50	50			50						
Trailing Detector (ft)	0	0	0			0						
Turning Speed (mph)	15			9	15	9						
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.88						
Ped Bike Factor												
Frt						0.850						
Flt Protected	0.950											
Satd. Flow (prot)	1736	1827	3471	0	0	2733						
Flt Permitted	0.950											
Satd. Flow (perm)	1736	1827	3471	0	0	2733						
Right Turn on Red				Yes		Yes						
Satd. Flow (RTOR)						80						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00						
Link Speed (mph)		30	30		30							
Link Distance (ft)		416	244		1862							
Travel Time (s)		9.5	5.5		42.3							
Volume (vph)	903	744	639	0	0	495						
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.73	0.73	0.93	0.93						
Growth Factor	100%	100%	100%	100%	100%	100%						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%						
Bus Blockages (#/hr)	0	0	0	0	0	0						
Parking (#/hr)												
Mid-Block Traffic (%)		0%	0%		0%							
Adj. Flow (vph)	941	775	875	0	0	532						
Lane Group Flow (vph)	941	775	875	0	0	532						
Turn Type		custom										
Protected Phases	1 3	1 2	2			1 3	1	3	5	6	7	8
Permitted Phases		1				1 3						
Total Split (s)	60.0	79.0	40.0	0.0	0.0	60.0	39.0	21.0	21.0	33.0	33.0	13.0
Act Effct Green (s)	60.1	72.9	33.9			60.1						
Actuated g/C Ratio	0.60	0.73	0.34			0.60						
v/c Ratio	0.90	0.58	0.74			0.32						
Control Delay	32.2	8.1	30.9			10.6						
Queue Delay	0.0	0.5	45.3			0.0						
Total Delay	32.2	8.6	76.2			10.6						
LOS	C	A	E			B						
Approach Delay		21.6	76.2									
Approach LOS		C	E									

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBTL and 5:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 35.0 Intersection LOS: D
Intersection Capacity Utilization 74.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1611: E Henrietta & South

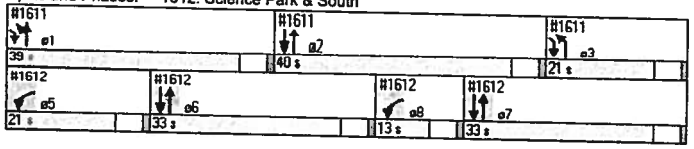


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1	ø2	ø3	ø5	ø7
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	12	12	12	12	12	12					
Grade (%)	0%		0%			0%					
Storage Length (ft)	0	0		0	0						
Storage Lanes	1	1		0	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0					
Leading Detector (ft)	50	50	50		50	50					
Trailing Detector (ft)	0	0	0		0	0					
Turning Speed (mph)	15	9		9	15						
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95					
Ped Bike Factor											
Frt		0.850	0.980								
Flt Protected	0.950					0.995					
Satd. Flow (prot)	1770	1583	1825	0	0	3522					
Flt Permitted	0.950					0.822					
Satd. Flow (perm)	1770	1583	1825	0	0	2909					
Right Turn on Red		Yes		Yes							
Satd. Flow (RTOR)		3	15								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00					
Link Speed (mph)	30		30			30					
Link Distance (ft)	396		244			2781					
Travel Time (s)	9.0		5.5			63.2					
Volume (vph)	11	3	510	87	50	501					
Confl. Peds. (#/hr)											
Confl. Bikes (#/hr)											
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95					
Growth Factor	100%	100%	100%	100%	100%	100%					
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%					
Bus Blockages (#/hr)	0	0	0	0	0	0					
Parking (#/hr)											
Mid-Block Traffic (%)	0%		0%			0%					
Adj. Flow (vph)	12	3	537	92	53	527					
Lane Group Flow (vph)	12	3	629	0	0	580					
Turn Type		custom			custom						
Protected Phases	5 8		6 7			6 7	1	2	3	5	7
Permitted Phases		8			6						
Total Split (s)	34.0	13.0	66.0	0.0	33.0	66.0	39.0	40.0	21.0	21.0	33.0
Act Effct Green (s)	26.1	8.1	70.3			70.3					
Actuated g/C Ratio	0.26	0.08	0.70			0.70					
v/c Ratio	0.03	0.02	0.49			0.28					
Control Delay	14.0	28.7	9.4			4.6					
Queue Delay	0.0	0.0	1.2			0.2					
Total Delay	14.0	28.7	10.7			4.8					
LOS	B	C	B			A					
Approach Delay	16.9		10.7			4.8					
Approach LOS	B		B			A					

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBTL and 5:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 8.0 Intersection LOS: A
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1612: Science Park & South

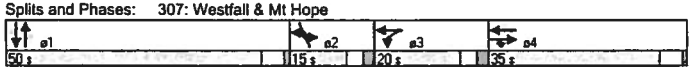


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		75	0		0	125		200	125		0
Storage Lanes	0		1	1		0	1		1	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.941				0.850			
Flt Protected		0.998		0.950			0.950			0.950		
Satd. Flow (prot)	0	1859	1583	1770	1753	0	1770	3539	1583	1770	3539	0
Flt Permitted		0.978		0.260			0.085			0.227		
Satd. Flow (perm)	0	1822	1583	484	1753	0	158	3539	1583	423	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164		34				196			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			1751			379			1632	
Travel Time (s)		9.5			39.8			8.6			37.1	
Volume (vph)	12	259	342	512	159	103	71	734	190	137	1327	3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.81	0.81	0.82	0.82	0.82	0.97	0.97	0.97	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	15	320	422	624	194	126	73	757	196	152	1474	3
Lane Group Flow (vph)	0	335	422	624	320	0	73	757	196	152	1477	0
Turn Type	Perm		custom	pm+pt			pm+pt		Perm	pm+pt		
Protected Phases		4	4	3	3 4		2	1		2	1	
Permitted Phases	4		4	3 4			1		1	1		
Total Split (s)	35.0	35.0	35.0	20.0	55.0	0.0	15.0	50.0	50.0	15.0	50.0	0.0
Act Effct Green (s)		29.5	29.5	50.3	53.3		57.7	49.5	49.5	57.7	49.5	
Actuated g/C Ratio		0.25	0.25	0.42	0.44		0.48	0.41	0.41	0.48	0.41	
v/c Ratio		0.75	0.82	1.46	0.40		0.39	0.52	0.26	0.52	1.01	
Control Delay		52.7	39.7	245.8	21.5		38.8	28.4	4.1	23.2	49.9	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		52.7	39.7	245.8	21.5		38.8	28.4	4.1	23.2	49.9	
LOS		D	D	F	C		D	C	A	C	D	
Approach Delay		45.5			169.8			24.5			47.4	
Approach LOS		D			F			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 82 (68%), Referenced to phase 1:NBSB, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.46
Intersection Signal Delay: 68.2 Intersection LOS: E
Intersection Capacity Utilization 96.9% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 307: Westfall & Mt Hope

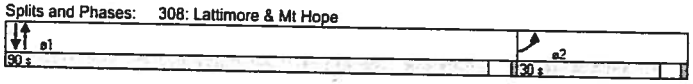


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50	50	50	
Trailing Detector (ft)	0		0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor						
Frt	0.930				0.998	
Flt Protected	0.976			0.997		
Satd. Flow (prot)	1691	0	0	3529	3532	0
Flt Permitted	0.976			0.802		
Satd. Flow (perm)	1691	0	0	2838	3532	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	41				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	30			30	30	
Link Distance (ft)	407			1632	1189	
Travel Time (s)	9.3			37.1	27.0	
Volume (vph)	127	136	44	798	1150	18
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.94	0.94	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	163	174	47	849	1250	20
Lane Group Flow (vph)	337	0	0	896	1270	0
Turn Type			Perm			
Protected Phases	2			1	1	
Permitted Phases			1			
Total Split (s)	30.0	0.0	90.0	90.0	90.0	0.0
Act Effct Green (s)	25.3			88.7	88.7	
Actuated g/C Ratio	0.21			0.74	0.74	
v/c Ratio	0.87			0.43	0.49	
Control Delay	62.4			5.6	1.1	
Queue Delay	0.0			0.0	0.0	
Total Delay	62.4			5.6	1.1	
LOS	E			A	A	
Approach Delay	62.4			5.6	1.1	
Approach LOS	E			A	A	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 1:NBSB, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 76.9% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 308: Lattimore & Mt Hope



Lane Group	EBL	EBT	EBR	EBR2	NBL	NBT	NBR	NBR2	SBL	SBT	SBR	NWL2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		
Storage Length (ft)	125		0		125		0		125		0	
Storage Lanes	1		1		1		0		1		0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50		50	50			50	50		50
Trailing Detector (ft)	0	0	0		0	0			0	0		0
Turning Speed (mph)	15		9	9	15		9	9	15		9	15
Lane Util. Factor	0.95	0.91	0.95	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor												
Frt		0.883	0.850			0.994				0.989		
Flt Protected	0.950	0.989			0.950				0.950			
Satd. Flow (prot)	1681	1480	1504	0	1770	3518	0	0	1770	3500	0	0
Flt Permitted	0.950	0.989			0.138				0.125			
Satd. Flow (perm)	1681	1480	1504	0	257	3518	0	0	233	3500	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			56							8		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30				30				30		
Link Distance (ft)		603				1189				1155		
Travel Time (s)		13.7				27.0				26.3		
Volume (vph)	350	0	354	185	109	767	29	3	354	925	72	10
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.91	0.91	0.91	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		
Adj. Flow (vph)	380	0	385	201	124	872	33	3	389	1016	79	11
Lane Group Flow (vph)	308	324	334	0	124	908	0	0	389	1095	0	0
Turn Type	Split		Perm		pm+pt				pm+pt			Split
Protected Phases	8	8			5	2			1	6		3
Permitted Phases		8	8		2				6			
Total Split (s)	25.0	25.0	25.0	0.0	15.0	32.0	0.0	0.0	30.0	47.0	0.0	25.0
Act Effct Green (s)	22.0	22.0	22.0		41.7	31.2			59.0	45.5		
Actuated g/C Ratio	0.18	0.18	0.18		0.35	0.26			0.49	0.38		
v/c Ratio	1.00	1.20	1.04		0.56	0.99			0.90	0.82		
Control Delay	100.7	160.8	101.1		39.8	53.1			27.8	28.4		
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0	0.0		
Total Delay	100.7	160.8	101.1		39.8	53.1			27.8	28.4		
LOS	F	F	F		D	D			C	C		
Approach Delay		121.0				51.5				28.3		
Approach LOS		F				D				C		

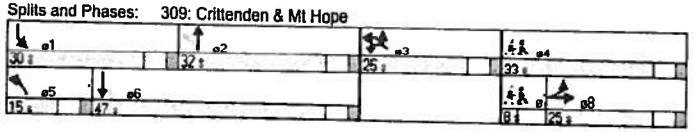
Intersection Summary

Lane Group	NWL	NWR	NWR2	ø4	ø7
Lane Configurations					
Ideal Flow (vphpl)	1900	1900	1900		
Lane Width (ft)	12	12	12		
Grade (%)	0%				
Storage Length (ft)	0	0			
Storage Lanes	1	1			
Total Lost Time (s)	3.0	3.0	3.0		
Leading Detector (ft)	50	50			
Trailing Detector (ft)	0	0			
Turning Speed (mph)	15	9	9		
Lane Util. Factor	1.00	1.00	1.00		
Ped Bike Factor					
Frt		0.850			
Flt Protected	0.950				
Satd. Flow (prot)	1770	1583	0		
Flt Permitted	0.950				
Satd. Flow (perm)	1770	1583	0		
Right Turn on Red			Yes		
Satd. Flow (RTOR)		3			
Headway Factor	1.00	1.00	1.00		
Link Speed (mph)	30				
Link Distance (ft)	1862				
Travel Time (s)	42.3				
Volume (vph)	154	204	18		
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor	0.95	0.95	0.95		
Growth Factor	100%	100%	100%		
Heavy Vehicles (%)	2%	2%	2%		
Bus Blockages (#/hr)	0	0	0		
Parking (#/hr)					
Mid-Block Traffic (%)	0%				
Adj. Flow (vph)	162	215	19		
Lane Group Flow (vph)	173	234	0		
Turn Type		custom			
Protected Phases	3	3		4	7
Permitted Phases		3			
Total Split (s)	25.0	25.0	0.0	33.0	8.0
Act Effct Green (s)	21.4	21.4			
Actuated g/C Ratio	0.18	0.18			
v/c Ratio	0.55	0.82			
Control Delay	75.0	91.4			
Queue Delay	0.0	0.0			
Total Delay	75.0	91.4			
LOS	E	F			
Approach Delay	84.5				
Approach LOS	F				

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 32 (27%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.20
Intersection Signal Delay: 63.4 Intersection LOS: E
Intersection Capacity Utilization 79.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 309: Crittenden & Mt Hope

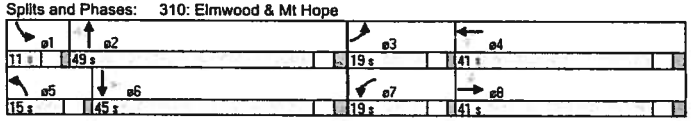


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	125		0	125		0	125		0	125		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.972			0.993			0.951			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3440	0	1770	3514	0	1770	3366	0	1770	3408	0
Flt Permitted	0.105			0.105			0.089			0.095		
Satd. Flow (perm)	196	3440	0	196	3514	0	166	3366	0	177	3408	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			4			79			41	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1418			846			1155			323	
Travel Time (s)		27.6			16.5			26.3			7.3	
Volume (vph)	492	1376	315	280	919	44	184	996	481	132	939	306
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.86	0.86	0.86	0.92	0.92	0.92	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	547	1529	350	326	1069	51	200	1083	523	148	1055	344
Lane Group Flow (vph)	547	1879	0	326	1120	0	200	1606	0	148	1399	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Total Split (s)	19.0	41.0	0.0	19.0	41.0	0.0	15.0	49.0	0.0	11.0	45.0	0.0
Act Effct Green (s)	54.0	38.0		54.0	38.0		57.0	46.0		50.0	42.0	
Actuated g/C Ratio	0.45	0.32		0.45	0.32		0.48	0.38		0.42	0.35	
v/c Ratio	1.84	1.70		1.09	1.00		0.84	1.20		0.82	1.15	
Control Delay	413.6	346.8		112.3	68.8		40.1	127.2		58.0	111.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	413.6	346.8		112.3	68.8		40.1	127.2		58.0	111.8	
LOS	F	F		F	E		D	F		E	F	
Approach Delay		361.9			78.6			117.5			106.6	
Approach LOS		F			E			F			F	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 86 (72%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.84
Intersection Signal Delay: 189.5 Intersection LOS: F
Intersection Capacity Utilization 127.2% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 310: Elmwood & Mt Hope

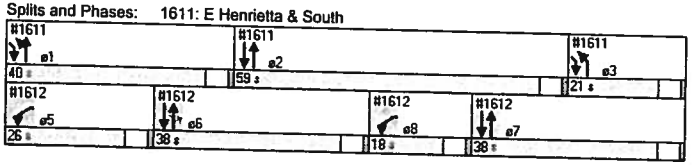


Lane Group	NBL	NBT	SBT	SBR	SEL	SER	ø1	ø3	ø5	ø6	ø7	ø8
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900						
Lane Width (ft)	12	12	12	12	12	12						
Grade (%)		0%	0%		0%							
Storage Length (ft)	0			0	0	0						
Storage Lanes	0			0	0	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0						
Leading Detector (ft)	50	50	50			50						
Trailing Detector (ft)	0	0	0			0						
Turning Speed (mph)	15			9	15	9						
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.88						
Ped Bike Factor												
Frt						0.850						
Flt Protected	0.950											
Satd. Flow (prot)	1736	1827	3471	0	0	2733						
Flt Permitted	0.950											
Satd. Flow (perm)	1736	1827	3471	0	0	2733						
Right Turn on Red				Yes		Yes						
Satd. Flow (RTOR)						135						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00						
Link Speed (mph)		30	30		30							
Link Distance (ft)		832	244		1862							
Travel Time (s)		18.9	5.5		42.3							
Volume (vph)	463	627	875	0	0	672						
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.88	0.88						
Growth Factor	100%	100%	100%	100%	100%	100%						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%						
Bus Blockages (#/hr)	0	0	0	0	0	0						
Parking (#/hr)												
Mid-Block Traffic (%)		0%	0%		0%							
Adj. Flow (vph)	493	667	931	0	0	764						
Lane Group Flow (vph)	493	667	931	0	0	764						
Turn Type		custom										
Protected Phases	1 3	1 2	2			1 3	1	3	5	6	7	8
Permitted Phases		1				1 3						
Total Split (s)	61.0	99.0	59.0	0.0	0.0	61.0	40.0	21.0	26.0	38.0	38.0	18.0
Act Effct Green (s)	70.0	86.2	44.0			70.0						
Actuated g/C Ratio	0.58	0.72	0.37			0.58						
v/c Ratio	0.49	0.51	0.73			0.46						
Control Delay	17.4	9.1	39.7			22.4						
Queue Delay	0.0	0.1	3.7			0.0						
Total Delay	17.4	9.1	43.4			22.4						
LOS	B	A	D			C						
Approach Delay		12.6	43.4									
Approach LOS		B	D									

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 1:NBTL and 6:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 25.3 Intersection LOS: C
Intersection Capacity Utilization 56.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1611: E Henrietta & South

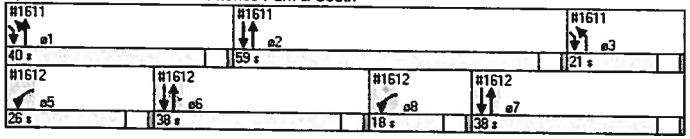


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø1	ø2	ø3	ø5	ø7
Lane Configurations											
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Width (ft)	12	12	12	12	12	12					
Grade (%)	0%		0%			0%					
Storage Length (ft)	0	0		0	0						
Storage Lanes	1	1		0	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0					
Leading Detector (ft)	50	50	50		50	50					
Trailing Detector (ft)	0	0	0		0	0					
Turning Speed (mph)	15	9		9	15						
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95					
Ped Bike Factor											
Frt		0.850	0.998								
Flt Protected	0.950					0.999					
Satd. Flow (prot)	1770	1583	1859	0	0	3536					
Flt Permitted	0.950					0.948					
Satd. Flow (perm)	1770	1583	1859	0	0	3355					
Right Turn on Red		Yes		Yes							
Satd. Flow (RTOR)		55	1								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00					
Link Speed (mph)	30		30			30					
Link Distance (ft)	396		244			2781					
Travel Time (s)	9.0		5.5			63.2					
Volume (vph)	109	52	503	9	8	626					
Confl. Peds. (#/hr)											
Confl. Bikes (#/hr)											
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95					
Growth Factor	100%	100%	100%	100%	100%	100%					
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%					
Bus Blockages (#/hr)	0	0	0	0	0	0					
Parking (#/hr)											
Mid-Block Traffic (%)	0%		0%			0%					
Adj. Flow (vph)	115	55	529	9	8	659					
Lane Group Flow (vph)	115	55	538	0	0	667					
Turn Type		custom			custom						
Protected Phases	5 8		6 7			6 7	1	2	3	5	7
Permitted Phases		8			6						
Total Split (s)	44.0	18.0	76.0	0.0	38.0	76.0	40.0	59.0	21.0	26.0	38.0
Act Effct Green (s)	21.7	11.2	86.3			86.3					
Actuated g/C Ratio	0.18	0.09	0.72			0.72					
v/c Ratio	0.36	0.28	0.40			0.28					
Control Delay	24.6	16.4	5.6			3.4					
Queue Delay	1.1	0.0	0.8			0.2					
Total Delay	25.7	16.4	6.4			3.6					
LOS	C	B	A			A					
Approach Delay	22.7		6.4			3.6					
Approach LOS	C		A			A					

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 1:NBTL and 6:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 7.1 Intersection LOS: A
Intersection Capacity Utilization 39.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1612: Science Park & South



Location: Mt Hope Ave

Town: Rochester

01-Oct-08

County: Monroe

Milepost: **To:**

Time of Day	No. of Accidents	% of Total
6 AM - 10 AM	45	16
10:00 AM - 4 PM	133	47
4 PM - 7 PM	63	22
7 PM - 12 MID	33	12
12 MID - 6 AM	9	3.2
Unspecified	0	0
Total	283	

Direction	# Veh	% of Total
North:	127	23
South:	190	34
East:	86	15
West:	69	12
Unknown:	0	0

Direction	# Veh	% of Total
NorthEast:	24	4.3
NorthWest:	12	2.2
SouthEast:	25	4.5
SouthWest:	22	4
Total	555	

Weather	No. of Accidents	
Clear:	131	46
Cloudy:	105	37
Fog:	0	0
Rain:	28	9.9
Sleet:	0	0
Snow:	16	5.7
Unknown:	2	0.7
Total	282	

Acc. Type	# Veh	% of Total
Sideswipe:	7	2.5
Rear End:	87	31
Right Angle:	56	20
Left Turn:	65	23
Pedestrian:	3	1.1
Fixed Object:	8	2.8
Head on:	3	1.1

Acc. Type	# Veh	% of Total
Bicycle:	4	1.4
Right Turn:	10	3.5
Deer Strike:	0	0
Backing:	0	0
Overtaking:	40	14
Unknown:	0	0
Total	283	

Pavement	No. of Accidents	
Dry:	188	67
Muddy:	0	0
Other:	2	0.7
Slush:	3	1.1
Snow/Ice:	20	7.1
Wet:	69	24
Unknown:	0	0
Total	282	

Accident Severity	No. of Accidents	% of Total
Reportable:	138	49
Non Reportable:	50	18
Unknown:	95	34
Total	283	

Type of Accident	No. of Accidents	% of Total
Intersection:	151	55
Link:	125	45
Total	276	

Time of Year	No. of Accidents	
Winter (Dec-Feb)	86	30
Spring (Mar-May)	57	20
Summer (Jun-Aug)	59	21
Fall (Sep-Nov)	81	29
Total	283	

Light Condition	No. of Accidents	% of Total
Dark Road-Lighted:	59	21
Dark Road-Unlighted:	0	0
Dawn:	1	0.4
Daylight:	215	76
Dusk:	5	1.8
Unknown:	2	0.7
Total	282	

Chapter 2 Accident Analysis

Summary Statistics Per Year For

Mt Hope Ave

01-Oct-08

2003

Reportable Accidents	**17**
Non Reportable Accident	**4**
Unknown	**9**

2004

Reportable Accidents	**59**
Non Reportable Accident	**24**
Unknown	**37**

2005

Reportable Accidents	**62**
Non Reportable Accident	**22**
Unknown	**49**

PROJECT: 25006

INTERSECTION ACCIDENT RATE CALCULATIONS - NYSDOT

$$\text{Rate per MEV} = \frac{\text{\# of Accidents} \times 1{,}000{,}000}{\text{Total No. of Entering Vehicles}} =$$

$$\text{Rate} = \frac{\text{\# of Accidents} \times 1{,}000{,}000}{\text{Veh./Day} \times \text{Duration of Study}} =$$

Accidents per million entering vehicles (Acc / MEV)

---

1. Mt. Hope Ave / Westfall Rd

ADT = Peak hour entering volume / k factor

ADT = 2822 VPH / 0.08 = 35275 VPD

$$\text{Rate} = \frac{13 \text{ Acc.} \times 1{,}000{,}000}{35275 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 0.47 \text{ Acc / MEV}$$

2. Mt Hope Ave / Lattimore Rd

ADT = Peak hour entering volume / k factor

ADT = 1772 VPH / 0.08 = 22150 VPD

$$\text{Rate} = \frac{8 \text{ Acc.} \times 1{,}000{,}000}{22150 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 0.46 \text{ Acc / MEV}$$

3. Mt Hope Rd / Crittenden Blvd

ADT = Peak hour entering volume / k factor

ADT = 3532 VPH / 0.08 = 44150 VPD

$$\text{Rate} = \frac{44 \text{ Acc.} \times 1{,}000{,}000}{44150 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 1.26 \text{ Acc / MEV}$$

4. Mt Hope Ave / Elmwood Ave

ADT = Peak hour entering volume / k factor

ADT = 4711 VPH / 0.08 = 58888 VPD

$$\text{Rate} = \frac{78 \text{ Acc.} \times 1{,}000{,}000}{58888 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 1.67 \text{ Acc / MEV}$$

5. E. Henrietta Rd / South Ave

ADT = Peak hour entering volume / k factor

ADT = 2168 VPH / 0.08 = 27100 VPD

$$\text{Rate} = \frac{3 \text{ Acc.} \times 1{,}000{,}000}{27100 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 0.14 \text{ Acc / MEV}$$

ROADWAY SEGMENT (MID-BLOCK) ACCIDENT RATE CALCULATIONS - NYSDOT

$$\text{Rate per MVM} = \frac{\text{\# of Accidents} \times 1{,}000{,}000}{\text{Total Vehicle Miles of Travel}}$$

$$\text{Rate} = \frac{\text{\# of Accidents} \times 1{,}000{,}000}{\text{Sectional Length} \times \text{AADT} \times \text{Duration of Study}}$$

Accidents per million vehicle miles (Acc / MVM)

---

1. Westfall Rd / Lattimore Rd

Section length = 0.304 miles
2 - way ADT = 22500

$$\text{Rate} = \frac{21 \text{ Acc.} \times 1{,}000{,}000}{0.304 \text{ mi} \times 22500 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 3.88 \text{ Acc / MVM}$$

2. Lattimore Rd / Crittenden Blvd

Section length = 0.223 miles
2 - way ADT = 21000

$$\text{Rate} = \frac{28 \text{ Acc.} \times 1{,}000{,}000}{0.223 \text{ mi} \times 21000 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 7.56 \text{ Acc / MVM}$$

3 Crittenden Blvd / Elmwood Ave

Section length = 0.213 miles
2 - way ADT = 30000

$$\text{Rate} = \frac{68 \text{ Acc.} \times 1{,}000{,}000}{0.213 \text{ mi} \times 30000 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 13.45 \text{ Acc / MVM}$$

4 Crittenden Blvd / South Ave

Section length = 0.354 miles
2 - way ADT = 11800

$$\text{Rate} = \frac{11 \text{ Acc.} \times 1{,}000{,}000}{0.354 \text{ mi} \times 11800 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 3.33 \text{ Acc / MVM}$$

Project: 25006

ROADWAY SEGMENT (MID-BLOCK) ACCIDENT RATE CALCULATIONS - MCDOT

$$\text{Rate per MVM} = \frac{\text{\# of Accidents} \times 1{,}000{,}000}{\text{Total Vehicle Miles of Travel}}$$

$$\text{Rate} = \frac{\text{\# of Accidents} \times 1{,}000{,}000}{\text{Sectional Length} \times \text{AADT} \times \text{Duration of Study}}$$

Accidents per million vehicle miles (Acc / MVM)

---

1. Westfall Rd / Lattimore Rd

Section length = 0.304 miles
2 - way ADT = 22500

$$\text{Rate} = \frac{12 \text{ Acc.} \times 1{,}000{,}000}{0.304 \text{ mi} \times 22500 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 2.22 \text{ Acc / MVM}$$

2. Lattimore Rd / Crittenden Blvd

Section length = 0.223 miles
2 - way ADT = 21000

$$\text{Rate} = \frac{18 \text{ Acc.} \times 1{,}000{,}000}{0.223 \text{ mi} \times 21000 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 4.86 \text{ Acc / MVM}$$

3 Crittenden Blvd / Elmwood Ave

Section length = 0.213 miles
2 - way ADT = 30000

$$\text{Rate} = \frac{36 \text{ Acc.} \times 1{,}000{,}000}{0.213 \text{ mi} \times 30000 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 7.12 \text{ Acc / MVM}$$

4 Crittenden Blvd / South Ave

Section length = 0.354 miles
2 - way ADT = 11800

$$\text{Rate} = \frac{7 \text{ Acc.} \times 1{,}000{,}000}{0.354 \text{ mi} \times 11800 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 2.12 \text{ Acc / MVM}$$

PROJECT: 25006

INTERSECTION ACCIDENT RATE CALCULATIONS - MCDOT

MCDOT

$$\text{Rate per MEV} = \frac{\text{\# of Accidents} \times 1{,}000{,}000}{\text{Total No. of Entering Vehicles}} =$$

$$\text{Rate} = \frac{\text{\# of Accidents} \times 1{,}000{,}000}{\text{Veh./Day} \times \text{Duration of Study}} =$$

Accidents per million entering vehicles (Acc / MEV)

---

1. Mt. Hope Ave / Westfall Rd

ADT = Peak hour entering volume / k factor

ADT = 2822 VPH / 0.08 = 35275 VPD

$$\text{Rate} = \frac{4 \text{ Acc.} \times 1{,}000{,}000}{35275 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 0.14 \text{ Acc / MEV}$$

2. Mt Hope Ave / Lattimore Rd

ADT = Peak hour entering volume / k factor

ADT = 1772 VPH / 0.08 = 22150 VPD

$$\text{Rate} = \frac{4 \text{ Acc.} \times 1{,}000{,}000}{22150 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 0.23 \text{ Acc / MEV}$$

3. Mt Hope Rd / Crittenden Blvd

ADT = Peak hour entering volume / k factor

ADT = 3532 VPH / 0.08 = 44150 VPD

$$\text{Rate} = \frac{14 \text{ Acc.} \times 1{,}000{,}000}{44150 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 0.40 \text{ Acc / MEV}$$

4. Mt Hope Ave / Elmwood Ave

ADT = Peak hour entering volume / k factor

ADT = 4711 VPH / 0.08 = 58888 VPD

$$\text{Rate} = \frac{38 \text{ Acc.} \times 1{,}000{,}000}{58888 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 0.82 \text{ Acc / MEV}$$

5. E. Henrietta Rd / South Ave

ADT = Peak hour entering volume / k factor

ADT = 2168 VPH / 0.08 = 27100 VPD

$$\text{Rate} = \frac{2 \text{ Acc.} \times 1{,}000{,}000}{27100 \text{ VPD} \times 365 \text{ Days} \times 2.167 \text{ Yrs.}} = 0.09 \text{ Acc / MEV}$$

MCDOT Intersection Average Reportable Accident Rates

Urb/Sub/Rur	Functional Classes	Control	# Int's in Avg	Avg Rpt Rate 03-05
Rural	Rural Arterial/Rural Local Road	Unsignalized	1	0.39
Rural	Rural Arterial/Rural Minor Collector	Unsignalized	2	0.69
Rural	Rural Collector/Rural Collector	Unsignalized	3	0.18
Rural	Rural Collector/Rural Local Road	Unsignalized	1	0.42
Rural	Rural Collector/town road	Unsignalized	2	0.24
Rural	Rural Local Road/Rural Collector	Unsignalized	2	0.00
Rural	Rural Local Road/Rural Local Road	Unsignalized	34	0.16
Rural	Rural Local Road/Rural Minor Collector	Unsignalized	22	0.38
Rural	Rural Local Road/town road	Unsignalized	11	0.19
Rural	Rural Minor Collector/Rural Collector	Unsignalized	2	0.14
Rural	Rural Minor Collector/Rural Local Road	Unsignalized	16	0.21
Rural	Rural Minor Collector/Rural Minor Collector	Unsignalized	8	0.56
Rural	Rural Minor Collector/town road	Unsignalized	4	0.24
Rural	town road/Rural Collector	Unsignalized	1	0.00
Rural	town road/Rural Local Road	Unsignalized	6	0.79
Rural	town road/Rural Minor Collector	Unsignalized	8	0.19
Rural	town road/town road	Unsignalized	1	0.00
Suburban	Suburban Arterial/Suburban Arterial	Signalized	25	0.38
Suburban	Suburban Arterial/Suburban Arterial	Unsignalized	4	0.47
Suburban	Suburban Arterial/Suburban Collector	Signalized	7	0.37
Suburban	Suburban Arterial/Suburban Collector	Unsignalized	2	1.14
Suburban	Suburban Arterial/Suburban Local Road	Signalized	6	0.17
Suburban	Suburban Arterial/Suburban Local Road	Unsignalized	4	0.00
Suburban	Suburban Arterial/town road	Signalized	17	0.21
Suburban	Suburban Arterial/town road	Unsignalized	37	0.10
Suburban	Suburban Arterial/village road	Unsignalized	1	0.22
Suburban	Suburban Collector/Suburban Arterial	Signalized	10	0.29
Suburban	Suburban Collector/Suburban Arterial	Unsignalized	4	0.25
Suburban	Suburban Collector/Suburban Collector	Signalized	4	0.33
Suburban	Suburban Collector/Suburban Collector	Unsignalized	15	0.25
Suburban	Suburban Collector/Suburban Local Road	Signalized	1	0.16
Suburban	Suburban Collector/Suburban Local Road	Unsignalized	11	0.11
Suburban	Suburban Collector/Suburban Minor Collector	Unsignalized	3	0.54
Suburban	Suburban Collector/town road	Signalized	5	0.27
Suburban	Suburban Collector/town road	Unsignalized	33	0.17
Suburban	Suburban Collector/village road	Signalized	1	0.05
Suburban	Suburban Local Road/Suburban Arterial	Signalized	3	0.18
Suburban	Suburban Local Road/Suburban Arterial	Unsignalized	5	0.21
Suburban	Suburban Local Road/Suburban Collector	Signalized	2	0.11
Suburban	Suburban Local Road/Suburban Collector	Unsignalized	9	0.50
Suburban	Suburban Local Road/Suburban Local Road	Unsignalized	10	0.09
Suburban	Suburban Local Road/Suburban Minor Collector	Unsignalized	2	0.82
Suburban	Suburban Local Road/town road	Signalized	1	0.41
Suburban	Suburban Local Road/town road	Unsignalized	10	0.16
Suburban	Suburban Local Road/village road	Signalized	1	0.00
Suburban	Suburban Minor Collector/Suburban Arterial	Unsignalized	1	0.49
Suburban	Suburban Minor Collector/Suburban Local Road	Unsignalized	3	0.11
Suburban	Suburban Minor Collector/Suburban Minor Collector	Unsignalized	1	0.23
Suburban	Suburban Minor Collector/town road	Unsignalized	4	0.35
Suburban	town road/Suburban Arterial	Signalized	21	0.31
Suburban	town road/Suburban Arterial	Unsignalized	35	0.19
Suburban	town road/Suburban Collector	Signalized	1	0.15
Suburban	town road/Suburban Collector	Unsignalized	11	0.13
Suburban	town road/Suburban Local Road	Signalized	1	0.19
Suburban	town road/Suburban Local Road	Unsignalized	6	0.32
Suburban	unknown type/Suburban Local Road	Unsignalized	1	0.00
Suburban	village road/Suburban Arterial	Unsignalized	1	0.00
Suburban	village road/Suburban Local Road	Unsignalized	2	0.10
Urban	Collector/Collector	Signalized	20	0.39

Rates are in Reportable Accidents per Million Entering Vehicles

MCDOT Intersection Average Reportable Accident Rates

Urb/Sub/Rur	Functional Classes	Control	# Int's in Avg	Avg Rpt Rate 03-05
Urban	Collector/Collector	Unsignalized	4	0.16
Urban	Collector/Local Street	Signalized	22	0.32
Urban	Collector/Local Street	Unsignalized	57	0.24
Urban	Collector/Minor Arterial	Signalized	19	0.44
Urban	Collector/Minor Arterial	Unsignalized	4	0.26
Urban	Collector/Principal Arterial	Unsignalized	1	0.09
Urban	Local Street/Collector	Signalized	12	0.33
Urban	Local Street/Collector	Unsignalized	29	0.28
Urban	Local Street/Local Street	Signalized	3	0.02
Urban	Local Street/Local Street	Unsignalized	189	0.37
Urban	Local Street/Minor Arterial	Signalized	30	0.17
Urban	Local Street/Minor Arterial	Unsignalized	25	0.12
Urban	Local Street/Principal Arterial	Signalized	7	0.08
Urban	Local Street/Principal Arterial	Unsignalized	1	0.00
Urban	Local Street/unknown type	Signalized	1	0.00
Urban	Minor Arterial/Collector	Signalized	45	0.34
Urban	Minor Arterial/Collector	Unsignalized	2	0.28
Urban	Minor Arterial/Local Street	Signalized	105	0.24
Urban	Minor Arterial/Local Street	Unsignalized	100	0.21
Urban	Minor Arterial/Minor Arterial	Signalized	79	0.46
Urban	Minor Arterial/Minor Arterial	Unsignalized	5	0.04
Urban	Minor Arterial/Principal Arterial	Signalized	5	0.29
Urban	Minor Arterial/Principal Arterial	Unsignalized	1	0.00
Urban	Minor Arterial/unknown type	Unsignalized	1	0.00
Urban	Principal Arterial/Collector	Signalized	5	0.19
Urban	Principal Arterial/Local Street	Signalized	17	0.13
Urban	Principal Arterial/Local Street	Unsignalized	3	0.00
Urban	Principal Arterial/Minor Arterial	Signalized	6	0.15
Urban	Principal Arterial/Minor Arterial	Unsignalized	2	0.25

Rates are in Reportable Accidents per Million Entering Vehicles

MCDOT Non-intersection Reportable Accident Rates

Urb/Sub/Rur	Functional Class	Avg Rpt Rate 03-05
Urban	Collector	1.10
Urban	Local Street	2.69
Urban	Minor Arterial	1.08
Urban	Principal Arterial	0.46
Rural	Rural Arterial	0.66
Rural	Rural Collector	0.71
Rural	Rural Local Road	0.92
Rural	Rural Minor Collector	0.87
Suburban	Suburban Arterial	0.66
Suburban	Suburban Collector	0.56
Suburban	Suburban Local Road	0.53
Suburban	Suburban Minor Collector	0.59

Rates are in Reportable Accidents per Million Vehicle Miles

INTERSECTION CRITICAL RATE CALCULATIONS

MT HOPE / WESTFALL		INTERSECTION ADT	35275
		AVERAGE RATE	0.15
YM=	12.87538		
CRITICAL	**0.36639**		
MT HOPE / LATTIMORE		INTERSECTION ADT	22150
		AVERAGE RATE	0.13
YM=	8.08475		
CRITICAL	**0.40044**		
MT HOPE / CRITT / E HEN		INTERSECTION ADT	44150
		AVERAGE RATE	0.15
YM=	16.11475		
CRITICAL	**0.33974**		
MT HOPE / ELMWOOD		INTERSECTION ADT	58888
		AVERAGE RATE	0.15
YM=	21.49412		
CRITICAL	**0.31068**		
E HEN / SOUTH		INTERSECTION ADT	27100
		AVERAGE RATE	0.46
YM=	9.8915		
CRITICAL	**0.86529**		

MAINLINE CRITICAL RATE CALCULATIONS

WESTFALL / LATTIMORE		ADT	22500
		SECTION LENGTH	0.304
		AVERAGE RATE	0.46
YM=	2.4966		
CRITICAL	**1.36638**		
LATTIMORE / CRITTENDEN		ADT	21000
		SECTION LENGTH	0.223
		AVERAGE RATE	0.46
YM=	1.709295		
CRITICAL	**1.60589**		
CRITTENDEN / ELMWOOD		ADT	30000
		SECTION LENGTH	0.213
		AVERAGE RATE	0.46
YM=	2.33235		
CRITICAL	**1.40492**		
CRITTENDEN / SOUTH		ADT	11800
		SECTION LENGTH	0.354
		AVERAGE RATE	1.08
YM=	1.524678		
CRITICAL	**2.79242**		

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 1

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
1	1/19/2003	13:21	Lnk	Rep	1	1	2	3	7	Left	kwik fill pkg lot adjacent to Mt. Hope on Westmoreland
2	6/18/2004	17:20	Lnk	Unk	1	1	1	1	9	REnd	kwik fill driveway on Westmoreland
3	1/17/2003	11:25	Ins	Unk	1	1	2	2	4,18	Left	veh 1 turned left from thru/right lane
4	3/27/2004	15:20	Ins	Non	1	1	1	1	4	Bike	Vehicle hit bicycle, while turning right, bicycle not injured
5	2/22/2005	22:41	Ins	Unk	4	1	4	4	19,66	Rght	v1 nb turn right onto westfall, slid, hit v2 waiting to turn left
6	11/2/2005	10:39	Ins	Unk	1	1	1	1	3	REnd	v2 stopped EB on Shelbourne behind v1, v1 backed into v2
7	1/14/2005	8:54	Lnk	Unk	1	1	2	2	60	FixO	v1 swerved to avoid hitting v2 that was turning left onto Raleigh
8	1/13/2004	19:36	Ins	Non	4	4	4	1	4	REnd	v1 eb critt, started, stopped again, rear end by v2
9	1/24/2004	8:43	Ins	Unk	1	1	2	3	7	Rght	v1 and v2 turning rt onto mt. hope from critt., v1 turned too sharp
10	1/30/2004	17:10	Ins	Rep	4	1	1	2	4	REnd	v2 did not see v1 stopped eb on critt. at signal
11	2/28/2005	16:00	Ins	Unk	1	1	2	4		Side	v1 sideswiped v2 turn left to mt hope from critt.
12	3/21/2005	9:00	Ins	Non	1	1	2	2	4,5	REnd	rear end on critt., v2 fled scene down fort hill
13	1/2/2004	10:40	Ins	Unk	1	1	1	2	18	Over	v1 on east hen, turn signal still on, v2 attempted to pass on right
14	2/5/2004	15:57	Ins	Rep	1	1	1	1	42	REnd	v1 said brakes did not work, rear ended v2 and v3 on east hen
15	4/2/2004	8:50	Ins	Rep	1	1	2	2	7	Left	v1 turned left into donut pkg lot, hit by v2 sb on east hen

DETAILS OF ACCIDENT HISTORY

SRF Associates

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P.I.N. _____
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Page Number 2

PERIOD STUDIED
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26 Months

(1) No.	(2) Date	(3) Time		(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
16	6/20/2004	15:18	Ins		Rep	1	4	1	1	20,4	Over	both veh wb on east hen, v1 entered v2 lane at mt. hope
17	5/20/2005	17:55	Ins		Unk	1	1	1	1	9	REnd	v1 rear end v2 on east hen at mt. hope/fort hill
18	0/17/2003	15:51	Ins		Rep	1	1	1	2	7,7	Left	v1 eb on elmwood turned left in front of wb v2
19	0/20/2003	14:20			Non	0	1	0	0		Side	v1 had 4ways on, v2 went around, v1 started again, hit v2
20	11/3/2003	13:15			Unk	1	1	2	3	13	Side	both wb elmwood at mt. hope, changing lanes
21	2/13/2003	18:55	Ins		Rep	4	1	4	1	4,66	REnd	v1 stopped wb elmwood, started, stopped for emer veh, got rear ended
22	2/26/2003	0:20	Ins		Unk	4	1	1	2	12	REnd	v1 stopped at light, v2 eb elmwood, distracted, rear end v1
23	1/2/2004	19:03	Ins		Rep	4	2	2	2		Left	v1 sb mthope rt to elmwood, v2 nb mt hope lt to elmwood, hit each other
24	1/30/2004	7:56			Rep	1	1	2	2	60	Side	eb elmwood, changed lanes to avoid another vehicle
25	2/6/2004	17:12	Ins		Rep	1	1	2	2	7	Left	v1 eb elmwood, lt onto mt hope, v2 wb elmwood
26	2/12/2004	12:40			Rep	1	1	2	2	9	REnd	v1 eb elmwood rear end, v2 who slowed for traffic
27	2/16/2004	18:00	Ins		Rep	4	1	1	2	7	Left	v1 wb elmwood hit v1 eb lt onto mt hope
28	3/12/2004	14:30	Ins		Rep	1	2	1	2	60	REnd	v1 stopped at signal, light changes, does not go cuz emer veh, rear end by v2
29	3/31/2004	10:30	Ins		Rep	1	1	1	2	7,18	Left	v1 wb elmwood left in front of eb v2
30	4/5/2004	23:05	Ins		Rep	4	1	1	1	7,4	Left	v1 eb elmwood, v2 wb lt to mt hope, v2 did not see v1

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
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P.I.N. _____
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File _____
By _____
Page Number 3

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
31	5/3/2004	19:40	Ins	Unk	1	1	1	1	7	Left	v1 eb lt from elmwood, hit wb v2
32	6/22/2004	12:03	Ins	Unk	1	1	1	2	9	REnd	both wb elmwood, v2 thought v1 going thru yellow light
33	7/6/2004	15:53	Ins	Rep	1	1	1	1	7	Left	v1 eb elmwood lt to mt. hope, hit v2 wb elmwood
34	7/7/2004	13:07	Ins	Unk	1	1	1	1	69	REnd	eb elmwood, v1 had rear gate open
35	7/16/2004	7:23	Ins	Rep	1	1	1	2	17,7	Left	v2 wb lt from elmwood thru yellow, hit eb V1
36	7/18/2004	12:33	Ins	Rep	1	1	1	2	4	REnd	v1 foot slipped off clutch, rear end v2
37	8/2/2004	10:30	Ins	Unk	0	1	0	0	4	FixO	v1 wb elmwood swerved for v2, hit median. V1 ran red light
38	8/25/2004	13:00	Ins	Unk	1	1	1	2	4	REnd	eb elmwood, v2 could not stop in time
39	9/2/2004	10:48	Ins	Non	1	1	1	1	19	Left	v1 eb elmwood speeding, v2 wb elmwood lt to mt hope
40	10/9/2004	20:20	Ins	Rep	4	1	1	2	17	Left	v1 eb lt to mt. hope, went thru red, and hit sb v2
41	10/28/2004	19:38	Ins	Unk	4	1	1	1	4,7	REnd	v1 hit v2 and pushed into v3
42	11/9/2004	18:21	Ins	Rep	4	1	1	2	4	REnd	v1 rear end v2, v2 slowed for emer. Vehicle
43	12/2/2004	10:32	Ins	Rep	1	1	1	1	7	Left	v1 wb lt in front of eb v2
44	2/10/2004	6:39	Ins	Rep	4	1	2	3	7	Rght	v1 nb rt from mt hope, hit eb v2
45	2/12/2004	11:00	Ins	Unk	1	1	1	2	18	Left	v2 eb elmwood, v1 wb lt in front of v2

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe

Town of Rochester

Street Name: Mt Hope Ave

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Location: Mt Hope Ave

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Date of Report: 10/1/200

P.I.N. _____

Case No. _____

File _____

By _____

Page Number 4

PERIOD STUDIED

From 10/14/200

To: 12/29/200

26 Months

(1) No.	(2) Date	(3) Time		(4) Type	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
46	9/24/2005	18:51	Ins	Rep		3	1	1	1	4	REnd	v1 stopped eb, started, stopped, rear end by v2
47	5/10/2005	11:50	Ins	Rep		1	1	1	1	4	REnd	wb at signal, v1 stopped, v2 could not stop in time
48	1/5/2005	7:40	Ins	Rep		1	1	4	4	18	Left	v2 sb lt, hit nb v1 and wb stopped v3
49	1/20/2005	16:38	Ins	Rep		1	1	2	2	4	REnd	wb elmwood, v1 slowed for emer. Vehicle, v2 rear ended
50	1/22/2005	1:50		Unk		4	1	4	2	2	Left	v2 wb lt to mt hope w/ arrow, v1 eb elmwood hit v2
51	1/28/2005	1:52	Ins	Unk		4	1	5	1	7	Left	v1 wb lt to mt hope, hit v2 eb on elmwood, v1 said had arrow
52	1/28/2005	11:25	Ins	Unk		1	1	4	4	9,66	REnd	wb elmwood, v2 stopped in traffic, v1 slid into v2
53	2/22/2005	14:15	Ins	Rep		1	1	2	4	7	Left	v1 eb lt in front of wb v2
54	3/21/2005	15:20	Ins	Unk		1	1	1	1	4	REnd	red light, v2 stopped, v1 did not, rear end
55	4/19/2005	15:05	Ins	Rep		1	1	1	1	19	Left	v1 eb elmwood, v2 wb lt, v1 high speed
56	4/26/2005	14:50		Unk		1	1	1	2	9	REnd	v1 & 2 wb elmwood ,rear end
57	8/9/2005	8:05	Ins	Rep		1	1	1	1	9	REnd	eb elmwood rear end
58	8/23/2005	16:03	Ins	Rep		1	1	1	1	7,18	Left	v1 wb elmwood, v2 eb lt to mt hope
59	9/17/2005	12:32		Non						7,13	Bike	both eb elmwood, truck mirror hit bicyclist
60	9/24/2005	13:34	Ins	Non		1	1	1	1	9	REnd	foot slipped off brake, rear end

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe

Town of Rochester

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P.I.N. _____

Case No. _____

File _____

By _____

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To: 12/29/200

26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
61	9/30/2005	18:20	Ins	Non	4	1	1	1	4	REnd	v2 rear ended v1 stopped at signal
62	10/4/2005	9:57	Ins	Unk	1	1	1	1	7	RAng	v1 sb mt hope, v2eb elmwood made RTOR., hit v1
63	10/5/2005	8:24	Ins	Non	1	1	1	1	9	REnd	v1 stopped in traffic, rear end by v2
64	0/27/2005	22:45	Ins	Rep	4	1	2	2	7	Left	v1 eb elmwood, v2 wb left to mt. hope, v2 did not see v1
65	2/16/2005	12:06	Ins	Rep	1	1	2	1	10	REnd	v2 rear end v1, v1 went thru intersection hit curb, v1 diabetes shock
66	2/29/2005	7:10	Ins	Rep	1	1	1	2	7	Left	v1 eb elmwood, v2 wb lt - hit v1
142	0/14/2003	20:09	Lnk	Non	4	1	2	3	9,66	REnd	V2 TURNING RIGHT WHEN REARENDED BY V1 GOING STRAIGHT. V1 COULDN'T STOP IN TIMED DUE TO WET ROADS.
143	0/15/2003	16:45	Ins	Unk	1	1	1	2	4,7	REnd	V2 STOPPED AT LIGHT, V1 FAILED TO STOP AND REARENDED V2
144	0/17/2003	12:58	Ins	Unk	1	1	1	2		Rght	V2 TURNING RIGHT SB WAS STRUCK BY V1 SB.
146	0/27/2003	6:14	Lnk	Rep	4	1	2	3	60	H-On	V1 SWERED TO AVOID ABRUPTLY STOPPED CAR IN FRONT AND STRUCK V2 NB HEAD ON.
147	0/27/2003	20:05	Lnk	Rep	4	1	1	1	7	Left	V1 ATTEMPTING TO TURN RIGHT ACROSS 3 LANES TO GET INTO PARKING LOT. V1 STRUCK V2 NB.
148	0/27/2003	17:15	Ins	Rep	4	1	2	3	7	REnd	V 1 COULDN'T STOP QUICK ENOUGH DUE TO WET PAVEMENT AND REARENDED V2

DETAILS OF ACCIDENT HISTORY

SRF Associates

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County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
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P.I.N. _____
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File _____
By _____
Page Number 6

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
149	0/29/2003	10:24	Ins	Rep	1	1	2	3	,7,18	Left	V2 TURNED LEFT IN FRONT OF V1. V1 SAID SHE HAD GREEN LIGHT, V2 SAID SHE HAD A YELLOW LEFT SIGNAL AND SHE RAN THE LIGHT. V1 STRUCK V2.
150	0/30/2003	13:27	Ins	Rep	1	1	1	1	9	REnd	V1 REARENED V2 WHEN TRAFFIC STARTED UP THEN SUDDENLY STOPPED.
151	1/3/2003	14:45	Lnk	Rep	1	1	2	2	7,20	Left	V1 EXITING DRIVEWAY ATTEMPTING TO GET INTO NB LANE WHEN STRUCK V2 ALREADY NB
152	1/6/2003	15:45	Lnk	Non	1	1	1	2	9	REnd	BOTH STOPPED AT LIGHT V1 ADJUSTING FOOT, SLIPPED OFF CLUTCH AND REARENDED V2.
153	1/7/2003	12:20	Lnk	Unk	1	1	1	1	9	REnd	V2 STOPPED IN TRAFFIC WHEN STRUCK BY V1
154	1/10/2003	14:23	Ins	Rep	1	1	1	1	14	Pedn	V1 SB, PED RAN NW INTO CROSSWALK AND WAS STRUCK BY V1
156	1/21/2003	17:18	Ins	Rep	4	1	1	1	4,17	RAng	V1 SB DISREGARDED RED LIGHT AND STRUCK V2 WB
157	1/24/2003	16:55	Ins	Rep	4	2	2	3	9,66	REnd	V2 STOPPED AT INTERSECTION AS THE SIGNAL TURNED RED, V1 THOUGHT V2 WAS GOING THROUGH LIGHT AND TRIED TO STOP BUT SLID ON PAVEMENT AND REARENDED V1
158	1/29/2003	17:30	Ins	Rep	4	1	2	2	,7	Left	V1 TURNING LEFT FAILED TO YIELD R.O.W . V1 SB STRUCK V2 AS HE TURNED IN FROT OF HIM

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe

Town of Rochester

Street Name: Mt Hope Ave

Route Number: 15

Location: Mt Hope Ave

Milepost: To:

Date of Report: 10/1/200

P.I.N. _____

Case No. _____

File _____

By _____

Page Number 7

PERIOD STUDIED

From 10/14/200

To: 12/29/200

26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
159	12/1/2003	15:33	Ins	Unk	1	1	1	2	9	Over	V1 TRAVELING SW BEHIND V2. V1 CHANGED INTO TURNING LANE AND STRUCK V2
160	12/2/2003	11:59	Ins	Rep	1	1	2	2	7,18	Left	V2 SB STRUCK V1 WHO WAS TURNING LEFT
161	12/2/2003	17:35	Lnk	Unk	4	1	4	1	9	REnd	V3 STOPPED AT LIGHT, V2 STOPPED BEHIND V3, V1 COMING BEHIND V2 ATTEMPTED TO STOP AND SLID INTO V2 WHO THEN REARENDED V3
162	2/10/2003	12:45	Lnk	Rep	1	1	1	1	7	Rght	V1 ATTEMPTING TO ENTER TRAFFIC FROM DRIVEWAY, OUTSIDE SB LANE WAS STOPPED BUT TRAFFIC IN INSIDE LANE WASN'T, V1 STRUCK V2 AS HE PULLED OUT
163	2/12/2003	7:50	Ins	Unk	1	1	2	4	4,66	RAng	V1 WB NOT PAYING ATTENTION TO SIGNAL CHANGING, TRIED TO STOP AND SLID INTO V2 NB.
164	2/15/2003	14:02	Lnk	Rep	1	2	2	2	,7	Left	V2 MAKING LEFT TURN INTO DRIVEWAY WAS STRUCK BY V1 SB
165	2/19/2003	15:43	Ins	Non	1	1	2	2	4,66	REnd	TRAFFIC WAS STOPPED AND THEN STARTED TO MOVE, THEN STOPPED SUDDENLY AND V1 SLID ON ICE AND REARENDED V2
166	2/26/2003	16:51	Ins	Rep	1	1	1	2	7	RAng	V1 EXITING BK STRAIGHT ACROSS WHEN STRUCK BY V2 THAT COULD AVOID HIM.
167	1/2/2004	12:00	Lnk	Non	1	1	1	2	9	REnd	V2 CAME TO STOP DUE TO HEAVY TRAFFIC. V1 REARENDED V2.

DETAILS OF ACCIDENT HISTORY

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Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 8

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
168	1/3/2004	10:40	Lnk	Unk	1	1	1	2	18	Over	V1 LEFTS TURNING SIGNAL STAYED ON WHEN TRYING TO TURN RIGHT INTO PAKRING LOT. V2 THOUGHT V1 WAS TURNING LEFT AND TRIED TO PASS ON RIGHT. V1 STRUCK V2
169	1/6/2004	17:22	Lnk	Non	4	1	1	2	4,9	REnd	V2 STOPPED IN TRAFFIC WAS REAENDED BY V1
170	1/6/2004	14:02	Lnk	Rep	1	1	4	2	66,7	RAng	V2 CROSSING FROM EAST TO WEST, HAVING CAR PROBLEMS AND WAS STRUCK BY V1 SB WHO COULDN'T AVOID IT. V2 THEN HIT V3 WHO WAS STOPPED IN TRAFFIC
171	1/13/2004	14:53	Lnk	Rep	1	1	4	4	7	Rght	V1 TURNING RIGHT OUT OF DRIVEWAY STRUCK V2 WHO WAS SB
172	1/16/2004	19:30	Lnk	Rep	4	1	4	1	4,7	RAng	V1 WAVED ON BY 2 VEHICLES TO PULL OUT OF OF DRIVEWAY WAS STRUCK BY V2 WHO CENTER LANE NB
173	1/17/2004	18:40	Lnk	Non	4	1	4	1	,7,4	RAng	V2 PULLING OUT OF PARKING LOT, BUMPER HANGING OUT. V1 SB COULDN'T NOT MANUVER AROUND IT AND STRUCK V2
174	1/18/2004	11:30	Ins	Rep	1	1	4	2	4	FixO	BACKING OUT OF DRIVEWAY, STEPPED ON ACCELERATER INSTEAD OF BRAKE AND HIT SIGN POST.
175	1/21/2004	9:00	Lnk	Unk	1	1	2	1	20,4	Over	V1 CHANGING LANES AND STRUCK V2.
176	1/23/2004	15:45	Lnk	Rep	1	1	1	1	7,4	RAng	V1 EXITING PARKING LOT STRUCK V2 SB

DETAILS OF ACCIDENT HISTORY

SRF Associates

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County of Monroe
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Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 9

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
177	1/28/2004	14:55	Lnk	Non	1	1	5	4	,7	Left	V2 TURNING LEFT FAILED TO YIELD R.O.W. V1 COULDN'T NOT AVOID IT AND STRUCK V2
180	2/5/2004	15:57	Ins	Rep	1	1	1	1	42	REnd	V1 SB ATT TO STOP AND HAD BRAKE FAILURE CAUSING HIM TO REAREND V2 WHICH THEN STRUCK V3
182	2/24/2004	10:46	Lnk	Unk	1	1	1	2	7	Left	V2 SB CENTER LANE, V1 ATT TO ENTER NB TRAFFIC AND STRUCK V2.
183	3/8/2004	15:30	Ins	Unk	4	1	1	2	9	Over	BOTH TURNING RIGHT NB AND V1 WENT INTO V2'S LANE AND STRUCK V2
184	3/13/2004	20:50	Lnk	Unk	4	1	1	1	4	RAng	V1 ATTEMPTED LEFT TURN OUT OF PARKING LOT STRUCK V2 NB
185	3/16/2004	14:30	Ins	Rep	1	2	4	2	9,66	Side	BOTH TRAVLEING SB WHEN V2 LOST CONROL DUE TO SNOW, SKIDDED AND WAS STRUCK BY V1
188	3/25/2004	16:25	Lnk	Unk	1	1	2	3	60	REnd	UNINVOLVED VEH CAME TO ABRUPT STOP WHICH CAUSED V2 TO SLOW AND V1 TO REAREND V2
190	3/30/2004	19:46	Lnk	Rep	4	1	1	2	7	RAng	V2 ATTEMPTING TO MAKE LEFT INTO DUNKIN DONUTS WAS STRUCK BY V1 NB
191	3/31/2004	13:00	Ins	Rep	1	1	1	2	,7	RAng	V1 MAKING LEFT ON SB MT HOPE STRUCK V2 NB MAKING A LEFT INTO GAS STATION.
192	4/1/2004	23:06	Ins	Rep	4	3	2	3	4,7	Left	V1 NB ATTEMPTING LEFT TURN STRUCK V2 SB
193	4/2/2004	8:50	Lnk	Rep	1	1	2	2	,7	Left	V1 SB STRUCK V2 ATTEMPTING A LEFT TURN INTO PARKING LOT

DETAILS OF ACCIDENT HISTORY

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Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 10

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
194	4/2/2004	8:00	Ins	Rep	1	1	2	2	20	Over	BOTH NB. V1 IN CURB LANE, CHANGING LANES FOR LEFT TURN AND STRIKES V2
195	4/2/2004	19:53	Ins	Non	4	3	2	3	4	Over	V2 PREPARING TO MAKE RIGHT TURN WHEN V1 WHICHED LANES AND STRUCK V2
197	4/17/2004	7:29	Ins	Unk	1	1	1	1	,7,18	Left	V1 SB STRUCK V2 WHEN ATTEMPTING LEFT TURN
199	4/28/2004	12:40	Lnk	Unk	1	1	1	1	9	REnd	2 STOPPING IN TRAFFIC WHEN V1 REARENDED V2
200	5/2/2004	0:01	Lnk	Rep	4	1	2	2	20,5	Over	V1 WAS CHANGING LANES, NEVER SAW V2 NEXT TO HER. V1 STRUCK V2
201	5/3/2004	8:58	Lnk	Rep	1	1	1	2	4,9	REnd	V1 REARENDED V2. V1 DIDN'T NOTICE V2 SLOWING DOWN
202	5/5/2004	17:00	Ins	Non	1	1	1	2	,18	Side	V1 TURNING RIGHT INTO SB LANE, V2 TURNING LEFT, DROVE AROUND UNINVOLVED VEH ACROSS DOUBLE LINE. V1 COULDN'T AVOID HITTING V2
203	5/8/2004	16:10	Lnk	Rep	1	1	2	3	7	RAng	V1 EXITING HESS STRUCK V2 SB
204	5/9/2004	2:45	Ins	Rep	4	1	1	1	17	Rght	V1 SB RAN LIGHT ABS STRUCK V2 TURNING RIGHT
205	5/10/2004	18:39	Ins	Unk	1	1	1	1	,18	Left	BOTH HAD GREEN LIGHT. V1 NB STRAIGHT, V2 ATTEMPTING LEFT TURN WAS STRUCK BY V1.
206	5/12/2004	8:18	Lnk	Unk	1	1	1	2	,7	Left	V1 SB STRUCK BY V2 EXITING LEFT OUT OF PARKING LOT

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe

Town of Rochester

Street Name: Mt Hope Ave

Route Number: 15

Location: Mt Hope Ave

Milepost: To:

Date of Report: 10/1/200

P.I.N. _____

Case No. _____

File _____

By _____

Page Number 11

PERIOD STUDIED

From 10/14/200

To: 12/29/200

26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
208	5/15/2004	12:52	Lnk	Unk	1	1	2	3	7	RAng	V1 TURNING LEFT FROM PARKING LOT COLLIDED WITH V1 IN THE SB LEFT LANE
210	5/19/2004	13:17	Lnk	Non	1	1	1	1	7	REnd	V2 STOPPED IN TRAFFIC WAS REARENDED BY V1
211	5/20/2004	12:00	Ins	Rep	1	1	1	1	7	Left	V1 NB ATTMEPTING LEFT TURN FAILED TO YIELD V2 SB. V1 STRUCK V2
212	5/23/2004	12:56	Lnk	Rep	1	1	1	1	,7	RAng	V2 SB ATTMEPTING LEFT TURN INTO CVS FAILED TO YIELD R.O.W V1 NB. V1 STRUCK V2.
213	5/23/2004	0:10	Ins	Rep	4	1	2	3	,18,20	Over	BOTH NB ATTEMPTING RIGHT TURNS AND V2 STARTING TURNING INTO CURB LANE WHERE V1 WAS. V1 TRIED TO AVOID V2 BUT STRUCK HIM
214	6/1/2004	10:47	Lnk	Unk	1	1	1	2	9	REnd	V2 SLOWED DOWN TO TURN INTO PARKING LOT WHEN V1 STRUCK V2 FROM BEHIND.
215	6/8/2004	16:00	Ins	Rep	1	1	1	1	7,4	Left	V1 NB MAKING LEFT TURN FAILED TO YIELD V2 SB. V1 STRUCK V2
216	6/9/2004	7:48	Ins	Rep	1	1	1	1	,7	RAng	V2 LEFT TURN, FAILED TO YIELD R.O.W. V1 STRUCK V2
217	6/9/2004	13:58	Lnk	Rep	1	1	1	1	4	Left	V1 MAKING LEFT OUT OF PARKING LOT WAS LOOKING BACK OVER RIGHT SHOULDER WHEN SHE STRUCK V2 SB.
218	6/10/2004	18:45	Lnk	Rep	1	1	1	1	4,7,4,7	H-On	V1 AND V2 WERE OPPOSITE SIDE OF ROAD ATTEMPTINGTO TURN LEFT AND COLLIDED HEAD ON.

DETAILS OF ACCIDENT HISTORY

SRF Associates

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County of Monroe
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Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
247	0/10/2004	11:40	Lnk	Non	1	1	1	2	7	Left	V1 ATTEMPTING LEFT TURN, FAILED TO YIELD R.O.W AND STRUCK V2 NB.
248	0/14/2004	17:55	Lnk	Unk	3	1	2	3	9,4	REnd	V2 STOPPING IN TRAFFIC WHEN STRUCK BY V1.
249	0/15/2004	10:20	Lnk	Rep	1	1	2	2	7,69	RAng	V1 EXITING CVS ATTEMPTING LEFT TURN STRUCK V2 NB LEFT LANE.
250	0/22/2004	14:43	Ins	Unk	1	2	1	2	7	Rght	V1 TURNING RIGHT OUT OF RALEIGH ST FAILED TO YIELD R.O.W V2 SB. V1 STRUCK V2.
253	0/26/2004	18:47	Lnk	Rep	4	1	1	1	4	H-On	V1 PULLED OUT OF PARKING LOT ONTO NB. V2 MOVED TO SB CENTER LANE TO TURN LEFT. V1 AND V2 COLLIDED.
254	11/2/2004	7:50	Ins	Non	1	1	2	3	9	REnd	V2 ATTEMPTING TO MAKE RIGHT TURN WAS REARENDED BY V1 WHO WAS FOLLOWING TOO CLOSE.
255	11/3/2004	13:30	Lnk	Rep	1	1	1	1	9,4	REnd	V3 ATTEMPTING LEFT TURN WASN'T FULLY IN LEFT TURN LANE. WAS REARENDED BY V2 AND THEN V2 WAS REARENDED BY V1.
257	11/4/2004	19:01	Lnk	Rep	4	1	2	3	4,7	RAng	V1 EXITING PARKING LOT STRUCK V2 SB IN CENTER LANE.
258	11/4/2004	19:54	Ins	Non	4	1	2	3	7,4	REnd	V2 SLOWING DOWN TO MAKE RIGHT TURN WHEN REARENDED BY V1.
259	11/5/2004	10:31	Ins	Non	1	1	1	2		Left	V1 STRUCK V2 SB WHEN MAKING A LEFT TURN.
260	11/9/2004	14:32	Lnk	Unk	1	1	1	1	7	Left	V1 ATTEMPTING A LEFT TURN OUT OF McDS STRUCK V2 NB.

DETAILS OF ACCIDENT HISTORY

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County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 15

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
261	11/8/2004	14:00	Lnk	Unk	1	1	1	2	7,69	Left	V2 EXITING FROM GAS STATION WAS STRUCK BY V1 WHICH WAS TRAVELING EB IN TURNING LEFT LANE.
262	11/9/2004	9:15	Ins	Non	1	1	1	2	42	RAng	V1 WB LOST BRAKE WHEN APPROACHING INTERSECTION AND WENT THROUGH RED LIGHT, STRICKING V2 NB.
263	11/9/2004	15:57	Lnk	Non	1	1	1	1	7	Left	V1 MAKING LEFT TURN OUT OF PARKING LOT STRUCK V2 SB.
264	1/12/2004	17:08	Lnk	Unk	3	1	1	1	9,4	REnd	V2 SLOWING FOR TRAFFIC WHEN STRUCK BY V1.
267	12/1/2004	15:50	Lnk	Rep	1	1	2	2	4,13	Over	V1 IN RIGHT LANE DIDN'T SEE V2 WHEN SWITCHING INTO LEFT LANE AND STRUCK V2.
268	12/3/2004	8:08	Lnk	Unk	1	1	2	4	7,18	Left	V2 SB CENTER LANE SLOWING DOWN TO TURN LEFT, V1 SW EXITING FROM PARKING LOT STRUCK V2.
269	12/6/2004	8:16	Lnk	Rep	1	1	1	2	7	RAng	V1 SB LEFT TURN ONLY LANE STRUCK V2 EXITING EB OUT OF PARKING LOT.
270	2/13/2004	16:15	Lnk	Non	1	1	1	1	4	REnd	V3, V2 AND V1 STOPPED AT SB RED LIGHT. V1 THOUGHT LIGHT TURNED GREEN, TOOK FOOT OFF BRAKE AND STRUCK V2 WHICH THEN STRUCK V3.
271	2/14/2004	21:00	Ins	Unk	4	1	2	4	4	Over	V2 STOPPED IN LEFT TURN LANE, READY TO TURN EB. V1 SB WAS CHANGING FROM CENTER LANE TO V2'S LANE AND STRUCK V2.

DETAILS OF ACCIDENT HISTORY

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Diagram: Mt Hope Av

County of Monroe

Town of Rochester

Street Name: Mt Hope Ave

Route Number: 15

Location: Mt Hope Ave

Milepost: To:

Date of Report: 10/1/200

P.I.N. _____

Case No. _____

File _____

By _____

PERIOD STUDIED

From 10/14/200

To: 12/29/200

26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Lght Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
272	2/16/2004	8:08	Lnk	Non	1	1	1	2	,14	Pedn	PED WAITING IN THE MIDDLE OF THE STREET CROSSED AND WAS STRUCK BY V1.
273	2/18/2004	7:31	Ins	Rep	1	1	1	2	17	RAng	V1 WB RAN RED LIGHT AND STRUCK V2 SB.
274	2/20/2004	13:40	Ins	Rep	1	1	1	2	9	REnd	V3 AND V2 STOPPED DUE TO HEAVY TRAFFIC, V1 REARENDED V2, WHICH CAUSED V2 TO REAREND V3.
278	2/6/2005	2:12	Ins	Rep	4	4	2	1	2,13	FixO	V1 FAILED TO STAY IN HIS LANE AND STRUCK MEDIAN AND LIGHT POLE.
279	3/9/2005	14:53	Ins	Rep	1	1	1	2	4	REnd	V2 AND V3 STOPPED IN TRAFFIC AT WHICH TIME V1 REARENDED V2 WHICH THEN CAUSED V2 TO REARENDED V3.
284	7/6/2005	16:59	Ins	Non	1	1	1	1	4	REnd	V2 STOPPED AT LIGHT AND WAS STRUCK BY V1.
296	2/13/2005	7:00	Lnk	Rep	2	1	1	2	5,13	Over	V2 TRYING TO MAKE RIGHT TURN WHEN V1 TRYING TO PASS V2 STRUCK V2
297	2/14/2005	7:48	Ins	Rep	1	1	4	2	17,7	RAng	VEH 1 BACKED INTO VEH 2
298	2/15/2005	9:45	Lnk	Unk	1	1	1	1	20,20	Over	V2 SB PASSED DOUBLE LINE INTO ON COMING NB TO PASS GARBAGE TRUCK, V1 ALSO PULLED OUT AND STRUCK V2.
299	0/23/2005	16:18	Lnk	Non	1	1	2	2	,7,4	RAng	V1 CURB SIDE LANE, V2 CENTER LANE. V2 MADE RIGHT TURN FROM CENTER LANE AND STRUCK V1 IN CURB LANE.
300	3/19/2005	14:40	Ins	Rep	1	1	1	2	,7	RAng	V2 EB STOPPED IN MIDDLE OF ROAD AND WAS STRUCK BY V1 SB.

DETAILS OF ACCIDENT HISTORY

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County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 17

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
301	3/26/2005	9:27	Lnk	Unk	1	1	1	1	4,4	Over	V1 HAD LEFT SIGNAL ON AND WENT RIGHT AROUND A VEH INTO PARKING LOT. V2 HAD HER RIGHT SIGNAL ON TO GO INTO SAME PARKING LOT. V1 STRUCK V2.
304	5/20/2005	17:55	Ins	Unk	1	1	1	1	9	REnd	V2 STOPPED FOR RED LIGHT AND WAS REARENDED BY V1.
305	1/5/2005	15:12	Lnk	Unk	1	2	4	2	66	RAng	V1 EXITING PARKING LOT WB AND STRUCK V2 NB
306	1/6/2005	15:37	Ins	Non	1	1	4	1	9	REnd	V2 STOPPED AT LIGHT WHEN REARENDED BY V1.
307	1/18/2005	15:45	Lnk	Unk	1	1	2	1	20	Over	V2 SB IN LEFT TURN LANE. V1 NOT SEEING V2 STRUCK V2 WHEN CHANGING INTO LEFT LANE. V1 BOUNCED OFF V2 AND STRUCK V3.
308	1/19/2005	11:55	Ins	Non	1	4	2	2		Over	BOTH NB TURNING RIGHT. V1 (INSIDE) TOOK WIDE TURN AND STRUCK V2.
309	1/19/2005	10:50	Ins	Non	1	1	4	4	18,20	Over	V1 CENTER LANE, V2 CURB LANE. V1 ATTEMPTED A QUICK RIGHT TURN FROM CENTER LANE AND STRUCK V2.
310	1/7/2005	21:14	Lnk	Unk	4	1	5	2	20,4	Over	V2 CURB LANE, V1 OUTSIDE LANE TRIED TO UNSAFELY CHANGE LANES AND STRUCK V2.
311	1/28/2005	15:50	Ins	Unk	1	1	1	1	4,9	REnd	V2 STOPPED IN TRAFFIC NB WHEN REARENDED BY V1.
312	2/2/2005	16:02	Lnk	Unk	1	1	1	1	7	Left	V1 EXITING PARKING LOT EB STRUCK V2 SB.
313	2/7/2005	14:30	Lnk	Unk	1	1	1	2	7,69	Left	V2 SB TURNING LEFT INTO CVS WAS STRUCK BY V1 NB

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Town of Rochester

Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 18

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
314	2/8/2005	17:02	Lnk	Rep	4	1	2	3	7,4	Over	BOTH SB, V1 ATTEMPTING TO CHANGE FROM LEFT TO RIGHT LANE AND STRUCK V2.
315	2/9/2005	18:36	Ins	Rep	4	1	4	4	69,66	Left	V2 SB TURNING LEFT SAID NB CENTER LANES STOPPED TO LET HER THROUGH WHEN V1 NB CURB LANE STRUCK V2.
316	2/15/2005	11:40	Lnk	Unk	1	2	1	2	7,60	RAng	V2 NB WAS WAITING IN THE LEFT TURN LANE. V1 TRYING TO EXIT CVS, MAKING A LEFT TURN. NB STOPPED TO ALLOW V1 TO EXIT BUT V1 DIDN'T SEE V2 AND STRUCK V2
317	2/25/2005	11:35	Ins	Non	1	1	1	1	7,62	RAng	V1 ATTEMPTING TO CROSS SB AND NB TRAFFIC. V1 STRUCK V2 NB.
318	2/25/2005	15:30	Ins	Rep	1	1	1	2	,7,4	Left	V1 NB STRUCK V2 SB TURNING LEFT, CLAIMS SHE HAD YELLOW LIGHT
319	2/26/2005	17:10	Lnk	Rep	1	1	2	2		Rght	V2 EXITING OUT OF HESS INTO LEFT TURN ONLY LANE WHEN STRUCK BY V1 SB CENTER LANE.
320	3/3/2005	11:19	Lnk	Rep	1	1	1	1	7	RAng	V1 EXITING CVS STRUCK V2 NB
321	3/10/2005	22:58	Lnk	Unk	4	1	1	2	4	FixO	V1 MISJUDGE THE ROAD CURVE AND STRUCK THE CURB.
322	3/23/2005	12:31	Lnk	Unk	1	1	1	2	4	REnd	V1 STOPPED IN TRAFFIC IN CENTER LANE, PROCEEDED NB AND REARENDED V2.
324	3/24/2005	20:26	Lnk	Unk	4	1	1	1	64,65	FixO	DEBRIS IN THE ROAD WAY
325	3/29/2005	16:03	Ins	Rep	1	1	1	1	,7,3	RAng	V2 BACKED EB AND FAILED TO YIELD R.O.W V1 SB. V1 STRUCK V2.

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe

Town of Rochester

Street Name: Mt Hope Ave

Route Number: 15

Location: Mt Hope Ave

Milepost: To:

Date of Report: 10/1/200

P.I.N. _____

Case No. _____

File _____

By _____

PERIOD STUDIED

From 10/14/200

To: 12/29/200

26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
326	3/30/2005	13:19	Lnk	Non	1	1	1	1	3,7	REnd	V1 MISSED TURN WAN WAS BACKING SB ON THE NB. V1 STRUCK V2 GOING NORTH ON NB
328	4/14/2005	14:22	Lnk	Rep	1	1	1	1	13	Over	V1 IN LEFT LANE, V2 RIGHT LANE. V1 ATTEMPTED TO CHANGE LANES AND STRUCK V2.
329	4/15/2005	17:00	Ins	Non	1	1	1	1	7	Left	V1 ATTEMPTING TO TURN LEFT. CENTER SB LANE STOPPED TO LEFT V1 CROSS BUT RIGHT LANE, V2 SB DIDN'T STOP. V1 STRUCK V2.
330	4/17/2005	19:15	Ins	Non	1	1	1	1	9,9	REnd	V3 AND V2 STOPPED AT LIGHT WHEN V1 REARENDED V2 WHICH THEN REARENDED V3.
331	4/25/2005	14:40	Ins	Rep	1	1	1	1	7,17	RAng	V1 ENTERING MT HOPE EB STRUCK V2 SB CENTER LANE.
332	4/25/2005	6:55	Ins	Unk	1	1	1	1		Over	BOTH AT SIGNAL, WHEN TURNED GREEN BOTH CLAIM THE OTHER SWERVED INTO THEIR LANE.
333	4/26/2005	14:29	Lnk	Unk	1	1	1	1	18,7	FixO	V1 TURNING NORTH STRUCK CURB/ HYDRANT TO AVOID NB TRAFFIC.
334	5/10/2005	12:34	Ins	Unk	1	2	1	1	9	REnd	V2 STOPPED IN HEAVY TRAFFIC WHEN STRUCK IN THE BEHIND BY V1.
335	5/10/2005	18:30	Lnk	Unk	1	1	1	1	,7	Left	V2 NB TURNED LEFT IN FRONT OF V1 SB, CAUSING V1 TO STRIKE V2.
336	5/12/2005	9:37	Ins	Rep	1	1	1	1	19	REnd	V2 NB ATTEMPTING TO TURN RIGHT INTO PARKING LOT WAS REARENDED BY V1

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 20

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
337	5/24/2005	9:55	Lnk	Unk	1	1	2	3	9	REnd	UNKNOWN TRUCK CUT IN FRONT OF V1 CAUSING HIM TO STOP ABURPTLY, CAUSING V2 BEHIND V1 TO REARENDED V1.
338	5/31/2005	9:00	Lnk	Non	1	1	1	1		Bike	BICYCLIST TRAVELING NB IN SB TRAFFIC. V1 EXITING PARKING LOT EB. BICYCLIST STRUCK V1.
339	6/4/2005	0:22	Ins	Rep	4	1	1	2	4	Over	V2 IN CENTER LANE WAS STRUCK BY V1 SB TRYING TO TURN LEFT.
340	0/21/2005	7:45	Ins	Rep	1	1	1	1	13,13	Over	V2 IN TURNING LANE V1 NEXT LANE WHEN STRUCK V2.
341	7/26/2005	15:12	Lnk	Rep	1	1	1	2	69,7	Left	V1 NB, V2 SB TURNING LEFT, STATES VEH STOPPED TO LET HER BY, WHEN V1 STRUCK V2
342	1/10/2005	18:33	Ins	Rep	4	1	1	2	9,4	REnd	V2 AND V3 WERE STOPPED IN TRAFFIC WHEN V1 REARENDED V2 WHICH REARENDED V3.
343	1/28/2005	15:25	Lnk	Unk	1	1	1	2	,7	Left	V2 SB ATTEMPTED LEFT TURN WHEN STRUCK BY V1 NB
344	8/30/2005	16:04	Lnk	Rep	1	2	1	2	9,4,9	Left	V2 MAKING LEFT OUT OF DRIVEWAY, TRAFFIC STOPPED TO LET HER BY WHEN V1 NB STRUCK V2.
345	6/3/2005	16:15	Lnk	Unk	1	1	1	2	4	REnd	V2 STOPPED AT LIGHT WHEN REARENDED BY V1.
346	2/3/2005	14:20	Lnk	Rep	1	1	2	4	7	RAng	V1 EXITING PARKING LOT EB STRUCK V2 SB.
347	7/21/2005	11:45	Lnk	Rep	1	1	1	1	7	RAng	V1 EXITING DRIVEWAY, 1 LANE STOPPED TO LET V1 EXIT. V2 NB WAS STRUCK BY V1

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe

Town of Rochester

Street Name: Mt Hope Ave

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348	3/10/2005	7:58	Ins	Unk	1	1	1	1	4	REnd	V2 STOPPED AT SIGNAL WHEN REARENDED BY V1.
349	9/8/2005	7:00	Lnk	Rep	1	1	1	2	7	Left	V1 LEFT TURN OUT OF DRIVEWAY WHEN STRUCK V2 NB
350	0/13/2005	11:37	Lnk	Unk	1	2	1	2	13	Over	V1 NB TRYING TO GET INTO V2 NB LANE. V1 STRUCK V2.
351	5/9/2005	17:00	Lnk	Rep	1	1	1	1	7,20	Left	V1 EXITING PARKING LOT STRUCK V2 SB
352	1/23/2005	8:44	Lnk	Rep	1	1	2	1	,7	RAng	V1 SN IN TURN ONLY LANE. V2 ATTEMPTED LEFT TURN NB FROM PARKING LOT WHEN STRUCK BY V1.
353	6/28/2005	20:45	Ins	Rep	3	1	1	1	9	REnd	V3 SB HAD TO STOP FOR ANOTHER VEH WHEN REARENDED BY V2 WHICH WAS REARENDED BY V1
354	5/14/2005	16:20	Ins	Non	1	1	1	2	4	RAng	V2 NB WHEN STRUCK BY V1 WB
355	1/4/2005	13:58	Lnk	Unk	1	1	1	2	7,4	RAng	V1 EXITING OUT OF HESS DID NOT SEE V2. V1 STRUCK V2
356	2/3/2005	12:27	Lnk	Unk	1	1	2	3	7	Left	V2 ATTEMPTING LEFT TURN WHEN STRUCK BY V1 NB
357	2/13/2005	12:36	Ins	Rep	1	1	1	1	,18,20	REnd	V2 CHANGING LANES LEFT TO RIGHT, V1 ATTEMPTING RIGHT TURN. V1 REARENDED V2.
358	2/3/2005	14:20	Lnk	Rep	1	1	2	4	7,69	RAng	V1 EXITING PLAZA NB WHEN STRUCK V2 SB
359	3/18/2005	20:10	Lnk	Rep	4	1	1	1	,7	RAng	V2 PULLIN GOUT OF HESS WHEN V1 SB STRUCK V2
360	6/6/2005	22:35	Ins	Rep	4	1	1	1		Rght	V1 TURNING RIGHT WHEN V1 STRUCK V2 SB

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
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Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 22

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
361	6/10/2005	14:00	Ins	Unk	1	1	1	1	20	Over	V1 LEFT LANE, V2 RIGHT LANE. V1 SWITCHED LANES AND STRUCK V2
362	6/13/2005	13:38	Lnk	Rep	1	1	1	2	7	Left	V1 ATTEMPTING LEFT TURN INTO CVS. V1 STRUCK V2 NB
363	6/13/2005	17:17	Ins	Non	1	1	1	1	4	RAng	V1 MAKING RIGHT TURN WHEN STRUCK V2 WHO WAS STOPPED IN TRAFFIC.
364	6/14/2005	10:37	Ins	Non	1	1	1	1	4	REnd	V1 STOPPED AT LIGHT NB WHEN REARENDED BY V2
365	6/15/2005	15:45	Lnk	Unk	1	1	1	1		REnd	V2 STOPPED SHORT DUE TO ANOTHER VEH WHEN V1 REARENDED V2.
366	7/1/2005	16:20	Lnk	Rep	1	1	1	1	7	RAng	V1 PULLING OUT OF PARKING LOT WHEN HE STRUCK V2 NB
367	7/9/2005	22:25	Ins	Non	4	2	1	1	4,7	Bike	V1 STRUCK BICYCLIST, NOT PAYING ATTENTIING
368	7/12/2005	22:36	Lnk	Non	4	1	1	1	20	Over	V1 AND V2 NB, V1 TRIED TO PASS V2 WHEN V1 STRUCK V2.
369	7/24/2005	15:00	Ins	Unk	1	1	1	1	20	Over	V1 STRUCK V2 WHEN TRYING TO PASS GOING SB
370	8/2/2005	17:10	Ins	Rep	1	1	1	1	4	REnd	V2 STOPPED IN TRAFFIC AND V1 FAILED TO. V1 REARENDED V2.
371	8/3/2005	17:21	Lnk	Rep	1	1	1	1	13	Over	V1 TRIED TO GET INTO CENTER AND FAILED TO SEE V2 ALREADY THERE.
372	8/6/2005	19:07	Lnk	Rep	1	1	1	1	7	RAng	V1 TRYING TO CROSS TRAFFIC TO GET TO HESS WHEN V1 STRUCK V2 SB
373	8/11/2005	8:50	Lnk	Unk	1	1	1	1	4	Over	V1 CLAIMED TO HAVE PAIN WHEN STRIKING V2, THEN STRIKING THE CURB.

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
Milepost: To:
Date of Report: 10/1/200

P.I.N. _____
Case No. _____
File _____
By _____
Page Number 23

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
374	8/17/2005	20:58	Ins	Unk	4	1	1	1		REnd	V2 PULLED TO SIDE WAITING FOR AMBULANCE TO PASS WHEN STRUCK IN THE REAR BY V1.
375	8/22/2005	13:30	Lnk	Rep	1	1	1	1	7	RAng	V1 EXITING OUT OF PARKING LOT STRUCK V2 SB WHICH THEN V2 STRUCK V3
376	8/22/2005	13:30	Lnk	Rep	1	1	1	1		REnd	V1 WAS STRUCK BY ANOTHER CAR WHICH CAUSED V1 TO REAREND V2
377	9/5/2005	14:55	Ins	Unk	1	1	1	1	13	Over	V1 PULLED OUT NB INFRONT OF V2. CAUSING V2 TO STRICK V1.
378	9/6/2005	14:45	Ins	Non	1	1	1	1	7	Over	V1 LEFT LANE V2 RIGHT LANE. V1 CHANGED LANES AND FAILED TO YIELD R.O.W V1 STRUCK V2.
379	9/9/2005	14:56	Lnk	Rep	1	1	1	1	4,7	RAng	V1 EXITING HESS STRUCK V2 SB
380	9/26/2005	16:16	Ins	Rep	1	1	2	3	7	Left	V1 ATTEMPTING LEFT TURN STRUCK V2 SB
381	9/27/2005	17:17	Ins	Rep	1	1	1	1	7	RAng	V1 WB WAIVED ON BY OTHER VEH WHEN HE STRUCK V2 SB.
382	9/30/2005	14:12	Ins	Rep	3	1	1	1	20	Over	V1 IN CENTER LANE V2 RIGHT LANE. V1 SWICTHING LANES AND STRUCK V2.
383	10/9/2005	18:52	Ins	Rep	4	1	2	2	17	Left	V2 ATTEMPTING LEFT TURN WAS STRUCK BY V1 EB WHO DISGREGARDED SIGNAL.
385	0/16/2005	13:18	Lnk	Rep	1	1	1	2	7	RAng	V2 EXITING FROM HESS WHEN STRUCK BY V1

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
Route Number: 15
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Milepost: To:
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P.I.N. _____
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By _____
Page Number 24

PERIOD STUDIED
From 10/14/200
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
386	0/17/2005	10:38	Lnk	Rep	1	1	1	2	7	RAng	V1 EXITING HESS FAILED TO YEILD V1 SB
387	0/17/2005	16:49	Lnk	Unk	1	1	1	1	4,4,7	RAng	V1 EXITING HESS WAS STRUCK BY V2 SB
388	0/27/2005	21:30	Ins	Unk	1	1	1	1	,17,7	RAng	V2 WENT THROUGH RED LIGHT AND STRUCK V1 NB
389	11/8/2005	11:40	Lnk	Unk	1	1	1	1	20	Over	V1 CHANGED LANES AND FAILED TO SEE V2. V1 STRUCK V2.
390	1/20/2005	0:29	Ins	Rep	4	1	1	2	4	Over	V1 STRUCK V2 WHEN CHANGING LANES.
391	1/21/2005	17:40	Lnk	Unk	4	1	1	1	4	REnd	V2 STOPPED IN TRAFFIC WHEN REARENDED BY V1
392	1/22/2005	7:28	Ins	Rep	1	1	2	3	9	REnd	V2 SUDDENLY STOPS FOR RED LIGHT WHEN REARENDED BY V1. V1 THEN REARENDS V3 WAITING TO MAKE LEFT TURN.
393	1/26/2005	12:20	Lnk	Non	1	1	2	2	7	RAng	V1 EXITING HESS NB STRUCK V2 SB
394	1/30/2005	12:56	Lnk	Rep	1	1	1	2	42,9	REnd	V1 HAD BRAKE DEFECTS AND REARENDED V2 WHO THEN REARENDED V3.
395	12/2/2005	16:05	Lnk	Unk	4	1	1	2	9	REnd	V2 STOPPED IN TRAFFIC WAS REARENDED BY V1
396	12/7/2005	15:45	Lnk	Unk	1	1	2	4	20	Over	V1 CHANGED LANES IMPROPERLY AND STRUCK V2
397	12/8/2005	7:40	Ins	Unk	1	1	2	1	20	Over	V1 ATTEMPTING RIGHT TURN WHEN OVERTAKING V2 ALREADY IN RIGHT LANE.
398	12/8/2005	11:54	Lnk	Rep	1	1	1	1	3	REnd	V2 STOPPED IN TRAFFIC WAS STRUCK BY V1 BACKING UP
399	12/9/2005	10:21	Lnk	Unk	1	1	4	4	7	RAng	V1 EXITING HESS WHEN STRIKING V2 SB.

DETAILS OF ACCIDENT HISTORY

SRF Associates

Diagram: Mt Hope Av

County of Monroe
Town of Rochester

Street Name: Mt Hope Ave
Route Number: 15
Location: Mt Hope Ave
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P.I.N. _____
Case No. _____
File _____
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Page Number 25

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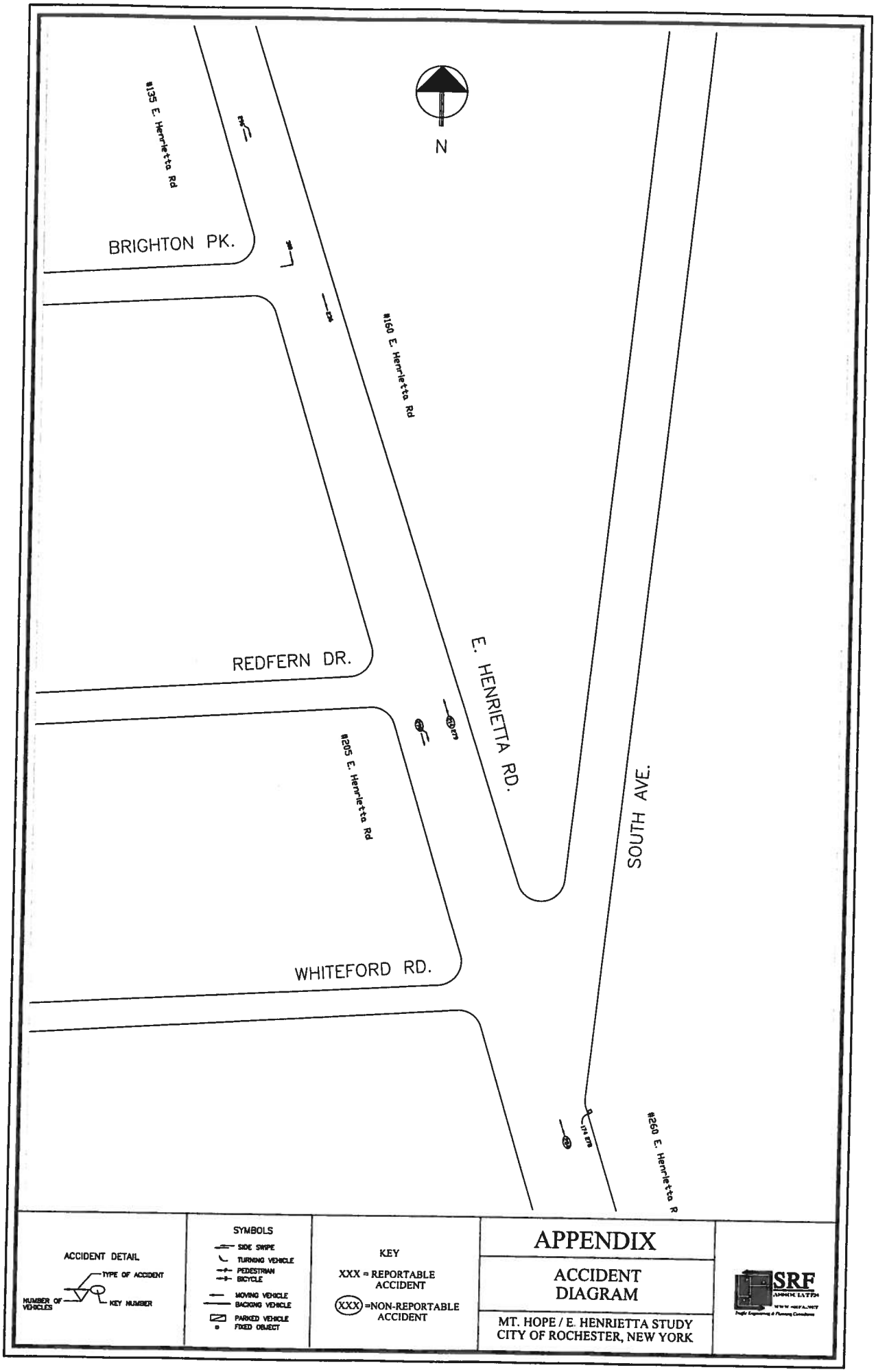
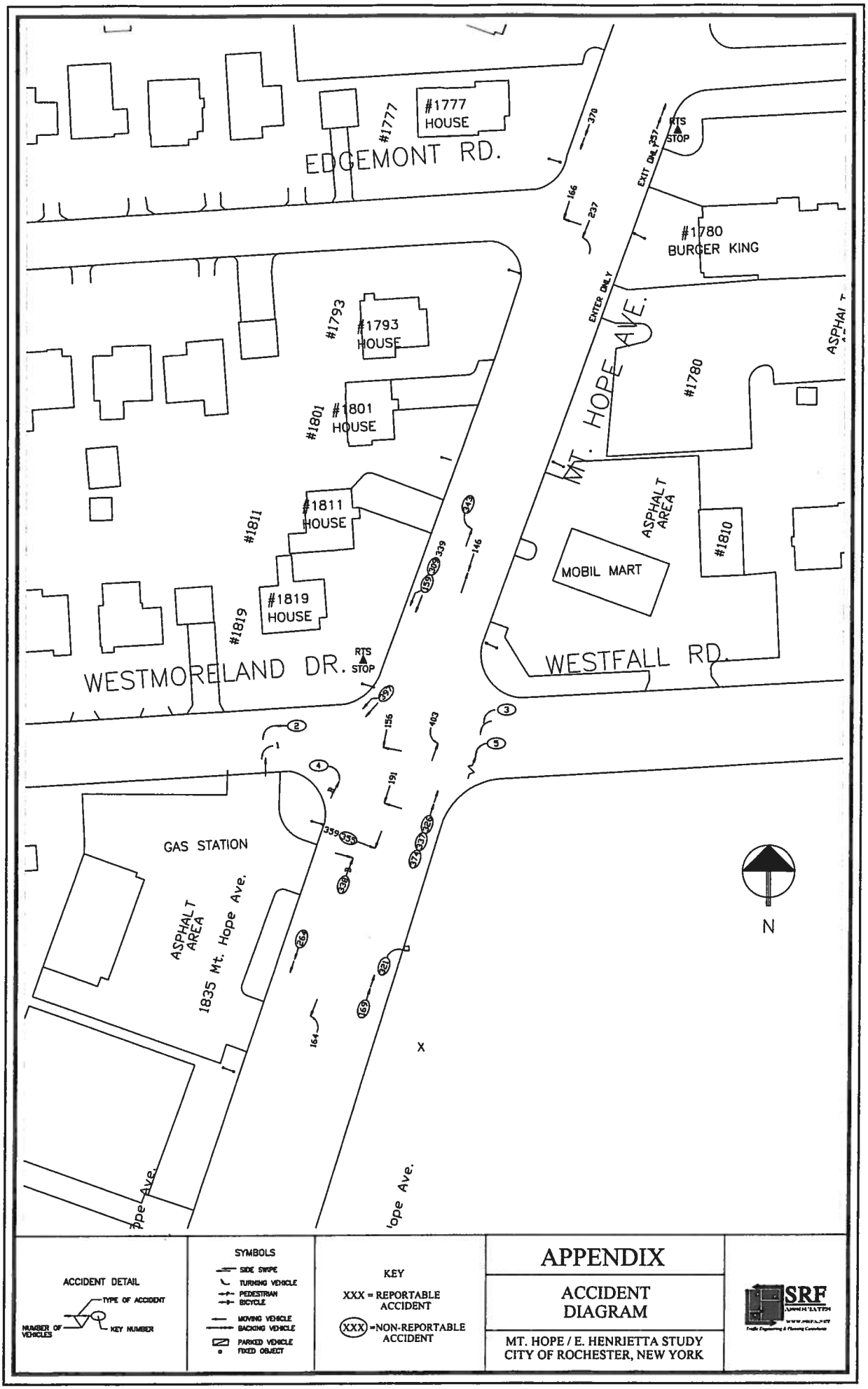
To: 12/29/200
26 Months

(1) No.	(2) Date	(3) Time	(4) TYPE	(5) Severity	(6) Light Cond	(7) Road Cond	(8) Surf Cond	(9) Weather	(10) Apparent Contributing Factors	(11) Acc. Type	(12) Description
400	12/9/2005	16:00	Lnk	Rep	1	1	2	2	7	RAng	V1 PULLING INTO DUNKIN DONUTS WHEN HE STRUCK V2 NB.
401	2/13/2005	10:51	Lnk	Rep	1	1	1	1	20,18	Over	V1 CHANGING LANES AND STRUCK V2
402	2/17/2005	22:40	Lnk	Rep	4	1	2	2	66	Side	V1 SB HIT ICE PATCH, SLID AND SIDESWIPED V2.
403	2/19/2005	17:43	Ins	Rep	4	1	4	1	7	Left	V1 SB ATTEMPTED LEFT TURN AND STRUCK V2 NB

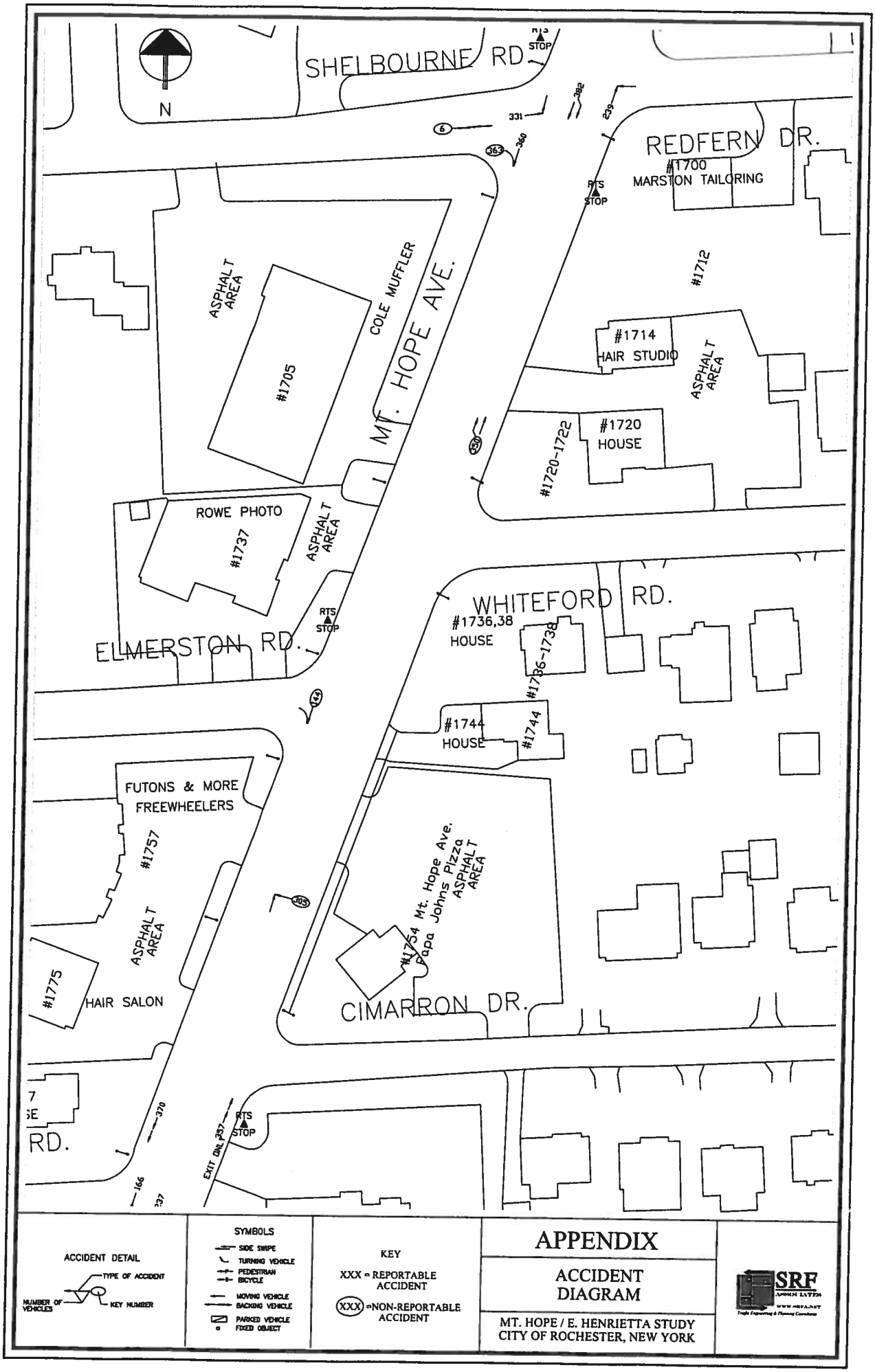

N
#135 E. Henrietta Rd
BRIGHTON PK.
#160 E. Henrietta Rd
REDFERN DR.
E. HENRIETTA RD.
#205 E. Henrietta Rd
SOUTH AVE.
WHITEFORD RD.
#260 E. Henrietta R
ACCIDENT DETAIL
TYPE OF ACCIDENT
NUMBER OF VEHICLES
KEY NUMBER
SYMBOLS
SIDE SWIPE
TURNING VEHICLE
PEDESTRIAN
BICYCLE
MOVING VEHICLE
BACKING VEHICLE
PARKED VEHICLE
FIXED OBJECT
KEY
XXX = REPORTABLE ACCIDENT
(XXX) =NON-REPORTABLE ACCIDENT
APPENDIX
ACCIDENT DIAGRAM
MT. HOPE / E. HENRIETTA STUDY
CITY OF ROCHESTER, NEW YORK
SRF



APPENDIX

ACCIDENT DIAGRAM

MT. HOPE / E. HENRIETTA STUDY
CITY OF ROCHESTER, NEW YORK


N
SHELBOURNE RD.
STOP
331
382
239
6
363
360
REDFERN DR.
#1700
MARSTON TAILORING
RTS
STOP
#1712
ASPHALT
AREA
COLE MUFFLER
#1705
MT. HOPE AVE.
#1714
HAIR STUDIO
ASPHALT
AREA
350
#1720-1722
#1720
HOUSE
ROWE PHOTO
#1737
ASPHALT
AREA
RTS
STOP
ELMERSTON RD.
WHITEFORD RD.
#1736,38
HOUSE
#1736-1738
144
#1744
HOUSE
#1744
FUTONS & MORE
FREEWHEELERS
#1757
ASPHALT
AREA
#1754 Mt. Hope Ave.
Papa Johns Pizza
ASPHALT
AREA
305
#1775
HAIR SALON
CIMARRON DR.
RD.
370
RTS
STOP
EXIT ONLY
257
166
237
ACCIDENT DETAIL
TYPE OF ACCIDENT
NUMBER OF VEHICLES
KEY NUMBER
SYMBOLS
SIDE SWIPE
TURNING VEHICLE
PEDESTRIAN
BICYCLE
MOVING VEHICLE
BACKING VEHICLE
PARKED VEHICLE
FIXED OBJECT
KEY
XXX = REPORTABLE ACCIDENT
(XXX) =NON-REPORTABLE ACCIDENT
APPENDIX
ACCIDENT DIAGRAM
MT. HOPE / E. HENRIETTA STUDY
CITY OF ROCHESTER, NEW YORK
SRF

Chapter 3 Traffic Analysis

MT. HOPE & EAST HENRIETTA IMPROVEMENT PROJECT
PM PEAK Midblock Update - 9/29/08

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	2030 NO BUILD Bkgd Rate	2030 NO BUILD Total Bkgd Volume	FRA UofR	Hess	East Side MidBlk	Med. Bldg	Brug Starb Subwy	McD's	Total Site Trips	2030 BUILD Full Build Volumes
1	MT Hope Ave/ Elmwood Ave											
	SR	176	1.74	306							0	306
	ST	732	1.19	869							0	869
	SL	76	1.74	132							0	132
	WR	25	1.74	44							0	44
	WT	528	1.74	919							0	919
	WL	219	1.14	250							0	250
	NR	376	1.15	431							0	431
	NT	777	1.15	896							0	896
	NL	144	1.14	164							0	164
	NB U turn						34				34	34
	ER	181	1.58	285							0	285
	ET	791	1.74	1376							0	1376
	EL	283	1.74	492							0	492
1A	MT Hope Ave/ New Mid Block										0	0
											0	0
	SR		1.74	0	19			29			48	48
	ST		1.28	0					-2		-2	-2
	SL		1.74	0					36		36	36
	SB U turn						22				22	22
	WR		1.74	0					39		39	39
	WT		1.74	0					5		5	5
	WL		1.28	0					58		58	58
	NR		1.28	0					50		50	50
	NT		1.28	0				-20			-20	-20
	NL		1.28	0	59			20			79	79
	NB U turn					13				30	43	43
	ER		1.74	0	51			53			104	104
	ET		1.74	0	5						5	5
	EL		1.74	0	19			80			99	99
2	MT Hope Ave/ Crittenden Blvd										0	0
											0	0
	SR (Crittenden Rd)	56	1.28	72							0	72
	ST (Mt Hope Ave)	721	1.28	925							0	925
	SL1 (Fort Hill Terr)	276	1.28	354							0	354
	SL2 (E Henrietta Rd)	0	1.28	0							0	0
	SB U turn					13			1	22	36	36
	WR1 (Fort Hill)	14	1.28	18							0	18
	WR2 (MT Hope Ave)	159	1.28	204							0	204
	WT (Crittenden Rd)	120	1.28	154							0	154
	WL (MT Hope Ave)	8	1.28	10							0	10
	NR1(E Henrietta Rd)	2	1.28	3							0	3
	NR2 (Fort Hill)	23	1.28	29							0	29
	NT (MT Hope Ave)	598	1.28	767							0	767
	NL (Crittenden Rd)	85	1.28	109							0	109
	ER1 (MT Hope Ave)	144	1.28	185							0	185
	ER2 (E Henrietta Rd)	276	1.28	354							0	354
	ET (Fort Hill)	0	1.28	0							0	0
	EL (MT Hope Ave)	273	1.28	350							0	350

MT. HOPE & EAST HENRIETTA IMPROVEMENT PROJECT
AM PEAK Midblock Update - 9/29/08

			2030 NO BUILD									2030 BUILD
LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Bkgd Rate	Total Bkgd Volume	FRA UofR	Hess	East Side MidBlk	Med. Bldg	Brug Starb Subwy	McD's	Total Site Trips	Full Build Volumes
1	MT Hope Ave/ Elmwood Ave											
	SR	305	1.74	531							0	531
	ST	673	1.28	863							0	863
	SL	37	1.74	64							0	64
	WR	13	1.74	23							0	23
	WT	826	1.74	1437							0	1437
	WL	319	1.28	408							0	408
	NR	128	1.28	164							0	164
	NT	595	1.28	763							0	763
	NL	172	1.28	220							0	220
	NB U Turn						9				9	9
	ER	164	1.74	285							0	285
	ET	532	1.74	926							0	926
	EL	155	1.74	270							0	270
1A	MT Hope Ave/ New Mid block										0	0
											0	0
	SR		1.74	0	3			86			89	89
	ST		1.28	0					-44		-44	-44
	SL		1.74	0					148		148	148
	SB U Turn						20				20	20
	WR		1.74	0					112		112	112
	WT		1.74	0					10		10	10
	WL		1.28	0					76		76	76
	NR		1.28	0					65		65	65
	NT		1.28	0				-10			-10	-10
	NL		1.28	0	17			10			27	27
	NB U Turn					10				31	41	41
	ER		1.74	0	35			2			37	37
	ET		1.74	0	10						10	10
	EL		1.74	0	13			23			36	36
2	MT Hope Ave/ Crittenden Blvd										0	0
											0	0
	SR (Crittenden Rd)	194	1.28	249							0	249
	ST (Mt Hope Ave)	611	1.28	784							0	784
	SL1 (Fort Hill Terr)	265	1.28	340							0	340
	SL2 (E Henrietta Rd)	2	1.28	3							0	3
	SB U Turn					14			6	49	69	69
	WR1 (Fort Hill)	5	1.28	6							0	6
	WR2 (MT Hope Ave)	270	1.28	346							0	346
	WT (Crittenden Rd)	287	1.28	368							0	368
	WL (MT Hope Ave)	0	1.28	0							0	0
	NR1(E Henrietta Rd)	0	1.28	0							0	0
	NR2 (Fort Hill)	9	1.28	12							0	12
	NT (MT Hope Ave)	561	1.28	719							0	719
	NL (Crittenden Rd)	116	1.28	149							0	149
	ER1 (MT Hope Ave)	81	1.28	104							0	104
	ER2 (E Henrietta Rd)	147	1.28	189							0	189
	ET (Fort Hill)	1	1.28	1							0	1
	EL (MT Hope Ave)	96	1.28	123							0	123

NODE 214843
RD NAME:MT.HOPE AVE
FROM:ELMWOOD AVE.S OF
DIR 1=NB,DIR 2=SB

W/ TH OK

MONROE COUNTY
2006 TRAFFIC STUDY
JOB NUMBER 2331

Site Code : 000021484310
Start Date: 11/14/2006
File I.D. : 214843
Page : 1

Direction 1

Begin Time	Tues. 11/14					Combined		Wed. 11/15					Combined	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	240	*	295	*	535		48	264	58	273	106	537
12:15	*	241	*	242	*	483		34	231	35	266	69	497
12:30	*	270	*	281	*	551		48	263	27	281	75	544
12:45	*	246	*	254	*	500		30	260	20	286	50	546
01:00	*	243	*	264	*	507		21	268	20	286	41	554
01:15	*	254	*	264	*	518		16	242	23	269	39	511
01:30	*	225	*	238	*	463		17	248	16	225	33	473
01:45	*	229	*	256	*	485		17	246	15	276	32	522
02:00	*	226	*	232	*	458		18	261	24	282	42	543
02:15	*	245	*	248	*	493		20	270	18	264	38	534
02:30	*	235	*	228	*	463		12	248	12	250	24	498
02:45	*	208	*	265	*	473		11	240	13	290	24	530
03:00	*	264	*	267	*	531		7	250	10	259	17	509
03:15	*	222	*	280	*	502		11	212	10	235	21	447
03:30	*	291	*	294	*	585		12	288	5	268	17	556
03:45	*	298	*	353	*	651		7	263	12	315	19	578
04:00	*	246	*	292	*	538		3	252	12	277	15	529
04:15	*	278	*	322	*	600		11	276	16	282	27	558
04:30	*	261	*	272	*	533		11	232	19	281	30	513
04:45	*	316	*	328	*	644		6	304	26	364	32	668
05:00	*	286	*	323	*	609		16	324	28	320	44	644
05:15	*	324	*	344	*	668		24	328	45	382	69	710
05:30	*	248	*	328	*	576		41	301	84	272	125	573
05:45	*	268	*	282	*	550		46	240	92	256	138	496
06:00	*	228	*	182	*	410		54	244	82	190	136	434
06:15	*	224	*	179	*	403		96	206	139	200	235	406
06:30	*	190	*	175	*	365		138	217	176	195	314	412
06:45	*	206	*	161	*	367		142	209	204	171	346	380
07:00	*	190	*	150	*	340		134	176	157	170	291	346
07:15	*	174	*	124	*	298		180	188	252	139	432	327
07:30	*	154	*	140	*	294		210	158	293	106	503	264
07:45	*	167	*	127	*	294		252	122	357	144	609	266
08:00	*	147	*	115	*	262		250	127	262	106	512	233
08:15	*	144	*	112	*	256		222	118	302	111	524	229
08:30	*	104	*	110	*	214		256	144	294	106	550	250
08:45	*	115	*	82	*	197		214	142	308	110	522	252
09:00	*	124	*	117	*	241		220	122	202	123	422	245
09:15	211	122	260	96	471	218		200	120	217	96	417	216
09:30	177	114	217	90	394	204		192	136	256	96	448	232
09:45	203	88	212	82	415	170		218	106	232	66	450	172
10:00	201	94	201	87	402	181		200	96	198	71	398	167
10:15	221	86	216	60	437	146		173	74	212	71	385	145
10:30	166	83	206	74	372	157		212	86	217	70	429	156
10:45	214	77	257	59	471	136		220	78	216	74	436	152
11:00	204	78	226	64	430	142		218	103	199	66	417	169
11:15	182	78	237	56	419	134		230	66	219	60	449	126
11:30	224	62	264	44	488	106		235	76	264	58	499	134
11:45	194	44	231	56	425	100		264	59	258	65	522	124
Totals	2197	9257	2527	9294	4724	18551		5217	9484	6156	9423	11373	18907
Day Totals	11454		11821		23275			14701		15579		30280	
% Total	9.4%	39.7%	10.8%	39.9%				17.2%	31.3%	20.3%	31.1%		
Peaks	10:45	04:30	10:45	04:45	10:45	04:45		07:45	04:45	07:45	04:30	07:45	04:45
Volume	824	1187	984	1323	1808	2497		980	1257	1215	1347	2195	2595
P.H.F.	.91	.91	.93	.96	.92	.93		.95	.95	.85	.88	.90	.91

NODE:214843
RD NAME:MT.HOPE AVE
FROM:ELMWOOD AVE.S OF
DIR 1=NB,DIR 2=SB

MONROE COUNTY
2006 TRAFFIC STUDY
JOB NUMBER 2331

Site Code : 000021484310
Start Date: 11/14/2006
File I.D. : 214843

Direction 1

Begin Time	Thur. 11/16			Combined			Fri. 11/17			Combined		
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	58	234	49	261	107	495	60	*	74	*	134	*
12:15	39	250	38	280	77	530	58	*	43	*	101	*
12:30	47	270	28	298	75	568	51	*	54	*	105	*
12:45	40	262	27	274	67	536	36	*	46	*	82	*
01:00	36	243	26	239	62	482	29	*	28	*	57	*
01:15	24	232	22	290	46	522	22	*	30	*	52	*
01:30	14	214	22	264	36	478	30	*	38	*	68	*
01:45	16	244	18	292	34	536	22	*	29	*	51	*
02:00	21	244	10	258	31	502	22	*	37	*	59	*
02:15	15	234	16	280	31	514	26	*	38	*	64	*
02:30	16	255	14	341	30	596	19	*	18	*	37	*
02:45	7	262	10	332	17	594	13	*	7	*	20	*
03:00	13	242	10	266	23	508	16	*	12	*	28	*
03:15	4	262	7	330	11	592	13	*	9	*	22	*
03:30	11	262	11	312	22	574	13	*	10	*	23	*
03:45	6	300	12	380	18	680	21	*	13	*	34	*
04:00	2	298	14	330	16	628	17	*	12	*	29	*
04:15	11	277	17	308	28	585	8	*	20	*	28	*
04:30	17	272	22	266	39	538	16	*	32	*	48	*
04:45	10	336	30	332	40	668	15	*	39	*	54	*
05:00	20	282	22	330	42	612	26	*	33	*	59	*
05:15	30	289	43	421	73	710	25	*	48	*	73	*
05:30	42	281	66	404	108	685	38	*	78	*	116	*
05:45	39	258	89	310	128	568	50	*	84	*	134	*
06:00	55	251	87	229	142	480	49	*	95	*	144	*
06:15	76	253	125	187	201	440	82	*	120	*	202	*
06:30	134	248	158	195	292	443	134	*	166	*	300	*
06:45	128	190	199	150	327	340	130	*	228	*	358	*
07:00	134	184	172	167	306	351	125	*	146	*	271	*
07:15	176	172	201	138	377	310	*	*	*	*	*	*
07:30	214	157	301	156	515	313	*	*	*	*	*	*
07:45	246	124	330	133	576	257	*	*	*	*	*	*
08:00	210	162	264	117	474	279	*	*	*	*	*	*
08:15	228	155	284	122	512	277	*	*	*	*	*	*
08:30	226	116	263	113	489	229	*	*	*	*	*	*
08:45	214	138	270	122	484	260	*	*	*	*	*	*
09:00	192	124	224	120	416	244	*	*	*	*	*	*
09:15	213	150	217	102	430	252	*	*	*	*	*	*
09:30	180	126	167	85	347	211	*	*	*	*	*	*
09:45	212	96	246	104	458	200	*	*	*	*	*	*
10:00	166	116	180	82	346	198	*	*	*	*	*	*
10:15	198	100	210	90	408	190	*	*	*	*	*	*
10:30	226	86	228	72	454	158	*	*	*	*	*	*
10:45	190	82	230	80	420	162	*	*	*	*	*	*
11:00	208	86	208	82	416	168	*	*	*	*	*	*
11:15	204	80	240	76	444	156	*	*	*	*	*	*
11:30	194	65	226	68	420	133	*	*	*	*	*	*
11:45	232	83	232	81	464	164	*	*	*	*	*	*
Totals	4994	9647	5885	10269	10879	19916	1166	0	1587	0	2753	0
Day Totals	14641		16154		30795		1166		1587		2753	
% Total	16.2%	31.3%	19.1%	33.3%			42.3%	.0%	57.6%	.0%		
Peaks	07:45	04:45	07:30	04:45	07:30	04:45	06:15		06:15		06:15	
Volume	910	1188	1179	1487	2077	2675	471		660		1131	
P.H.F.	.92	.88	.89	.88	.90	.94	.87		.72		.78	

Mid block Signal Warrants
Project # 25006

Revised 02/23/09

	Office Counts	Office Percent	Coffee Counts	Coffee Percent	East approach		West Approach	Mt Hope two-way	Mt Hope Percent	2030 build
12:00 AM	6	0.13%						300	0.99%	357
1	2	0.04%						145	0.48%	173
2	1	0.02%						128	0.42%	152
3	1	0.02%						74	0.24%	88
4	2	0.04%						104	0.34%	124
5	8	0.18%						376	1.24%	448
6	56	1.23%	22	1.95%	25		46	1031	3.40%	1227
7	262	5.77%	61	5.39%	116		128	1835	6.06%	2184
8	443	9.75%	94	8.31%	196	6&7	198	2108	6.96%	2509
9	318	7.00%	84	7.43%	141		177	1737	5.74%	2067
10	273	6.01%	77	6.81%	121		162	1648	5.44%	1962
11	362	7.97%	73	6.45%	160		154	1887	6.23%	2246
12:00 PM	467	10.28%	80	7.07%	207	5	169	2124	7.01%	2528
1	411	9.04%	114	10.08%	182	1	**240**	2060	6.80%	**2452**
2	326	7.17%	103	9.11%	144	3	217	2105	6.95%	2505
3	316	6.95%	104	9.20%	140	2	219	2090	6.90%	2488
4	421	9.26%	87	7.69%	**186**	8	183	2268	7.49%	**2700**
5	470	10.34%	57	5.04%	**208**	4	120	2423	8.00%	**2884**
6	181	3.98%	59	5.22%	80		124	1632	5.39%	1943
7	90	1.98%	46	4.07%	40		97	1203	3.97%	1432
8	62	1.36%	38	3.36%	27		80	964	3.18%	1147
9	40	0.88%	32	2.83%	18		67	865	2.86%	1030
10	14	0.31%			6			620	2.05%	738
11	12	0.26%			5			553	1.83%	658
	4544	100.00%	1131	100.00%	2011		2382	30280	100.00%	36041
	4th highest			**8th highest**				**Peak Hour**		

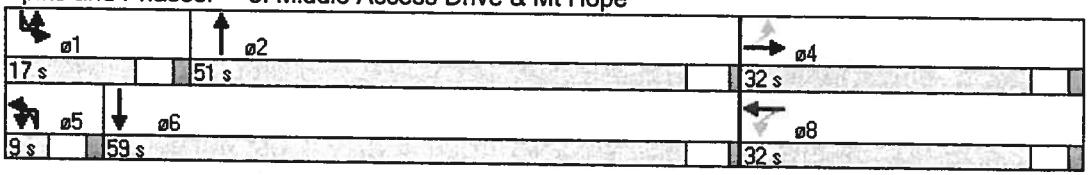
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	12	12	11	12
Storage Length (ft)	75		0	50		0		150		0		100		0
Storage Lanes	1		0	1		0		1		0		1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50		50	50	50		50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0		0	0	0	
Turning Speed (mph)	15		9	15		9	9	15		9	9	15		9
Right Turn on Red			Yes			Yes				Yes				Yes
Link Speed (mph)		30			30				30				30	
Link Distance (ft)		380			205				610				580	
Travel Time (s)		8.6			4.7				13.9				13.2	
Volume (vph)	36	10	37	76	10	112	41	27	1024	65	20	148	1299	89
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Parking (#/hr)									20				20	
Lane Group Flow (vph)	42	56	0	89	144	0	0	76	1210	0	0	186	1542	0
Turn Type	Perm			Perm			Prot	Prot			Prot	Prot		
Protected Phases		4			8		5	5	2		1	1	6	
Permitted Phases	4			8										
Detector Phases	4	4		8	8		5	5	2		1	1	6	
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		8.0	8.0	30.0		8.0	8.0	30.0	
Total Split (s)	32.0	32.0	0.0	32.0	32.0	0.0	9.0	9.0	51.0	0.0	17.0	17.0	59.0	0.0
Total Split (%)	32.0%	32.0%	0.0%	32.0%	32.0%	0.0%	9.0%	9.0%	51.0%	0.0%	17.0%	17.0%	59.0%	0.0%
Maximum Green (s)	27.0	27.0		27.0	27.0		4.0	4.0	46.0		12.0	12.0	54.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	4.0		3.5	3.5	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.0		1.5	1.5	1.0	
Lead/Lag							Lead	Lead	Lag		Lead	Lead	Lag	
Lead-Lag Optimize?														
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	C-Max		None	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0				7.0				7.0	
Flash Dont Walk (s)	20.0	20.0		20.0	20.0				18.0				18.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pedestrian Calls (#/hr)	20	20		20	20				20				20	
Act Effct Green (s)	18.2	18.2		18.2	18.2			9.0	57.7			15.1	66.1	
Actuated g/C Ratio	0.18	0.18		0.18	0.18			0.09	0.58			0.15	0.66	
v/c Ratio	0.21	0.17		0.36	0.36			0.49	0.69			0.70	0.76	
Control Delay	33.1	12.5		37.0	8.8			39.4	32.5			42.3	14.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.3			0.0	0.5	
Total Delay	33.1	12.5		37.0	8.8			39.4	32.9			42.3	15.2	
LOS	C	B		D	A			D	C			D	B	
Approach Delay		21.3			19.6				33.3				18.1	
Approach LOS		C			B				C				B	
Queue Length 50th (ft)	25	7		53	7			29	403			119	248	
Queue Length 95th (ft)	44	32		79	44			m68	m448			m122	m234	
Internal Link Dist (ft)		300			125				530				500	
Turn Bay Length (ft)	75			50				150				100		
Base Capacity (vph)	320	508		389	560			155	1764			272	2017	
Starvation Cap Reductn	0	0		0	0			0	154			0	161	
Spillback Cap Reductn	0	0		0	0			0	0			0	0	
Storage Cap Reductn	0	0		0	0			0	0			0	0	
Reduced v/c Ratio	0.13	0.11		0.23	0.26			0.49	0.75			0.68	0.83	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 24.1 Intersection LOS: C
Intersection Capacity Utilization 66.6% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Middle Access Drive & Mt Hope



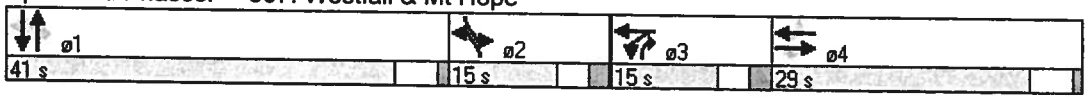
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	20		55	290		0	115		195	225		0
Storage Lanes	1		1	1		0	1		1	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			531			379			1572	
Travel Time (s)		9.5			12.1			8.6			35.7	
Volume (vph)	9	193	59	272	304	154	123	866	509	177	680	1
Peak Hour Factor	0.88	0.88	0.88	0.93	0.93	0.93	0.94	0.94	0.94	0.90	0.90	0.90
Lane Group Flow (vph)	10	219	67	292	493	0	131	921	541	197	757	0
Turn Type	Perm		Perm	Prot			pm+pt		pm+ov	pm+pt		
Protected Phases		4		3	3 4		2	1	3	2	1	
Permitted Phases	4		4				1		1	1		
Detector Phases	4	4	4	3	3 4		2	1	3	2	1	
Minimum Initial (s)	6.0	6.0	6.0	5.0			5.0	21.0	5.0	5.0	21.0	
Minimum Split (s)	29.0	29.0	29.0	11.0			13.0	40.0	11.0	13.0	40.0	
Total Split (s)	29.0	29.0	29.0	15.0	44.0	0.0	15.0	41.0	15.0	15.0	41.0	0.0
Total Split (%)	29.0%	29.0%	29.0%	15.0%	44.0%	0.0%	15.0%	41.0%	15.0%	15.0%	41.0%	0.0%
Maximum Green (s)	24.0	24.0	24.0	10.0			10.0	36.0	10.0	10.0	36.0	
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0	4.0	3.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0			2.0	1.0	2.0	2.0	1.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	2.0			2.0	2.0	2.0	2.0	2.0	
Recall Mode	None	None	None	None			None	C-Max	None	None	C-Max	
Walk Time (s)	7.0	7.0	7.0					20.0			20.0	
Flash Dont Walk (s)	17.0	17.0	17.0					14.0			14.0	
Pedestrian Calls (#/hr)	0	0	0					0			0	
Act Effct Green (s)	21.1	21.1	21.1	13.7	37.7		53.3	42.9	56.6	53.3	42.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.21	0.21	0.21	0.14	0.38		0.53	0.43	0.57	0.53	0.43	
v/c Ratio	0.06	0.56	0.18	0.62	0.72		0.36	0.61	0.52	0.65	0.50	
Control Delay	29.6	40.0	13.7	47.9	31.2		20.2	25.1	4.9	26.9	6.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.6	40.0	13.7	47.9	31.2		20.2	25.1	4.9	26.9	6.7	
LOS	C	D	B	D	C		C	C	A	C	A	
Approach Delay		33.7			37.4			17.8			10.9	
Approach LOS		C			D			B			B	
Queue Length 50th (ft)	5	124	10	93	250		37	236	36	56	36	
Queue Length 95th (ft)	18	183	41	#139	350		72	326	91	133	73	
Internal Link Dist (ft)		338			451			299			1492	
Turn Bay Length (ft)	20		55	290			115		195	225		
Base Capacity (vph)	196	484	447	469	772		392	1519	1041	331	1519	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.05	0.45	0.15	0.62	0.64		0.33	0.61	0.52	0.60	0.50	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 92 (92%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 21.5 Intersection LOS: C
Intersection Capacity Utilization 77.5% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 307: Westfall & Mt Hope



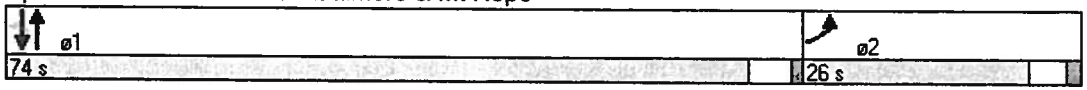
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50	50	50	
Trailing Detector (ft)	0		0	0	0	
Turning Speed (mph)	15	9	15			9
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	407			1572	1170	
Travel Time (s)	9.3			35.7	26.6	
Volume (vph)	12	29	153	807	750	91
Peak Hour Factor	0.53	0.53	0.89	0.89	0.83	0.83
Lane Group Flow (vph)	78	0	0	1079	1014	0
Turn Type			Perm			
Protected Phases	2			1	1	
Permitted Phases			1			
Detector Phases	2		1	1	1	
Minimum Initial (s)	6.0		7.0	7.0	7.0	
Minimum Split (s)	26.0		24.0	24.0	24.0	
Total Split (s)	26.0	0.0	74.0	74.0	74.0	0.0
Total Split (%)	26.0%	0.0%	74.0%	74.0%	74.0%	0.0%
Maximum Green (s)	21.0		69.0	69.0	69.0	
Yellow Time (s)	3.5		4.0	4.0	4.0	
All-Red Time (s)	1.5		1.0	1.0	1.0	
Lead/Lag	Lag		Lead	Lead	Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		2.0	2.0	2.0	
Recall Mode	None		C-Max	C-Max	C-Max	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		12.0	12.0	12.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	9.5			87.3	87.3	
Actuated g/C Ratio	0.10			0.87	0.87	
v/c Ratio	0.38			0.57	0.33	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	22.4			7.0	0.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	22.4			7.0	0.4	
LOS	C			A	A	
Approach Delay	22.4			7.0	0.4	
Approach LOS	C			A	A	
Queue Length 50th (ft)	14			138	5	
Queue Length 95th (ft)	18			148	7	
Internal Link Dist (ft)	327			1492	1090	
Turn Bay Length (ft)						
Base Capacity (vph)	424			1880	3043	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.18			0.57	0.33	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 33 (33%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 4.5 Intersection LOS: A
Intersection Capacity Utilization 65.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 308: Lattimore & Mt Hope



Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBU	SBL	SBT	SBR	NWL	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	12	12	12	11	12	10	13
Storage Length (ft)	365	0		180		0		290		0	315	0
Storage Lanes	1	1		1		0		1		0	1	1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50		50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0		0	0
Turning Speed (mph)	15	9	9	15		9	9	15		9	15	9
Right Turn on Red			Yes			Yes				Yes		Yes
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	603				1170				610		1295	
Travel Time (s)	13.7				26.6				13.9		29.4	
Volume (vph)	123	189	104	149	719	0	69	340	784	249	368	346
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Lane Group Flow (vph)	137	210	116	166	799	0	0	455	1148	0	409	384
Turn Type	pm+pt		Perm	pm+pt			Prot	Prot				Perm
Protected Phases	7	4		5	2		1	1	6		8	
Permitted Phases	4	4	4	2								8
Detector Phases	7	4	4	5	2		1	1	6		8	8
Minimum Initial (s)	3.0	3.0	3.0	3.0	7.0		5.0	5.0	7.0		3.0	3.0
Minimum Split (s)	12.0	32.0	32.0	8.0	27.0		25.0	25.0	27.0		32.0	32.0
Total Split (s)	12.0	44.0	44.0	12.0	27.0	0.0	29.0	29.0	44.0	0.0	32.0	32.0
Total Split (%)	12.0%	44.0%	44.0%	12.0%	27.0%	0.0%	29.0%	29.0%	44.0%	0.0%	32.0%	32.0%
Maximum Green (s)	3.0	39.0	39.0	7.0	22.0		24.0	24.0	39.0		27.0	27.0
Yellow Time (s)	3.5	3.5	3.5	4.0	4.0		3.5	3.5	4.0		3.5	3.5
All-Red Time (s)	5.5	1.5	1.5	1.0	1.0		1.5	1.5	1.0		1.5	1.5
Lead/Lag	Lead			Lead	Lag		Lead	Lead	Lag		Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	4.0		2.0	2.0	4.0		3.0	3.0
Recall Mode	None	None	None	None	C-Max		None	None	C-Max		None	None
Walk Time (s)		7.0	7.0		7.0				7.0		7.0	7.0
Flash Dont Walk (s)		20.0	20.0		14.0				14.0		20.0	20.0
Pedestrian Calls (#/hr)		50	50		50				50		50	50

Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBU	SBL	SBT	SBR	NWL	NWR
Act Effct Green (s)	40.1	40.1	40.1	33.0	24.0			26.9	41.9		28.1	28.1
Actuated g/C Ratio	0.40	0.40	0.40	0.33	0.24			0.27	0.42		0.28	0.28
v/c Ratio	0.54	0.33	0.16	0.73	0.97			0.96	0.81		0.88	0.54
Control Delay	27.3	22.2	4.2	38.2	62.2			59.1	20.3		62.1	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	27.3	22.2	4.2	38.2	62.2			59.1	20.3		62.1	20.7
LOS	C	C	A	D	E			E	C		E	C
Approach Delay	19.2				58.1				31.3		42.0	
Approach LOS	B				E				C		D	
Queue Length 50th (ft)	55	89	0	61	223			280	326		284	115
Queue Length 95th (ft)	97	147	33	#156	#386			m#480	410		m#349	m171
Internal Link Dist (ft)	523				1090				530		1215	
Turn Bay Length (ft)	365			180				290			315	
Base Capacity (vph)	256	649	717	226	821			476	1412		479	724
Starvation Cap Reductn	0	0	0	0	0			0	0		0	0
Spillback Cap Reductn	0	0	0	0	0			0	0		0	0
Storage Cap Reductn	0	0	0	0	0			0	0		0	0
Reduced v/c Ratio	0.54	0.32	0.16	0.73	0.97			0.96	0.81		0.85	0.53

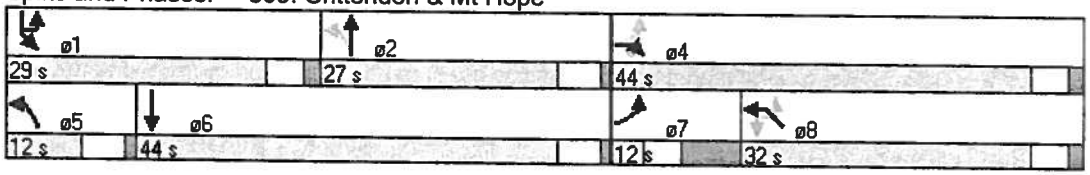
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 44 (44%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 38.8 Intersection LOS: D
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 309: Crittenden & Mt Hope



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	12	12	12
Storage Length (ft)	620		630	300		0		315		0	280		0
Storage Lanes	1		1	1		0		1		0	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	9	15		9	15		9
Right Turn on Red			Yes			Yes				Yes			Yes
Link Speed (mph)		35			35				30			30	
Link Distance (ft)		1418			846				580			307	
Travel Time (s)		27.6			16.5				13.2			7.0	
Volume (vph)	270	926	285	408	1437	23	9	220	763	164	64	863	531
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.90	0.90	0.90	0.90	0.95	0.95	0.95
Lane Group Flow (vph)	284	975	300	439	1570	0	0	254	1030	0	67	1467	0
Turn Type	pm+pt		Perm	pm+pt			Prot	Prot			pm+pt		
Protected Phases	3	8		7	4		5	5	2		1	6	
Permitted Phases	8		8	4							6		
Detector Phases	3	8	8	7	4		5	5	2		1	6	
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0		4.0	4.0	7.0		4.0	7.0	
Minimum Split (s)	12.0	33.0	33.0	12.0	33.0		10.0	10.0	40.0		10.0	40.0	
Total Split (s)	12.0	34.0	34.0	13.0	35.0	0.0	11.0	11.0	43.0	0.0	10.0	42.0	0.0
Total Split (%)	12.0%	34.0%	34.0%	13.0%	35.0%	0.0%	11.0%	11.0%	43.0%	0.0%	10.0%	42.0%	0.0%
Maximum Green (s)	7.0	28.0	28.0	8.0	29.0		6.0	6.0	37.0		5.0	36.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	2.5	2.5	1.5	2.5		1.5	1.5	2.5		1.5	2.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None	None	None	None		None	None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0				10.0			10.0	
Flash Dont Walk (s)		19.0	19.0		19.0				24.0			24.0	
Pedestrian Calls (#/hr)		0	0		0				0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	40.0	31.0	31.0	42.0	32.0			8.0	42.0		45.9	39.0	
Actuated g/C Ratio	0.40	0.31	0.31	0.42	0.32			0.08	0.42		0.46	0.39	
v/c Ratio	1.21	0.89	0.51	1.74	1.39			1.85	0.73		0.32	1.05	
Control Delay	153.4	44.3	18.6	371.9	209.4			437.1	21.4		17.3	66.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	29.1	
Total Delay	153.4	44.3	18.6	371.9	209.4			437.1	21.4		17.3	95.6	
LOS	F	D	B	F	F			F	C		B	F	
Approach Delay		59.2			244.9				103.6			92.2	
Approach LOS		E			F				F			F	
Queue Length 50th (ft)	~173	310	82	~371	~711			~256	100		21	~506	
Queue Length 95th (ft)	#338	#425	165	#565	#850			m#419	266		44	#645	
Internal Link Dist (ft)		1338			766				500			227	
Turn Bay Length (ft)	620		630	300				315			280		
Base Capacity (vph)	234	1097	584	252	1132			137	1416		212	1396	
Starvation Cap Reductn	0	0	0	0	0			0	0		0	0	
Spillback Cap Reductn	0	0	3	0	0			0	0		0	88	
Storage Cap Reductn	0	0	0	0	0			0	0		0	0	
Reduced v/c Ratio	1.21	0.89	0.52	1.74	1.39			1.85	0.73		0.32	1.12	

Intersection Summary

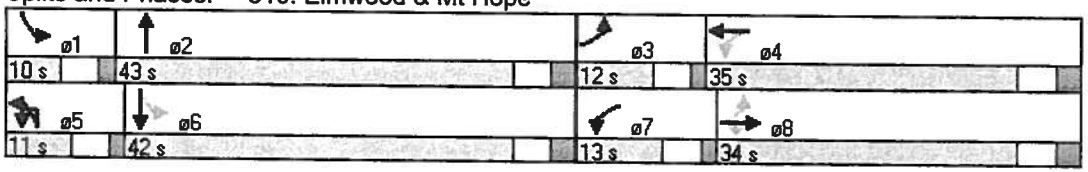
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 95 (95%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.85
Intersection Signal Delay: 134.5 Intersection LOS: F
Intersection Capacity Utilization 122.3% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 310: Elmwood & Mt Hope



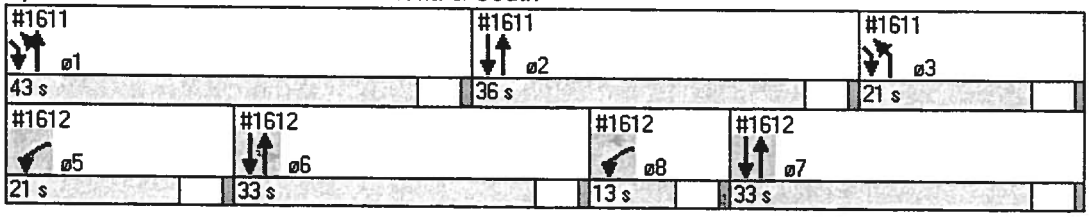
Lane Group	NBL	NBT	SBT	SBR	SEL	SER	ø1	ø3	ø5	ø6	ø7	ø8
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900						
Storage Length (ft)	0			0	200	0						
Storage Lanes	0			0	1	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0						
Leading Detector (ft)	50	50	50			50						
Trailing Detector (ft)	0	0	0			0						
Turning Speed (mph)	15			9	15	9						
Right Turn on Red				Yes		Yes						
Link Speed (mph)		30	30		30							
Link Distance (ft)		416	244		530							
Travel Time (s)		9.5	5.5		12.0							
Volume (vph)	903	744	639	0	0	495						
Peak Hour Factor	0.96	0.96	0.90	0.90	0.93	0.93						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%						
Lane Group Flow (vph)	941	775	710	0	0	532						
Turn Type		custom										
Protected Phases	1 3	1 2	2			1 3	1	3	5	6	7	8
Permitted Phases		1				1 3						
Detector Phases	1 3	1 2	2			1 3						
Minimum Initial (s)			10.0				24.0	6.0	6.0	10.0	10.0	6.0
Minimum Split (s)			28.0				40.0	21.0	21.0	33.0	33.0	13.0
Total Split (s)	64.0	79.0	36.0	0.0	0.0	64.0	43.0	21.0	21.0	33.0	33.0	13.0
Total Split (%)	64.0%	79.0%	36.0%	0.0%	0.0%	64.0%	43%	21%	21%	33%	33%	13%
Maximum Green (s)			31.0				38.0	16.0	16.0	28.0	28.0	8.0
Yellow Time (s)			4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)			1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag				Lead		Lead	Lag	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)			3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			None				C-Max	None	C-Max	None	None	None
Walk Time (s)			7.0				24.0		7.0	7.0	7.0	
Flash Dont Walk (s)			9.0				10.0		9.0	21.0	21.0	
Pedestrian Calls (#/hr)			0				0		0	0	0	

Lane Group	NBL	NBT	SBT	SBR	SEL	SER	ø1	ø3	ø5	ø6	ø7	ø8
Act Effct Green (s)	65.1	71.9	28.9			65.1						
Actuated g/C Ratio	0.65	0.72	0.29			0.65						
v/c Ratio	0.83	0.59	0.71			0.29						
Control Delay	22.8	8.7	33.5			9.3						
Queue Delay	0.0	0.5	18.1			0.0						
Total Delay	22.8	9.2	51.6			9.3						
LOS	C	A	D			A						
Approach Delay		16.6	51.6									
Approach LOS		B	D									
Queue Length 50th (ft)	456	178	201			128						
Queue Length 95th (ft)	#788	246	256			m147						
Internal Link Dist (ft)		336	164		450							
Turn Bay Length (ft)												
Base Capacity (vph)	1130	1389	1145			1816						
Starvation Cap Reductn	0	0	436			0						
Spillback Cap Reductn	0	244	0			0						
Storage Cap Reductn	0	0	0			0						
Reduced v/c Ratio	0.83	0.68	1.00			0.29						

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 1:NBTL and 5:, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 23.7 Intersection LOS: C
Intersection Capacity Utilization 74.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1611: E Henrietta & South



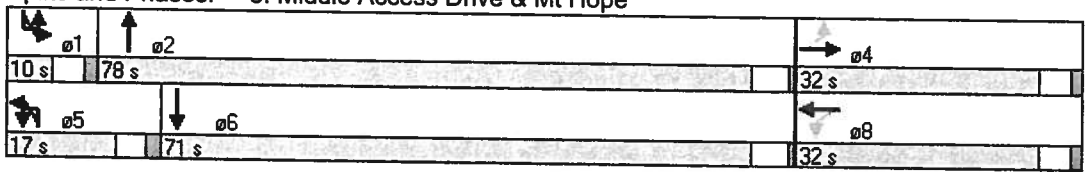
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	11	11	12	12	12	11	12
Storage Length (ft)	75		0	50		0		150		0		100		0
Storage Lanes	1		0	1		0		1		0		1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50		50	50	50		50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0		0	0	0	
Turning Speed (mph)	15		9	15		9	9	15		9	9	15		9
Right Turn on Red			Yes			Yes				Yes				Yes
Link Speed (mph)		30			30				30				30	
Link Distance (ft)		375			237				610				580	
Travel Time (s)		8.5			5.4				13.9				13.2	
Volume (vph)	99	5	104	58	5	39	43	79	1320	50	22	36	1298	48
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Parking (#/hr)									20				20	
Lane Group Flow (vph)	116	128	0	68	52	0	0	136	1523	0	0	64	1495	0
Turn Type	Perm			Perm			Prot	Prot			Prot	Prot		
Protected Phases		4			8		5	5	2		1	1	6	
Permitted Phases	4			8										
Detector Phases	4	4		8	8		5	5	2		1	1	6	
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		8.0	8.0	30.0		8.0	8.0	30.0	
Total Split (s)	32.0	32.0	0.0	32.0	32.0	0.0	17.0	17.0	78.0	0.0	10.0	10.0	71.0	0.0
Total Split (%)	26.7%	26.7%	0.0%	26.7%	26.7%	0.0%	14.2%	14.2%	65.0%	0.0%	8.3%	8.3%	59.2%	0.0%
Maximum Green (s)	27.0	27.0		27.0	27.0		12.0	12.0	73.0		5.0	5.0	66.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	4.0		3.5	3.5	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.0		1.5	1.5	1.0	
Lead/Lag							Lead	Lead	Lag		Lead	Lead	Lag	
Lead-Lag Optimize?														
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	None	C-Max		None	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0				7.0				7.0	
Flash Dont Walk (s)	20.0	20.0		20.0	20.0				18.0				18.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pedestrian Calls (#/hr)	20	20		20	20				20				20	
Act Effct Green (s)	20.0	20.0		20.0	20.0			14.3	84.2			9.0	76.6	
Actuated g/C Ratio	0.17	0.17		0.17	0.17			0.12	0.70			0.08	0.64	
v/c Ratio	0.52	0.37		0.38	0.17			0.66	0.71			0.48	0.76	
Control Delay	51.8	15.9		47.7	13.7			78.7	9.0			48.1	32.8	
Queue Delay	0.3	0.0		0.0	0.0			0.0	0.7			0.0	11.2	
Total Delay	52.1	15.9		47.7	13.8			78.7	9.7			48.1	44.1	
LOS	D	B		D	B			E	A			D	D	
Approach Delay		33.1			33.0				15.4				44.2	
Approach LOS		C			C				B				D	
Queue Length 50th (ft)	86	23		49	4			109	110			42	551	
Queue Length 95th (ft)	124	64		80	32			m155	m573			m55	m545	
Internal Link Dist (ft)		295			157				530				500	
Turn Bay Length (ft)	75			50				150				100		
Base Capacity (vph)	326	457		262	425			212	2150			133	1959	
Starvation Cap Reductn	0	0		0	0			0	295			0	460	
Spillback Cap Reductn	29	0		0	39			0	192			0	0	
Storage Cap Reductn	0	0		0	0			0	0			0	0	
Reduced v/c Ratio	0.39	0.28		0.26	0.13			0.64	0.82			0.48	1.00	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 50 (42%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 29.7 Intersection LOS: C
Intersection Capacity Utilization 66.3% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Middle Access Drive & Mt Hope



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	20		55	290		0	115		195	225		0
Storage Lanes	1		1	1		0	1		1	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			586			379			1632	
Travel Time (s)		9.5			13.3			8.6			37.1	
Volume (vph)	12	259	342	512	159	103	71	734	190	137	1327	3
Peak Hour Factor	0.81	0.81	0.81	0.87	0.87	0.87	0.97	0.97	0.97	0.95	0.95	0.95
Lane Group Flow (vph)	15	320	422	589	301	0	73	757	196	144	1400	0
Turn Type	Perm		Perm	Prot			pm+pt		pm+ov	pm+pt		
Protected Phases		4		3	3 4		2	1	3	2	1	
Permitted Phases	4		4				1		1	1		
Detector Phases	4	4	4	3	3 4		2	1	3	2	1	
Minimum Initial (s)	6.0	6.0	6.0	5.0			5.0	21.0	5.0	5.0	21.0	
Minimum Split (s)	29.0	29.0	29.0	11.0			13.0	40.0	11.0	13.0	40.0	
Total Split (s)	30.0	30.0	30.0	24.0	54.0	0.0	16.0	50.0	24.0	16.0	50.0	0.0
Total Split (%)	25.0%	25.0%	25.0%	20.0%	45.0%	0.0%	13.3%	41.7%	20.0%	13.3%	41.7%	0.0%
Maximum Green (s)	25.0	25.0	25.0	19.0			11.0	45.0	19.0	11.0	45.0	
Yellow Time (s)	4.0	4.0	4.0	3.0			3.0	4.0	3.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0			2.0	1.0	2.0	2.0	1.0	
Lead/Lag	Lag	Lag	Lag	Lead			Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	2.0			2.0	2.0	2.0	2.0	2.0	
Recall Mode	None	None	None	None			None	C-Max	None	None	C-Max	
Walk Time (s)	7.0	7.0	7.0					20.0			20.0	
Flash Dont Walk (s)	17.0	17.0	17.0					14.0			14.0	
Pedestrian Calls (#/hr)	0	0	0					0			0	
Act Effct Green (s)	25.9	25.9	25.9	25.6	54.6		56.4	48.3	74.0	56.4	48.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.22	0.22	0.22	0.21	0.46		0.47	0.40	0.62	0.47	0.40	
v/c Ratio	0.06	0.80	0.90	0.80	0.37		0.40	0.53	0.19	0.50	0.98	
Control Delay	37.7	59.8	50.7	54.5	20.3		39.5	29.3	1.2	31.5	51.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	37.7	59.8	50.7	54.5	20.3		39.5	29.3	1.2	31.5	51.7	
LOS	D	E	D	D	C		D	C	A	C	D	
Approach Delay		54.3			42.9			24.6			49.8	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	9	234	204	221	126		30	235	0	75	~597	
Queue Length 95th (ft)	26	298	#299	#310	198		54	297	19	m67	#751	
Internal Link Dist (ft)		338			506			299			1552	
Turn Bay Length (ft)	20		55	290			115		195	225		
Base Capacity (vph)	242	419	483	733	831		256	1426	1051	362	1426	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.06	0.76	0.87	0.80	0.36		0.29	0.53	0.19	0.40	0.98	

Intersection Summary

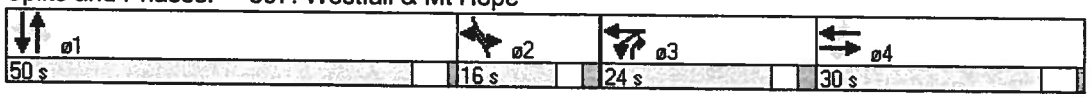
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 85 (71%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 43.0 Intersection LOS: D
Intersection Capacity Utilization 82.6% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 307: Westfall & Mt Hope



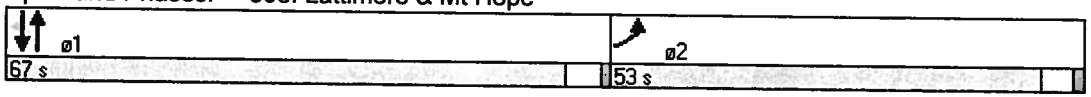
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50		50	50	50	
Trailing Detector (ft)	0		0	0	0	
Turning Speed (mph)	15	9	15			9
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	407			1632	1166	
Travel Time (s)	9.3			37.1	26.5	
Volume (vph)	127	136	44	798	1150	18
Peak Hour Factor	0.78	0.78	0.94	0.94	0.92	0.92
Lane Group Flow (vph)	337	0	0	896	1270	0
Turn Type			Perm			
Protected Phases	2			1	1	
Permitted Phases			1			
Detector Phases	2		1	1	1	
Minimum Initial (s)	6.0		7.0	7.0	7.0	
Minimum Split (s)	26.0		24.0	24.0	24.0	
Total Split (s)	53.0	0.0	67.0	67.0	67.0	0.0
Total Split (%)	44.2%	0.0%	55.8%	55.8%	55.8%	0.0%
Maximum Green (s)	48.0		62.0	62.0	62.0	
Yellow Time (s)	3.5		4.0	4.0	4.0	
All-Red Time (s)	1.5		1.0	1.0	1.0	
Lead/Lag	Lag		Lead	Lead	Lead	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		2.0	2.0	2.0	
Recall Mode	None		C-Max	C-Max	C-Max	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		12.0	12.0	12.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	26.4			87.6	87.6	
Actuated g/C Ratio	0.22			0.73	0.73	
v/c Ratio	0.82			0.48	0.49	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	54.3			6.2	6.3	
Queue Delay	0.0			0.0	0.0	
Total Delay	54.3			6.2	6.3	
LOS	D			A	A	
Approach Delay	54.3			6.2	6.3	
Approach LOS	D			A	A	
Queue Length 50th (ft)	218			78	139	
Queue Length 95th (ft)	241			396	127	
Internal Link Dist (ft)	327			1552	1086	
Turn Bay Length (ft)						
Base Capacity (vph)	732			1877	2578	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.46			0.48	0.49	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 19 (16%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 12.7 Intersection LOS: B
Intersection Capacity Utilization 76.9% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 308: Lattimore & Mt Hope



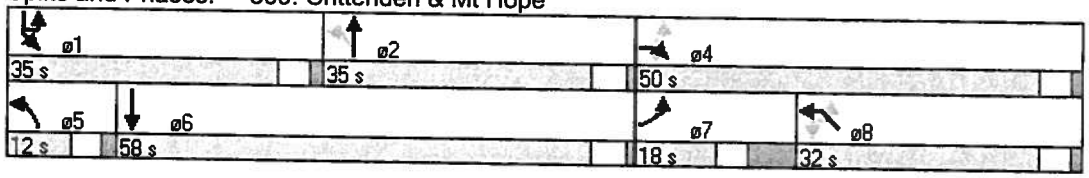
Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBU	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	365	0		180		0		290		0		315	0
Storage Lanes	1	1		1		0		1		0		1	1
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50		50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0	0		0	0	0
Turning Speed (mph)	15	9	9	15		9	9	15		9	15	15	9
Right Turn on Red			Yes			Yes				Yes			Yes
Link Speed (mph)	30				30				30			30	
Link Distance (ft)	596				1166				610			1302	
Travel Time (s)	13.5				26.5				13.9			29.6	
Volume (vph)	350	354	185	109	767	0	36	354	925	72	10	154	204
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lane Group Flow (vph)	368	373	195	115	807	0	0	411	1050	0	0	173	215
Turn Type	pm+pt		Perm	pm+pt			Prot	Prot			Perm		Perm
Protected Phases	7	4		5	2		1	1	6			8	
Permitted Phases	4	4	4	2							8		8
Detector Phases	7	4	4	5	2		1	1	6		8	8	8
Minimum Initial (s)	3.0	6.0	6.0	5.0	7.0		5.0	5.0	7.0		6.0	6.0	6.0
Minimum Split (s)	12.0	32.0	32.0	12.0	27.0		12.0	12.0	27.0		32.0	32.0	32.0
Total Split (s)	18.0	50.0	50.0	12.0	35.0	0.0	35.0	35.0	58.0	0.0	32.0	32.0	32.0
Total Split (%)	15.0%	41.7%	41.7%	10.0%	29.2%	0.0%	29.2%	29.2%	48.3%	0.0%	26.7%	26.7%	26.7%
Maximum Green (s)	9.0	45.0	45.0	7.0	30.0		30.0	30.0	53.0		27.0	27.0	27.0
Yellow Time (s)	3.5	3.5	3.5	3.5	4.0		3.5	3.5	4.0		3.5	3.5	3.5
All-Red Time (s)	5.5	1.5	1.5	1.5	1.0		1.5	1.5	1.0		1.5	1.5	1.5
Lead/Lag	Lead			Lead	Lag		Lead	Lead	Lag		Lag	Lag	Lag
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0	3.0	2.0	4.0		2.0	2.0	4.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	C-Max		None	None	C-Max		None	None	None
Walk Time (s)		7.0	7.0		7.0				7.0		7.0	7.0	7.0
Flash Dont Walk (s)		20.0	20.0		14.0				14.0		20.0	20.0	20.0
Pedestrian Calls (#/hr)		20	20		20				20		20	20	20
Act Effct Green (s)	39.3	39.3	39.3	47.7	39.9			31.7	63.9			21.3	21.3

Lane Group	EBL	EBR	EBR2	NBL	NBT	NBR	SBU	SBL	SBT	SBR	NWL2	NWL	NWR
Actuated g/C Ratio	0.33	0.33	0.33	0.40	0.33			0.26	0.53			0.18	0.18
v/c Ratio	0.94	0.72	0.30	0.43	0.69			0.88	0.56			0.54	0.47
Control Delay	67.7	43.1	4.5	15.2	21.9			58.5	30.8			46.7	10.8
Queue Delay	7.4	0.0	0.0	0.0	0.2			0.0	0.4			0.0	0.0
Total Delay	75.1	43.1	4.5	15.2	22.1			58.5	31.2			46.7	10.9
LOS	E	D	A	B	C			E	C			D	B
Approach Delay	47.6				21.2				38.9			26.8	
Approach LOS	D				C				D			C	
Queue Length 50th (ft)	250	262	0	13	223			320	320			102	46
Queue Length 95th (ft)	#356	332	47	m40	#351			#496	454			95	45
Internal Link Dist (ft)	516				1086				530			1222	
Turn Bay Length (ft)	365			180				290				315	
Base Capacity (vph)	392	620	739	287	1177			484	1868			436	546
Starvation Cap Reductn	0	0	0	0	0			0	344			0	0
Spillback Cap Reductn	17	0	0	0	43			0	0			0	6
Storage Cap Reductn	0	0	0	0	0			0	0			0	0
Reduced v/c Ratio	0.98	0.60	0.26	0.40	0.71			0.85	0.69			0.40	0.40

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 40 (33%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 35.4 Intersection LOS: D
Intersection Capacity Utilization 84.6% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 309: Crittenden & Mt Hope



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	620		630	300		0		315		0	280		0
Storage Lanes	1		1	1		0		1		0	1		0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50		50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	9	15		9	15		9
Right Turn on Red			Yes			Yes				Yes			Yes
Link Speed (mph)		35			35				30			30	
Link Distance (ft)		1418			846				580			310	
Travel Time (s)		27.6			16.5				13.2			7.0	
Volume (vph)	492	1376	285	250	919	44	34	164	896	431	132	869	306
Peak Hour Factor	0.95	0.95	0.95	0.91	0.91	0.91	0.95	0.95	0.95	0.95	0.94	0.94	0.94
Lane Group Flow (vph)	518	1448	300	275	1058	0	0	209	1397	0	140	1250	0
Turn Type	pm+pt		Perm	pm+pt			Prot	Prot			pm+pt		
Protected Phases	3	8		7	4		5	5	2		1	6	
Permitted Phases	8		8	4							6		
Detector Phases	3	8	8	7	4		5	5	2		1	6	
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0		4.0	4.0	7.0		4.0	7.0	
Minimum Split (s)	12.0	32.0	32.0	12.0	32.0		10.0	10.0	40.0		10.0	40.0	
Total Split (s)	27.0	47.0	47.0	15.0	35.0	0.0	15.0	15.0	48.0	0.0	10.0	43.0	0.0
Total Split (%)	22.5%	39.2%	39.2%	12.5%	29.2%	0.0%	12.5%	12.5%	40.0%	0.0%	8.3%	35.8%	0.0%
Maximum Green (s)	22.0	41.0	41.0	10.0	29.0		10.0	10.0	42.0		5.0	37.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	2.5	2.5	1.5	2.5		1.5	1.5	2.5		1.5	2.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	None	None	None	None		None	None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0				10.0			10.0	
Flash Dont Walk (s)		19.0	19.0		19.0				24.0			24.0	
Pedestrian Calls (#/hr)		0	0		0				0			0	
Act Effct Green (s)	59.0	44.0	44.0	44.0	32.0			12.0	45.0		47.0	40.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.49	0.37	0.37	0.37	0.27			0.10	0.38		0.39	0.33	
v/c Ratio	1.25	1.12	0.47	1.15	1.13			1.18	1.07		0.85	1.07	
Control Delay	160.9	99.2	21.8	136.4	110.9			158.7	71.6		64.1	86.3	
Queue Delay	0.0	0.0	10.7	99.1	0.0			0.0	13.8		0.0	3.0	
Total Delay	160.9	99.2	32.4	235.5	110.9			158.7	85.3		64.1	89.3	
LOS	F	F	C	F	F			F	F		E	F	
Approach Delay		104.5			136.6				94.9			86.7	
Approach LOS		F			F				F			F	
Queue Length 50th (ft)	~451	~677	116	~200	~499			~198	~612		62	~555	
Queue Length 95th (ft)	#669	#817	199	#375	#635			m#332	#754		#175	#695	
Internal Link Dist (ft)		1338			766				500			230	
Turn Bay Length (ft)	620		630	300				315			280		
Base Capacity (vph)	416	1298	643	239	940			177	1311		165	1163	
Starvation Cap Reductn	0	0	0	0	0			0	40		0	0	
Spillback Cap Reductn	0	0	309	40	0			0	0		0	8	
Storage Cap Reductn	0	0	0	0	0			0	0		0	0	
Reduced v/c Ratio	1.25	1.12	0.90	1.38	1.13			1.18	1.10		0.85	1.08	

Intersection Summary

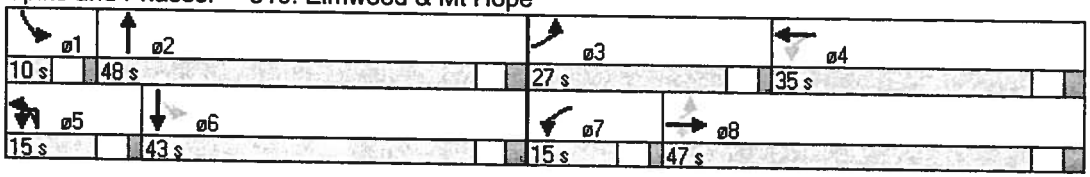
Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 99 (83%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.25
Intersection Signal Delay: 104.9 Intersection LOS: F
Intersection Capacity Utilization 113.3% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 310: Elmwood & Mt Hope



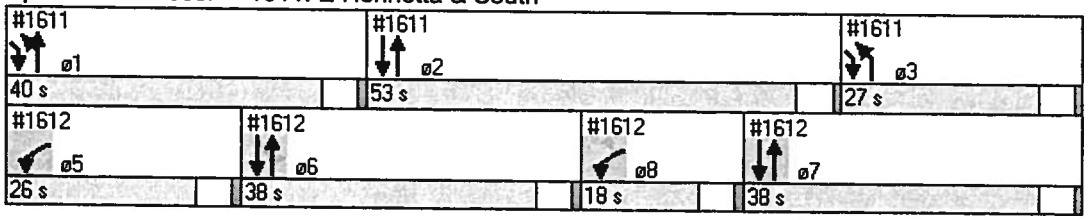
Lane Group	NBL	NBT	SBT	SBR	SEL	SER	ø1	ø3	ø5	ø6	ø7	ø8
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900						
Storage Length (ft)	0			0	200	0						
Storage Lanes	0			0	1	0						
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0						
Leading Detector (ft)	50	50	50			50						
Trailing Detector (ft)	0	0	0			0						
Turning Speed (mph)	15			9	15	9						
Right Turn on Red				Yes		Yes						
Link Speed (mph)		30	30		30							
Link Distance (ft)		832	244		541							
Travel Time (s)		18.9	5.5		12.3							
Volume (vph)	463	627	875	0	0	672						
Peak Hour Factor	0.95	0.95	0.96	0.96	0.95	0.95						
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%						
Lane Group Flow (vph)	487	660	911	0	0	707						
Turn Type		custom										
Protected Phases	1 3	1 2	2			1 3	1	3	5	6	7	8
Permitted Phases		1				1 3						
Detector Phases	1 3	1 2	2			1 3						
Minimum Initial (s)			10.0				24.0	6.0	6.0	10.0	10.0	6.0
Minimum Split (s)			28.0				40.0	21.0	21.0	33.0	33.0	13.0
Total Split (s)	67.0	93.0	53.0	0.0	0.0	67.0	40.0	27.0	26.0	38.0	38.0	18.0
Total Split (%)	55.8%	77.5%	44.2%	0.0%	0.0%	55.8%	33%	23%	22%	32%	32%	15%
Maximum Green (s)			48.0				35.0	22.0	21.0	33.0	33.0	13.0
Yellow Time (s)			4.0				4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)			1.0				1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag				Lead		Lead	Lag	Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)			3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			None				C-Max	None	C-Max	None	None	None
Walk Time (s)			7.0				24.0		7.0	7.0	7.0	
Flash Dont Walk (s)			9.0				10.0		9.0	21.0	21.0	
Pedestrian Calls (#/hr)			0				0		0	0	0	

Lane Group	NBL	NBT	SBT	SBR	SEL	SER	ø1	ø3	ø5	ø6	ø7	ø8
Act Effct Green (s)	71.8	87.8	42.2			71.8						
Actuated g/C Ratio	0.60	0.73	0.35			0.60						
v/c Ratio	0.47	0.49	0.75			0.42						
Control Delay	16.6	8.4	37.8			23.2						
Queue Delay	0.0	0.3	38.4			0.0						
Total Delay	16.6	8.7	76.2			23.2						
LOS	B	A	E			C						
Approach Delay		12.0	76.2									
Approach LOS		B	E									
Queue Length 50th (ft)	235	172	278			269						
Queue Length 95th (ft)	299	289	430			m206						
Internal Link Dist (ft)		752	164		461							
Turn Bay Length (ft)												
Base Capacity (vph)	1039	1455	1446			1676						
Starvation Cap Reductn	0	0	594			0						
Spillback Cap Reductn	0	269	0			0						
Storage Cap Reductn	0	0	0			0						
Reduced v/c Ratio	0.47	0.56	1.07			0.42						

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87 (73%), Referenced to phase 1:NBTL and 5:, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 36.0 Intersection LOS: D
Intersection Capacity Utilization 56.5% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1611: E Henrietta & South



QUEUE LENGTH RESULTS (FEET)

Mt. Hope
Revised 02/26/2009

AM PEAK HOUR RESULTS

Intersection	Eastbound Left	Eastbound Through	Eastbound Right	Westbound Left	Westbound Through	Northbound Left	Northbound Through	Northbound Right	Southbound Left	Southbound Through	Southeast Right	Northwest Left	Northwest Right
Elmwood *Storage Length*	#338 *620*	#425	165 *630*	#565 *300*	#850	m#419 *315*	266		44 *280*	#645			
Middle Access Drive *Storage Length*	44 *75*	32		79 *50*	44	m68 *150*	m448		m122 *100*	m234			
Crittenden/East Hen. *Storage Length*	97 *365*	147	33			#156 *180*	#386		m#480 *290*	410		m#349 *315*	m171
Lattimore *Storage Length*	18						148			7			
Westfall *Storage Length*	18 *20*	183	41 *55*	#139 *290*	350	72 *115*	326	91 *195*	133 *225*	73			
East Hen / South *Storage Length*						#788	246			256	m147		

PM PEAK HOUR RESULTS

Intersection	Eastbound Left	Eastbound Through	Eastbound Right	Westbound Left	Westbound Through	Northbound Left	Northbound Through	Northbound Right	Southbound Left	Southbound Through	Southeast Right	Northwest Left	Northwest Right
Elmwood *Storage Length*	#669 *620*	#817	199 *630*	#375 *300*	#635	m#332 *315*	#754		#175 *280*	#695			
Middle Access Drive *Storage Length*	124 *75*	64		80 *50*	32	m155 *150*	m573		m55 *100*	m545			
Crittenden/East Hen. *Storage Length*	#356 *365*	332	47			m40 *180*	#351		#496 *290*	454		95 *315*	45
Lattimore *Storage Length*	241						396			127			
Westfall *Storage Length*	26 *20*	298	#299 *55*	#310 *290*	198	54 *115*	297	19 *195*	m67 *225*	#751			
East Hen / South *Storage Length*						299	289			430	m206		

m = Volume for 95% queue is metered by upstream signal
 # = 95% queue exceeds capacity, queue may be longer. Result shown is after two cycles

Queue exceeds entered storage

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MEMORANDUM

TO: Tom Lichtenthal – Bergmann Associates

FROM: Cory Greene, PE, PTOE

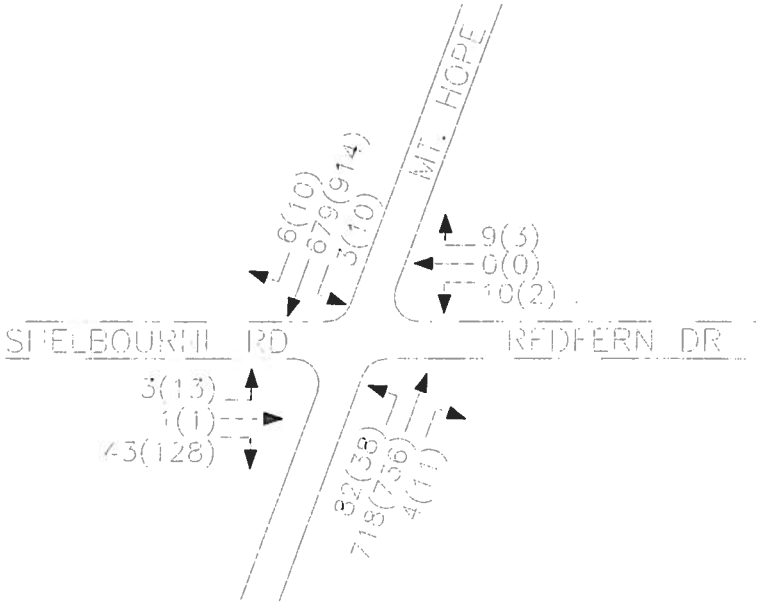
DATE: July 25, 2007

RE: Mt. Hope Reconstruction project

Tom – we have completed the Traffic Signal Warrant analysis of the Mt. Hope / Shelbourne Road / Redfern Drive intersection for the Mt. Hope reconstruction project. Our findings are summarized below.

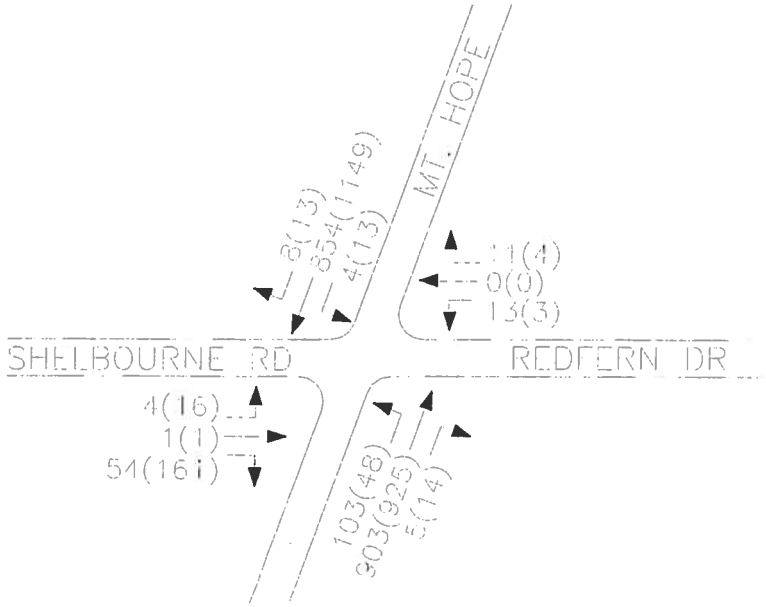
SRF & Associates obtained AM and PM peak hour turning movement counts at the Mt. Hope / Shelbourne intersection Monday June 18 from 4:00-6:00 PM and Tuesday June 19, 2007 from 7:00-9:00 AM. The peak hour traffic volumes occurred between 7:30-8:30 AM and 4:30-5:30 PM. The AM and (PM) peak hour counts are shown below.

Existing 2007 Volumes



Based on growth rates developed for this project along this section of Mt. Hope, a 1.0% increase in traffic volumes per year was applied to the 2007 volumes to develop the 2030 design year volumes. The future 2030 design year volumes are shown below.

Future 2030 Volumes



The need for a traffic signal was determined by an investigation of the existing traffic conditions and physical characteristics at the location. The eight traffic signal warrants identified in the *Standard Specifications Update for the adoption of the National MUTCD (FHWA) and the New York State Supplement* were reviewed to investigate the need for a traffic control signal at this location. Two specific traffic volume related warrants were evaluated:

Warrant 2: Four-Hour Vehicle Volume
Warrant 3: Peak Hour

These warrants and their criteria are fully explained in the MUTCD. The individual warrants are discussed below.

Warrant 2 stipulates that for any four hours of a day, minimum threshold volumes are met on the artery and side road. Based on the existing and future design year traffic volumes, this warrant is not met. Based on the fact that the four hour volume warrant is not met, it is reasonable to assume that the remaining volume related warrants would also not be met.

Warrant 3 is also intended for application where minor street traffic suffers undue delay in entering or crossing the major street for one hour of the day. It stipulates that for one hour of a day, minimum threshold volumes are met on the artery and side road. Based on a review of the traffic volumes on Shelbourne, it is apparent that a majority of the eastbound traffic turns right to go south on Mt. Hope Avenue. The MUTCD allows for the reduction of right turning traffic from the overall approach when considering traffic signal volume warrants. If no reduction is made to the Shelbourne approach, then the warrant is met during the PM peak hour period for existing and future design year traffic volume conditions. However, if a reduction is applied, then the peak hour volume warrant is not met. Therefore, because a majority of vehicles turn right, and experience less delay than left turning vehicles, it is appropriate to reduce the approach volumes when considering the warrants. In summary, this warrant is not met.

The remaining five warrants were reviewed to determine if conditions at the Shelbourne intersection would indicate the need for a signal. Three of the remaining five warrants do not apply to this intersection, and the other two warrants that deal with pedestrian volumes and crash experience are also not met. Therefore, the installation of a traffic signal is not recommended at the Mt. Hope / Shelbourne Road intersection.

We trust this addresses your concerns. Please contact our office with further comments or questions.

Sincerely,

Cory H. Greene

Cory Greene, P.E., PTOE
Traffic Engineer

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MEMORANDUM

TO: Tom Lichtenthal – Bergmann Associates

FROM: Cory Greene, PE, PTOE

DATE: October 23, 2007

RE: Mt. Hope Reconstruction project

Tom – we have completed the investigation of conversion of Fort Hill Terrace to from one way to two way traffic operations for the Mt. Hope reconstruction project. Our findings are summarized below.

Conversion of Fort Hill Terrace at the Mt. Hope Avenue / Crittenden Blvd.-East Henrietta Road intersection would require an additional phase of the traffic signal to accommodate westbound vehicles on Fort Hill Terrace. The capacity analysis tables below indicate the results of the analysis with three (3) different options.

The first option would maintain one-way eastbound traffic flows on Fort Hill Terrace (existing conditions); the second option would allow westbound two-way flows on Fort Hill Terrace with one lane on the westbound approach; the third option would allow two-way flows on Fort Hill Terrace with two westbound lanes on the approach to Mt. Hope Avenue.

The two-westbound lane option on Fort Hill Terrace was investigated to try and minimize the amount of green time that would need to be allocated to the Fort Hill approach at the signalized intersection.

Fort Hill Terrace – One Way Eastbound
(existing conditions)

	2030 Conditions	
	AM	**PM**
Mt. Hope / Fort Hill		
Eastbound Left	E	E
Eastbound Thru	D	E
Eastbound Right	A	A
Northbound Left	C	C
Northbound Thru	D	C
Southbound Left	E	E
Southbound Thru	C	C
Northwest Left/Thru	E	D
Northwest Right	D	D
Overall	***D(42.1)***	***D(40.8)***

Fort Hill Terrace Two Way - One Westbound Lane

	2030 Conditions	
	AM	**PM**
Mt. Hope / Fort Hill		
Eastbound Left	F	E
Eastbound Thru	D	F
Eastbound Right	A	A
Westbound	F	E
Northbound Left	D	C
Northbound Thru	D	F
Southbound Left	E	E
Southbound Thru	B	C
Northwest Left/Thru	F	C
Northwest Right	E	C
Overall	***D(50.3)***	***E(56.0)***

Fort Hill Terrace Two Way - Two Westbound Lanes

	2030 Conditions	
	AM	**PM**
Mt. Hope / Fort Hill		
Eastbound Left	E	D
Eastbound Thru	C	D
Eastbound Right	A	A
Westbound Left	F	E
Westbound Thru/Right	C	C
Northbound Left	D	C
Northbound Thru	D	F
Southbound Left	E	F
Southbound Thru	C	C
Northwest Left/Thru	D	C
Northwest Right	D	C
Overall	***D(44.9)***	***D(47.7)***

The results in the tables above indicate that converting Fort Hill Terrace to two-way operations yields the most amount of intersection delay for motorists. The addition of two westbound lanes on Fort Hill Terrace provides marginally improved delay conditions as compared to the one lane westbound option. Neither option for converting Fort Hill Terrace to two-way operations can provide level of service conditions "E" or better. The only option that maintains level of service "E" or better under future 2030 conditions is the one-way operation of Fort Hill Terrace that exists today.

In conclusion, maintaining the one-way eastbound traffic flows on Fort Hill Terrace at the Mt. Hope / Crittended Blvd.-East Henrietta Road intersection provides the better operating conditions when compared to converting Fort Hill Terrace to two-way traffic flows. As such, it is recommended that Fort Hill Terrace remain as one-way eastbound traffic flows only.

We trust this addresses your concerns. Please contact our office with further comments or questions.

Sincerely,

Cory H. Greene

Cory Greene, P.E., PTOE
Traffic Engineer

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Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBU
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)						0%			0%			
Storage Length (ft)	430	0			0		0	150		0		
Storage Lanes	1	2			0		0	1		0		
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50	50		50	50			50
Trailing Detector (ft)	0	0	0	0	0	0		0	0			0
Turning Speed (mph)	15	9	9	15	15		9	15		9	9	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.850	0.850			0.984			0.994			
Flt Protected	0.950					0.960		0.950				
Satd. Flow (prot)	1770	1583	1583	0	0	1760	0	1770	3518	0	0	0
Flt Permitted	0.483					0.960		0.143				
Satd. Flow (perm)	900	1583	1583	0	0	1760	0	266	3518	0	0	0
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)			195			4						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)						30			30			
Link Distance (ft)						400			1189			
Travel Time (s)						9.1			27.0			
Volume (vph)	350	354	185	25	50	5	10	109	767	29	3	54
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	368	373	195	26	53	5	11	115	807	31	3	57
Lane Group Flow (vph)	368	373	195	0	0	95	0	115	841	0	0	0
Turn Type	custom	custom	custom	Perm	Perm			pm+pt				pm+pt
Protected Phases	7	8				3		5	2			1
Permitted Phases	8	8	8	3	3			2				6
Total Split (s)	14.0	30.0	30.0	18.0	18.0	18.0	0.0	12.0	31.0	0.0	0.0	27.0
Act Effct Green (s)	40.2	29.2	29.2			12.8		36.9	28.0			
Actuated g/C Ratio	0.34	0.24	0.24			0.11		0.31	0.23			
v/c Ratio	0.96	0.97	0.37			0.50		0.60	1.02			
Control Delay	79.2	84.2	7.4			57.1		30.2	81.5			
Queue Delay	0.0	0.0	0.0			0.0		0.0	0.0			
Total Delay	79.2	84.2	7.4			57.1		30.2	81.5			
LOS	E	F	A			E		C	F			
Approach Delay						57.1			75.3			
Approach LOS						E			E			

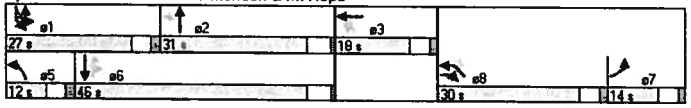
Intersection Summary

Lane Group	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12
Grade (%)		0%			0%		
Storage Length (ft)	260		0		300	0	
Storage Lanes	1		0		1	1	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50	50	
Trailing Detector (ft)	0	0		0	0	0	
Turning Speed (mph)	15		9	15	15	9	9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor							
Frt		0.989				0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3500	0	0	1770	1583	0
Flt Permitted	0.129				0.673		
Satd. Flow (perm)	240	3500	0	0	1254	1583	0
Right Turn on Red			Yes				Yes
Satd. Flow (RTOR)		7				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30		
Link Distance (ft)		508			1320		
Travel Time (s)		11.5			30.0		
Volume (vph)	354	925	72	10	154	204	18
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0
Parking (#/hr)							
Mid-Block Traffic (%)		0%			0%		
Adj. Flow (vph)	373	974	76	11	162	215	19
Lane Group Flow (vph)	430	1050	0	0	173	234	0
Turn Type	pm+pt			Perm		Perm	
Protected Phases	1	6			8		
Permitted Phases	6			8		8	
Total Split (s)	27.0	46.0	0.0	30.0	30.0	30.0	0.0
Act Effct Green (s)	55.0	43.1			29.2	29.2	
Actuated g/C Ratio	0.46	0.36			0.24	0.24	
v/c Ratio	1.03	0.83			0.57	0.60	
Control Delay	79.2	27.5			33.1	32.4	
Queue Delay	0.0	1.3			0.0	0.0	
Total Delay	79.2	28.8			33.1	32.4	
LOS	E	C			C	C	
Approach Delay		43.5			32.7		
Approach LOS		D			C		

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 77 (64%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 56.0 Intersection LOS: E
Intersection Capacity Utilization 93.4% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 309: Crittenden & Mt Hope



Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	11	11	12	12	11
Grade (%)						0%			0%			
Storage Length (ft)	430	0			0		0	150		0		
Storage Lanes	1	2			1		0	1		0		
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50	50		50	50		50	50
Trailing Detector (ft)	0	0	0	0	0	0		0	0		0	0
Turning Speed (mph)	15	9	9	15	15		9	15		9	9	15
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.850	0.850			0.897			0.998			
Flt Protected	0.950				0.950			0.950				
Satd. Flow (prot)	1711	1583	1583	0	1770	1671	0	1711	3414	0	0	0
Flt Permitted	0.160				0.950			0.167				
Satd. Flow (perm)	288	1583	1583	0	1770	1671	0	301	3414	0	0	0
Right Turn on Red			Yes				Yes					
Satd. Flow (RTOR)			116			11						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.00	1.04
Link Speed (mph)						30			30			
Link Distance (ft)						400			1189			
Travel Time (s)						9.1			27.0			
Volume (vph)	124	189	104	25	50	5	10	149	719	12	136	3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	138	210	116	26	53	5	11	166	799	13	151	3
Lane Group Flow (vph)	138	210	116	0	79	16	0	166	812	0	0	0
Turn Type	custom	custom	custom	custom	custom			pm+pt			pm+pt	pm+pt
Protected Phases	7	8			7	3		5	2		1	1
Permitted Phases	8	8	8	7	7			2			6	6
Total Split (s)	8.0	28.0	28.0	8.0	8.0	8.0	0.0	12.0	27.0	0.0	29.0	29.0
Act Effct Green (s)	34.8	29.8	29.8		5.0	5.0		33.0	24.0			
Actuated g/C Ratio	0.35	0.30	0.30		0.05	0.05		0.33	0.24			
v/c Ratio	0.80	0.44	0.21		0.89	0.17		0.74	0.99			
Control Delay	68.9	33.3	6.8		117.7	32.4		50.8	54.1			
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0			
Total Delay	68.9	33.3	6.8		117.7	32.4		50.8	54.1			
LOS	E	C	A		F	C		D	D			
Approach Delay						103.4			53.5			
Approach LOS						F			D			

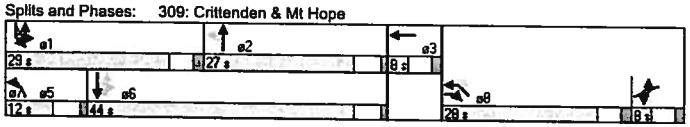
Intersection Summary

Lane Group	SBL	SBT	SBR	NWL	NWR	NWR2
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	10	13	12
Grade (%)		0%		0%		
Storage Length (ft)	260		0	300	0	
Storage Lanes	1		0	1	1	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	
Turning Speed (mph)	15		9	15	9	9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.964			0.850	
Flt Protected	0.950			0.950		
Satd. Flow (prot)	1770	3298	0	1652	1636	0
Flt Permitted	0.148			0.950		
Satd. Flow (perm)	276	3298	0	1652	1636	0
Right Turn on Red			Yes			Yes
Satd. Flow (RTOR)		52			1	
Headway Factor	1.00	1.04	1.00	1.09	0.96	1.00
Link Speed (mph)		30		30		
Link Distance (ft)		508		1332		
Travel Time (s)		11.5		30.3		
Volume (vph)	340	784	249	368	346	6
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%		0%		
Adj. Flow (vph)	378	871	277	409	384	7
Lane Group Flow (vph)	532	1148	0	409	391	0
Turn Type	pm+pt				Perm	
Protected Phases	1	6		8		
Permitted Phases	6				8	
Total Split (s)	29.0	44.0	0.0	28.0	28.0	0.0
Act Effct Green (s)	53.0	41.0		29.8	29.8	
Actuated g/C Ratio	0.53	0.41		0.30	0.30	
v/c Ratio	0.99	0.83		0.83	0.80	
Control Delay	64.5	21.0		53.2	51.6	
Queue Delay	0.0	0.4		0.0	0.0	
Total Delay	64.5	21.5		53.2	51.6	
LOS	E	C		D	D	
Approach Delay		35.1		52.4		
Approach LOS		D		D		

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 70 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 44.9 Intersection LOS: D
Intersection Capacity Utilization 95.5% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 309: Crittenden & Mt Hope



Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	12	11	11	12	12	11
Grade (%)						0%			0%			
Storage Length (ft)	430	0			0		0	150		0		
Storage Lanes	1	2			0		0	1		0		
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50	50		50	50		50	50
Trailing Detector (ft)	0	0	0	0	0	0		0	0		0	0
Turning Speed (mph)	15	9	9	15	15		9	15		9	9	15
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.850	0.850			0.984			0.998			
Flt Protected	0.950					0.960		0.950				
Satd. Flow (prot)	1711	1583	1583	0	0	1760	0	1711	3414	0	0	0
Flt Permitted	0.167					0.960		0.154				
Satd. Flow (perm)	301	1583	1583	0	0	1760	0	277	3414	0	0	0
Right Turn on Red			Yes				Yes					
Satd. Flow (RTOR)			116			5						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.04	1.00	1.00	1.04
Link Speed (mph)						30			30			
Link Distance (ft)						400			1189			
Travel Time (s)						9.1			27.0			
Volume (vph)	124	189	104	25	50	5	10	149	719	12	136	3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	138	210	116	26	53	5	11	166	799	13	151	3
Lane Group Flow (vph)	138	210	116	0	0	95	0	166	812	0	0	0
Turn Type	custom	custom	custom	Perm	Perm			pm+pt			pm+pt	pm+pt
Protected Phases	7	8				3		5	2		1	1
Permitted Phases	8	8	8	3	3			2			6	6
Total Split (s)	8.0	27.0	27.0	8.0	8.0	8.0	0.0	12.0	29.0	0.0	28.0	28.0
Act Effct Green (s)	29.0	24.0	24.0			5.0		34.9	26.0			
Actuated g/C Ratio	0.29	0.24	0.24			0.05		0.35	0.26			
v/c Ratio	0.87	0.55	0.25			1.02		0.74	0.91			
Control Delay	84.5	39.7	7.4			146.1		50.6	37.3			
Queue Delay	0.0	0.0	0.0			0.0		0.0	0.0			
Total Delay	84.5	39.7	7.4			146.1		50.6	37.3			
LOS	F	D	A			F		D	D			
Approach Delay						146.1			39.6			
Approach LOS						F			D			

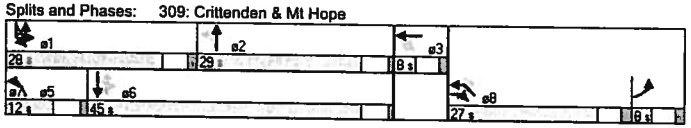
Intersection Summary

Lane Group	SBL	SBT	SBR	NWL	NWR	NWR2
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	10	13	12
Grade (%)		0%		0%		
Storage Length (ft)	260		0	300	0	
Storage Lanes	1		0	1	1	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	
Turning Speed (mph)	15		9	15	9	9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.964			0.850	
Flt Protected	0.950			0.950		
Satd. Flow (prot)	1770	3298	0	1652	1636	0
Flt Permitted	0.138			0.950		
Satd. Flow (perm)	257	3298	0	1652	1636	0
Right Turn on Red			Yes			Yes
Satd. Flow (RTOR)		53			1	
Headway Factor	1.00	1.04	1.00	1.09	0.96	1.00
Link Speed (mph)		30		30		
Link Distance (ft)		508		1332		
Travel Time (s)		11.5		30.3		
Volume (vph)	340	784	249	368	346	6
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%		0%		
Adj. Flow (vph)	378	871	277	409	384	7
Lane Group Flow (vph)	532	1148	0	409	391	0
Turn Type	pm+pt				Perm	
Protected Phases	1	6		8		
Permitted Phases	6				8	
Total Split (s)	28.0	45.0	0.0	27.0	27.0	0.0
Act Effct Green (s)	54.0	42.1		24.0	24.0	
Actuated g/C Ratio	0.54	0.42		0.24	0.24	
v/c Ratio	1.03	0.81		1.03	0.99	
Control Delay	73.7	19.0		88.2	79.5	
Queue Delay	0.0	0.4		0.0	0.0	
Total Delay	73.7	19.5		88.2	79.5	
LOS	E	B		F	E	
Approach Delay		36.6		84.0		
Approach LOS		D		F		

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 70 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 50.3 Intersection LOS: D
Intersection Capacity Utilization 93.6% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 309: Crittenden & Mt Hope



Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBU
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)						0%			0%			
Storage Length (ft)	430	0			0		0	150		0		
Storage Lanes	1	2			1		0	1		0		
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50	50	50	50	50		50	50			50
Trailing Detector (ft)	0	0	0	0	0	0		0	0			0
Turning Speed (mph)	15	9	9	15	15		9	15		9	9	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.850	0.850			0.897			0.994			
Flt Protected	0.950				0.950			0.950				
Satd. Flow (prot)	1770	1583	1583	0	1770	1671	0	1770	3518	0	0	0
Flt Permitted	0.483				0.950			0.143				
Satd. Flow (perm)	900	1583	1583	0	1770	1671	0	266	3518	0	0	0
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)			195			11						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)						30			30			
Link Distance (ft)						400			1189			
Travel Time (s)						9.1			27.0			
Volume (vph)	350	354	185	25	50	5	10	109	767	29	3	54
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	368	373	195	26	53	5	11	115	807	31	3	57
Lane Group Flow (vph)	368	373	195	0	79	16	0	115	841	0	0	0
Turn Type	custom	custom	custom	custom	custom			pm+pt				pm+pt
Protected Phases	7	8			7	3		5	2			1
Permitted Phases	8	8	8	7	7			2				6
Total Split (s)	14.0	30.0	30.0	14.0	14.0	18.0	0.0	12.0	31.0	0.0	0.0	27.0
Act Effct Green (s)	51.1	39.6	39.6		11.6	8.5		36.9	28.0			
Actuated g/C Ratio	0.43	0.33	0.33		0.10	0.07		0.31	0.23			
v/c Ratio	0.79	0.71	0.30		0.46	0.12		0.60	1.02			
Control Delay	45.6	45.5	6.0		61.2	33.1		30.5	80.3			
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0			
Total Delay	45.6	45.5	6.0		61.2	33.1		30.5	80.3			
LOS	D	D	A		E	C		C	F			
Approach Delay						56.4			74.3			
Approach LOS						E			E			

Intersection Summary

Lane Group	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12
Grade (%)		0%			0%		
Storage Length (ft)	260		0		300	0	
Storage Lanes	1		0		1	1	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Leading Detector (ft)	50	50		50	50	50	
Trailing Detector (ft)	0	0		0	0	0	
Turning Speed (mph)	15		9	15	15	9	9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor							
Frt		0.989				0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3500	0	0	1770	1583	0
Flt Permitted	0.129				0.673		
Satd. Flow (perm)	240	3500	0	0	1254	1583	0
Right Turn on Red			Yes				Yes
Satd. Flow (RTOR)		7				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30		
Link Distance (ft)		508			1320		
Travel Time (s)		11.5			30.0		
Volume (vph)	354	925	72	10	154	204	18
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0
Parking (#/hr)							
Mid-Block Traffic (%)		0%			0%		
Adj. Flow (vph)	373	974	76	11	162	215	19
Lane Group Flow (vph)	430	1050	0	0	173	234	0
Turn Type	pm+pt			Perm		Perm	
Protected Phases	1	6			8		
Permitted Phases	6			8		8	
Total Split (s)	27.0	46.0	0.0	30.0	30.0	30.0	0.0
Act Effct Green (s)	55.0	43.1			39.6	39.6	
Actuated g/C Ratio	0.46	0.36			0.33	0.33	
v/c Ratio	1.03	0.83			0.42	0.45	
Control Delay	81.7	27.0			21.4	20.8	
Queue Delay	0.0	1.3			0.0	0.0	
Total Delay	81.7	28.3			21.4	20.8	
LOS	F	C			C	C	
Approach Delay		43.8			21.0		
Approach LOS		D			C		

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 75 (63%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 47.7 Intersection LOS: D
Intersection Capacity Utilization 98.0% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 309: Crittenden & Mt Hope

APPENDIX E

Environmental Checklists and Documentation

NEPA ASSESSMENT CHECKLIST
Mt. Hope Avenue And East Henrietta Road Improvement Project (Pin 4753.61)

I. THRESHOLD QUESTION

	YES	NO
1. Does the project involve unusual circumstances as described in 23 CFR §771.117(b)?	☐	☒

- If YES, the project does not qualify as a Categorical Exclusion and an EA or EIS is required. You may STOP COMPLETING THE CHECKLIST.
- If NO, go on.

II. AUTOMATIC CATEGORICAL EXCLUSION

	YES	NO
2. Is the project an action listed as an Automatic Categorical Exclusion in 23 CFR §771.117 (c) (C List) and/or is the project an element-specific project classified by FHWA as a Categorical Exclusion on July 22, 1996?	☐	☒

- If YES to question 2, the project qualifies for a C List Categorical Exclusion. You may STOP COMPLETING THE CHECKLIST. The checklist should be included in the appendix of the Final Design Report (or Scope Summary Memorandum/Final Design Report). The CATEGORICAL EXCLUSION DETERMINATION memo is to be sent to the appropriate Main Office Design liaison unit with a copy of the Final Design Report (or Scope Summary Memorandum/Final Design Report). A copy of the CATEGORICAL EXCLUSION DETERMINATION memo must also be sent to the Office of Budget and Finance, Project and Letting Management, and others (see sample DETERMINATION memo attached).
  (Note – Even if YES to question 2, there may be specific environmental issues that still require an action such as an EO 11990 Wetland Finding or a determination of effect on cultural resources. The project is still an Automatic Categorical Exclusion but the necessary action must be taken, such as obtaining FHWA's signature on the wetland finding. Refer to the appropriate section of the Environmental Procedures Manual for guidance.)
- If NO to question 2, go on.

III. PROGRAMMATIC CATEGORICAL EXCLUSION

	YES	NO
3. Is the project on a new location or does it involve a change in the functional classification or added mainline capacity (add through-traffic lanes)?	☐	☒
4. Is this a Type I project under 23 CFR 772, "Procedures for Abatement of Highway Traffic Noise and Construction"?	☐	☒
5. If the project is located within the limits of a designated sole source aquifer area or the associated stream flow source area, is the drainage pattern altered?	☐	☒
6. Does the project involve changes in travel patterns?	☐	☒
7. Does the project involve the acquisition of more than minor amounts of temporary or permanent right-of-way (a minor amount of right-of-way is defined as not more than 10 percent of a parcel for parcels under 4 ha (10 acres) in size, 0.4 ha (1 acre) of a parcel 4 to 40.5 ha (10 to 100 acres) in size and 1 percent of parcel for parcels greater than 40.5 ha (100 acres) in size)?	☒	☐

	YES	NO
8. Does the project require a Section 4(f) evaluation and determination in accordance with the FHWA guidance?	☐	☒
9. Does the project involve commercial or residential Displacement?	☐	☒
10. If Section 106 applies, does FHWA's determination indicate an opinion of adverse effect?	☐	☒
11. Does the project involve any work in wetlands requiring a Nationwide Wetland Permit #23?	☐	☒
12. Does the project involve any work in wetlands requiring an individual Executive Order 11990 Wetland Finding?	☐	☒
13. Has it been determined that the project will significantly encroach upon a flood plain based on preliminary hydraulic analysis and consideration of EO 11988 criteria as appropriate?	☐	☒
14. Does the project involve construction in, across or adjacent to a river designated as a component proposed for or included in the National System of Wild and Scenic Rivers?	☐	☒
15. Does the project involve any change in access control?	☐	☒
16. Does the project involve any known hazardous materials sites or previous land uses with potential for hazardous material remains within the right-of-way?	☒	☐
17. Does the project occur in an area where there are Federally listed endangered or threatened species or critical habitat?	☐	☒
18. Is the project, pursuant to EPM Chapter 1A and Table 2 and Table 3 of 40 CFR Parts 51 and 93, non-exempt or does it exceed any ambient air quality standard?	☐	☒
19. Does the project lack consistency with the New York State Coastal Zone Management Plan and policies of the Department of State, Office of Coastal Zone Management?	☐	☒
20. Does the project impact or acquire any Prime or Unique Farmland as defined in 7 CFR Part 657 of the Federal Farmland Protection Policy Act and are there outstanding compliance activities necessary? (Note: Interpret compliance activity to mean completion of Form AD 1006.)	☐	☒

- If NO for questions 3-20, go on to answer question 21.
- If YES to any question 3-20, project will not qualify as a Programmatic Categorical Exclusion. Answer questions 21 and 22 for documentation only and go on to question 23.

21. Does the project involve the use of a temporary road, Detour or ramp closure?	☐	☒

- If NO to questions 3-20 and NO to question 21, the project qualifies as a Programmatic Categorical Exclusion. You may STOP COMPLETING THE CHECKLIST. The checklist should be included in the appendix of the Final Design Report (or Scope Summary Memorandum/Final Design Report). The CATEGORICAL EXCLUSION DETERMINATION memo is to be sent to the appropriate Main Office Design liaison unit with a copy of the Final Design Report (or Scope Summary Memorandum/Final Design Report). A copy of the Categorical Exclusion memo must also be sent to the Office of Budget and Finance, Project and Letting Management, and others (see sample DETERMINATION memo attached).
- If YES to question 21, preparer should complete question 22 (i-v). If questions 3-20 are NO and 21 is YES, the project will still qualify as a Programmatic Categorical Exclusion if questions 22 (i-v) are YES.

	YES	NO
22. Since the project involves the use of temporary road, detour or ramp closure, will all of the following conditions be met:		
i. Provisions will be made for pedestrian access, where warranted, and access by local traffic and so posted.	☒	☐
ii. Through-traffic dependent business will not be Adversely affected.	☒	☐
iii. The detour or ramp closure, to the extent possible, will not interfere with any local special event or festival.	☒	☐
iv. The temporary road, detour or ramp closure does not substantially change the environmental consequences of the action.	☒	☐
v. There is no substantial controversy associated with The temporary road, detour or ramp closure.	☒	☐

- If question 3-20 are NO, 21 is YES and 22 (i-v) are YES, the project qualifies for a Programmatic Categorical Exclusion. You may STOP COMPLETING THE CHECKLIST. The checklist should be included in the appendix of the Final Design Report (or Scope Summary Memorandum/Final Design Report). The CATEGORICAL EXCLUSION DETERMINATION memo is to be sent to the appropriate Main Office Design liaison unit with a copy of the Final Design Report (or Scope Summary Memorandum/Final Design Report). A copy of the Categorical Exclusion memo must also be sent to the Office of Budget and Finance, Project and Letting Management, and others (see sample DETERMINATION memo attached).
- If questions 3-20 are NO, 21 is YES and any part of 22 is NO, go on to question 23.

	YES	NO
23. Is the project section listed in 23 CFR §771.117(d) (D List) Or is the project an action similar to those listed in 23 CFR §771.117 (d)?	☒	☐

For those questions which precluded a Programmatic Categorical Exclusion, documentation should be provided for any YES response to questions 3-20 or for a NO response to any part of questions 22 (i-v). This documentation, as well as the checklist, should be included in the Design Approval Document, i.e., Final Design Report, etc., to be submitted to the Main Office/FHWA Design liaison unit for submission to the FHWA Division for classification of the project as a D List Categorical Exclusion.

NEPA ASSESSMENT CHECKLIST DOCUMENTATION
Mt. Hope Avenue and East Henrietta Road
Improvement Project (PIN 4753.61)

III.7. Programmatic Categorical Exclusion: Right-of-Way Acquisitions

According to III.7 of the NEPA Checklist, a minor amount of right-of-way is defined as not more than 10 percent of a parcel for parcels under 4 ha (10 acres) in size. The Mt. Hope Avenue and East Henrietta Road Improvement Project involves the acquisition of more than minor amounts of right-of-way for 6 parcels along Mt. Hope Avenue. These 6 parcels have been highlighted in Table 1 on the next page which contains all right-of-way takings proposed for this project. All 6 parcels are located along the northern portion of Mt. Hope Avenue between Elmwood Avenue and Raleigh Road. The location of these 6 parcels and the areas where the proposed right-of-way takings will occur are highlighted on the attached plan sheets. The total parcel size, the proposed taking, and the percentage of the entire parcel the proposed takings represent are also shown on the attached plan sheets.

Table 1: Mt. Hope Avenue And East Henrietta Road Right-Of-Way Takings

Address	Tax Account	Take	Purpose
1870 Mt. Hope Avenue	150.21-1-2	Fee 6648 SF	Hospital Strip taking on Westfall Road
1810 Mt. Hope Avenue	136.77-2-53.1	Fee 389 SF	Business- Mobil Gas Station 3.0' Strip taking on Mt. Hope Avenue
1780 Mt. Hope Avenue	136.77-2-54	Fee 643 SF	Business- Burger King 3.0' Strip taking on Mt. Hope Avenue
1754 Mt. Hope Avenue	136.77-2-55.1	Fee 610 SF	Business- Papa John's 3.0' Strip taking on Mt. Hope Avenue
1744 Mt. Hope Avenue	136.77-2-56	Fee 142 SF	Residential 3.0' Strip taking on Mt. Hope Avenue
1736 & 1738 Mt. Hope Avenue	136.77-2-1	Fee 191SF	Residential Corner taking on Mt. Hope Avenue
1720 & 1722 Mt. Hope Avenue	136.69-2-46	Fee 59 SF	Residential Corner taking on Mt. Hope Ave.
1714 Mt. Hope Avenue	136.69-2-48	Fee 179 SF	Business - Esthetica Hair Studio 3.0' Strip taking on Mt. Hope Ave.
1712 Mt. Hope Avenue	136.69-2-49	Fee 177 SF	Business - 3.0' Strip taking on Mt. Hope Ave.
1698 & 1700 Mt. Hope Avenue	136.69-2-50	Fee 177 SF	Residential 3.0' Strip taking on Mt. Hope Ave.
1686 Mt. Hope Avenue	136.69-2-51	Fee 389 SF	Residential Corner taking on Mt. Hope Ave.
1680 Mt. Hope Avenue	136.69-2-52	Fee 183 SF	Residential 3.0' Strip taking on Mt. Hope Ave.
1670 Mt. Hope Avenue	136.69-2-53	Fee 170 SF	Residential 3.0' Strip taking on Mt. Hope Ave.
1660 Mt. Hope Avenue	136.69-2-54	Fee 125 SF	Residential Strip taking on Mt. Hope Ave.
1652 Mt. Hope Avenue	136.69-2-55	Fee 20 SF	Residential Strip taking on Mt. Hope Ave.
1580 Mt. Hope Avenue	136.69-2-1.2	Fee 101 SF	Religious Corner taking on Mt. Hope Ave.
1550 Mt. Hope Avenue	136.61-3-30	Fee 84 SF	Business – Wendy's Strip taking on Mt. Hope Ave.
1522 Mt. Hope Avenue	136.61-3-29	Fee 23 SF	Business – Wendy's Strip taking on Mt. Hope Ave.
1520 Mt. Hope Avenue	136.61-3-28	Fee 34 SF	Business Strip taking on Mt. Hope Ave.
1510 Mt. Hope Avenue	136.61-3-27	Fee 395 SF	Business Strip taking on Mt. Hope Ave.
1500 Mt. Hope Avenue	136.61-3-26	Fee 1524 SF	Business—Dunkin Donuts Strip taking on Mt. Hope Ave.
1422 Mt. Hope Avenue	136.54-1-22.1	Fee 252 SF	Business – McDonalds Corner taking on Mt. Hope Ave.
1360 Mt. Hope Avenue	136.54-1-28	Fee 164 SF	Business – Maxim Health Strip taking on Mt. Hope Ave.
1340 Mt. Hope Avenue	136.54-1-30.2	Fee 751 SF	Business – Bordaux/Abbotts Strip taking on Mt. Hope Ave.
1330 Mt. Hope Avenue	136.54-1-32	Fee 387 SF	Business – Mykonos Strip taking on Mt. Hope Ave.
793 Elmwood Avenue	136.54-1-2	Fee 1857 SF	Business – CVS Strip taking on Mt. Hope Ave.

1286 Mt. Hope Avenue	136.46-1-48.1	Fee 904 SF	Business Strip taking on Mt. Hope Ave.
1837 Mt. Hope Avenue	136.77-1-25.1	Fee 517 SF	Business Strip taking on Westmoreland Road
1775 Mt. Hope Avenue	136.77-1-13.2	Fee 180 SF	Residential 3' Strip taking on Mt. Hope Ave.
1757 Mt. Hope Avenue	136.77-1-13.1	Fee 17 SF	Residential Corner taking on Mt. Hope Ave.
1737 Mt. Hope Avenue	136.77-1-12	Fee 823 SF	Business- Rowe Photography 8.4' Strip taking on Mt. Hope Ave.
1705 Mt. Hope Avenue	136.69-1-39	Fee 17 SF	Business - Mt. Hope Plaza Corner taking on Mt. Hope Ave.
1653-1691 Mt. Hope Avenue	136.69-1-37	Fee 4705 SF	Business – Mt. Hope Plaza 14.5' Strip taking on Mt. Hope Ave.
1575 Mt. Hope Avenue	136.69-1-20	Fee 83 SF	Residential Corner Taking on Mt. Hope Avenue
1555-1559 Mt. Hope Avenue	136.61-3-38	Fee 242 SF	Business 3' Strip taking on Mt. Hope Avenue
1551 Mt. Hope Avenue	136.61-3-37	Fee 227 SF	Business 3' Strip taking on Mt. Hope Avenue
1545 Mt. Hope Avenue	136.61-3-25	Fee 173 SF	Residential Corner taking on Mt. Hope Avenue
1511 Mt. Hope Avenue	136.61-2-29	Fee 175 SF	Business – Mt. Hope Diner Strip taking on Mt. Hope Avenue
1495 & 1499 Mt. Hope Avenue	136.61-2-28	Fee 312 SF	Business – Strip taking on Mt. Hope Ave.
1477 Mt. Hope Avenue	136.61-1-31	Fee 680 SF	Business - HSBC Bank Strip taking on Mt. Hope Ave.
1475 Mt. Hope Avenue	136.61-1-30	Fee 687 SF	Business - HSBC Bank Strip taking on Mt. Hope Ave.
1471 Mt. Hope Avenue	136.61-1-28	Fee 2042 SF	Business - Mt. Hope Service Center Strip taking on Mt. Hope Ave.
1431 Mt. Hope Avenue	136.53-1-7	Fee 4796 SF	Business - Hess Express Gas Station 32.5' Strip taking on Mt. Hope Ave.
1401 Mt. Hope Avenue	136.53-1-6	Fee 10996SF	Business – University of Rochester 36' Strip taking on Mt. Hope Ave.
1371 Mt. Hope Avenue	136.53-1-5	Fee 4132 SF	Business – University of Rochester 39' Strip taking on Mt. Hope Ave.
1351 Mt. Hope Avenue	136.53-1-4	Fee 6406 SF	Business – University of Rochester 39' Strip taking on Mt. Hope Ave.
1325 Mt. Hope Avenue	136.53-1-3.1	Fee 6822 SF	Business – University of Rochester 39' Strip taking on Mt. Hope Ave.
127 Redfern Drive	136.70-1-40	Fee 23 SF	Residential Corner taking on E. Henrietta Road
130 Redfern Drive	136.70-1-41	Fee 22 SF	Residential Corner taking on E. Henrietta Road
80 E. Henrietta Road	136.62-1-31	Fee 6 SF	Residential Corner taking on E. Henrietta Road
66 E. Henrietta Road	136.62-1-42	Fee 8 SF	Residential Corner taking on E. Henrietta Road
48 E. Henrietta Road	136.62-1-45	Fee 7 SF	Residential Corner taking on E. Henrietta Road
30 E. Henrietta Road	136.62-1-62	Fee 75 SF	Religious Corner taking on E. Henrietta Road

III.16. Programmatic Categorical Exclusion: Hazardous Materials

A hazardous waste-contaminated materials screening was conducted of the Mount Hope Avenue-East Henrietta Road improvement corridor. The screening was conducted in general accordance with NYSDOT environmental procedures. The screening included review of environmental databases, review of historic land use maps and aerial photographs, interviews and site visits.

The screening identified 16 sites of environmental concern that present the potential for encountering contamination within the proposed construction right-of-way or property acquisitions. These sites include 13 current or former gasoline stations/filling stations and two suspect dry cleaning operations. Three sites are listed by the NYSDEC as active petroleum spill events at which cleanup activities are on-going.

Table 2: Sites of Potential Contamination Within Proposed Construction Limits and Property Acquisitions

Name	Address	Environmental Concern
Hess Station # 32353*	1431 Mt. Hope	Active service station, USTs, Spill Events
Mt. Hope Service Center/ Safelite Auto Glass	1471 Mt. Hope	Former Service Station, spill events
United Cleaners	1499 Mt. Hope	Dry cleaner, possible cleaning chemicals
Dunkin Donuts/former Mt. Hope Service Center	1500 Mt. Hope	Former location of Mt. Hope Service Center, filling station circa 1962.
U of R Currier Bldg	1510-1540 Mt. Hope	Past Spill event site, gasoline fumes, associated with spill at Hess Station
Fort Hill Liquor Store	1520 Mt. Hope	Spill event-fumes associated with Hess Station
Former filling station	1545 Mt. Hope	Filling station circa 1962
Tire Associates/former Mt. Hope Service Center	1581 - 1591 Mt. Hope	Former service station and repair garage. Also known as the Marie Palermo property.
Mt. Hope Cleaners	1665 Mt. Hope	Dry cleaners, EPA air permit, possible use of dry cleaning chemicals
Cole Muffler	1735 Mt. Hope	Automotive services, waste oil storage
Rowe Photo*	1737 Mt Hope	Former service station-active spill event
Mt. Hope Mobil*	1810 Mt. Hope	Active service station, UST, Spill Events
Kwik Fill/Red Apple	1835 Mt. Hope	Active service station, USTs, Spill Events
South Presbyterian Church	30 East Henrietta Road	Petroleum Spill event-tank failure
White's garage/Integrity Auto Repair	241 East Henrietta Road	Former service station-PBS site and spill event site
Former filling station	1925 South Ave at East Henrietta Road	Former filling station circa 1962 between Mt. Hope Ave. and East Henrietta Road

* Denotes active petroleum spill events at which cleanup activities are on-going.

The intersection of Mt. Hope Avenue/East Henrietta Road/Crittenden Blvd/Fort Hill Terrace is of concern due to a long standing active petroleum spill event (Hess Station at 1431 Mt. Hope Ave.) and former filling stations at the intersection. Gasoline contamination has been reported in sewers, buildings and monitoring wells in this vicinity. Rowe Photography at 1737 Mt. Hope Ave. and the ExxonMobil station at 1810 Mt. Hope Ave. are also active petroleum spill events. An active remediation system is in service at the former Tire Associates/Mt. Hope Service Center/filling station at 1581-1590 Mt. Hope.

Subsurface investigative activities should be conducted at identified sites during final design to accurately determine actual limits of contamination prior to construction, to evaluate possible cleanup costs and to identify areas of significant contamination. Investigations may also result in revisions to design options. Investigations should be conducted to identify possible buried tanks within proposed construction areas. Test borings advanced to anticipated construction depths should be screened for evidence of contamination. Soil samples should be collected for laboratory analysis if field screening activities detect of contamination. Depth to groundwater should be determined. Groundwater samples may be required for laboratory analysis to evaluate potential for encountering contaminated groundwater during construction.

If contaminated materials are encountered, the anticipated areas of contamination will be identified on the plans and contract documents. In constructing the project improvements, NYSDOT approved specifications and pay items will be used to properly test, handle, store and remove and dispose of these contaminated materials.

CITY OF ROCHESTER
Environmental Assessment Form

LONG FORM

FOR CITY USE ONLY

Project I.D. (File) No(s).:_____
Project Title: Mount Hope Avenue and East Henrietta Road Improvement Project
Date Filed:_____
Lead Agency:_____
Review By:_____
Determination Recommendation: [ ] 1. No significant impact
[ ] a. No mitigation period required
[ ] b. Mitigation period required
[ ] 2. EIS required
Fee Paid: $_____ (have form stamped or attach receipt)

PART I - Project Information

AFFIDAVIT

"I affirm that the information provided herein is true and I understand that this application will be accepted for all purposes as the equivalent of an affidavit, and if it contains a material false statement, shall subject me to the same penalties for perjury as if I had been duly sworn."

Completed by;

Paul Way — Name (type of print)
Signature
October 23, 2008 — Date

1. **APPLICANT/INITIATOR INFORMATION**
   A. Name of Applicant(s)/Initiator(s): City of Rochester
   Address: Department of Environmental Services, City Hall, Room 300 B, 30 Church Street
   City: Rochester State: New York Zip Code: 14614
   Telephone No.: (585) 428-6860

   B. Name of Agency and/or Individual preparing this form: City of Rochester
   Address: Department of Environmental Services, City Hall, Room 300 B, 30 Church Street
   City: Rochester State: New York Zip Code: 14614
   Contact Person: Paul Way Telephone No.: (585) 428-6860

2. **PROJECT INFORMATION**
   A. Project Description. Attach a detailed description of the main features of the project. This description should reflect the ultimate use of the site in terms of all construction and development, verifiable by submitted drawings/plans. If the project will be phased, the anticipated phasing schedule should be described.

   B. Attach **each** of the following:
      1. A copy of USGS 7 1/2 minute, 1:24,000 scale map or other maps, diagrams, or serial photos which clearly indicate the specific boundaries, topography of the project site and the surrounding area, and existing land use of the project site and affected areas.

      2. A site plan showing the location of the significant features such as proposed structures, roads, extent of floodplain, wetlands and landscaping features.

C. Location of roadway project is:
1) Mt. Hope Avenue (NYS Rt. 15) - from Elmwood Avenue to the Erie Canal
2) East Henrietta Road (NYS Rt. 15 A) - from Mt. Hope Avenue to South Avenue
Street Address (if any): Not applicable.

D. Tax Account No. (Assessor): Not applicable.

E. Section-Block-Lot No. (Maps & Records): Not applicable.

F. Estimated development cost $15 M Construction Cost

G. Project Character

1. Total project area (acres or sq. ft.)_____ or length (miles)_____
Mt. Hope Ave. (NYS Rt. 15) = 0.85 mi.; E. Henrietta Rd. (NYS Rt. 15 A) = 0.30 mi.
2. Number of buildings 22 height/stories varies sq. ft._____
3. Number of attached residential units 0 detached_____
4. Total floor area of institutional, commercial or industrial uses (specify) 0
5. Existing zoning district C-2 (Commercial Center) & R-1 (Low-Density Residential)
Proposed district C-V Collegetown Village District
6. Total land surface area (sq. ft) of project site which is:

	Presently	Upon Completion
Buildings	0	0
Parking Areas, Road, Driveways	530,000 S.F.	575,000 S.F.
Lawn	47,000 S.F.	90,000 S.F.
Brush	0	0
Wooded (mature tree cover)	0	0
Freshwater Wetland	0	0
Water Body	0	0
Unvegetated (rock, earth fill, paved surface, etc.)	0	0
Total	577,000 S.F.	665,000 S.F.

7. What is the anticipated period(s) of construction? Under currently planned Federal and State project funding construction is scheduled to begin on Phase 1 in spring 2010 and be substantially completed fall 2010. Phase 2 construct not yet scheduled.

3. **SITE INFORMATION**

A. Describe the types of locations of soils, using a site map. Give the USDA-SCS soil classification types if known. Ub = Urban Soils (USDA soil map attached)

B. What is the depth (in feet) to:

1. Groundwater > 6.5 feet minimum > 6.5 feet average
2. Bedrock > 6.5 feet minimum > 6.5 feet average

(*See attachment for additional information)

C. **Topography and Grading.** Attach a copy of the grading plan.
(*NOTE: Grading plan will be complete and ready for review prior to Final Design.)

1. Percent of site previously graded 100%
2. Area to be graded (acres of sq. ft.) 675,000 S.F.
3. Slope classification of project site:

Slope	Existing Topography	After Grading
0-14%	100 %	100 %
15-24	%	%
25% or over	%	%
Total	100%	100%

4. Volume of cutting 41,000 C.Y. cubic yards, maximum cut slope ratio and height 2 Ft.
5. Volume of fill 0 cubic yards, maximum fill slope ratio and height
6. Volume of soil imported or exported (specify) Existing Road and sidewalk boxout to be exported.
If exported, identify area of disposal To be determined by contractor and approved by the City.
7. Could drainage from the site cause erosion or situation to adjacent areas?
[ ] Yes [X] No If yes, explain
8. Describe any physical alteration (e.g. dikes, excavation, fill, stream diversion) of any drainage system and/or lake, stream and wetland. Estimate quantity of material to be dredged and indicate where spoils will be deposited. Project includes excavation and replacement/upgrades of existing closed drainage system. Disposal area to be determined by contractor.
9. Describe and indicate on a site map the provisions to control erosion and storm water run-off. Include size and location of any basins and discharge points.
Silt fences will be used to control longitudinal runoff from the site. Inlet protection will be used for drainage inlets. Discharge point will remain the same as they currently are.
10. Will construction activity occur in any area having 15% of slope or greater?
[ ] Yes [X] No If yes, depict the area of 15% or greater slope and the area of construction activity on the attached site plan.

11. Is there evidence of significant erosion or slope slippage at the site?
[ ] Yes [x] No If yes, describe_____

D. What land forms are on the project site (cliffs, ravines, hills, glacial formations, ridges, etc.)?
The terrain along Mt. Hope Avenue and East Henrietta Road is generally level.

4. **TRANSPORTATION CHARACTERISTICS**

A. **Vehicular trips (one-way) generated by the project:**

	Vehicles less than 10,000 lbs. GVW		Vehicles of 10,000 lbs. GVW or greater	
	Existing	Upon Completion	Existing	Upon Completion
Peak a.m. hour # Trips	7:30 a.m. to 8:30 a.m.	7:30 a.m. to 8:30 a.m.	7:30 a.m. to 8:30 a.m.	7:30 a.m. to 8:30 a.m.
Peak p.m. hour # Trips	4:45 p.m. to 5:45 p.m.	4:45 p.m. to 5:45 p.m.	4:45 p.m. to 5:45 p.m.	4:45 p.m. to 5:45 p.m.
Average daily traffic	30,000	39,600	6005	792

B. **Traffic Patterns**

1. What streets/roads will receive increased traffic? (For each road include the current average daily traffic (ADT) and increase ADT contributed by the project.) Also include the directional distribution of the ADT on the affected roads.

Street	**Presently**	**Upon Completion**
Mt. Hope Avenue 50% NB & 50% SB in the AM and PM periods	30,000	39,600
East Henrietta Road 60% NB & 40% SB in the AM period, 40% NB and 60% SB in the PM period	11,800	16,400

(*NOTE: The increase in traffic is due to the following: standard annual traffic growth between current traffic levels and the estimated time of completion, University of Rochester (U of R) Collegetown for the year 2027 traffic projections prepared by FRA Engineering, and redevelopment of the east side of Mt. Hope at the proposed mid-block location.

The U of R Collegetown project and Mt. Hope Professional building driveway consolidation is anticipated to provide approximately 4,200 vehicles per day on the west side of the proposed midblock intersection. The east side redevelopment (Starbucks, Subway, and Brueggers driveway consolidation) is anticipated to provide approximately 2,400 vehicles per day on the east side of the proposed midblock intersection. However, Mt. Hope Avenue highway project itself will not increase traffic

volumes within the study area.

2. Describe any new transportation patterns which will arise because of the project. The impact the additional traffic will have on the operating capacity of a specific street should be noted.

There are no anticipated new traffic patterns that will develop due to this project. Standard growth rates are expected. Operational enhancements will be completed to improve traffic flow through the corridor.

C. **Employment and User Information**

1. Facilities to be open 24 hours a day, 7 days a week.
2. Number of total employees (both existing and estimated future) 0 _____ Each shift (identify by shift hours)_____
3. Number of clients, customers or users/average weekday (both existing and estimated future) Not applicable. For traffic information see # 4A and B above.

D. **Parking Information**

1. Off-street parking spaces:
   a. Total existing 0 Total upon completion: 0
   b. [X] On-site [ ] Off-site
2. If the project will affect on-street parking, identify the number of affected spaces and their location: No on-street parking currently exists on either side of Mt. Hope Avenue or East Henrietta Road. Forty-seven (47) on-street parking spaces will be provided on Mt. Hope Avenue near the northern project limits.

E. **Public Transportation**

1. Is the project site/area served by public transportation?
   [x] Yes [ ] No If yes, identify provider and route members
   RTA bus routes 91, 50, 5, 12, and 19.
2. If possible, estimate the number of employees, clients and customers using public transportation unknown

F. **Street System Modifications**

1. Does the project involve a street widening? [x] Yes [ ] No If yes:
   a. How many feet on each side? Along Mt. Hope Avenue widening varies from 0 ft. to 36 ft. No widening will occur along East Henrietta Road. For exact locations and dimensions see Plan Sheets P1 through P17 in Appendix A of the Design Report.
   b. Will the project remove any portion of the sidewalk or planting strip?
   [x] Yes [ ] No If yes, describe the dimensions of the project, existing sidewalk, and planting strips widths and those proposed.
   For locations and dimensions of sidewalks and planting strips to be removed see Plan Sheets P1 through P17 in Appendix A of the Design Report.
   c. If additional right-of-way must be acquired, describe how many feet and the current use and condition of the area being taken on a separate sheet.

For current use and condition of right-of-way acquisitions see Section III.C.2.l of the Design Report.

2. Does the project require the temporary closing of a street? [ ] Yes [x] No
   a If yes, describe the period of time it will be closed and the detour routing on a separate sheet.
   b. If only a partial closing (one or more travel lanes), describe: Staged construction will be used to construct between 1/3 to ½ of the roadway at a time. A minimum of one lane in each direction will be maintained. Emergency services will always be given priority to access the corridor.

3. Does the project involve a street abandonment? [ ] Yes [x] No
   If yes, describe:

4. Does the project involve construction of a new street? [ ] Yes [x] No

5. Does the project require (directly or indirectly) any other capital improvement to the existing street system? [x] Yes [ ] No If yes, describe on a separate sheet.

5. ENVIRONMENTAL INDICATORS

A Are any of the following land uses or environmental resources either to be affected by the proposal or located within or adjacent to the project site(s)? Check appropriate box for **every** item of the following checklist:

		Yes	No	Unknown
a.	Industrial	[ ]	[x]	[ ]
b.	Commercial	[x]	[ ]	[ ]
c.	Office	[ ]	[x]	[ ]
d.	Residential	[x]	[ ]	[ ]
e.	Utilities	[x]	[ ]	[ ]
f.	Parking	[x]	[ ]	[ ]
g.	Streets	[x]	[ ]	[ ]
h.	Parks	[ ]	[x]	[ ]
i.	Hospitals	[x]	[ ]	[ ]
j.	Schools	[x]	[ ]	[ ]
k.	Open Spaces	[ ]	[x]	[ ]
l.	Steep Slopes (15% or greater)	[ ]	[x]	[ ]
m.	Mature trees	[x]	[ ]	[ ]
n.	Shoreline	[ ]	[x]	[ ]
o.	Erodible Soils	[ ]	[x]	[ ]
p.	Energy Supplies	[ ]	[x]	[ ]
q.	Hazardous Materials	[x]	[ ]	[ ]
r.	Natural Drainage Course, Stream or other water body	[ ]	[x]	[ ]
s.	Ambient noise levels	[ ]	[x]	[ ]

		Yes	No	Unknown
t.	Freshwater Wetlands designated by DEC	[ ]	[x]	[ ]
u.	Floodplain as designated by Federal Insurance Administration	[ ]	[x]	[ ]
v.	Within 100' of Genesee River, River Gorge, Barge Canal, Lake Ontario	[x]	[ ]	[ ]
w.	Scenic views or vistas of importance to the community.	[ ]	[x]	[ ]
x.	Wildlife, including habitats	[ ]	[x]	[ ]
y.	Air quality	[ ]	[x]	[ ]
z.	Historical, archaeological sites (listed on National Register or eligible for listing) and/or designated City Landmarks/Preservation District	[x]	[ ]	[ ]

B. Are any facilities under your ownership, lease, or supervision to be utilized in the accomplishment of this project, either listed or under consideration for listing on the

Environmental Protection Agency's List of Violating Facilities? [ ] Yes [x] No

6. ENVIRONMENTAL QUALITY FACTORS

A. Air Quality

1. Identify the types of quantities of air emissions to be produced as a result of the project, including stationary sources on the site and mobile sources attributable to the project (attach a separate sheet).

2. Indicate the measures to be taken to control air emissions (attach a separate sheet).

3. Will the project routinely produce odors? [ ] Yes [x] No
If odors will occur, indicate who will be affected:_____

4. Will the project generate dust during and/or after construction? [x] Yes [ ] No
If dust will occur, identify control measures:
Water will be used during construction for dust control, cover all disturbed areas with mulch and/or seed. Clean tires of construction vehicles exiting site.

B. Noise and Vibration

1. Will the project generate noise which could be heard outside the project area?
[x] Yes [ ] No If yes, where: Noise will be heard in residential and commercial areas adjacent to the project area. Noise will result from normal construction and building activities. No noise is anticipated to be heard outside of the project area after construction.

2. Will the project generate noise exceeding ambient levels (both during and after construction)? [x] Yes [ ] No If yes, identify distances to noise sensitive land uses and existing and projected decibel levels at project boundary:
Normal construction and building activities may occasionally exceed ambient noise levels for property owners along the corridor. Once construction is complete the project is not expected to produce noise exceeding ambient levels.

3. Will the project result in vibration being transmitted off the site? [x] Yes [ ] No
If yes, identify distances to affected sites, their use, and the levels of vibration: Typical roadway construction vibrations resulting from construction machinery, large trucks, jack hammers, etc. may transmit low level vibrations to properties adjacent to the site.

C. Waste Generation/Disposal

1. Describe the type and amount of solid waste that will be generated and the method and location of disposal (describe amount in pounds or cubic yards per week).
Pavement removal - 41,000 C.Y. Disposal area to be determined by contractor.
Contaminated soil - 2,000 C.Y. Disposal area to be determined by contractor.
(*NOTE: This is a one-time waste generation/disposal and will not occur weekly. Amounts listed are preliminary estimates and not precise quantities.)

2. Will the project result in the use of discharge of hazardous materials/wastes?
[ ] Yes [x] No If yes, attach a discussion of the types of materials/waste,
a. What type of material?_____
b. How often?_____

3. Liquid Waste

a. Will the project involve the disposal of liquid waste? [ ] Yes [x] No
b. Sanitary sewage discharge (gallons per day)_____
c. Will industrial waste be discharged? [ ] Yes [x] No
   1. If yes, describe the daily average concentration of the chemical compounds discharged:_____
   2. Will the industrial waste receive pretreatment prior to discharge? [ ] Yes [x] No
   3. Describe the means of waste disposal and points of discharge.

4. Does the project involve demolition of a building or structure? [x] Yes [ ] No
   If yes: Underground utilities (sewer lines, water lines, electrical services) may need to be relocated.
   a. Describe the content of the demolition debris and the disposal site.
   b. Does the structure/building contain asbestos? [ ] Yes [ ] No
      If yes: A sampling and testing program for asbestos will be implemented prior to construction for any underground utilities or structures impacted.
      1. Describe the procedures to be followed in removal of the asbestos: Any confirmed asbestos containing materials will be handled in accordance with appropriate Federal and State regulations.
      2. Identify the site where the asbestos will be disposed: Any encountered asbestos will be disposed of at an approved local facility to be chosen by the contractor and approved by the City.

D. **Miscellaneous**

1. Total anticipated water usage per day (gallons/day) 0
   Describe any sources of water supply other than the municipal system, e.g. wells, streams, surface impoundments, etc.

2. Energy Use
   a. Will the project result in an increase in energy use? [ ] Yes [x] No
      If yes, indicate type(s) and the amount of increase:

   b. Are adequate energy sources and utilities now available to service the project? [x] Yes [ ] No
      If no, what additional utilities will be required?

7. Identify **all** governmental actions (i.e. funding, permits, approvals, leases, etc.) necessary for project implementation:

Level of Government & Agency	Type of Action	Status	Project ID#
Federal:			
Federal Highway Administration	Funding; Lead Agency for NEPA	Pending	
State:			
NYS Dept. of Transportation	Funding; Highway Work Permit	Pending	
NYS Dept. of Environmental Conservation	SPDES Permit for Stormwater Discharges from Construction Activity (GP-02-01)	Pending	

Local:

City of Rochester	Funding; Lead Agency for SEQRA;	Pending
Mayor and City Council	Rezoning	Pending
Traffic Control Board	Street Widening and Parking Regulations	Pending
Monroe County Health Dept.	Permit for water main alterations	Pending
Monroe County Dept. of Planning & Development	239-m and Airport Referral	Pending

8. **SUMMARY OF ISSUES**

List the potential environmental impacts/issues as identified by responses to sections 3, 4, 5 and 6 above. Discuss alternatives and mitigation measures for these issues.

See Attachment for "Summary of Issues" discussion.

CITY OF ROCHESTER
Long Environmental Assessment Form - Part I

ATTACHMENTS

2. Project Information

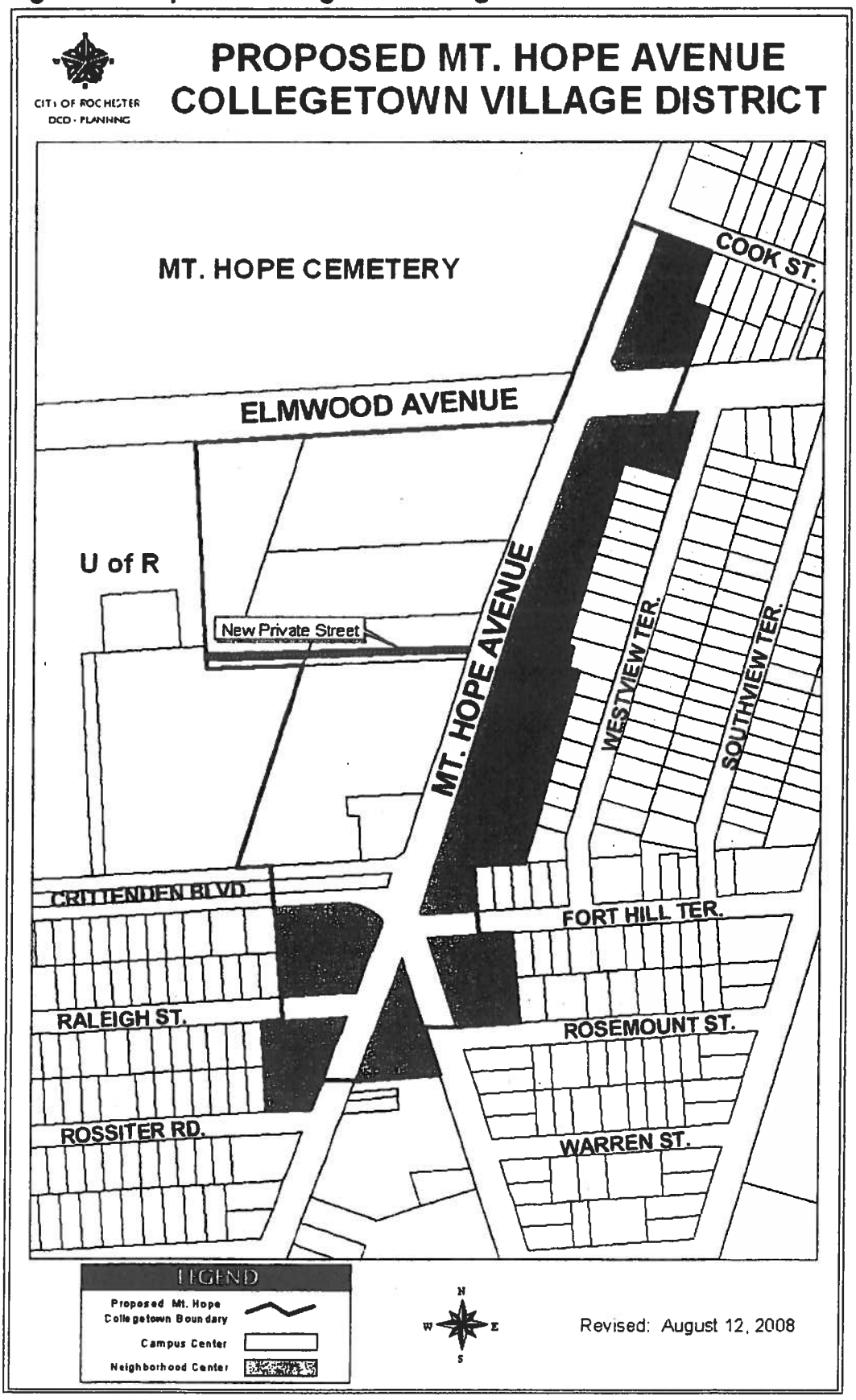
In October, 2007, the *Draft Design Report for the Mt. Hope Avenue and East Henrietta Road Improvements was* issued by the City of Rochester, U.S. Department of Transportation and the NYS Department of Transportation. The report revealed the public safety hazards of the multiple curb cuts and traffic patterns associated with the land uses in the segment of Mt. Hope Avenue between Crittenden Boulevard and Elmwood Avenue, within which a drive-through use was being proposed. The proposed street modifications as outlined in this report incited controversy in the neighborhood as revealed in a letter dated November 19, 2007, from the President of the Mt. Hope Business Association. The release of the report and the subsequent response from the Business Association brought attention to the significant traffic problems in this neighborhood and the need for an alternatives analysis. The affect of the proposed drive-through on the traffic problems and, in turn, the affect of the street reconstruction project on existing uses required further assessment before any land use decisions or street redesign decisions could be rendered. In addition, the City had recently decided to pursue a feasibility study of a Kendrick Road/Interstate 390 interchange which could significantly alter traffic patterns on Mt. Hope Avenue.

Another change in circumstances related to project information received by the City pertained to the University of Rochester's (U of R) plans for the development along the west side of Mt. Hope Avenue, in the subject area. The University has been undertaking a study of the River and Strong Hospital Campuses in an effort to produce an overall Master Plan which will ultimately result in a requirement for City Council adoption of zoning text and map amendments. It has been conceptually disclosed that this portion of Mt. Hope is intended to take on a "College Town" character. The City expects the creation of a "College Town" along this portion of Mt. Hope Avenue to be a tremendous opportunity for this community. The potential for significant investment by the U of R in transforming the entire west side of the street requires that development along the east side of Mt. Hope be reevaluated and similarly regulated. The character of the east side of Mt. Hope should at least support, if not mimic the desired character of the west side of the street within the U of R Master Plan area.

In response to this convergence of planning activities, the City Council imposed a Moratorium on building permits and the street reconstruction project activities for the purpose of conducting a land use, transportation and planning study for a designated portion of the Mt. Hope corridor extending between Elmwood Avenue and Raleigh Street. The findings of the Moratorium Study are contained in Mount Hope Avenue: *A Vision for Collegetown*, see attached, which recommends the rezoning of the area to a proposed new zoning designation C-V Collegetown Village District and modifications to the street project which incorporate "collegetown" features to the street redesign, as well as mitigations of construction activities.

The proposed Collegetown Village District map is shown in figure 1.

Figure 1: Proposed Collegetown Village District



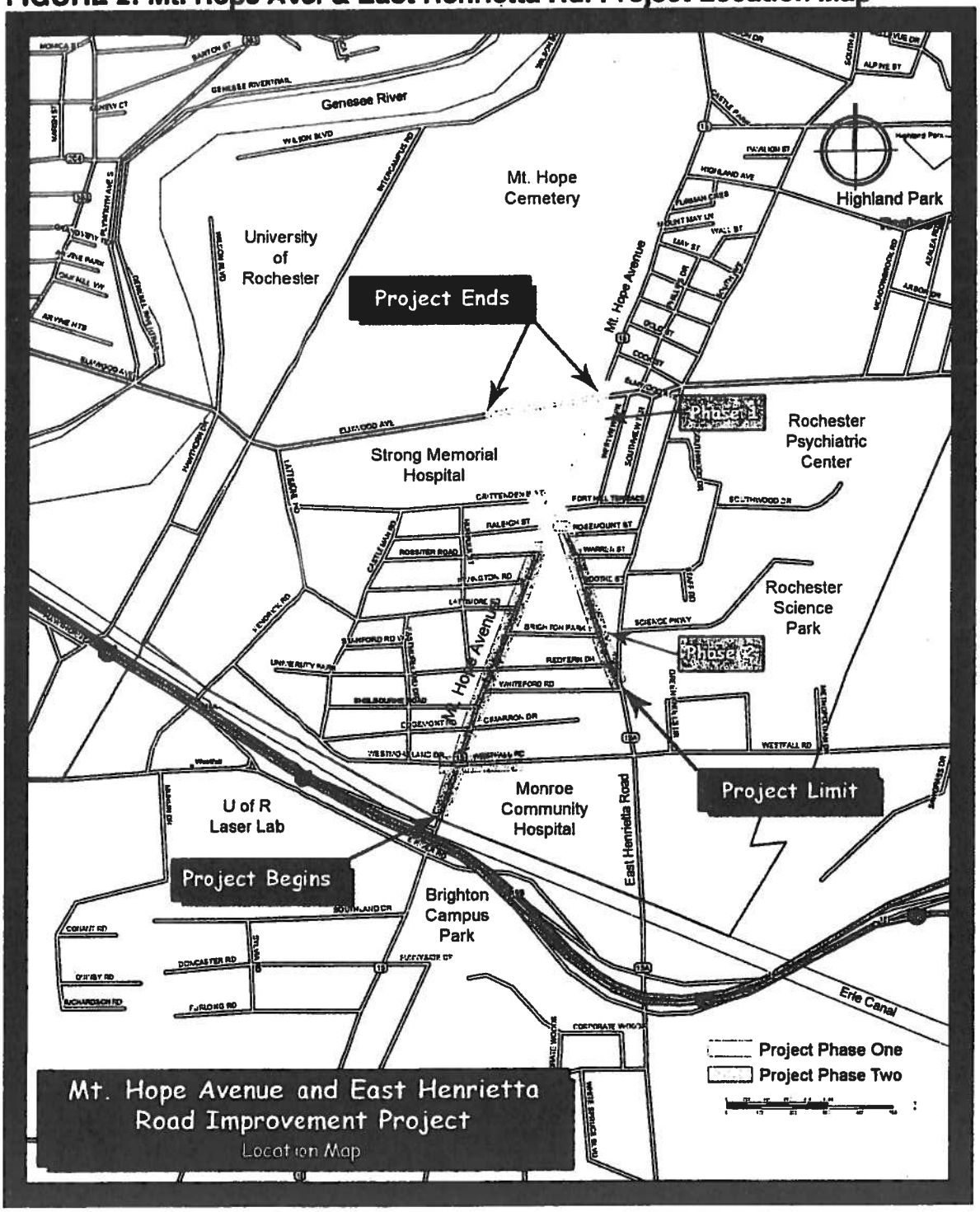
The final street improvement project is a hybrid of several evolutions of the plan, but is the result of dialog and evaluations undertaken during the Mt. Hope Avenue moratorium study. The final plan will achieve the safety improvements which are needed while promoting the Vision of Collegetown and providing safe and convenient access of the area businesses to Mt. Hope Avenue.

The proposed reconstruction and rehabilitation project will improve the pavement deficiencies through full depth pavement reconstruction or rehabilitation on Mt. Hope Avenue from the Erie Canal to Elmwood Avenue, and on East Henrietta Road from South Avenue to Mt. Hope Avenue. The project also includes geometric modifications at the Mt. Hope Ave./Crittenden Blvd. intersection and an eastbound right turn lane at the Elmwood Avenue/Mt. Hope Avenue intersection, water main replacement, lighting replacement, upgrading/replacing traffic signals, drainage improvements, new pavement markings, signs and various landscaping and sidewalk improvements. Fifty-three linear strips of private property along Mt. Hope Avenue will be taken and incorporated into this project. Section III.C.2.I of the Design Report lists all property addresses, tax map numbers, property descriptions and amount of land that will be taken for each affected property along Mt. Hope Avenue. Plan sheets P1 through P17 in Appendix A of the Design Report show the areas where property will be taken along Mt. Hope Avenue. These areas are labeled as "AFEE" on the plans.

This project is located in the City of Rochester in Monroe County, New York. The project area encompasses approximately 4,500 liner feet of Mt. Hope Avenue/NYS Route 15 beginning at the Erie Canal/southern City limit and proceeds northerly to the north side approach of the Elmwood Avenue intersection. The project also includes improvements to East Henrietta Road/NYS Route 15A from South Avenue north approximately 1,700 linear feet to the Mt. Hope Avenue intersection. A Project Location Map and a USGS Map indicating the specific boundaries of the project and the topography of the project site are included in this attachment as Figure 2 and Figure 3. Preliminary site plans showing the location of significant features such as proposed structures, roads, drainage, grading, and landscaping features are contained in Appendix A of the Design Report.

The intent of this project is to reduce the high accident rates along the project corridor, one of the highest in Monroe County, by implementing an Access Management design approach utilizing medians to reduce the accident potential of those accessing the many businesses along the corridor. This project will also provide improved continuous ADA compliant sidewalks along both sides of the roadway(s) and will address the necessary pavement, drainage, street lighting and landscaping improvements needed along the corridor to enhance the residential character of the abutting neighborhoods while buffering the residences from impacts of the highway. The proposed project does not include improvements to the Mt. Hope Avenue /Elmwood Avenue or the East Henrietta Road/South Avenue intersections. For additional information about the project, refer to the Design Report.

FIGURE 2: Mt. Hope Ave. & East Henrietta Rd. Project Location Map



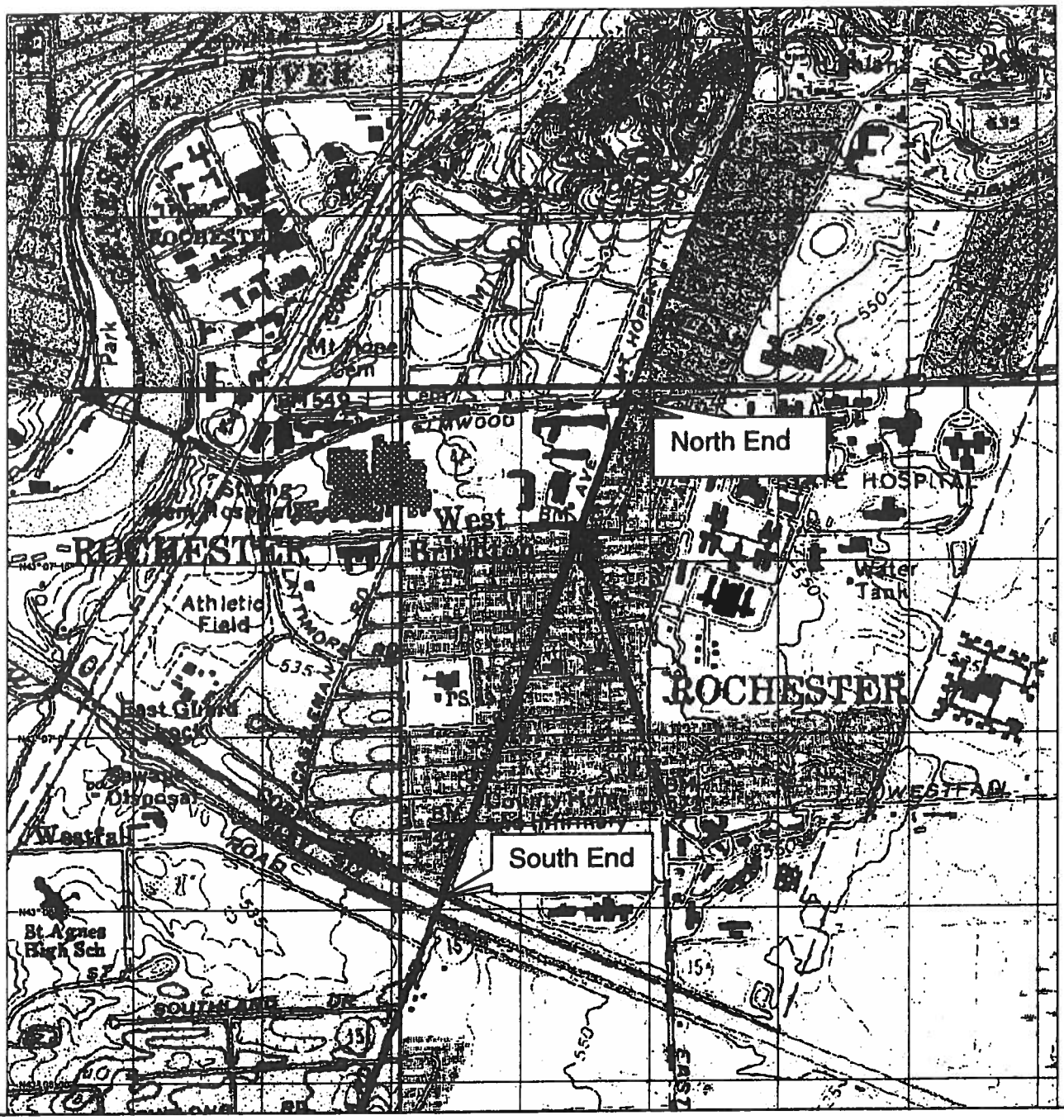


FIGURE 3: Mt. Hope Avenue & East Henrietta Road Reconstruction, PIN 4753.61
Elmwood Ave to Erie Canal, Monroe County (Pittsford Quadrangle)

Project Location

LATITUDE/LONGITUDE		UTM	
South End	North End	South End	North End
N 43° 6' 46"	N 43° 7' 29"	4776704 N	4778001 N
W 77° 37' 24"	W 77° 37' 03"	18 286546 E	18 287068 E

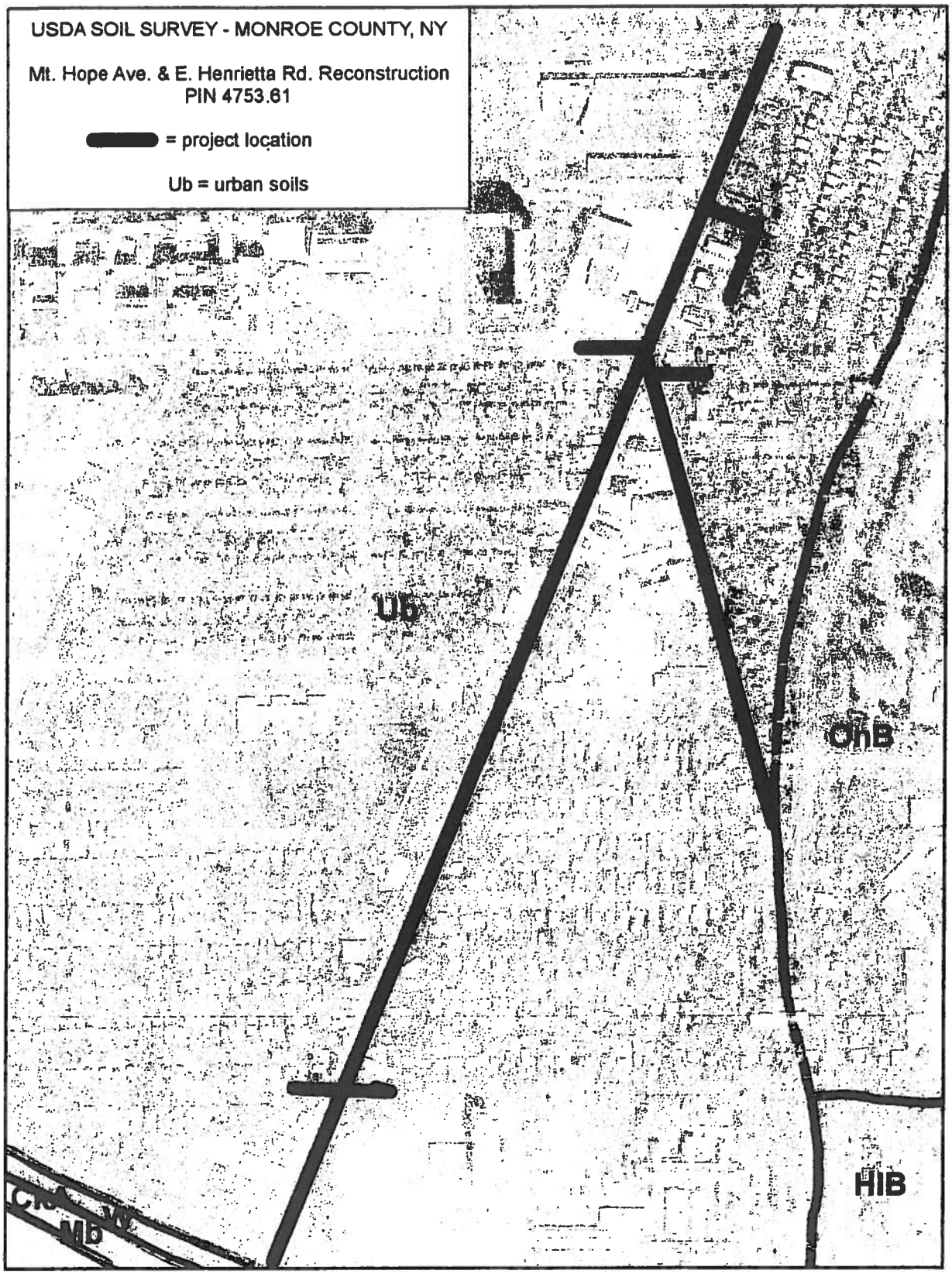
3. Site Information

Figure 4 contains a USDA soil map showing the locations of soil types at the project location. The map shows the project located over urban soils (Ub). Urban soils consist of areas that have been so altered or obscured by urban works and structures that identification of the soils is not feasible. In Monroe County, these areas are mainly located in the closely built-up parts of the city of Rochester. This project is entirely located in this type of soil environment. According to the USDA NRCS National Cooperative Web Soil Survey[1], the depth to the water table or any restrictive layer (bedrock, cemented layers, dense layers, etc.) is greater than 200 centimeters (approximately 6.5 feet).

A more thorough investigation was conducted of the project site in June 2007 by SJB Services, Inc. SJB Services, Inc. completed a subsurface investigation for the Mt. Hope Avenue and East Henrietta Road Improvements Project which included a total of 16 test borings drilled throughout the project corridor. Depths of the test borings varied between 4 feet and 11 feet. No problematic soil foundation issues were found to exist for the proposed roadway reconstruction. No free standing water or bedrock was observed in the test borings upon completion of the drilling. While the exact location of the water table or bedrock has not been ascertained, no adverse impacts to groundwater or soil are anticipated as a result of the proposed roadway reconstruction within the project limits. Additional information on soils and foundations for this project can be found in Section III.C.2.i of the Design Report. A copy of the grading plan is unavailable at this time. Grading plans will be available for review during Final Design.

[1] The USDA NSCS Web Soil Survey can be found online http://websoilsurvey.nrcs.usda.gov/app/

FIGURE 4: USDA Soil Survey of Project Area



4. Transportation Characteristics: Part F - Street System Modifications (Question 5)

This roadway construction project is a capital improvement to the existing street system. Refer to "Project Information" on the first page of this attachment and the Design Report for additional information about the project.

In addition to improvements to existing streets, improvements to existing utilities will also occur as a result of this project. The full scope of improvements to gas, electric, cable television, and telephone are unknown at this time. However, the neighborhood business owner association has requested that the City pursue burying overhead utilities as part of this project. Frontier Telephone has also indicated that their communication system is full, and that they anticipate building new conduits and moving some of the existing conduits to avoid any conflicts. They own approximately 5 poles within the project limits.

The City of Rochester Water Bureau plans to incorporate the following improvements as part of this project:

- Replace 1,300 ft. of 12 NPS water main on Mt. Hope Avenue between Rossiter Road and Shelbourne Road, including new branch mains, hydrants, and water services.
- Replace 8 NPS unlined water main on Mt. Hope Avenue from Westfall Road to the South City Line, including hydrants and water services.
- Replace 1,900 ft. of 8 NPS unlined water main on East Henrietta Road between Mt. Hope Avenue and South Avenue and replace 250 ft. of 6 NPS water main on East Henrietta Road between Redfern Drive and Whiteford Road, including new hydrants and water services.
- On Crittenden Boulevard, install additional cathodic protection and replace hydrants, valve boxes and small water services that are not copper and copper services older than 15 years.

5. Environmental Indicators:

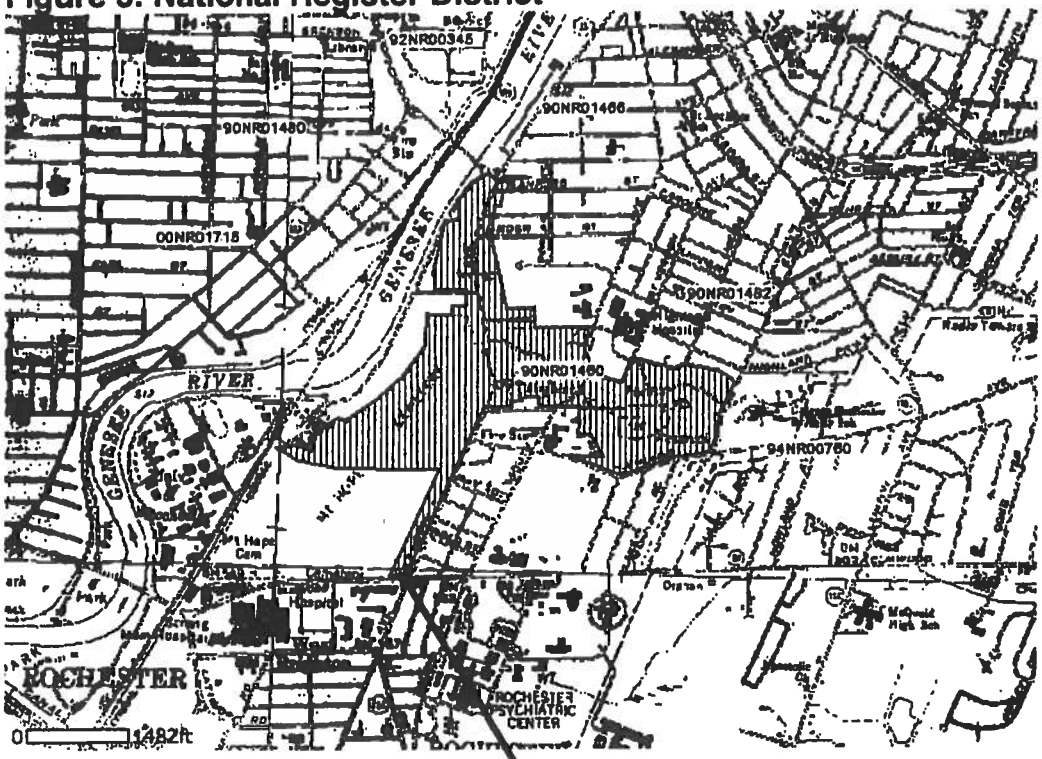
Historic Resources

A portion of the Mt. Hope Cemetery located at the northwest corner of Elmwood Avenue and Mt. Hope Avenue is listed on the National Register of Historic Places. In accordance with the State Environmental Quality Review Act (SEQR) Part 617.4(b)(9), any Unlisted action occurring wholly or partially within, or substantially contiguous to, any historic building, structure, facility, site or district or prehistoric site that is listed on the National Register of Historic Places is a Type I Action.

In a letter dated, June 29, 2007, the State Historic Preservation Office (SHPO) concluded that the project will have no adverse effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places. A copy of the letter is attached.

Figure 5 is a National Register District map (90NR01460) generated from the New York State Parks, Recreation and Historic Preservation national Register website on October 15, 2008.

Figure 5: National Register District



Legend

Background Maps (Scanned Quads)

State Parks

State/National Register

Federal Eligibility

National Register Listed

State Register Listed (only)

Listing In Progress

County Boundaries

Intersection of Elmwood Avenue and Mt. Hope Avenue

6. Environmental Quality Factors

Air Quality

During construction, diesel exhaust emissions may occur from construction vehicles and equipment. The movement of the construction vehicles through the proposed development area may generate dust. Various construction operations themselves are also capable of generating airborne emissions. These construction operations include demolishing existing facilities, earthwork (clearing and grubbing, excavating and backfilling), paving activities, and painting.

Re-establishment of ground cover, turf and pavement, as soon as construction allows, will minimized project borne dust. Water will be applied for purposes of dust control in connection with excavation operations. The effects of emissions from construction vehicles will be of relatively short duration, having no anticipated long term effects; therefore, no mitigation for emissions from construction vehicles is proposed. No open burning on the proposed site will be allowed during construction.

Traffic Impacts

The increase in traffic shown on the EAF under # 4 "Transportation Characteristics" is due to the standard annual traffic growth between current traffic levels and the estimated time of completion and traffic growth associated with the planned University of Rochester Collegetown development and east side roadway re-development. The capital roadway project will not increase traffic volumes within the study area and will not result in a change in diesel emissions.

8. Summary of Issues

Transportation Characteristics

D(1 and 2) Additional measures to further minimize impact to businesses will be evaluated during the detailed design phase. These measures may include "A plus B Bidding" construction schedule incentives, temporary parking area(s) and temporary pavement installations to maintain access during construction.

D(1 and 2) Currently, there is no on-street parking along the project corridor. There are "No Parking Any Time" signs posted on both sides of Mt. Hope Avenue and East Henrietta Road. This project proposes to help alleviate the existing parking situation by creating 47+/- new on-street spaces. Additional parking options are seen as a benefit to most property owners, businesses and residents along the corridor.

F(1)(b) Existing pedestrian facilities along Mt. Hope Avenue are in poor condition and will be upgraded and improved as part of this project. Currently, there are 7 ft. wide attached concrete sidewalks along the northern project area. The concrete sidewalks in the southern section of the project are either 7 ft. wide attached sidewalks or 5 ft. wide detached sidewalks separated by a 3 ft. wide tree lawn. Pedestrians that walk this corridor indicated that they feel unsafe walking that close to the 30,000 cars that travel this corridor on a daily basis. This project will remedy the situation by creating 5 ft. wide tree lawn separations along both sides of Mt. Hope Avenue between the road and the sidewalk. Existing trees and plantings will be removed and replaced with new trees that will line both sides of Mt. Hope Avenue.

F(1)(c) The intent of this project is to reduce the high accident rates along the project corridor, specifically on Mt. Hope Avenue between Elmwood Avenue and Crittenden Blvd. This area has one of the highest accident rates in Monroe County. There are 53 commercial and residential strips of properties where right-of-way takings will occur in order to improve the level of service, safety, and mobility needs of people and goods throughout the corridor. Table 1 in the attachment lists information on all proposed right-of-way takings. A plan indicating the location of these proposed structure takings for the project is shown on sheet numbers P-1 through P-17 in Appendix A. Most of the takings are relatively minor in scope resulting in less than 10 percent of the entire property. No buildings will be acquired or demolished as a result of this project. These takings are viewed as necessary to improve the safety of those who travel the corridor.

F(2) On site maintenance of traffic and staged construction are anticipated for this project. Traffic flow will be maintained by a single lane of traffic in each direction along Mt. Hope Avenue and East Henrietta Road during all construction operations. Emergency services, including emergency medical vehicles traveling to and from nearby hospitals, will always be given priority to get through the corridor. Access to all residential and business driveways will be maintained during construction. A clearly marked traveled way will be delineated through the use of temporary pavement markings, traffic signage and construction barricades. In addition, pedestrian traffic would be maintained at all times on at least one side of the roadway. Traffic signals will also be maintained during construction. The need for restricted construction operations during the AM and PM peak traffic movements will be considered during the preparation of the detailed maintenance and protection of traffic plan.

F(5) The Rochester Water Bureau would like to replace portions of their existing main with new pipe, including new branch mains, hydrants, and water services. Coordination with public and private utilities will occur as an ongoing process throughout the project planning and design process. A sampling and testing program for asbestos will be implemented prior to construction for any underground utilities or structures impacted as part of this project. Any confirmed asbestos containing materials will be handled in accordance with appropriate Federal and State regulations.

Air Quality

All attempts will be made to minimize impacts to local businesses and residences during the construction period. Impacts such as dust and noise are inevitable during any construction project. However, no significant effect is expected as a result of dust, erosion, or sedimentation caused by construction activity. During construction, airborne particulates can be controlled through wetting of soil surfaces and covering of trucks and other dust sources. Potential impacts during construction will be controlled by temporary soil erosion and water pollution measures such as silt fences, hay bales, sedimentation basins, and covering disturbed area with mulch or seed. All disturbed areas would be permanently revegetated to control long term erosion. All pavement, soil, and sidewalk removed from the corridor will be disposed of at an approved waste disposal facility.

Eliot Spitzer
Governor

Carol Ash
Commissioner

New York State Office of Parks,
Recreation and Historic Preservation

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June 29, 2007

Mark Lester
Bergmann Associates
28 East Main St
Rochester, New York 14608

Re: FHWA,DOT
Mt Hope Ave and East Henrietta Rd.
Rd/ROCHESTER, Monroe County
07PR02511/PIN 4753.61

Dear Mr. Lester:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966.

Based upon this review, it is the SHPO's opinion that your project will have No Adverse Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Director

An Equal Opportunity/Affirmative Action Agency

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