

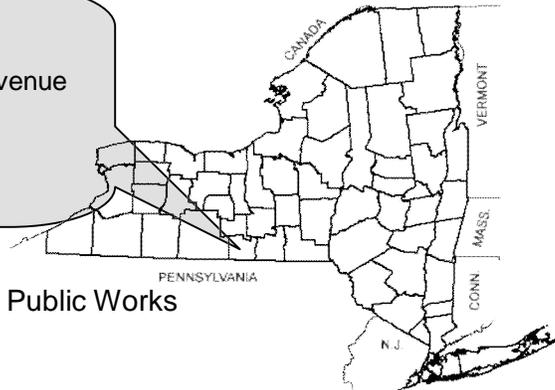
TRANSPORTATION

FINAL PROJECT SCOPING REPORT/ FINAL DESIGN REPORT

June 2012



East Church Street
Clemens Center Parkway to Madison Avenue
P.I.N. 6754.18
City of Elmira
Chemung County



City of Elmira Department of Public Works
840 Linden Place Extension
Elmira, NY 14901

U.S. Department of Transportation Federal Highway Administration



NEW YORK STATE DEPARTMENT OF TRANSPORTATION
ANDREW M. CUOMO, Governor JOAN MCDONALD, Commissioner



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PROJECT REPORT

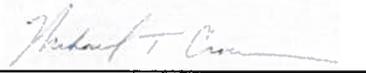
Memorandum

Date: July 18, 2012

To: Andrew P. Avery, P.E.

From: Michael T. Croce, P.E.

Signature:



RE: DESIGN APPROVAL REQUEST MEMORANDUM

PIN 6754.18
EAST CHURCH STREET
CLEMENS CENTER PARKWAY TO MADISON AVENUE
CITY OF ELMIRA, CHEMUNG COUNTY

1. LOCATION AND COST:

The proposed project would rehabilitate 0.3 miles of East Church Street (NYS Route 352 Westbound) from Clemens Center Parkway to Madison Avenue. East Church Street is an Urban Minor Arterial with uncontrolled access. It is not on the National Highway System. The City of Elmira would retain ownership and maintenance responsibility for the roadway upon completion. The Engineer's Opinion of Probable Construction Cost is \$1.143 million dollars (please refer to Exhibit 1.6-2 in the Final Project Scoping Report/Design Report). No right-of way costs are anticipated. This project is on the Elmira Chemung Transportation Council (ECTC) Transportation Improvement Plan (TIP) with a programmed construction cost of \$1.096 million dollars. The Federal government would provide STP-Flex funding through SAFETEA-LU. The City of Elmira would be responsible for any costs above and beyond the programmed funding amount.

2. ALTERNATE DESCRIPTION:

The project area and recommended alternative are described in Chapters 1 and 2 of the Final Project Scoping Report / Final Design Report (attached). The recommended alternative is presented in Chapter 1, in section "1.3. What Alternative(s) Are Being Considered?" A summary of the design is given below.

The project would involve the rehabilitation of East Church Street between Clemens Center Parkway and Madison Avenue.

- Mill and resurface the existing asphalt pavement surface. The existing concrete base would remain.
- Replace and reset existing curb. Install curb extensions at intersections where design vehicle turning movements allow.
- Replace existing drainage structures with new structures and bicycle friendly grates. Connect new structures to the existing sewer laterals or the main as needed.
- Replace existing concrete sidewalks where in poor condition or adjustments are needed to accommodate new curb location or reveal.
- Install new curb ramps with detectable warning surfaces
- Replace existing signing
- Install new pavement markings
- Retain existing traffic signals.
- Install a landscaped buffer between the Chemung County Parking Lot and East Church Street.
- Extend the existing ornamental lighting system from Lake Street to Madison Avenue.



Memorandum

3. STANDARDS AND DESIGN EXCEPTIONS:

The design is consistent with the standards listed in the NYSDOT Highway Design Manual, specifically chapters 2 and 18. It has also been developed in accordance with AASHTO's A Policy on Geometric Design of Highways and Streets 2004, Guide for the Planning, Design, and Operation of Pedestrian Facilities, and the Guide for the Development of Bicycle Facilities. It complies with the National Manual on Uniform Traffic Control Devices for Streets and Highways, the New York State Supplement (MUTCD), and The Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities. The existing posted speed limit is 30 mph. The existing and anticipated operating speeds are consistent with the proposed design.

Several design exceptions apply to the design. These include turning lane width, stopping sight distance, horizontal clearance, and travel lane cross slope. Justification for these non-standard features is available in Section 2.3.3.5 and Appendix D of the attached report. This memorandum requests your approval of the listed non-standard features.

4. TRAFFIC CONTROL PLANS:

Provisions for work zone traffic control, including pedestrian traffic and bicycle traffic are anticipated. The traveled way would be clearly marked with delineation devices as well as the appropriate MUTCD compliant signing and barricades where open to the traveling public. Flaggers would be utilized to direct traffic where required. Access to affected residential and commercial driveways would be maintained during construction or alternate accommodations made. Access for emergency vehicles and local deliveries would also be maintained. It is anticipated that short term lane closures and longer term parking lane and/or shoulder closures would be required. If East Church Street were closed for major operations (i.e. milling and resurfacing) a posted detour would be put in place to maintain traffic.

5. ENVIRONMENTAL DETERMINATIONS:

This project has been progressed as a SEQR Type II Action and a NEPA Class II Programmatic Categorical Exclusion. Therefore, the project required no further SEQR processing. Concurrence on the NEPA classification was received from NYSDOT on July 18, 2012.

6. PROCEDURAL PROCESS AND QUALITY CONTROL STATEMENT:

The project has followed the project development process in accordance with the NYSDOT "Locally-Administered, Federal-Aid Procedures Manual." All requirements requisite to these actions and approvals have been met, independent quality control reviews have been accomplished, and the work is consistent with established standards, policies, regulations, and procedures, except as otherwise noted and explained in this memorandum.

7. REQUEST FOR APPROVAL:

Please indicate your approval of design by signing this memorandum.

I, THE UNDERSIGNED, APPROVE THE PREFERRED ALTERNATIVE AND NON-STANDARD FEATURES AS DESCRIBED IN THE ATTACHED FINAL DESIGN REPORT.

APPROVED: 
Andrew P. Avery, P.E., Director of Public Services

DATE: 7/19/12

Cc: Brent Rauber, P.E., Local Projects Liaison, NYSDOT Region 6
Thomas Detrie, Project Engineer, Bergmann Associates



PROJECT APPROVAL SHEET

(Pursuant to SAFETEA-LU Matrix)

A. Recommendation for Scoping & Design Approval:

The project cost and schedule are consistent with the Regional Capital Program.



Director of Public Works, City of Elmira

7/19/12

B. Recommendation for Scoping, Design, & Nonstandard Feature Approval:

All requirements requisite to these actions and approvals have been met, the required independent quality control reviews separate from the functional group reviews have been accomplished, and the work is consistent with established standards, policies, regulations and procedures, except as otherwise noted and explained.



Project Manager, Bergmann Associates

6/25/12

C. Nonstandard Feature Approval:

The nonstandard features have been adequately justified and it is not prudent to eliminate them as part of this project.

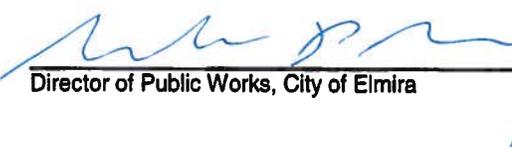


Director of Public Works, City of Elmira

7/19/12

D. Scoping & Design Approval:

The required environmental determinations have been made and the preferred alternative for this project is ready for final design.



Director of Public Works, City of Elmira

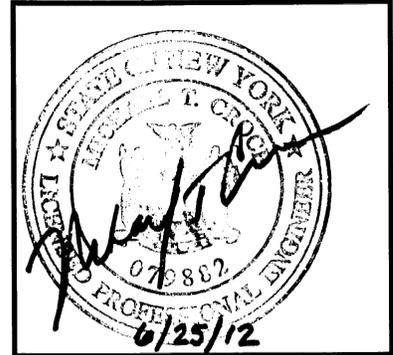
7/19/12

LIST OF PREPARERS

Group Director Responsible for Production of the Design Approval Document:

Michael T. Croce, P.E., Project Manager, Bergmann Associates

Description of Work Performed by Firm: Directed the preparation of the Design Approval Document in accordance with established standards, policies, regulations and procedures, except as otherwise explained in this document.



Note: It is a violation of law for any person, unless they are acting under the direction of a licensed professional engineer, architect, landscape architect, or land surveyor, to alter an item in any way. If an item bearing the stamp of a licensed professional is altered, the altering engineer, architect, landscape architect, or land surveyor shall stamp the document and include the notation "altered by" followed by their signature, the date of such alteration, and a specific description of the alteration.

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CHAPTER 1 - EXECUTIVE SUMMARY

1.1. Introduction

This report was prepared in accordance with the New York State Department of Transportation (NYSDOT) Procedures for Locally Administered Federal Aid Projects Manual, NYSDOT Project Development Manual, 6 NYCRR Part 617, and 23 CFR 771.

1.2. Purpose and Need

1.2.1. Where is the Project Located?

A Project location map is included in Appendix A (Exhibit 1.2.1). The following is a project location summary.

- A. Route number: NYS Route 352 (Westbound only)
- B. Route name: East Church Street
- C. Municipality: City of Elmira, NY
- D. County: Chemung
- E. Length: 0.30 Miles (1,600 Feet)
- F. Limits: Clemens Center Parkway (NYS Route 14) to Madison Avenue

1.2.2. Why is the Project Needed?

The segment of East Church Street from Clemens Center Parkway to Madison Avenue is an urban principal arterial, being one of two main east-west thoroughfares through downtown Elmira. This road serves as the main access to numerous government office buildings, religious institutions, and local businesses. Pedestrian activity is fairly high given the urban, downtown setting. Bicycles frequent the project corridor. On-street parking is heavily used.

Transportation deficiencies on the existing facility include:

- Poor pavement surface condition with distress including transverse and longitudinal cracking. There are also signs of numerous utility and repair patches.
- Lack of curb reveal between Lake Street and Madison Avenue resulting in poor roadway definition and surface drainage channelization.
- Areas with inadequate pedestrian accommodations including poor sidewalk conditions, missing or non-traversable curb ramps, and a lack of detectable warning surfaces.
- Lack of separation between public and private parking lots immediately adjacent to the sidewalk.
- Traffic signs that do not meet current National Manual on Uniform Traffic Control Devices and New York State Supplement (MUTCD) standards and add to visual clutter.
- Limited intervisibility between pedestrians, bicyclists, and vehicles due to on street parking, roadside features, and buildings.

1.2.3. What are the Objectives/Purposes of the Project?

The purpose of this project is to improve infrastructure condition and safety for all users along East Church Street.

Project objectives include the following:

- (1) Eliminate identified pavement surface deficiencies and provide a structurally sound roadway section that can accommodate expected traffic volumes with a pavement service life expectancy of 15 years assuming proper routine maintenance.
- (2) Improve pedestrian facilities throughout the project limits in compliance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) while providing safe and convenient passages to local businesses and government facilities.
- (3) Correct identified drainage deficiencies.
- (4) Improve the condition and application of traffic control devices in accordance with the National Manual of Uniform Traffic Control Devices and the New York State Supplement (MUTCD).
- (5) Correct identified safety issues throughout the corridor.
- (6) Provide consistent lighting through the corridor.
- (7) Improve aesthetics and achieve continuity with adjacent roadway segments to the greatest extent feasible.

Project constraints include:

- (1) An available construction budget of \$1,096,000 funded by the federal Surface Transportation Program (STP).
- (2) An aggressive letting (bid opening) deadline of October 2012.

1.3. What Alternative(s) Are Being Considered?

Alternative 1: No Action/Maintenance (Null)

This alternative would retain East Church Street with no improvements other than routine maintenance. The null is retained only as a baseline for comparison to the feasible alternative and will not be discarded until a final decision is made regarding the selection of a build alternative.

Alternative 2: Resurfacing and Safety Enhancements

This alternative would involve the partial depth milling and resurfacing of East Church Street throughout the project limits. Curb extensions would be installed where feasible at side street intersections. Curb would be removed and replaced, reset, or retained as necessary to accommodate the modified geometry and drainage improvements while addressing documented deficiencies. Drainage facilities would be replaced and updated as necessary.

New sidewalks and curb ramps would be installed according to ADAAG. Traffic signs would be upgraded to meet current standards. Existing traffic signals would be maintained with minor improvements. City of Elmira ornamental lighting would be extended throughout the project limits. Landscape and streetscape elements would be installed as funding allows, enhancing the City's vibrant downtown environment.

Refer to Section 1.6 of this report for additional information on the anticipated cost and schedule. Refer to Sections 2.3.3.2 and 2.3.3.5 for discussion of the design criteria and nonstandard features. Plans, profiles, and a typical section illustrating Alternative 2 are contained in Appendix A.

1.4 Environmental Review

NEPA (National Environmental Policy Act):

It has been determined that this project is a NEPA Class II, Programmatic Categorical Exclusion in accordance with 23 CFR 771.117d and the NEPA checklist. Class II actions that do not individually or cumulatively have a significant environmental effect are excluded from the requirement to prepare an Environmental Impact Statement (EIS) or an Environmental Assessment (EA). Refer to the attached NEPA checklist and supplemental information in Appendix B. Programmatic Categorical Exclusions do not require FHWA's concurrence.

SEQRA (State Environmental Quality Review Act):

The City of Elmira is the SEQRA Lead Agency. The County has classified the project as a SEQRA Type II Action in accordance with 6 NYCRR 617.5. Projects classified as Type II projects require no further processing or consideration. A SEQRA Type II Determination Form is provided in Appendix B.

1.5 How will the Alternatives Affect the Environment?

Exhibit 1.5 Comparison of Alternatives		
Category	Alternatives	
	Null	2
Wetland impacts	None	None
100 year floodplain impact	None	None
Archeological Sites Impacted	None	None
Section 106/Section 4(f) Impacts	None	No Adverse Effects / <i>de minimis</i>
Property impacts	None	None
Visual Impacts	None	Improvement
Safety impacts	None	Improvement
Intersection Control	None	None
Intersection Capacity	No Change	No Change
Pavement Condition	Continued Deterioration	Improvement (15 Year Service Life)
Drainage	No Change	Enhanced Drainage, Bicycle Friendly Grates
Traffic Control Devices	No Change	MUTCD Compliant
Construction Cost	None	\$1,142,946

1.5.1 Proposed Mitigation:

No mitigation is proposed for this project.

1.5.2 Anticipated Permits/Certifications/Coordination:

A NYSDOT Highway Work Permit would be required for construction within the Clemens Center Parkway highway boundaries and work zone traffic control (e.g. work zone signing).

Coordination

- Coordination with Federal Highway Administration (via NYSDOT)
- Coordination with New York State Historic Preservation Officer (SHPO) (via NYSDOT)

- Coordination with the US Fish and Wildlife Service
- Coordination with the New York Natural Heritage Program

Certifications

- NYS Department of Labor: Asbestos Variances

1.6 What are the Costs & Schedules?

It is anticipated that Design Approval will be granted in July of 2012. Letting (bid opening) must occur during the month of October in order to obligate construction funding. Construction is expected to begin in the spring of 2013 and last approximately 4 months.

Exhibit 1.6-1 Project Schedule	
Activity	Date Occurred/Tentative
Scope Approval	November 2011
Design Approval	July 2012
ROW Acquisition	None Anticipated
Construction Start	April 2013
Construction Complete	August 2013

Exhibit 1.6-2 Comparison of Alternative Project Costs (2012 Dollars)		
Activities	Null Costs	Alternate 2 Costs
Roadway Rehabilitation	0	879,800
Subtotal 1	0	879,800
Incidentals ¹ (10%)	0	87,980
Subtotal 2	0	967,780
Contingency ² (5%)	0	48,389
Subtotal 3	0	1,016,169
Field Change Order ³ (5%)	0	50,808
Subtotal 4	0	1,066,977
Mobilization (4%)	0	42,679
Subtotal 5	0	1,109,656
Expected Award Amount – Inflated ⁴ @ 3%/yr to midpoint of construction (2013 Dollars)	0	1,142,946
Available Construction Funding ⁵	-	1,096,000
Reimbursable Utility Costs ⁶	0	0
ROW Costs ⁷	0	0
Construction Inspection and Support ⁸	0	232,000

Exhibit 1.6-2 Comparison of Alternative Project Costs (2012 Dollars)		
Activities	Null Costs	Alternate 2 Costs
Streetscape Costs ⁹ (Information Kiosks, Bicycle Racks, Permanent Trash Receptacles, Decorative Surface Treatments)	0	39,425
Curb Replacement ⁹ (South Side - Baldwin Street to Lake Street)	0	18,975
Total Project Costs	0	1,433,346

Notes:

1. The potential cost increase due to unknown or un-tabulated items. Includes survey and work zone traffic control.
2. NYSDOT recommends a standard contingency of 15% at Design Approval stage. However, given the current level of detail, a lower contingency was used.
3. FCO would be 5% per HDM Chapter 21 Section 21.4.3.3.
4. An escalation rate of 3% has been included to account for potential future increases in labor, material, equipment and other costs.
5. Construction budget in the NYSDOT STIP for Region 6.
6. Minor utility adjustments to achieve vertical clearance anticipated. All work on existing facilities within the highway boundary.
7. ROW acquisition not anticipated for this project.
8. Construction inspection and support budget given in the STIP is \$109,000. Estimated cost shown in table. Actual cost to be negotiated during scoping for construction phase services agreement.
9. Probable construction contract add alternate.

At this stage of project development, the Engineer's Opinion of Probable Construction Cost is approximately \$47,000 (4%) in excess of the available construction funding shown in the NYSDOT STIP for Region 6. This includes a NYSDOT recommended 3% inflation factor to account for construction in 2013. Given the relatively short length of the project (0.3 miles, 4 city blocks), cutting scope by shrinking the project limits would be infeasible. The City of Elmira has already made the following adjustments to the project in an effort to control cost:

- Retain a 275 foot segment of existing curb in good condition, but with varying reveal, between Baldwin Street and Lake Street.
- Supply parking meters to the Contractor for installation.
- Designate several non-critical project components as add-alternates
 - Decorative surface treatments in concrete snow storage areas
 - Information Kiosks
 - Bicycle Racks
 - Permanent Trash Receptacles

At this time, it is anticipated that the City of Elmira and Chemung County will negotiate an easement necessary to build a proposed landscaped buffer along the Chemung County parking lot at no cost. No other right-of-way acquisitions are anticipated. This could allow up to \$15 thousand dollars previously programmed for right-of-way activities to offset higher construction or inspection and support costs.

Refinement of the project construction cost estimate will continue as design progresses. The City of Elmira has discussed the allocation of additional funding to this project with NYSDOT Region 6. If contractor bids come in above the programmed construction dollars, the City of Elmira would be responsible for covering the additional cost. The City of Elmira would also pay additional construction inspection and support costs above the programmed budget.

1.7 Which Alternative is Preferred?

Only one feasible build alternative (Alternative 2) has been identified that meets the project objectives within the identified constraints. A decision to enter final design will not be made until after the

environmental determination has been made and a thorough evaluation of public and agency comments is complete.

1.8 Who Will Decide Which Alternative Is Chosen And How Can I Be Involved In This Decision?

In 1998 as part of the City of Elmira Comprehensive Master Plan Update, the City of Elmira designated improving the pedestrian and bicycle safety and circulation along the Church Street corridor as a suggested improvement to enhance the Elmira Central Business District. In late 2006, the City of Elmira submitted an application to obtain Transportation Improvement Program (TIP) funding through the Elmira-Chemung Transportation Council (ECTC).

In December 2011, the City of Elmira conducted a formal Safety Assessment (SA) covering East Church Street from Clemens Center Parkway to Madison Avenue in accordance with the Safety Assessment Guidelines published by the New York State Metropolitan Planning Associations (NYSMPOs). An interdisciplinary team representing the City of Elmira, ECTC, the City of Elmira Police Department, the Chemung County Sheriff's Office, and the NYSDOT developed a set of safety improvement suggestions. A full copy of the SA report is included in Appendix C.

Preliminary design began in the fall of 2011. Public and private utility coordination began at that time and will continue throughout design. Coordination with the City of Elmira, New York State Department of Transportation (NYSDOT), Federal Highway Administration (FHWA), and other agencies is also ongoing. Refer to Appendix E for project correspondence.

There are a variety of ways you can obtain information and provide your thoughts:

- You can contact:

Andrew P. Avery
Director
City of Elmira Public Works Department
840 Linden Place Extension
Elmira, NY 14901

Please include the six digit Project Identification Number (PIN) 6754.18

Questions or comments email: aavery@cityofelmira.net
telephone: (607) 737-5750

- A public open house was held on June 14, 2012 at the Chemung County Commerce Building's lower conference room in Elmira, New York. Adjacent property and business owners were given the opportunity to review the proposed design and comment on the project. Public comments are summarized in Appendix G.

Exhibit 1.8 Public Involvement Plan Schedule of Milestone Dates	
Activity	Date Occurred/Tentative
Public Open House	June 2012
Project Letting Date	October 2012

The remainder of this report is a detailed technical evaluation of the existing conditions, the proposed alternatives, the impacts of the alternatives, copies of technical reports, and plans and other supporting information.

CHAPTER 2 – PROJECT INFORMATION

This chapter addresses the existing conditions, deficiencies, and needs for the project location as well as proposed features that will address the project objectives presented in Chapter 1 of this report.

2.1. Local Plans for the Project Area

This project is on the approved ECTC TIP under PIN 6754.18.

Improvements along East Church Street are consistent with the 1998 City of Elmira Comprehensive Master Plan Update. This project does not preclude future development plans, as it would maintain existing capacity and access. There are no approved public or private developments planned within the project limits that would affect vehicular, bicyclist, or pedestrian traffic.

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

East Church Street (NYS Route 352 Westbound) extends east-west through the heart of downtown Elmira, beginning at the intersection of Clemens Center Parkway (NYS Route 14) and West Church Street, and continues to the east to I-86. Adjacent to the project limits (east), East Church Street is a two-way, four-lane, curbed roadway and has a posted speed limit of 30 miles per hour. Lane widths are approximately 14 feet. There are 7 to 8 ft parking lanes in several locations. Based on field inspection, the existing pavement surface is in fair condition with general longitudinal and traverse cracking. Pavement markings are in fair condition as well. It is owned and maintained by the City of Elmira. East Church Street, from Clemens Center Parkway (NYS Route 14) to Madison Avenue intersects several other roadways. These include Baldwin Street, Lake Street, Academy Place, and William Street.

To the west, West Church Street (NYS Route 352 Westbound) extends east-west, beginning at West Water Street/NYS Route 352 and continuing to the intersection of Clemens Center Parkway (NYS Route 14) and East Church Street. It is a two-way, two-lane, curbed roadway and has a posted speed limit of 30 miles per hour. Lane widths are approximately 14 feet. Based on field inspection, the existing pavement surface is in fair condition with general longitudinal and traverse cracking. Pavement markings are in fair condition. It is owned and maintained by the City of Elmira.

Prior to 2004, Church Street and Water Street were one-way streets from Hoffman Street to Madison Avenue. The Traffic Signal Upgrade Phase 1 / Church Street-Water Street Two-Way Conversion Project changed them to two-way roadways along with the installation of new signal equipment, new pavement markings, and signing adjustments.

NYS Route 14 extends north-south through the City of Elmira, starting at the New York / Pennsylvania border and ending near Lake Ontario. The portion adjacent to the project area is known as the Clemens Center Parkway. Adjacent to East Church Street, Clemens Center Parkway is a two-way, four-lane divided, urban principal arterial, curbed roadway and has a speed limit of 40 miles per hour. Based on field inspection, the existing pavement surface is in fair condition with general longitudinal and traverse cracking. Pavement markings are in fair condition. It is owned by the New York State Department of Transportation, with maintenance performed by the City of Elmira.

Baldwin Street begins at East Water Street to the south and continues north to an intersection with New Street within the City of Elmira. Baldwin Street is a two-way, two-lane, asphalt surfaced, urban local road with curb and a speed limit of 30 miles per hour. Based on field inspection, the existing pavement surface and pavement markings are in excellent condition as it was recently resurfaced by the City in 2011. It is owned and maintained by the City of Elmira.

Lake Street extends from Sly Street / Pennsylvania Avenue to the south and ends at Lake Road (City of Elmira line). The Lake Street Bridge over the Chemung River has been closed since March 2011 due to structural concerns, effectively terminating Lake Street at Water Street. Lake Street is a two-way, two-lane, asphalt-surfaced, urban collector, curbed roadway and has a speed limit of 30 miles per hour. Based on field inspection, the existing pavement surface and pavement markings are in excellent condition as the travel lanes were recently resurfaced by the City in 2011. It is owned and maintained by the City of Elmira.

Academy Place (Alley No. 74) begins at East Church Street and continues north to East Third Street. It is a narrow two-way, two-lane, asphalt-surfaced, urban local roadway (alley) and has a speed limit of 30 miles per hour. It does not easily support two-way traffic. Based on field inspection, the existing pavement surface is in fair to poor condition with general longitudinal and traverse cracking. There are no pavement markings. It is owned and maintained by the City of Elmira.

William Street extends from East Market Street to the intersection of East Fifth Street / Lake Street. It is a two-way, two-lane, asphalt-surfaced, urban local curbed roadway and has a speed limit of 30 miles per hour. Based on field inspection, the existing pavement surface is in fair condition with general longitudinal and traverse cracking. There are no pavement markings. It is owned and maintained by the City of Elmira.

Madison Avenue begins at the intersection of Maple Avenue and Sly Street to the south and extends north to its intersection with Lake Street. It is a two-way, two-lane, asphalt-surfaced, urban minor arterial curbed roadway and has a speed limit of 30 miles per hour. Based on field inspection, the existing pavement surface is in fair condition with general longitudinal and traverse cracking. Pavement markings are in fair condition. It is owned and maintained by the City of Elmira.

East Church Street and abutting roadways are relatively straight and level adjacent to the project limits given the urban, built up nature of the corridor.

The City of Elmira has confirmed that there are no plans for improving or widening the adjacent segments of East Church Street or abutting roadways within the next 20 years.

2.3 Transportation Conditions, Deficiencies and Engineering Considerations

2.3.1 Traffic and Safety and Maintenance Operations

2.3.1.1 Functional Classification and National Highway System (NHS)

Classification data are summarized in Exhibit 2.3.1.1. East Church Street is also part of the City of Elmira's Designated Truck Route System, State Bicycle Route 17 (westbound), and is a New York State Touring Route.

Exhibit 2.3.1.1 East Church Street Classification Data	
Street Name	East Church Street (NYS Route 352 Westbound)
Functional Classification	Urban Principal Arterial
National Highway System (NHS)	No
Designated Truck Access Route	Yes
Qualifying Highway	No
Within 1 mile of a Qualifying Highway	Yes
Within the 16 foot vertical clearance network	No

2.3.1.2 Control of Access – In general, there is no control of access along East Church Street or its intersecting roadways throughout the project limits. Driveways connect directly to these roads. The one exception is Clemens Center Parkway (NYS Route 14) which has no connecting driveways between intersections. Access control would remain unchanged under the proposed project.

2.3.1.3 Traffic Control Devices –

2.3.1.3 (1) Traffic Signals - The following intersections along East Church Street have fully actuated, coordinated, three-color traffic signals, pedestrian push buttons with hand/man indications, countdown timers, and bicycle detectors: Clemens Center Parkway, Baldwin Street, Lake Street, and Madison Avenue. All signals are actuated by inductance loops. Bicycle loops exist on the East Church Street approaches to each signalized intersection. Signals are coordinated throughout the East Church Street corridor. The Clemens Center Parkway intersection is not well coordinated with East Church Street because it is also part of the Clemens Center Parkway corridor system. New traffic signal hardware and equipment were installed in 2004 as part of the Traffic Signal Upgrade Phase 1 Project.

No new traffic signals are proposed. Existing traffic signals would be retained. Inductance loops disturbed by construction would be replaced in kind. Vehicle and bicycle loop locations would be modified if necessary to accommodate changes to stop bar locations. Signal timing and coordination patterns for the Clemens Center Parkway intersection would be investigated separately by the City of Elmira and NYSDOT to see if operations can be improved in the westbound direction. Pedestrian push button locations and types would be reviewed during detailed design and modified if necessary to ensure they meet ADAAG to the greatest extent feasible.

2.3.1.3 (2) Signs - Signs within the project limits vary from poor to good condition based upon field inspection. The signs are generally consistent with the New York State Manual on Uniform Traffic Control Devices in effect at the time of installation. However, in some locations grouping, placement, and sheeting materials are no longer compliant with the National Manual on Uniform Traffic Control Devices, New York State Supplement, and applicable revisions (MUTCD). Additionally, unnecessary signs, inconsistencies, and sign clutter were noted throughout the corridor during a field review. Overall, sign post conditions vary from fair to good throughout the project limits. Several breakaway bases are higher than recommended. Additionally, field review showed some sign posts leaning as a result of sign panel weight and wind loading. Some sign panels are lower than recommended (< 7 feet) adjacent to a pedestrian facility.

The intersection of William Street with East Church Street operates as a two-way stop. Stop signs are posted on the right side of each approach to East Church Street. Academy Place and the Chemung County Parking Lot Alley (Alley No. 73) (public alleys) have no stop sign, yield sign, or traffic signal. Existing signing is generally unchanged from the Two-Way Conversion Project completed in 2004.

Existing signs, including but not limited to parking, stop, street name, regulatory, and warning signs would be removed and replaced with new signs meeting current MUTCD standards. The number of sign locations would be minimized wherever feasible. Signs would be installed on standard Type A posts or larger to handle the necessary loading. New stop signs would be installed on the William Street, Academy Place, and Chemung County Parking Lot Alley (public alleys) approaches to East Church Street.

2.3.1.3 (3) Pavement Markings - Pavement markings are in fair to good condition based upon field inspection. Throughout the project limits, a double yellow full barrier line separates two-way traffic. White lane and edge lines delineate the auxiliary turn lanes, through lanes, and shoulder/on-street parking lanes. All turn lanes are marked with turn arrows and "ONLY" letters. Left turn auxiliary lanes exist on all approaches to the Clemens Center Parkway and Madison Avenue intersections, as well as on the south, east, and west approaches to the Lake Street intersection. Westbound East Church Street has a right turn auxiliary lane on the approach to Clemens Center Parkway. Stop bars exist at all signalized intersections. They are missing on the William Street, Academy Place, and Chemung County Parking Lot Alley approaches to East Church Street. Crosswalks are located at all signalized intersections as well as across East Church Street at William Street. Types vary between rungs only (Type L), ladder (Type LS),

and diagonal with rails. Long line pavement markings are replaced on a yearly basis with paint by the City of Elmira. Existing striping patterns are from the 2004 Two-Way Conversion Project.

New pavement markings would be installed throughout the project limits in accordance with current MUTCD standards. NYSDOT Type L (rungs only) crosswalks would be installed at all crossing locations, with the exception of the Clemens Center Parkway intersection where Type LS (ladder) markings would be installed to match existing patterns. Wherever feasible, crosswalks would be made perpendicular to the road and in line with the walking path of the sidewalk. Stop bars would be provided on stop controlled intersection approaches including William Street, Academy Place, and the Chemung County Parking Lot Alley. Stop bar locations would balance optimal sight distance and turning truck accommodations. The stop line on westbound East Church Street at Clemens Center Parkway would be moved back to facilitate a southbound left turn onto eastbound East Church Street by a tractor trailer (WB-50).

2.3.1.4 Traffic Volumes -

2.3.1.4 (1) Existing Traffic Volumes - Continuous 24-hour traffic volume counts were collected by the NYSDOT in March 2011. Annual Average Daily Traffic (AADT) volumes were calculated from the data using adjustment factors published by the NYSDOT Highway Data Services Bureau. Existing AADT volumes appear below in Exhibits 2.3.1.4 (1)-1 with additional statistics provided in Exhibit 2.3.1.4 (1)-2. These reports are available in Appendix C.

Exhibit 2.3.1.4 (1)-1 East Church Street Existing and Future Traffic Volumes			
Year	Westbound AADT	Eastbound AADT	AADT
Existing (2011)	6,651	3,647	10,298
ETC (2013)	6,685	3,665	10,350
ETC+10 (2023)	6,853	3,758	10,611

Note: 1. Refer to Section 2.3.1.4 (2) for growth rates.
2. ETC is the Estimated Time of Completion

Exhibit 2.3.1.4 (1)-2 East Church Street Traffic Data Summary		
	Westbound	Eastbound
Peak Hour Volume Percentage	8% (PM)	10% (PM)
Peak Directional Split (D)	64.6% (Westbound PM)	
% Trucks	9%	
85th Percentile Speed	31 mph	28 mph

Based upon the NYSDOT Pavement Sufficiency Manual published by Pavement Management Services, East Church Street traffic consists of approximately 9% heavy vehicles (trucks). There is anecdotal evidence that the truck percentage may be slightly higher due to the recent economic growth associated with natural gas exploration in the Commonwealth of Pennsylvania. Tractor-trailers routinely use East Church Street as it provides a direct connection to I-86, is a Truck Access Highway, and City of Elmira Truck Route.

The City of Elmira speed limit of 30 miles per hour applies to East Church Street. Continuous 24-hour speed observations were collected by the City of Elmira in November 2011. Copies of the raw speed data are included in Appendix C. Speed data are summarized in Exhibit 2.3.1.4 (1)-2. As shown, the 85th

percentile speeds are consistent with the posted speed for the corridor. In the westbound direction, there are periods during the PM peak hour where traffic queues back from Clemens Center Parkway. This is due to traffic signal coordination deficiencies and driveway operations (Post Office and Chemung County Transit Center) just west of the intersection. Refer to the Safety Assessment document in Appendix C for more discussion of these phenomena. The delays are limited to peak periods and no significant improvement would be expected as part of this project. As a result, travel time and delay runs were not performed. See Section 2.3.1.5 for more information.

The Chemung County Transit System (CCTS) operates two regular bus routes through the corridor, however there are no stops along East Church Street between Clemens Center Parkway and Madison Avenue. The Chemung County Transit Center is located along West Church Street, just west of Clemens Center Parkway. School buses also pass through the corridor on a daily basis.

There is considerable vehicle and pedestrian traffic throughout the corridor due to the large number of public buildings and businesses located along and adjacent to East Church Street. Public facilities include City Hall, the City Police Department, Chemung County Courts building, Chemung County Corrections Facility, Chemung County Sheriff's Office, and the Chemung County Chamber of Commerce.

2.3.1.4 (2) Future Design Year Traffic Volume Forecasts - The estimated time of completion (ETC) is 2013. A design year of 2023 (ETC+10) was selected per Appendix 5 of the NYSDOT Project Development Manual. Traffic volume projections were completed for ETC (2013) and ETC+10 (2023). A growth rate of 0.25% was calculated with input from NYSDOT Region 6 Planning and based on historic continuous count information available from the NYSDOT for the City of Elmira. The 0.25% growth factor (annually compounded) was used to forecast AADT volumes for the years 2013 and 2023, which appear in Exhibit 2.3.1.4 (1)-1. Traffic volumes are consistent with the volumes presented in the City of Elmira Traffic Signal Upgrade Project, PIN 6753.09. ETC+20 and ETC+ 30-year projections were not made as this project is considered a pavement rehabilitation project and is not near a bridge or large culvert. Future build volumes would be the same as those experienced under future no-build conditions.

2.3.1.5 Level of Service - Based upon field observation, queues and delays do occur during the peak hour in the westbound direction. The heavier volume moves in the westbound direction and green time on the East Church Street approaches is limited by a coordination program favoring Clemens Center Parkway. Observed delays are however, reasonable given the urban, built up nature of the corridor. Peak hour operations within the corridor might be improved with a new coordination plan balancing the needs of East Church Street and Clemens Center Parkway. The City of Elmira and NYSDOT have agreed to investigate that possibility separately given this project's limited resources and minimal anticipated traffic signal work. See Section 2.3.1.3 (1) for more information. As indicated in Section 2.3.1.4 (2), future traffic volumes presented in the Traffic Signal Upgrade Project (PIN 6753.09) are representative of those projected for this project. Therefore, the level of service analysis for the signalized intersections within the corridor have also been judged to remain representative and new level of service analyses were not required. A copy of the level of service results from PIN 6753.09 are included in Appendix C for reference.

2.3.1.6 Work Zone Safety & Mobility

A. Work Zone Traffic Control Plan - All work zones and detours would be set up in conformance with the MUTCD. Provisions for maintenance and protection of pedestrian and bicycle traffic would be made. A clearly marked travel way would be delineated with temporary pavement markings, traffic signs, barricades, drums, cones, etc. as applicable. Flaggers would be utilized to direct traffic where required, in particular while work is being completed at the signalized intersections. Access to affected commercial properties would be maintained throughout construction or alternate accommodations provided. Access for emergency vehicles and local deliveries would also be maintained.

It is anticipated that the majority of construction could be accomplished using shoulder and parking lane closures along with part time lane closures with alternating one-way traffic under flagger control. A full closure of East Church Street (preferably over an extended weekend or series of weekends) between Clemens Center Parkway and Madison Avenue is proposed to allow for milling and resurfacing

operations. If completed during a weekend timeframe, impacts to commuter traffic, adjacent businesses, and public facilities would be minimized. All closures and detours would be approved in advance by the City of Elmira to allow for public and business notification. On-street parking would be restricted in some sections while construction is being completed. Bicyclists would be expected to continue to share the road with drivers or use the offsite detour when in place. Pedestrian access to businesses and public facilities would be maintained at all times during construction unless an alternate route is agreed upon in advance. Pedestrians would be rerouted to sidewalks along the other side of the road or adjacent city streets during sidewalk closures.

B. Special Provisions - Nighttime construction is not anticipated. The application of peak hour restrictions would be considered during detailed design. Work zone traffic control would be coordinated with local officials, business owners, utility owners, residents, City of Elmira Central School District, Chemung County Transit, Elmira Police Department, Chemung County Sheriff's Office, Elmira Fire Department, and local emergency service providers. Portable variable message signs could be used to notify the traveling public of potential delays during construction. The City of Elmira Department of Public Works would provide up-to-date construction information to the public via its website and the local media.

C. Significant Projects (per 23 CFR 630.1010) - This project is not classified as a Significant Project, therefore, its Transportation Management Plan (TMP) would consist of a Temporary Traffic Control (TTC) plan consistent with 23 CFR 630.1012. To satisfy TTC plan requirements, construction documents would include work zone traffic control notes, plans, and details. The requirements of Section 619 of the New York State Standard Specifications would apply to the contract.

2.3.1.7 Safety Considerations, Accident History and Analysis - An accident analysis was performed in accordance with the NYSDOT Highway Design Manual Chapter 5, Section 5.3. New York State Department of Motor Vehicles (NYSDMV) Police Accident Reports (MV104-A forms) were obtained from the City of Elmira Police Department covering a three-year period from October 1, 2008 to September 31, 2011. The accident study covered the area within and adjacent to the project limits including 800 feet to the west of Clemens Center Parkway and 800 feet to the east of Madison Avenue. There are no high accident locations (HALs), no Highway Safety Investigations (HSIs), Priority Investigation Locations (PILs), Safety Deficient Locations (SDLs), or Priority Investigation Intersections (PIIs) within the study area.

As previously noted, an SA was completed by the City of Elmira for the project corridor in December 2011. The SA reviewed existing safety concerns, accident information, and physical characteristics. The SA team provided suggestions to improve overall safety of the corridor and at each intersection. A copy of the final SA report is available in Appendix C.

Accidents are categorized as fatal, injury, property damage only (PDO) or non-reportable (NR). An accident is considered non-reportable if there is no personal injury and either:

- a) No motorists report was filed,
- b) No dollar value of vehicular damage was entered into the report, or
- c) The amount of vehicular damage did not exceed \$1,000.

A total of 79 accidents were documented within the project limits during the 3-year study period. Of the 79, there were 16 (20%) injury, 18 (23%) PDO, and 45 (57%) NR accidents. No fatalities were reported. A table summarizing the 79 intersection and midblock accidents is included in Appendix C. A collision diagram is also included in Appendix C as part of the SA Report.

Of the 79 total accidents, there were a total of three (3) pedestrian and bicycle accidents within the study area. The one (1) bicycle accident occurred mid-block between Clemens Center Parkway and Baldwin Street. The two (2) pedestrian accidents occurred at the intersections of Lake Street and William Street. All of these resulted in an injury. The City of Elmira has indicated that there may be additional "near-miss" vehicle/pedestrian/bicyclist conflicts due to the lack of intervisibility within the corridor.

Seventy-one (71) of the 79 accidents occurred at intersections within the study area. Intersection accidents are summarized by location and dominant accident type in Exhibit 2.3.1.7-1.

Exhibit 2.3.1.7-1 Intersection Accident Summary by Location and Type					
Intersecting Street	Type				Total
	Rear End	Right Angle	Left Turn	Other	
Railroad Avenue (West)	2	0	1	0	3
Clemens Center Parkway	11	3	3	2	19
Baldwin Street	6	0	0	0	6
Lake Street	5	1	2	1	9
Academy Place	0	1	0	0	1
William Street	0	0	1	0	1
Madison Avenue	22	5	0	3	30
Dewitt Avenue	0	2	0	0	2
Total	46	12	7	6	71

Eight (8) midblock accidents occurred throughout the corridor with five (5) related to driveway access. None of these accidents occurred at the same driveway.

Reviewing the intersection accidents, a large majority (65%) are rear ends, with the next highest being right angles (17%). These types of accidents are common at signalized intersections in urban environments. The most common causes cited by the accident reports were lack of driver attention, following too closely, and disregarding traffic control. Eight (8) of the rear end accidents involved a personal injury. It was noted that 25 of the rear end accidents were in the westbound direction.

The NYSDOT maintains a database of average accident rates for different types of roadway segments and intersections. Accident rates for linear sections are expressed in terms of the number of accidents per million vehicle miles of travel (acc/mvm). Rates for intersections are expressed in terms of the number of accidents per million entering vehicles (acc/mev). Average accident rates for similar facilities statewide were compared to those calculated for locations throughout the project limits to assess the actual safety performance of East Church Street versus reasonable expectation. Non-reportable accidents were not included in the accident rate calculation.

As shown in Exhibit 2.3.1.7-2, the calculated accident rates for East Church Street and adjoining intersections are higher than the statewide average rates. As indicated above, the most common accident type is rear-end collisions, with 17 of the 34 eligible accidents being rear-ends. Reviewing the accident reports, these occur due to a lack of driver attention, following too closely, and poor pavement conditions under inclement weather.

Exhibit 2.3.1.7-2 Accident Rate Summary			
Segment / Intersecting Street	Number of Injury and PDO Accidents	Calculated Accident Rate	NYSDOT Rate for Similar Facilities
East Church Street North Main Street to High Street	34	4.85	2.88
Railroad Avenue (West)	1	NA	0.15
Clemens Center Parkway	10	0.35	0.12
Baldwin Street	3	NA	0.26
Lake Street	2	0.15	0.12
Academy Place	1	NA	0.09
William Street	1	NA	0.15
Madison Avenue	14	0.56	0.12
Dewitt Avenue	1	NA	0.15
High Street	0	0	0.15

- Notes:
1. Segment accident rates include midblock and intersection accidents.
 2. Segment accident rates are measured in accidents per million vehicle miles traveled (acc/MVM).
 3. Intersection accident rates measured in accidents per million entering vehicles (acc/MEV).
 4. NA - Entering volumes from side street unavailable, therefore no accident rate calculated.

Suggestions from the SA report would be implemented where feasible and within available budget. The installation of curb extensions (bump outs) at the intersections would improve sight lines for drivers and pedestrians at crossing locations, thus enhancing intervisibility and safety for all modes of travel. These bump outs would be designed to accommodate turning trucks. Additionally, these features would visually narrow the street from the drivers' point of view, providing a traffic calming effect. Incremental improvements in the rear-end accident rate, hereby decreasing the number of stopping vehicles, could be realized with signal timing and coordination changes at the intersection of East Church Street and Clemens Center Parkway. See Section 2.3.1.3 (1) for more information.

2.3.1.8 Ownership and Maintenance Jurisdiction – The proposed project would result in no changes to the current ownership and maintenance responsibilities.

The City of Elmira owns and maintains East Church Street and all intersecting side streets, with the exception of Clemens Center Parkway (NYS Route 14), under the authority of Section 10, Subsection 25, of the New York State Highway Law. Clemens Center Parkway (NYS Route 14) is owned and maintained by the NYSDOT under Section 349-c of the New York State Highway Law. This includes all pavement, storm drainage facilities, curb, landscaping, signing, pavement markings, and traffic signals. However, the NYSDOT has an arterial maintenance agreement with the City of Elmira to perform routine maintenance on Clemens Center Parkway.

Winter snow removal operations on Clemens Center Parkway (NYS Route 14) are the responsibility of the City of Elmira under the authority of Section 12 of the New York State Highway Law and per the arterial maintenance agreement. The City of Elmira is also responsible for snow removal operations on the remaining roadways throughout the project area. The maintenance of public and private sidewalks and driveways is the responsibility of the adjacent property owner per City of Elmira code.

2.3.2 Multimodal

2.3.2.1 Pedestrians – The presence of government buildings, commercial businesses, and residential units make East Church Street a center for pedestrian activity. Sidewalks exist on both sides of East Church Street throughout the project limits. Most sidewalk surfaces are concrete, however, there are sections of slate. Surface conditions vary from poor to excellent with occasional tripping hazards. Curb ramp conditions vary from fair to good (where present) and are generally of the diagonal type. Some curb ramps may be non-traversable (by the disabled) due to existing slopes or physical obstructions blocking the ramps. Some curb ramps have older style detectable warning surfaces, but most do not.

Several businesses and public buildings maintain parking on the opposite side of East Church Street, requiring pedestrians to cross the street daily to reach their destinations. These include Elm Chevrolet and the Chemung County Corrections Facility. This increases the amount of pedestrian traffic crossing East Church Street. Additionally, the Bicycle and Pedestrian Advisory Committees for Chemung, Schuyler, and Steuben Counties (BACPAC), a subcommittee of ECTC, maintains two 1-mile long walking routes along the south side of East Church Street. One route comes north on Lake Street and heads west on East Church Street. The second route comes north on Baldwin Street and heads west as well. Both routes are marked with painted footprints on the concrete sidewalk. A complete Pedestrian Generator Checklist is contained in Appendix C.

Pedestrians would continue to utilize sidewalks along each side of East Church Street. Sidewalks and adjacent snow storage areas would be selectively replaced to remove tripping hazards, cracked and settled slabs, sidewalk in poor condition, and maintain necessary cross slopes. Sidewalks and crosswalks would be realigned at intersections in conjunction with the installation of new curb extensions to provide perpendicular crossings wherever feasible. Sidewalks and curb ramps would be reconstructed consistent with the ADAAG. All sidewalks would have a minimum clear width of 5 feet. Sidewalks immediately adjacent to the roadway would have a minimum width of 7 feet. Directional curb ramps would be installed where possible. Detectable warning fields would be installed at all crossing locations according to NYSDOT standards. Way finding features like medallions or arrows for the BACPAC's Downtown Elmira Walking Routes would be installed to further define and guide users. Refer to Section 2.3.1.6 for a discussion of pedestrian accommodation during construction.

2.3.2.2 Bicyclists – There are no separate facilities for bicyclists along East Church Street within the project limits. Bicyclists share the road with motor vehicles. East Church Street is designated and marked as State Bicycle Route 17 in the westbound direction only. Bicycle accommodations include bicycle detectors at the signalized intersections along East Church Street. These consist of small inductance loops, marked with Bicycle Signal Actuation Signs (R10-22), which place a call to the traffic signal controller when there is a stopped bicycle. The corridor is also marked with Wrong Way and Ride With Traffic (R5-1b, R9-3cP) signs as well as older style Share The Road warning signs. Bicyclists have occasionally been observed traveling the wrong way on the road, illegally using the sidewalk, and using improper equipment. There are several known bicycle user groups that travel through the corridor.

Existing bicycle accommodations would be maintained under proposed conditions. Bicycle detectors would be replaced in kind, with locations optimized for improved functionality. Share The Road warning signs, bike route signs, and other bicycle signage would be upgraded to current MUTCD standards. Drainage basins would be equipped with bicycle friendly reticuline grates.

2.3.3 Infrastructure

2.3.3.1 Design Standards - The following publications set forth the design standards for this project:

- A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO)
- NYSDOT Highway Design Manual (HDM)

- The Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (United States Access Board) (ADAAG)
- National Manual on Uniform Traffic Control Devices for Streets and Highways and the New York State Supplement (MUTCD)

These standards were applied to the project based upon design classification and design speed.

2.3.3.2 Critical Design Elements - Exhibit 2.3.3.2 summarizes the critical design elements for East Church Street.

Exhibit 2.3.3.2 Critical Design Elements for East Church Street (NYS Route 352 Westbound)¹					
PIN:		6754.18		NHS (Y/N):	No
Route No. & Name:		East Church Street NYS Route 352 Westbound		Functional Classification:	Urban Principal Arterial
Project Type:		2R		Design Classification:	Urban Arterial
% Trucks:		9%		Terrain:	Rolling
ADT (2023):		10,611		Truck Access/Qualifying Hwy.	Yes / No
Element		Standard		Existing Condition	Proposed Condition
1	Design Speed	30 mph ² HDM Section 2.7.2.2 A		30 mph	30 mph
2	Lane Width ³	12 ft Minimum, 14 ft Desirable HDM Section 2.7.2.2 B, Table 2-4		14 ft typ.	14 ft min
3	Turn Lane Width	11 ft Minimum, 12 ft Desirable HDM Section 2.7.2.2 B, Table 2-4		10 ft min	10 ft min
4	Parking Lane Width	8 ft Minimum, 12 ft Desirable HDM Section 2.7.2.2 B, Table 2-4		8 ft	8 ft typ.
5	Curb Offset ³	0 ft Minimum, 5 ft Desirable HDM Section 2.7.2.2 C, Table 2-4, Note 2		0 ft	0 ft
6	Maximum Grade	9 % HDM Section 2.7.2.2 E, Table 2-4		2.23%	2.23%
7	Horizontal Curvature	250 ft (@ e = 4.0%) HDM Section 2.7.2.2 F, Table 2-4		None	None
8	Superelevation Rate	4% Maximum HDM Section 2.7.2.2 G		Normal Crown	Normal Crown
9	Stopping Sight Distance ⁴	200 ft Minimum HDM Section 2.7.2.2 H, Table 2-4		< 123 ft min	123 ft min
10	Horizontal Clearance	0 ft with barrier; 1.5 ft without barrier; 3 ft at intersections HDM Section 2.7.2.2 I		1 ft min without barrier	1 ft min without barrier
11	Travel Lane Cross Slope	1.5% Min. to 2% Max. HDM Section 2.7.2.2 K		3% max	3% max
12	Parking Lane Cross Slope	1.5% Min. to 5% Max. HDM Section 2.7.2.2 K		3% max	3% max
13	Rollover	4% between travel lanes; 8% at edge of traveled way; HDM Section 2.7.3.1 L		1% max	1% max
14	Pedestrian Accommodation	5 ft Minimum Sidewalk Width Complies with ADA Per NYSDOT HDM Chapter 18		5 ft (min) Sidewalk	5 ft (min) Sidewalk

1. Critical design elements from HDM Chapter 2 used instead of HDM Chapter 7, 2R, for conservatism. Minimal differences in design values.

2. Existing off-peak 85th percentile speed.

3. Wide travel lane adjacent to curbing or parking lane to accommodate bicyclists in low speed segments per HDM Section 2.7.2.2.B.

4. Roadway lighted. Though the existing and proposed stopping sight distance is sub-standard over short distances, visibility is maintained and driver comfort controls.

2.3.3.3 Other Design Parameters -

Exhibit 2.3.3.3-1 Other Design Parameters			
Element	Standard	Existing Conditions	Proposed Condition
Drainage Design Storm	10 Year Storm	10 Year Storm	10 Year Storm
Level of Service	LOS D minimum LOS C desirable	LOS D minimum LOS C desirable	LOS D minimum LOS C desirable

Exhibit 2.3.3.3-2 Other Design Parameter: Design Vehicle		
Location	Design Vehicle	Vehicle Accommodated ¹
East Church Street at Clemens Center Parkway and Madison Avenue Intersections	WB-40	WB-40
All remaining intersections	SU-30	SU-30

Note:

1. Vehicle accommodated without encroachment into adjacent travel lanes. Larger vehicles can be accommodated with encroachment into adjacent travel lanes.

2.3.3.4 Existing and Proposed Highway Plan and Section – Plans, profiles, and typical sections illustrating the proposed improvements are included in Appendix A. Generally, the existing horizontal and vertical alignments, and roadway section would be maintained throughout the project limits. Adjustments would be made to tie into the adjacent sidewalk, stair, and threshold elevations at reasonable cross slopes. Additional adjustments would be made as necessary to accommodate the installation of the curb extensions.

Curb:

Curb is typically located along both sides of East Church Street throughout the project limits. Materials vary among concrete, granite, and Medina stone. Curb reveal varies from 0 inches along the north side between William Street and Madison Avenue to 9 inches along the north side between Baldwin Street and Lake Street in front of City Hall. Insufficient curb reveal between Lake Street and Madison Avenue has resulted in poor roadway definition and drainage concerns. Curb conditions vary but the concrete and Medina stone are generally in fair to poor condition with significant deterioration, settlement, and warping. The granite curb is in fair to good condition with limited areas of settlement, warping, and excessive curb reveal. Additionally, there are locations where the curb is slightly higher than the adjacent sidewalk, which results in water ponding on the sidewalk.

All concrete and Medina stone curb, as well as granite curb in poor condition, would be replaced with non-mountable (barrier) granite curb. Header curb would be omitted at all driveways per City of Elmira standards. Other granite curb in good condition would be maintained or removed and reset in order to maintain appropriate cross slopes.

Driveways:

There are numerous commercial driveways within the project limits. Several driveways are located within close proximity to intersections. These include, but are not limited to, Southern Tier Audiology near William Street and Dunkin Donuts near Madison Avenue. Additionally, there are several driveway cuts that lead to nowhere within the project limits.

Driveway spacing and access definition would be improved in accordance with the spirit and intent of the NYS DOT Policy and Standard for the Design of Entrances to State Highways to the greatest extent practicable. As allowed for in Section 5A.6.2 of that document, existing driveways within this mature, developed, and constrained urban environment would be individually designed. Driveways would be

modified or removed only after consultation with the property owner. During detailed design, driveway color and/or texture contrasts with the adjacent concrete sidewalk would be considered in order to visually define the driveway. Refer to the plans in Appendix A for proposed driveway locations and layout.

Generally, private alleyway intersections, including one between 201 and 215 East Church Street, would be designed as a street, if their entrances operate like public streets. Treatment would include curb radii, extension of the concrete sidewalk surface through the driveway, curb ramps, and detectable warning units. This hybrid system of elements would notify the visually impaired of a heavily used alley while also alerting the driver to the crossing pedestrian facility.

Clear Zone:

Existing horizontal clearance from face of curb to face of wooden utility poles is limited to one (1) foot. It is defined by both utility poles, owned by the utility companies, and light poles owned by the City of Elmira. These are classified as fixed objects and only exist from Lake Street to Madison Avenue. Other objects including signposts, parking meters, hydrants, and ornamental street light poles are also at minimum one (1) foot away from the curb face. However, these objects are on breakaway posts, with exception of the parking meters. As presented within Section 2.3.1.7, there is no distinct pattern of accidents involving fixed objects along the roadside.

Horizontal clearance would be improved with the removal of the wooden utility poles used for street lighting and their replacement with ornamental street light poles on breakaway bases. However, horizontal clearance would still be limited to approximately one (1) foot due to wooden utility poles from just west of William Street to Madison Avenue. Horizontal clearances from the face of curb to the line of fixed objects along East Church Street would generally be 1.5 feet or more, with further refinement during detailed design. The desirable horizontal clearance at intersections would be 3 feet. These dimensions would be maximized to the greatest extent feasible during detailed design.

Intersection Sight Distance:

Generally, intersection sight distance is limited by adjacent buildings, shrubs, on-street parking, and other roadside elements in this built-up corridor. While the limited sight lines are of concern, they do not show up as a significant contributing factor to the overall accident experience. No changes to intersection sight distance are proposed.

2.3.3.5 Non Standard/Non Conforming Features - Non-standard feature justification forms are included in Appendix D.

The following non-standard features would be retained as part of the proposed design:

- Turn Lane Width
- Stopping Sight Distance
- Horizontal Clearance
- Travel Lane Cross Slope

2.3.3.6 Pavement and Shoulder Conditions – The pavement condition assessment is based on field observation and a series of five pavement cores that were taken throughout the project limits to examine the existing pavement structure. Core locations were chosen to provide representative samples throughout the corridor, from both the travel and parking lanes. A Pavement Core Extraction report is contained in Appendix F. Based on field observation, the existing pavement along East Church Street is in fair to poor condition. The existing roadway surface exhibits a medium to high degree of general cracking, longitudinal cracking along the wheel paths, and full width transverse cracks. Additionally, minor rutting at the signal-controlled intersections was observed. Throughout the project limits, numerous roadway restoration patches were observed from utility installations and repairs. The existing pavement section is generally 11 to 13.25 inches thick, consisting of a Portland cement concrete pavement with an

asphalt overlay. The asphalt layer was generally 5 to 6.25 inches thick on top of 6 to 8 inches of concrete pavement. City records indicate the last resurfacing was completed in 1999.

Side streets generally have similar pavement surface conditions, exhibiting longitudinal and transverse cracking and minor rutting. Baldwin Street was milled and resurfaced, and Lake Street received a scratch coat overlay of the existing travel lanes in 2011.

A partial depth milling and overlay treatment would be completed along East Church Street in accordance with the NYSDOT Comprehensive Pavement Design Manual, Chapter 5. The pavement surface does not show signs of concrete slab settlement or heaving and based upon the concrete cores, the underlying concrete is in good condition. Rehabilitation of the asphalt pavement overlay would cost-effectively improve ride quality, friction, and cross slope. Additionally, this treatment would provide a service life of approximately 15 years with crack sealing required every 2 years. The proposed rehabilitation section would be as follows:

- 4 inches Cold Milling
- Truing and Leveling Course (As needed)
- 2 ½ inches Superpave HMA Binder Course
- 1 ½ inches Superpave HMA Top Course

In areas of full depth reconstruction for curb replacement and drainage improvements, subbase course and Portland cement concrete pavement of depths similar to the existing pavement would be installed. Concrete pavement would be doweled into the existing slabs to prevent differential settlement. After the placement of concrete, the new asphalt pavement overlay, in the depths noted above, would be placed in a continuous mat across the entire pavement area.

2.3.3.7 Drainage Systems – Roadway and curb lawn/sidewalk runoff is collected by a system of catch basins and a closed network of underground pipes. Poor pavement conditions along the curb inhibit positive drainage, resulting in some ponding. The overall network consists of both a combined (storm and sanitary) and a separate (storm only) sewer system. Combined systems run under East Church Street from Clemens Center Parkway to Baldwin Street and from Baldwin Street to Madison Avenue. The first section consists of 12-inch vitrified clay pipe (VCP) and drains into a 15-inch VCP combined system at Baldwin Street. The second section consists of 12-inch and 15-inch VCPs and drains into a 20-inch by 30-inch VCP combined system under Madison Avenue. Both the Lake Street and William Street combined systems, consisting of 12-inch VCPs, north of East Church Street drain into the system under East Church Street. Laterals for the catch basins range from 4 inches to 10 inches in diameter. Existing properties (i.e. rooftops, driveways, sanitary systems, etc.) also drain into the combined sewer system. All water in the combined systems is eventually treated at the Milton Street wastewater treatment facility before being discharged into the Chemung River. Both combined sewer systems are circa the late 1800s. The existing trunk lines under East Church Street were televised by the Chemung County Sewer District for this project and found to be in good condition.

Only a small segment of East Church Street runoff, adjacent to Clemens Center Parkway, is collected and transmitted to the separate storm sewer system. Runoff is collected in a system of 12-inch diameter VCP and directed to a 53-inch by 83-inch horizontal elliptical storm sewer under Clemens Center Parkway. This system was installed during the construction of Clemens Center Parkway in 1977 and is in good condition.

Catch basin grates are generally of an older cast iron (parallel bar) type. Some basins throughout the project limits include curb boxes.

Standard drainage design practices (i.e. 10-year design storm calculations for closed drainage systems) would apply to this project. The proposed improvements along East Church Street would not add additional impervious area to the overall drainage area of the project. The existing separate and combined sewer systems would be maintained. The proposed drainage system would follow the same

general patterns present under existing conditions. As a result, the quantity of storm water conveyed into the existing combined and separate sewer systems would be maintained.

Existing drainage inlets that are in poor condition, affected by the proposed curb line modifications, or adjacent to new curb ramps would be replaced and/or relocated. Reconnection to the existing trunk line would be done either at existing lateral locations or at new locations as appropriate. Curb improvements and new paving would also improve positive drainage. Bicycle friendly frames and grates would be utilized throughout the project limits. Frames and covers of existing manholes would be replaced and require adjustment to meet proposed grades. Existing drainage elements to remain would be cleaned prior to project completion.

2.3.3.8 Geotechnical – There are no special geotechnical concerns with soils or rock slopes within the project area. All lands within the project limits have been previously disturbed. According to the United States Department of Agriculture (USDA) Soil Survey for Chemung County, all soils within the project area belong to the Howard (HoA) family. These soils typically consist of gravelly silts and loams, a well draining soil, and are suitable for roadway construction.

2.3.3.9 Structures – There are no existing or proposed bridges within the project limits.

2.3.3.10 Hydraulics of Bridges and Culverts – There are no bridges or culverts within the project limits.

2.3.3.11 Utilities – Utilities within the project limits include underground gas, water, sanitary sewer, storm sewer, electric, fiber optic traffic signal interconnect, fiber optic communication, and telephone. There are also overhead electric, telephone, and cable lines suspended from wooden utility poles. Existing underground and overhead facilities are shown on the plans contained in Appendix A and are summarized in Exhibit 2.3.3.11. The existing sanitary sewer system is maintained by the Chemung County Sewer District and is described in Section 2.3.3.7. The existing separate storm sewer system is maintained by the City of Elmira per agreement with the NYSDOT and is described in Section 2.3.3.7. Underground and overhead electric serving the existing street lighting (ornamental poles and cobra heads) is owned and maintained by the City of Elmira and is described in Section 2.4.1. Physical surface features such as manholes, valve boxes, and hydrants were field located. Record information provided by utility owners was also plotted on the plans. Depths have not been field verified.

Water valve boxes, gas valve boxes, electric manhole/vault covers, and telephone manhole covers would require adjustment to meet proposed grades. This would be completed by the respective utility companies. Limited public and private utility relocations would be required in order to complete the proposed construction. Potential utility impacts, improvements, and relocations are summarized in Exhibit 2.3.3.11. In general, all impacted private utilities are within the existing highway boundary and relocations/improvement costs are anticipated to be non-reimbursable.

NYSEG has plans to abandon their existing underground gas main between Clemens Center Parkway and Madison Avenue and replace it with a new main beneath the existing sidewalk along the south side of East Church Street. Work is expected to occur in summer or fall of 2012. Coordination between NYSEG and the City of Elmira regarding the gas main relocation is ongoing.

From just west of William Street to Madison Avenue, the existing utility poles along the north side of East Church Street are located approximately one foot from the curb. These utility poles are the only ones that remain along Church Street from College Avenue to I-86 (downtown Elmira). The City of Elmira studied relocating these poles and overhead lines underground in cooperation with the various utility companies. Due to the estimated cost and scope of work necessary to relocate underground, the City of Elmira is no longer actively pursuing this possibility.

Exhibit 2.3.3.11 Existing Utilities			
Owner	Type	Location/Side	Proposed Modifications
Elmira Water Board	8 in Bell & Spigot Water Main	East Church Street - Clemens Center Parkway to Madison Avenue (Center)	None.
	8 in Bell & Spigot Water Main	Clemens Center Parkway North (Right)	None
	10 in Bell & Spigot Water Main	Baldwin Street (Left)	None
	6 in / 8 in Bell & Spigot Water Main	Lake Street (Left)	None
	8 in Bell & Spigot Water Main	William Street (Left)	None
	Water Main	Madison Avenue (Left)	None
NYSEG	8 in Wrought Iron Gas Main	East Church Street - Clemens Center Parkway to Madison Avenue (Right)	Abandon and replace with new 6-inch PE gas main located in south sidewalk.
	8 in Gas Main	Clemens Center Parkway North (Right)	Limited replacement to tie in new gas main.
	4 in PE Gas Main	Baldwin Street (Left and Right)	Limited replacement to tie in new gas main.
	4 in Wrought Iron Gas Main	Lake Street (Left and Right)	Limited replacement to tie in new gas main.
	4 in SW Gas Main	Academy Place (Right)	Limited replacement to tie in new gas main.
	12 in SWP Gas Main	William Street (Left)	None
	12 in Wrought Iron Gas Main	William Street (Right)	Limited replacement to tie in new gas main.
	12 in SW Gas Main	Madison Avenue (Left)	None
(2) 12 in Gas Main - Abandoned	East Church Street - Lake Street to Madison Avenue (Right)	None	
NYSEG	Overhead Electric	East Church Street - West of William Street to West of Madison Avenue (Left)	Minor vertical relocation to accommodate (clear) ornamental street lights
	Overhead Electric	William Street (Right)	None
	Overhead Electric Service	To 450, 452, 456, and 459 East Church Street	None
	Underground Electric Service	To 301 William Street, and 452 and 463 East Church Street	None
	Underground Electric	East Church Street - Clemens Center Parkway to Lake Street (Left to Right)	None
	Underground Electric	Clemens Center Parkway (Right)	None
	Underground Electric	Baldwin Street (Left)	None
	Underground Electric	Crossing - 310 East Church Street	None
Verizon	Overhead Telephone	Alley adjacent to Chemung County parking lot to East Church Street (Right)	None
	Underground Telephone Service	To 463 East Church Street	None

Exhibit 2.3.3.11 Existing Utilities			
	Underground Telephone Duct Bank	Clemens Center Parkway (Right)	None
	Underground Telephone Duct Bank	Baldwin Street (Right)	None
	Underground Telephone Duct Bank	East Church Street - Baldwin Street to Madison Avenue (Left)	None
	Underground Telephone Duct Bank	Academy Place to East Church Street Right	None
Time Warner Cable	Overhead Cable	Between 201 East Church St and 200 East Church St Between 317 East Church Street and 320 East Church Street	None
City of Elmira	Underground Fiber Optic Cable	East Church Street - Clemens Center Parkway to Madison Avenue (Left)	None
	Underground Fiber Optic Cable	Lake Street South(Right to Left)	None
	Underground Fiber Optic Cable	Madison Avenue South (Left)	None

2.3.3.12 Right of Way – The right-of-way (ROW) width along East Church Street throughout the project limits is 66 feet wide. Lake Street, William Street, and Madison Avenue also have a ROW width of 66 feet. Clemens Center Parkway has a variable ROW width. Baldwin Street has a ROW width of 49.5 feet. The two public alleys, Academy Place and Chemung County Parking Lot Alley, each have a ROW width of 20 feet.

No property acquisitions would be required. All work would be performed within the existing highway boundaries with the exception of a temporary easement and grading releases. A temporary easement along the Chemung County parking lot would be obtained by the City of Elmira from Chemung County to construct a landscaped buffer between the parking lot and sidewalk in order to improve aesthetics. Grading releases would be obtained as necessary from property owners along East Church Street to complete sidewalk, driveway, parking lot, and walkway adjustments. This would only occur in locations necessary to tie into the proposed work. These would be obtained by the City of Elmira during construction.

2.3.3.13 Landscaping/Environmental Enhancement – The existing landscaping is consistent with an urban downtown business district. Snow storage areas are generally concrete or asphalt from Clemens Center Parkway to William Street and grass from William Street to Madison Avenue. The streetscape is dominated by utility poles, ornamental and wooden street light poles, parking meters, hydrants, signal poles, and signposts. There are no special landscaping treatments along East Church Street with the exception of those on adjacent private property. These include small planters and landscape beds, shrub rows, and trees. Some of these shrub rows have overgrown the pedestrian walkway resulting in uncomfortable pedestrian “choke points.”

The City of Elmira has expressed a desire to enhance the visual appeal of downtown and improve the aesthetic character of the corridor. Surface treatments, landscaping, and streetscaping throughout the corridor would signify to motorists that they are entering the downtown district. Additionally, it would improve the pedestrian experience within the project limits. Snow storage areas would be restored as either hard surface or turf, depending on the adjacent land use. Hard surface treatments would be chosen during detailed design and could consist of either asphalt, plain concrete, or textured concrete.

Plantings would include limited street trees to provide a buffer between adjacent land uses and the roadway area. Existing shrubs that encroach on the walking path would be brought to the attention of the

property owner. Utility poles and signposts would be reduced where possible to reduce roadside clutter. City of Elmira ornamental street light poles would be installed on portions of the project lacking them today. Other landscaping features would include way finding features like medallions or arrows for the BACPAC's Downtown Elmira Walking Routes, solar powered trash receptacles, bike racks, and kiosks. Bike racks and kiosks would be the same design as those of the Elmira Promenade, just west of Clemens Center Parkway. These elements, along with the solar powered trash receptacles used elsewhere in the City, would visually connect this corridor with other areas of downtown. The inclusion of these features in the project would depend on their ability to fit within the available budget.

2.4 Miscellaneous –

2.4.1 Lighting

Existing street lighting within the project limits consists of both City of Elmira ornamental street light poles with high-pressure sodium luminaires (Clemens Center Parkway to Lake Street) and cobra head style high-pressure sodium luminaires suspended from wooden utility poles on davit arms (Lake Street to Madison Avenue). The various types of luminaires within and adjacent to the project corridor result in inconsistent lighting levels. Both systems are owned and maintained by the City of Elmira.

The existing ornamental street poles from Clemens Center Parkway to Lake Street would remain in place. Poles would be relocated if necessary to accommodate the proposed design. The City of Elmira is currently considering replacing existing high-pressure sodium luminaires with light emitting diode (LED) luminaires. The existing lighting from Lake Street to Madison Avenue would be removed and replaced with City of Elmira ornamental street poles and luminaires. Luminaires would be made consistent with the City's LED standard. Exact pole locations would be determined during detailed design.

2.4.2 Parking

On-street parking is permitted and metered along East Church Street within the project limits. It is regulated by parking signs and pavement markings in conjunction with parking meters for each stall.

According to the City of Elmira, the use of parking meters is required at the following times in the downtown district:

- 9 a.m. to 6 p.m. - Tuesday through Thursday and Saturday
- 9 a.m. to 9 p.m. - Monday and Friday

Within the corridor, meters are limited to either a 1- or 2-hour maximum with a 12-minute free time. By inspection, parking spaces are typically occupied by patrons of adjacent businesses and government buildings. In areas where parking is prohibited, "No Stopping Any Time," "No Parking Any Time," and "No Stopping Here to Corner" signs are posted. The existing number of active on-street parking spaces, determined by the parking meters installed within the corridor, is listed in Exhibit 2.4.2.

Exhibit 2.4.2 On-Street Parking Spaces			
Block	Side	Existing¹	Proposed
Clemens Center Parkway to Baldwin Street	North	7	6
	South	4	3
Baldwin Street to Lake Street	North	2	3
	South	12	9
Lake Street to William Street	North	2	2
	South	10	10
William Street to Madison Avenue	North	6	7
	South	0	0
Total		43	40

1. Refer to discussion of active, existing on-street parking spaces affected by NYSDMV parking regulations below.

In general, the definition of on-street parking would be enhanced throughout the East Church Street corridor. Parking meters would be relocated or replaced and parking signs installed to define parking spaces. See Exhibit 2.4.2 for a summary of the proposed number of on-street parking spaces. In general, some active, existing on-street parking spaces would be eliminated with the introduction of curb extensions. These elements would physically prevent vehicles from parking too close to an intersection. If considering active, existing parking spaces (apparent to the general public), the project would result in a net loss of three (3) spaces. It should be noted that the existing number of active parking spaces should already be reduced by a New York State Department of Motor Vehicles (NYSDMV) regulation making it illegal to park within 20 feet of a crosswalk. Therefore, if only the number of active, legal spaces is taken into consideration, the proposed project would result in a net total gain of one (1) parking space.

There are numerous off-street parking lots adjacent to East Church Street, each serving businesses along the corridor. These include the old USPS building; Barton, Smith, and Barton law office; the Elmira City Club; Lake Street Presbyterian Church; Southern Tier Audiology; Chemung County parking lot; old AC Delco; and Hapeman Rodriguez Chiropractic. Typically, striped parking spaces are located directly adjacent to the sidewalk, possibly resulting in conflicts between pedestrians and backing vehicles or car doors. The potential to develop additional buffer space between parking spots and the sidewalk would be reviewed with property owners and businesses during detailed design and in the future as redevelopment occurs. A planted buffer would be added along East Church Street in front of the Chemung County parking lot. This addition would maintain the existing number of parking spaces within the lot.

2.4.3 Railroads

There are no railroads within the project limits and no at-grade crossings within ½ mile that could impact traffic conditions.

Chapter 3 – Social, Economic and Environmental Considerations

3.1 National Environmental Policy Act (NEPA)

It has been determined that this project is a NEPA Class II, Programmatic Categorical Exclusion in accordance with 23 CFR 771.117d and the NEPA checklist. Class II actions that do not individually or cumulatively have a significant environmental effect are excluded from the requirement to prepare an Environmental Impact Statement (EIS) or an Environmental Assessment (EA). Refer to the attached NEPA checklist and supplemental information. Programmatic Categorical Exclusions do not require FHWA's concurrence.

Specifically, in accordance with the Federal Highway Administration's regulations 23 CFR 771.117(d) (the 'D List'), this project meets the project description of the Programmatic Categorical Exclusion 'D list' as "Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing)" and "Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting."

3.2 State Environmental Quality Review Act (SEQRA)

The City of Elmira is the SEQRA Lead Agency. The City has classified the project as a SEQRA Type II Action in accordance with 6 NYCRR 617.5. Projects classified as Type II projects require no further processing or consideration. A SEQRA Type II Determination Form is provided in Appendix B.

3.3 Additional Environmental Information

3.3.1. Wetlands

3.3.1.1. State Freshwater Wetlands - There are no New York State Department of Environmental Conservation (NYSDEC) regulated freshwater wetlands or regulated adjacent areas (100 ft) within the project area, as per the NYSDEC Freshwater Wetlands Maps. A NYSDEC Article 24 Freshwater Wetlands Permit is not required. No further investigation is required under Environmental Conservation Law, Article 24.

3.3.1.2. Federal Jurisdiction Wetlands – The project site has been reviewed for wetlands in accordance with the criteria defined in the 1987 US Army Corps of Engineers Wetland Delineation Manual. It has been determined the project will not impact areas that meet this criteria. A NYSDEC Section 401 Water Quality Certification and a U.S. Army Corps of Engineer (USACE) Section 404 Permit would therefore not be required for this project.

3.3.2 Surface Waterbodies and Watercourses

3.3.2.1. Surface Waters - The proposed project site was screened for surface waters and NYSDEC Surface water classifications. Based upon a review of the NYSDEC GIS data maps for regulated streams, and on the United States Geological Survey (USGS) quadrangle map of the project area, there are no surface waterways within the proposed project limits. Therefore, no USACE Section 404 permit, NYSDEC Article 15 permit, or NYSDEC Section 401 Water Quality Certification would be required for this project.

3.3.3. Wild, Scenic, and Recreational Rivers

3.3.3.1. State Wild, Scenic and Recreational Rivers - There are no NYSDEC Designated, Study or Inventory State Wild, Scenic or Recreational Rivers within or adjacent to the proposed project site. No further review is required.

3.3.3.2. National Wild and Scenic Rivers – The project does not involve a National Wild and Scenic River as shown by the Nationwide Rivers Inventory List of National Wild and Scenic Rivers. No further review is required.

3.3.3.3. Section 4(f) Involvement – The proposed project does not involve work in or adjacent to a wildlife or waterfowl refuge. No further consideration is required.

3.3.4. Navigable Waters

There are no state or federally regulated navigable waters located within the project's area of potential effect that will be impacted by the work.

3.3.5. Floodplains

The project area is covered by Panel 3601500005C of the City of Elmira, Chemung County, New York Federal Emergency Management Agency Flood Insurance Study (FIS) (April 2, 1997). The panel shows that the project lies outside the 100-year flood zone. The east end of the project area, from William Street to Madison Avenue is shown to be in an "area protected from the 100-year flood by levee, dike or other structure subject to failure or overtopping during larger floods." It is concluded that none of the project area is subject to floodplain regulations.

3.3.6. Coastal Resources

The proposed project is not located in a State Coastal Zone Management (CZM) area, according to the Coastal Zone Area Map from the NYS Department of State's Coastal Zone Management Unit.

The proposed project is not located in or near a Coastal Erosion Hazard Area.

According to NYS DOS "List of Approved Coastal Local Waterfront Revitalization Programs (LWRPs)," dated April 2012, the proposed project is not located in a Local Waterfront Revitalization Area. No further action is required.

3.3.7. Groundwater Resources, Aquifers, and Reservoirs

The NYSDEC Technical and Operational Series (TOGS) 2.1.3 discusses the identification of certain groundwater sources as "Primary Water Supply Aquifer Areas" or "Principal Aquifer Areas" as part of "geographic targeting." This "geographic targeting" does not directly regulate such areas, but serves as a method for enhancing existing regulatory protection (such as SPDES, Section 401 Water Quality Certification, and the SEQRA process) in critical locations where the groundwater resource is most productive and most vulnerable. Technical and Operational Series 2.1.3 defines "Primary Water Supply Aquifers" as "highly productive aquifers presently utilized as sources of water supply by major municipal water supply systems." It defines "Principal Aquifers" as "aquifers known to be highly productive or whose geology suggests an abundant and high quality potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time."

The project area is located within a study of the Elmira-Horseheads-Big Flats primary water supply aquifer.¹ Currently, no known groundwater contamination or impacts to public drinking water supplies exist and no adverse impacts to this aquifer are expected as a result of this project.

¹T. S. Miller, A. D. Randall, J. L. Belli, and R. V. Allen, Geohydrology of the Valley-Fill Aquifer in the Elmira area, Chemung County, New York: U.S. Geological Survey Open-File Report 82-110, 7 sheets, scale 1:24000.

A review of the EPA-designated Sole Source Aquifer Areas Federal Register Notices, Maps, and Fact Sheets indicates that the project is not located in a Sole Source Aquifer Project Review Area. No federal review and/or approvals are required pursuant to Section 1424(e) of the Safe Drinking Water Act.

3.3.8. Stormwater Management

Erosion and sedimentation control measures will be incorporated into the project. Erosion and sedimentation control plans will be developed which control erosion with straw or hay mulch, erosion control fabric, and/or temporary seeding, and control sedimentation with silt fence, inlet protection, and temporary sedimentation/detention ponds as necessary. No permanent stormwater management practices will be incorporated into the project since a SPDES permit is not required and it is not practicable for the site conditions.

Coverage under the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (GP-0-10-001) is required for any construction project that disturbs more than 1 acre of land. Disturbance is defined as any activity that will expose soil to surface water runoff, which includes full depth reconstruction of sidewalks proposed under this project. Most pavement areas will not be excavated to a depth that would expose soil.

As noted in Section 2.3.3.7 above, stormwater in the project area is collected by a system of catch basins and a closed drainage system. Most of the project area is served by a combined (storm and sanitary) sewer system that flows to a wastewater treatment facility prior to being discharged into the Chemung River under an existing SPDES permit. The three western-most catch basins in the project area drain to a separate storm sewer system that is located under Clemens Center Parkway. There will not be more than one acre of disturbance to soils drained by these three catch basins. It is therefore anticipated that coverage will not be required under the NYSDEC SPDES General Permit for Stormwater Discharged from Construction Activities (GP-0-10-001).

3.3.9. General Ecology and Wildlife Resources

3.3.9.1. General Ecology and Vegetative Communities – The project area is located in an urban downtown business district, and is characterized by buildings with sidewalks and curb lawns composed of asphalt and concrete (see Section 2.3.3.13). There are some landscaping treatments on adjacent property, including small planters and landscape beds, shrub rows, and trees. The terrain of the corridor is flat. No surface water or wetland habitats for fish, wildlife, or waterfowl exist in the vicinity of the project. Such a disturbed site in a high traffic area within an urban landscape results in limited access and foraging opportunities for most species of wildlife.

3.3.9.2. Endangered and Threatened Species - Consultation under Section 7 of the Endangered Species Act (ESA) was performed through the U.S. Fish and Wildlife Service (USFWS) New York Field Office website.² Documentation from this website is provided in Appendix B. The List of Threatened, Endangered, and Candidate Species for Chemung County includes the bald eagle (*Haliaeetus Leucocephalus*) which is a delisted species. While there are no ESA requirements for bald eagles, they continue to receive protection under the Bald and Golden Eagle Protection Act. Eagles nest near coastlines, rivers or lakes. They may nest in trees, on cliffs, on rock promontories or on manmade structures. They are not known to inhabit urban areas. Furthermore, the bald eagle is a State-listed species, and the NYSDEC is not aware of active bald eagle nests in the project location. The bald eagle was not identified by the NYSDEC Natural Heritage Program (see below) as being in the vicinity of either project location. No impacts to the bald eagle are anticipated as a result of this project.

In a letter dated December 12, 2011, the NYSDEC New York Natural Heritage Program sent a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats that

²U.S. Fish and Wildlife Service New York Field Office Endangered Species Consultation <http://www.fws.gov/northeast/nyfo/es/section7.htm> Accessed October 8, 2009.

may occur in the project area. The response cover letter is contained in the Appendix B. Two state listed species are included in the report. One of the species is the yellow lampmussel (*Lampsilis cariosa*), which is a freshwater mussel that is unlisted by New York State, but has a rank of "S3-vulnerable." This species inhabits runs and riffles of a river with a bottom substrate composed of gravel and cobble. This habitat is not found in the project area. The other species included is a historic record of the dragonfly species, cobra clubtail (*Gomphus vastus*). It is also unlisted by New York State, and has a rank of "SH – Historical." The last record of this species occurring in the vicinity of the project site was on June 13, 1940. Habitat for *Gomphus vastus* is in medium to large rivers with sandy substrate and large windswept lakes.³ The proposed project will have no impacts in such habitat.

3.3.9.3. Invasive Species – This project is located in an urban environment where the potential for invasive species to spread is significantly reduced. The entire project site consists of pavement or highly maintained curb lawns that are frequently mowed. However, preventative measures and management practices should be taken to prevent the introduction of invasives, intentionally or accidentally, during project design and construction.

3.3.10. Critical Environmental Areas

According to information obtained from NYSDEC, the proposed project does not involve work in or near a Critical Environmental Area.

3.3.11. Historic and Cultural Resources

A historic property listed on, or eligible for inclusion in, the National Register of Historic Places has been identified within the project's area of potential effect. Three of the four blocks in the project area are located in the Elmira Civil Historic District, which was listed in the National Register of Historic Places on July 30, 1980. In a letter dated January 17, 2012, the NYSDOT Region 6 Cultural Resources Coordinator (CRC) stated her finding that the project would have No Effect on properties on or eligible for listing on the National Register of Historic Places. The State Historic Preservation Office (SHPO) responded in a letter dated February 8, 2012 that it did not agree with the No Effect determination. After discussion with the SHPO, a letter was sent on February 29, 2012 which changed the effect determination for the project to No Adverse Effect on historic properties. This determination means that the undertaking will not alter, directly or indirectly, any of the characteristics that qualify the property for inclusion in the National Register, in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

In a letter dated March 6, 2012, the SHPO concurred that the proposed project will have No Adverse Effect on properties on or eligible for inclusion on the National Register of Historic Places. In a letter dated April 9, 2012, the FHWA confirmed that the undertaking would have No Adverse Effect upon properties on or eligible for inclusion on the National Register of Historic Places. It also confirmed that notification had been given to the SHPO, the Seneca Nation of Indians Tribal Historic Preservation Office (SNITHPO), the Tonawanda Seneca Nation, and the Cayuga Nation. The letter from FHWA also concluded that because there was no response from the SNITHPO, Tonawanda Seneca Nation or the Cayuga Nation, that they agree with that recommendation. The FHWA also concluded that there will be No Adverse Effect on properties on or eligible for inclusion on the National Register of Historic Places within the project's area of potential effect. It then concluded that the requirements of 36 CFR Part 800 have been met for the project, and that the Section 106 process is complete. The referenced correspondences are included in Appendix B.

Projects funded by FHWA that involve any historic site of national, state, or local significance are subject to 49 USC 303 of the U. S. Department of Transportation Act, commonly referred to as 4(f). The Safe, Accountable, Flexible Efficient Transportation Equality Act A Legacy for Users (SAFETEA-LU) includes an amendment to the Section 4(f) requirements that allows the U.S. Department of Transportation to

³ Massachusetts Division of Fisheries and Wildlife. *Natural Heritage & Endangered Species Program Cobra Clubtail Dragonfly*. May 2003. www.nhesp.org. Accessed January 23, 2008.

determine that certain uses of Section 4(f) land will have no adverse effect on the protected resource. *De minimis* impacts to historic sites are defined as the determination of either “no adverse effect” or “no historic properties affected” in compliance with Section 106. The Section 106 process for this project has resulted in a determination of “no adverse effect” as described above. The SHPO was informed of FHWA’s intent to make a *de minimis* determination in the letter dated February 29, 2012 as described above. The FHWA has directed that if they determine a project will have a *de minimis* impact to a 4(f) resource, the answer to Question #8 of the NEPA Assessment Checklist is “No.” The FHWA provided written determination that the project will have a *de minimis* impact to the Elmira Civil Historic District on June 19, 2012 (Appendix B).

3.3.12. Parks and Recreational Resources

There are no parks or recreational areas located within the project corridor. No land from any park or recreation area would be affected by this project. A Section 4(f) Evaluation (49 USC 303 of the U. S. Department of Transportation Act) for parks and recreational resources is therefore not required (See Section 3.3.11 regarding Section 4(f) for historic resources).

The project does not impact parklands or facilities that have been partially or fully federally funded through the Land and Water Conservation Act. No further consideration under Section 6(f) is required.

3.3.13. Visual Resources

No significant adverse visual impacts are expected to result from this project. Aesthetic improvements for the corridor are being considered for the lighting, and vegetative landscaping (see Sections 2.3.3.13 and 2.4.1). The proposed actions are anticipated to provide an improvement to the visual environment of the project site.

3.3.14. Farmlands

3.3.14.1 State Farmland and Agricultural Districts - The project is located in an urban area, and there are no Agricultural Districts in the vicinity of the project. Therefore no further review is required under Article 25-AA of the New York State Agricultural and Markets Law Section 305(4).

3.3.14.2. Federal Prime and Unique Farmland – This project would not involve the acquisition of any undeveloped property. Therefore, no further review is required under the Federal Farmland Protection Act.

3.3.15. Air Quality

An air quality analysis for CO is not required since this project will not increase traffic volumes, reduce source-receptor distances by 10% or more, or change other existing conditions to such a degree as to jeopardize attainment of the National Ambient Air Quality Standards. The project does not require a project-level conformity determination.

A Mesoscale Analysis is not required for this project since it does not significantly affect air quality conditions over a large area and is not a regionally significant project.

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 NAAQS. An air quality analysis screening was not performed for this project because there is no difference in the amount of intersection traffic between the build and no action alternatives. Also, the build alternative would not increase traffic volumes, reduce source-receptor distances, or change other existing conditions to such a degree as to jeopardize attainment of NAAQS. It was therefore concluded that further screening would not be necessary.

3.3.16. Energy

An energy assessment is not required for the proposed project since it is not expected to:

- Increase or decrease VMT;
- Generate additional vehicle trips;
- Significantly affect land use development patterns;
- Result in a shift in travel patterns; or
- Significantly increase or decrease vehicle operating speeds.

Therefore, the project will not significantly affect energy consumption.

3.3.17. Noise

The project does not qualify as a Type I project under the requirements developed by the Federal Highway Administration (FHWA) as identified in Chapter 1 of Title 23, Code of Federal Regulations, Part 772 (23 CFR 772). A noise study is therefore not required for this project.

3.3.18. Asbestos

Record drawings were not available for the East Church Street corridor showing the materials used in construction. Based upon the proposed scope at the time of the December 2011 site visit, materials were identified that would require asbestos sampling. Suspect materials consist of various sidewalk fillers, sealants and light pole paints. The visual inspection was unable to evaluate or view underground utilities.

Since the existing light poles are to remain, no further evaluation of their paint is required. Samples were taken of the sidewalk caulk were taken and tested. No asbestos material was present (see Appendix B).

3.3.19. Hazardous Waste and Contaminated Materials

A Hazardous Waste/Contaminated Materials Site Screening has been conducted for the project area in order to document the likely presence or absence of hazardous/contaminated environmental conditions. A hazardous/contaminated environmental condition is the presence or likely presence of any hazardous substances or petroleum products (including products currently in compliance with applicable regulations) on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.

The Hazardous Waste/Contaminated Materials Site Screening included a review of Federal and NYSDEC regulatory data files and a site 'walkover' on December 16, 2011. A Technical Memorandum for the screening is included in Appendix B.

The findings of the Hazardous Waste/Contaminated Materials Site Screening reveal a potential for hazardous materials or contaminated wastes on some adjacent properties. This includes three (3) former service station locations in the block between William Street and Madison Ave and two more former service stations in the next block to the east as shown in Exhibit 3.3.19-1.

Other findings include:

- An unidentified exposed pipe was observed within a fractured sidewalk block. The pipe is located at the southwest corner of East Church Street and Lake Street, outside the Elmira City Club at 320 East Church Street. The pipe is suspect and may be a fill port associated with a tank.

- 465 East Church Street – This site (now 460 East Church Street) was indicated in the databases as a former NYSDEC Spill Site associated with a tank removal. Although closed, the spill, according to the database information, did not meet NYSDEC Standards. Gasoline constituents were found in the groundwater and SVOCs were identified in subsurface soils. Groundwater wells may still be present onsite.
- Elm Chevrolet located at 301 East Church Street maintains an active 2,000 gallon UST located on the property. The exact location is unknown.
- Pole mounted electrical transformers were observed along the north side of East Church Street. The transformers appear to be owned by the local utility company. PCB oil may be present within the transformers. Handling of any transformers impacted would be the responsibility of the local utility.
- Lead and lead based paint may be present in and on existing light poles within the project area. Since no work is anticipated on the existing light poles, further testing for lead is not warranted. The visual inspection was unable to evaluate or view underground utilities. Lead may exist on or within the underground utilities. Utility owners handling their utilities should be aware of the potential for lead in their utilities.

Exhibit 3.3.19				
Sanborn Map Sites Adjoining the Project Area				
Location	ID on Sanborn Map	Address on Sanborn Map	Maps Identifies	Status
Project Corridor	Filling Station 1950 Map	450 East Church Street	2 tanks shown on the Sanborn Maps	Former Filling Station (AC Auto Seat Cover) Tank Status Unknown
Project Corridor	Filling Station 1950 Map	468 East Church Street Or 221 Madison Ave	Tanks do not appear on the map	Former Filling Station (Parking Lot) Tank Status Unknown
Project Corridor	Filling Station 1950 Map	453, 457 East Church Street	3 tanks shown on the Sanborn Map	Former Filling Station (1988 Used Auto Sales) Parking Lot Tank Status Unknown

In areas between William Street and Madison Avenue where excavation would be involved (such as for curb installation, drainage or utility work), monitoring during construction is preferable to separate testing prior to construction. The contract documents would include provisions to cover the possibility of hazardous waste/contaminated materials encountered during construction, if any.

Samples were taken of sidewalk caulk and tested for PCB's. Results indicated no PCB's in this material (see Appendix B).

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