CHAPTER 4 - SOCIAL, ECONOMIC and ENVIRONMENTAL CONDITIONS
and CONSEQUENCES

4.1 Introduction

This chapter discusses the social, economic and environmental issues associated with the proposed project, considering feasible Alternatives 2, 3, 5 and the Null condition. This project proposes a roadway at-grade intersection or an interchange at the Route 531 Terminus along with extension of the Route 531 alignment to the west where it joins with existing Route 31, using a curve to the left (westbound) to form a continuous east west alignment. The project also includes the Route 31 Improvements along a one mile segment in the Towns of Ogden and Sweden, Monroe County, New York where the alignments transition to existing Route 31. The project alternatives include a Conventional Signalized intersection (Alternative 2), a Signalized Superstreet crossover (Alternative 3) and a Full Diamond interchange (Alternative 5) at Route 531 / Route 36 Terminus. All three (3) alternatives for the Terminus have essentially the same improvements for Route 31. These include associated roadway improvements to Route 36 and intersection and traffic calming amenities along Route 31. Route 31 will receive a continuous two way left turn lane (CTWLTL) between Salmon Creek Road and Gallup Road with left turn lanes at these two intersections. The Gallup/Hubbell Road intersections with Route 31 will be modified geometrically with the alignments enhanced to improve intersection sight distance and provide traffic calming features along this segment. Traffic calming features will help provide a transition from the Route 531 expressway to the Route 31 two lane rural arterial.

4.1.1 Environmental Classification and Lead Agencies

4.1.1.1 NEPA Classification

Under the alternatives, this project is classified as a NEPA Class III action in accordance with 23 CFR 771.115. The Federal Highway Administration is the lead agency for the NEPA process; this will follow the Class III procedure under the NYSDOT Environmental Action Plan and the Project Development Manual (PDM). Class III actions require the preparation of an Environmental Assessment (EA) to determine the appropriate actions and environmental documentation.

This environmental assessment has evaluated the foreseeable project impacts related to the project location, community and the alternatives. Relevant impacts evaluated in this report include social and economic impacts; land use and environmental justice; historic and archaeological impacts; hazardous waste and asbestos; construction impacts; wetland, visual impacts, farmland and water quality issues.

Based on this draft evaluation it is anticipated that this project will not have any significant effects on the environment.

It is recommended that this project be progressed with FHWA concurrence with a Finding of No Significant Impact (FONSI). If there is no objection to these findings, a Finding of No Significant Impact (FONSI) will be prepared.

4.1.1.2 SEQR Classification and Lead Agencies

The Department has determined that this project is a SEQR Non-Type II Action in accordance with 17 NYCRR Part 15 - Procedures for Implementation of State Environmental Quality Review Act. SEQR Non-Type II projects include actions for which the environmental impacts are not clearly established and require an Environmental Assessment (EA).
NYSDOT is the SEQR lead agency and as lead agency will progress the project as SEQR Non-Type II (EA) in accordance with 17 NYCRR Part 15, because the recommended build alternatives have the potential to cause environmental impacts and the following potential impacts preclude a SEQRA Type II designation:

- d (1) the acquisition of occupied dwellings;
- 15.14(d) (6) – The structure at 3360 Brockport-Spencerport Road is National Register Eligible, a Type II action has “no effect on any district, site, structure or object that is listed, or may be eligible for listing, on the National Register of Historic Places.” This project has potential effects to this structure;
- d (7i) impacts of potentially 0.62 to 0.68 acres to freshwater wetlands depending on the alternative selected;
- d (7 iii) conversion of Prime or unique agricultural land;
- d (7 iv) the need to acquire more than one acre in an agricultural district.

Even though there are impacts and based on this environmental assessment, it is anticipated that this project will not have any significant affects on the environment. It is recommended that this project be progressed with a Determination of No Significant Effect (DONSE).

4.1.2 Coordination with Agencies

The previous studies and reports for this road segment are as follows:

- Major Investment Study – Route 531/Brockport-Rochester Corridor, February 2000-Final Summary Report;
- Technical Memorandum – Route 531 Extension Study, PIN 4531.05 (Washington St. to Redman Road), April 2010

This project was a result of the Route 531 Extension Study Scoping Phase completed in April 2010. The Route 531 Extension Study (PIN 4531.05) was to consider improvements to the 6.5 mile long corridor that would provide for the existing and projected traffic demand and address highway safety. During the scoping phase of that project, the results of the traffic and accident analysis indicated that in the future the existing Route 31 traffic would continue to operate at or near capacity during the commuter peak hours.

At the conclusion of the scoping phase it was determined that an extension of Route 531 was not viable but rather location-specific improvements developed as a result of the scoping phase should be progressed. Most importantly, these included safety and capacity improvements to the Route 531 Terminus, which was the highest priority, within the corridor. Ultimately the Route 531 Extension Project Scoping Report was concluded as a Technical Memorandum.

The NYSDOT informed the agencies indicated below regarding this action.

4.1.2.1 NEPA Cooperating and Participating Agencies

The following agencies have been identified as Cooperating Agencies in accordance with 23 CFR 771:

Cooperating Agencies
US Army Corps of Engineers (USACE)
US Environmental Protection Agency
US Fish and Wildlife
US Department of Agriculture
New York State Department of Agriculture and Markets
New York State Department of Environmental Conservation (NYSDEC)
New York State Office of Parks, Recreation, and Historic Preservation – State Historic Preservation Office (SHPO)

**Participating Agencies**
Monroe County
Town of Sweden
Town of Ogden

**SEQR Involved and Interested Agencies**

Input on the action was also sought from other interested local and regional agencies, municipal officials, and organized stakeholder interest groups. A list of these groups follows:

<table>
<thead>
<tr>
<th>Affiliation</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town of Ogden Building Dept.</td>
<td>LCP and Zoning compliance, trends and projection, impacts</td>
</tr>
<tr>
<td>Monroe County Planning Dept.</td>
<td>Trends and projections, compliance with regional plans</td>
</tr>
<tr>
<td>Town of Sweden Supervisor</td>
<td>LCP and Zoning compliance, trends and projection, impacts</td>
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<tr>
<td>Ogden and Sweden EMS Providers</td>
<td>Response times, emergency access routes, accidents/safety</td>
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<tr>
<td>Ogden and Sweden Police Departments</td>
<td>Response times, emergency access routes, accidents/safety</td>
</tr>
<tr>
<td>Monroe County Recreational Dept</td>
<td>Impact on passive and recreational resources and opportunities</td>
</tr>
<tr>
<td>Ogden and Sweden DPW</td>
<td>Existing and future roadway maintenance and improvements</td>
</tr>
<tr>
<td>Spencerport and Brockport School Dept. Districts</td>
<td>Impacts on existing and future school projections and plans</td>
</tr>
<tr>
<td>Ogden and Sweden Supervisors</td>
<td>General town growth and development issues</td>
</tr>
<tr>
<td>GTC</td>
<td>Model socio-economic trends and projections</td>
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A summary of the local and regional public participation efforts is included in the Appendix D.

### 4.2 Social

The Route 531 Terminus Improvements study area has been defined by the area of direct impact of the alternatives meeting the projects purpose and needs. Generally this is the area within and along the present right-of-way including adjacent properties, businesses and communities within the general limits of the alternatives being considered. To determine the overall project study area for the purpose of a social and economic analysis the following concerns were considered:

- where potential localized impacts of the project may take place;
- how the proposed project might affect the local and regional economy;
- how the project might alter travel patterns due to the elimination of peak hour congestion at Route 531/Route 36/Route 31.

The proposed Route 531 Terminus Improvements study area for the Social and Environmental affects includes the following geographic areas:

- The properties adjacent to the existing Route 531 Terminus and immediate Route 31 and Route 36 corridor
- The Town of Sweden
- The Town of Ogden
- Monroe County for overall comparisons

The purpose of this section is to discuss the social environment of the project study area and evaluate the potential social affects of the build alternatives. This project involves the Route 531 Terminus at the
intersection with Route 36 and the Route 31 corridor approximately 1 mile west of the Route 531/Route 36 intersection. The area is rural and lightly developed in the towns of Ogden and Sweden. With the exception of the no-build alternative, each alternative will involve reconstructing the existing terminus and replacing it with either an at-grade intersection (Alternatives 2 & 3) or a Full Diamond grade separated interchange (Alternative 5). Route 36 will receive a new at-grade intersection or bridge, spanning the Route 531 expressway that will be located at the current Route 531/Route 36 intersection. This will require minor to substantial approach work along Route 36 (depending on the alternatives) including minor profile improvements to provide adequate stopping sight distance under the two at-grade alternatives to substantial earthwork to provide the elevation change for a new grade-separated bridge.

The two at-grade alternatives will replace the existing Route 531/Route 36 ‘T’ type intersection with a conventional signalized four-leg intersection or a signalized superstreet median crossover. Under the Full Diamond Interchange alternative the Route 531 mainline will be depressed approximately 10 to 12 ft with new exit/entrance ramps leading up to Route 36. All alternatives will provide a direct transition from Route 531 to Route 31 near Salmon Creek, with the existing Route 31, between Salmon Creek and the Route 31/Route 36 intersection modified to a Cul-de-Sac. The remainder of Route 31 west of Salmon Creek will essentially be reconstructed and/or rehabilitated on existing alignment with intersection modifications to Hubbell, Gallup and Salmon Creek Road.

What follows is a discussion and analysis of five key social factors (a through e):

(a) Changes in the neighborhood or community cohesion

The rural neighborhoods in the immediate vicinity of the Route 531 terminus and west of Route 36 along Route 31 will be somewhat affected by project construction due to the acquisition of six residential properties along the north side of Route 31 between Gallup Road and Route 36. The approximate study area of the project, as illustrated in Exhibit 1.2.1-1, show the northern limit as the abutting properties along Route 31; the southern limit as Northampton Park; the western limit as Salmon Creek Road a main entrance to the Park; and the eastern limit as the Route 531 Terminus.

Land use adjacent to the project corridor is dominated by agricultural fields on the north and Northampton Park on the south with concise residential areas and one commercial facility at the intersection of Route 31/Route 36. Within the project limits, Northampton Park is the predominant feature which abuts the corridor along the south side of Route 31, which includes a snow ski hill, toboggan hill, running/skiing cross-country trails and horse trails with park access from Hubbell Road and Salmon Creek Road along Route 31. Northampton Park is primarily a dense wooded area with Salmon Creek and Spring Creek winding through the woods. Most park activities are typically located 500 ft to 1,000 ft away from Route 31.

Residential properties are dispersed amongst the agricultural fields along the north side of Route 31. These properties consist of two groupings of residential lots, one across from Hubbell Road consisting of five lots and three homes and another 1,600’ further to the east, just west of Salmon Creek which consists of three lots and three homes. Further to the east as you approach Route 36 the cluster of eleven homes will remain with access provided by the old Route 31 cul-de-sac. This group includes the historic eligible home which is the westerly most home next to Salmon Creek.

The relocation of these two groupings of homes (six relocations) will not have an impact on community cohesion as these locations are scattered residential properties within a primarily agricultural setting. However, this will have an impact to the current residential owners that is associated with relocation. There are no effects on the established neighborhoods to the west in the area of Salmon Creek Road along with a community of homes in the general vicinity of the Route 31/Route 36 intersection. The initial Real Estate Relocation Assessment has identified numerous similar properties available for the relocations in the general project vicinity.

The proposed road construction under all three (3) alternatives is not expected to have a significant impact on the character or the stability of the neighborhoods in the project area and the Towns of...
Ogden and Sweden. A change in land-use will occur north of Route 31 where six (6) residential properties will be eliminated and potentially converted back to rural agricultural land use. These six properties are in two isolated locations, versus neighborhoods, and the project will not negatively affect established neighborhoods to the east and west. The project improvements will positively affect the neighborhoods in the general vicinity of the Route 31/Route 36 intersection by “moving” the majority of through traffic away from the intersection along with significantly reducing accidents and delays associated with the present terminus thereby increasing safety and decreasing traffic delays and vehicle pollution.

(b) Changes in travel patterns and accessibility

Under the No build alternative, there would be no change to the travel patterns or access from the current conditions; although traffic operations would continue to deteriorate with increased delay, congestion and accidents during peak traffic periods.

Under the three (3) build alternatives, traffic would directly transition from Route 531 to Route 31, eliminating the right turn, left turn movement currently required at the Route 36 and Route 31 intersection, respectively. The Route 36/Route 31 intersection would redirect Route 31 traffic (east of Route 36) to/from the relocated Route 31/Route 531 alignment to the south along Route 36. A cul-de-sac would be placed on Route 31 west of Route 36 to provide access to eight homes in the area. This would eliminate Route 31’s current east-west connection, but in doing so, would still provide local access to the properties along the north side of Route 31 in this area.

The Route 31 east-west traffic will now have to proceed along Route 36 to access the new Route 31/Route 531 alignment by way of one of the at-grade intersections or the grade separated interchange to continue along Route 31. Roadway shoulders will be widened to allow better access to the community for pedestrians and bicyclists within the project corridor. It is also anticipated that all build alternatives will induce some traffic (100 – 200 vph) back to Route 531 regarding traffic that currently exits Route 531 at Union Street in the PM peak hour, and then travels Route 31 to avoid the queue, congestion and accidents at the present terminus. Overall the changes in travel patterns involve “relocating” the Route 531/Route 31 mainline traffic away from Route 31 for approximately 2,000’ west of Route 36, and “inducing” some of the Route 531 traffic which currently avoids the present Route 531/Route 36 terminus (mostly PM peak hour) back to Route 531 in lieu of exiting at Route 259-Union Street. These changes are not expected to have an impact on overall travel patterns and accessibility.

(c) Impact on school districts, recreation areas, churches, businesses, police and fire protection

There are no schools within the immediate area; however the Brockport Central School District and Spencerport Central Schools were consulted to determine whether the project would impact existing and or planned bus routes. During construction the school bus routes will typically continue to utilize existing roadways including Route 31, Route 36 and other area roadways. Completion of the project is expected to improve overall mobility and safety along Route 31 which is beneficial to the general public as well as the school busing systems. The project will be staged using a combination of typically on-site detours (traffic maintained) and an off-site detour (closing Route 531 from Union Street to Washington Street) for construction in the immediate area of the Route 531/Route 36 intersection. The duration is dependent on the alternative however will be minimized as practically as possible. Generally traffic will be maintained on-site in particular for Route 31 (west of Route 36) where only minor short term staging is required for the tie in and on Route 36 excluding the off-site detour. A communication plan will be used to coordinate all activities with agencies during construction. No adverse impacts are expected after the completion of the project.

Northampton Park is a Monroe County park located on the south side of Route 31 for a majority of the project corridor. Salmon Creek Road and Colby Street currently serve as the main entrances to the park with a secondary entrance off Hubbell Road. A playground, ski and sledding hill are located in the park south of Route 31 along Hubbell Road. In addition, multiple trails, sporting fields and picnic
facilities are located within the park south of Route 31. In general the park is heavily screened from Route 31 by wooded areas. Enhancements to the park entrances will be provided by adding left turn lanes or a continuous two way left turn lane for turning into or exiting the park entrance roads. Access to the park via Salmon Creek and Hubbell Road will be temporarily interrupted during construction (short duration), however in the long term the safety at the Route 31 intersections is expected to be improved.

There are no churches located within the project study area or within close proximity. The build alternative is not expected to have any negative impacts on area churches and other places of religious activities.

As previously mentioned, the only business located within the project study area is the M&M MiniMart Store located at the intersection of Route 31 and Route 36. This establishment is likely to experience minor impacts due to construction activity and will lose some pass-by shoppers, but it is not expected to have any significant long-term negative impacts. Ingress and egress to the site will be improved via rehabilitated driveway curb cuts and with Route 36 / County Route 212 having free flow conditions while Route 31 has stopped conditions, access will be slightly easier to this northeast site by heading north on Route 36 with a right hand turn into the Mini-Mart site.

The road reconstruction will have no long-term negative impact on emergency services once the project is completed. Overall the project is expected to benefit emergency responders by improving mobility and safety. Response times will most likely be reduced as a result of the Route 531 terminus improvements as travel distance will be less, congestion will be significantly reduced, accidents will be reduced and the two (highly congested) intersection maneuvers at Routes 531/36/31 will be eliminated. Service routes for emergency vehicles will be coordinated with, maintained and open at all times during construction. The use of an off-site detour is being considered and would require additional evaluation and public input before implementation.

(d) Impacts of alternatives on highway and traffic and safety as well as on overall public safety

The Route 531 intersection with Route 36 and the four (4) intersections along Route 31 have been identified by the Route 531 Extension Study and supplemental update as having higher accident rates than the statewide average. The high level of accidents in these areas has been attributed to congestion, capacity deficiencies and turning movements related to the current terminus movement through the Route 36 and Route 31 intersections and lack of turning lanes along Route 31 at the side street intersections. Safety considerations and accident history are further discussed in Section 2.3.1.8.

The two at-grade alternatives will provide sufficient traffic signal operation and storage room for queued vehicles at the intersection of Route 531 and Route 36. This increased storage room will improve traffic flow during peak hour commutes by preventing back-ups along Route 531. Under the grade-separated interchange alternative (Alternative 5) the queue will essentially be eliminated as the Route 531 traffic will transition directly to Route 31 through the interchange without maneuvering through an intersection or traffic signal. The flow of traffic will also be improved with advanced signing to allow westbound traffic to maneuver into the appropriate lanes in advance of the intersection or interchange.

The direct connection of Route 531 to Route 31 (west of Route 36) will eliminate conflicts and persistent delays, especially for westbound peak hour vehicles which experience the highest accident rates in the corridor. This includes the termination of Route 31 west of Route 36 to allow for the Route 31 to Route 531 transition. The rerouting of the Route 531 traffic will significantly reduce congestion and improve the safety and flow of traffic at the Route 531 Terminus.

Route 31 improvements will serve to reduce the number of accidents and improve the flow of traffic at the intersections of Hubbell, Gallup & Salmon Creek Road along Route 31. The addition of intersection channelization, a raised median between Route 36 and Gallup Road and a continuous two
way left turn lane between Gallup and Salmon Creek Road is expected to improve overall traffic flow and safety through this corridor.

Pedestrians are still prohibited on Route 531 by state law. There are currently no sidewalks along Route 31 or Route 36 within the project limits with pedestrians and bicyclists using the paved shoulders along these routes. Route 31 is also Bike Route 5, a signed on-road bicycle route across New York State. All of the feasible alternatives will widen the shoulders to a minimum of 8 feet in both directions along Route 31/Bike Route 5 and Route 36, within the project limits, to improve conditions for bicycle and pedestrian travel. At the Route 31 / Route 36 intersection, it has been determined that sidewalks are warranted due to the density of residential houses, two bus stops and the location of the M&M Minimart Convenience Store at the northeast corner of the intersection. For all of the feasible alternatives, sidewalk will be provided on both sides of Route 36, north of Route 31 to the northern project limits, and along both sides of Route 31, east of Route 36 extending to the intersection with Blackburn Knoll on the north side and approximately 650 feet on the south side.

All of the feasible alternatives have an alternative specific approach to pedestrian and bicycle travel at the new terminus. In general, the new terminus will provide a less direct movement for Route 31/Bike Route 5 bicyclists and pedestrians by eliminating the Route 31/Bike Route 5 through movement at Route 36 and requiring left and right turn movements on to Route 36 to continue east and west on Route 31/Bike Route 5.

(e) General social groups benefitted or harmed

This project has been examined for its potential impact on minority and low income areas. All projects are evaluated to ensure that there is not a disproportionately high or adverse impact on minority or low income population. It has been determined that all of the Build Alternatives will not have a disproportionately high and adverse human health or environmental effect on minority or low-income populations.

This conclusion is based on the 2010 census data that demonstrates that the percentage of minorities in the vicinity of the project (2.21%) is less than that for the Towns of Sweden and Ogden overall (3.23%). This data also shows that the mean household income does not fall in an Above Average Low-Income Population by Census Tract, 2010. The Department of Health and Human Resources reports the poverty guideline as being $22,050 for 2010. The 2010 Census also revealed 13.3% and 2.7% of household within the Towns of Sweden and Ogden, of having an income below the poverty threshold. The residents in the project area are therefore not part of a disproportionately high low-income population nor will the project have a disproportionately high and adverse human health and environmental effect on minority or low-income population.

Aspects of the project will improve conditions for local residents, transit users, pedestrians and bicyclists; these should also result in improvements for the elderly.

In summary the project will have no affect or significant impact on the following community types:

- neighborhood or community cohesion
- travel patterns and accessibility
- school districts, recreation areas, churches, businesses and fire protection
- highway, traffic and safety and overall public safety
- general social groups
- land use or demographics
4.2.1 Land Use

4.2.1.1 Demographics and Affected Population

None of the build alternatives will have a significant effect on existing land use within the project area; however six (6) homes will be acquired along the north side of Route 31 with the land use converted back to an agricultural setting or for highway purposes.

Genesee Finger Lakes Regional Planning Commission (GFLRPC) together with the Genesee Transportation Council evaluates growth trends throughout the region. Projections are made for commercial, industrial and residential development potential as well as employment growth in various sectors. The Study Area employment projections for 2035 by the Monroe County Transportation Analysis Zones (TAZ) indicate only a small amount of growth (1,613 jobs or 15% increase) over the next 25 years. Retail employment, however, is projected to decline by 174 jobs within the study area.

As discussed in section 4.2.3 below, the project is not located in an Environmental Justice Area. The project study area is predominately rural agriculture, parkland and lightly developed with a mixed use of residential and agricultural farmland along the north side with single family homes at irregular intervals on Route 31 and wooded unoccupied park land along the south side.
Summary Regarding Household Income and Employment Trends

The project corridor is not located in an Above Average Concentration of Low-income Population as illustrated in Exhibit 4.2.1-1 above. Overall the project improvements are not expected to affect the areas household income or employment trends.

4.2.1.2 Comprehensive Plans and Zoning

Town of Sweden & Village of Brockport Comprehensive Plan

The Comprehensive Plan for the Village of Brockport and Town of Sweden (combined) was updated in 2002 and amended on May 3, 2005. The Comprehensive Plan is the municipality's official policy document that serves as a basis for its development. It includes elements addressing land use trends and policies, transportation improvements, public utilities improvements, public parks and recreation, and other functional community planning and development information.

Brockport-Sweden LCP Goals and Policies - The Comprehensive Plan creates thirteen (13) functional areas under six (6) broad functional categories for which goals and actions are identified. These goals and actions are not prioritized but address:

Housing and Residential Land Use:

- Action 2.b) – Discourage sprawl and strip development in order to retain scenic vistas and the community's rural character.
- Action 2.g) – Discourage the conversion of local residential roads into through roads.

The Economy and Associated Land Uses:

- D-2.d) – Discourage “strip commercial” development.
- D-2.h) – In planning for future residential neighborhoods, make provisions for suitable neighborhood commercial center in appropriate locations.
- D-3.1.a) – Stimulating farming activities should take precedence over other uses in areas used for agriculture as provided for in the Town’s “right-to-farm” local law.
- D-3.2.a) – Encourage the State, County, and farmers to renew, sustain and expand the Agricultural Districts under the New York Agricultural Districts Law.
- D-3.2.d) – Do not extend water and sewer lines into or through areas being actively used for agriculture and further, limit the placement of other infrastructure, such as highways and tap-ins to water and sewer lines, which would encourage growth and development in areas designated for agricultural use.
- D-3.2.e) – Establish a preset fee for removing land from agricultural district to development use.

Industrial and Commercial Development:

- D-4.1.a) – Encourage industrial development through tax incentives.
- D-4.1.e) - Plan for new industrial development to avoid conflicts with residential neighborhoods.
- D-4.2.a) – Contain commercial development along Route 31 within a specified area.
- D-4.2.e) – Ensure adequate circulation among commercial plazas, for automobile and pedestrian traffic.

Transportation:

Goal – To provide a transportation system that minimizes congestion and is safe, efficient, convenient and environmentally responsible.
Public Utilities, Facilities, and Services:

- F.2.1.a) – Limit extensions of water and sewer utilities located, construction, and maintained in accordance with goals and objectives of this plan.

_Brockport-Sweden LCP Future Land Use Plan_ - The Future Land Use Maps (Figures 21 and 22 of the LCP) show the community’s “preferred vision” or “priority” land uses for the twenty-year planning period.

- **Conservation:** Two areas are identified by the Monroe County Preservation of Environmentally Sensitive Areas (PESA) Report for acquisition and protection:
  - The Sweden 7 Wetland (800 Acres) is a State Class II scrub, scrub deciduous wetland located between Swamp Road and Beadle Road
  - HO-9 (450 Acres) is four contiguous wetlands along the north branch of Black Creek. It is located on the east and west sides of West Sweden Road south of White Road.

- **Agriculture:** Continued agricultural use is recommended for land within the two Monroe County Agricultural Districts except where other non-residential uses are already established.

- **Rural Residential:** A large parcel of land currently zoned B-3 commercial recreation is listed as number 2 on Figure 24 of the LCP. The LCP recommends that the Town Board consider rezoning this parcel to R1-2 One Family Residential.

- **General Business:** The Future Zoning Map for the Town of Sweden (Figure 24 of the LCP) proposes most commercial and residential zoning districts to be located along the existing Route 31 corridor.

_Town of Ogden Comprehensive Plan, 2003_

The Ogden Comprehensive Plan was adopted on February 13, 2003 by the Town Council under Resolution #78. The top five prioritized issues were the following:

- Maintain the rural character of our community
- Protect and preserve the natural, scenic and historic attributes of our community
- Promote orderly balanced commercial, business and residential development
- Preserve woodlands
- Preserve farmlands

According to the Ogden plan, the extension of NYS Route 531 to Washington Street (SR 36) has had the most significant impact on development in Ogden. The new highway (built in the mid-1990s) brought a surge of growth and development in town, and several commercial and industrial developments have been constructed or are proposed in the eastern section of Ogden. The highway has also made the town more accessible to commuters traveling to the City of Rochester and other employment centers in Monroe County.

The Town of Ogden _Future Land Use Map_ identified 8 categories including: Rural Agriculture, Residential, Commercial, Light Industrial, Public Services, Recreation and Parks, Trails, and Heritage Commercial Area. Much of the future industrial use is located in close proximity to Route 531, which is and will continue to be an excellent transportation resource for industrial growth. The Heritage Commercial Area anticipates that commercial development in the future will extend south of the village along S. Union Street (Rt. 259) beyond Routes 31 and 531, thereby connecting the village to the town’s community center.

_Village of Spencerport Comprehensive Plan, Revised 2002_

The purpose of the comprehensive plan is to formulate goals for the future physical development of the community, to provide a healthful and pleasant living environment, and to offer proposals designed to attain these goals. The plan is designed to further the achievements of the following community goals:
• To retain the residential character of the community while helping to provide for housing needs of the expected population growth of the town.
• To strengthen the economic and fiscal health of the village.
• To provide the public services and facilities that efficiently and economically meet current and anticipated needs of the citizens and public.
• To support recreational facilities, open space and community services for a growing population.
• To encourage a sense of identify and pride in the village.
• To require high standards of quality and appearance for existing and future development, both public and private.
• To encourage and promote broad citizen participation in aspects of community life.

Development within the Town of Ogden has significant impact on the Village of Spencerport. Population in Spencerport has fluctuated the past 20 years from 3,424 in 1980 to 3,606 in 1990, 3,559 in 2000 and 3,601 in 2010. The radial pattern of the “suburban ring” has been extended through Spencerport with the completion of Route 531. The manufacturing centers and regional trading centers are now easily reached from Spencerport. This project does not preclude residential development and opportunities for the Spencerport Business District to serve an expanded area.

Erie Canal Corridor Plan: Genesee/Finger Lakes Region, 1993

This plan was completed in 1993 and the purpose of the report was to evaluate the potential of this segment of the Erie Canal for tourism, conservation, and recreation. Among the primary goals were to enhance tourism and economic development opportunities within the canal corridor. The plan was followed up by the Brockport Canal Front Master Plan in 1998.

Brockport Canal Master Plan, August 1998

This plan provides a realistic vision that builds off the success of Brockport’s central business district and positions the canal as a prominent regional cultural and recreational resource. The plan identifies proposed improvement zones to be implemented in phases including:

• Phase 1 – Canal Front Walk
• Phase 2 – Harvester Public Square
• Phase 3 – Erie Canal Greenway Trail
• Phase 4 – Historic Old Towne
• Phase 5 – Old Town Park
• Phase 6 – Corbett Community Park

None of these improvements directly impact the existing or potential future alternative Route 531 Terminus Improvements.

The project build alternatives are compatible with the Town and county master plans and the project objectives are consistent with the Town of Sweden’s and Town of Ogden’s Comprehensive Development Plan. In addition, the project is compatible with Technical Memorandum for PIN 4531.05 Route 531 Extension Study and the majority of the Route 531 terminus recommendations in the Route 531 Extension Study have been incorporated into the proposed project.

4.2.2 Neighborhoods and Community Cohesion

4.2.2.1 Community Cohesion

As discussed in section 4.2, the land use adjacent to the project corridor is dominated by agricultural fields on the north and Northampton Park on the south with concise residential areas located amongst the agricultural fields along the north side of Route 31 versus neighborhoods. Between Gallup Road and Salmon Creek, within the 4,600 ft agricultural segment on Route 31, there are six (6) residential properties
that will be relocated to provide right-of-way without access for safety purposes. The larger or more typical rural neighborhood residential settings west of Gallup Road and east of Salmon Creek and around the Route 31/Route 36 intersection will remain.

The project will not divide neighborhoods, isolate part of a neighborhood, generate new development or otherwise affect community cohesion. The age and ethnic background of the affected population is of a similar composition as the rest of the Town of Ogden. All of the occupied dwellings to be acquired are owner-occupied single family units and do not contain a disproportionate number of minority or low-income populations.

The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and relocation resources are available to all residential relocates without discrimination.

4.2.2.2 Home and Business Relocations

The project alternatives will require the acquisition and removal of six (6) occupied residences; however, these structures are located in two (2) pockets of residential properties within the aforementioned agricultural setting. Overall, the effects of this project will not cause adverse impacts upon neighborhood character and stability. The DOT relocation process will provide relocation assistance for finding comparable housing and review all available property within a 50-mile radius of the project as possible relocations sites for each residence. No businesses will be relocated. The review of possible relocation sites has identified numerous residential properties in the general area that are similar and potentially available.

4.2.3 Social Groups Benefited or Harmed

4.2.3.1 Elderly and/or Disabled Persons or Groups

A review of US Census data for Monroe County and the Towns of Ogden and Sweden indicates that there is no significant concentration of elderly or disabled persons in the project area. For significant elderly, the threshold is 12% of a census tract, as such, no impacts are anticipated.

4.2.3.2 Transit Dependent, Pedestrians, and Bicyclists

Transit dependent individuals may continue to use the existing transit bus stops along Route 31 since they will be retained; however at the Route 31/Route 36 intersection, the east bound stop on Route 31 will be relocated from the west side of the intersection to the east side of the intersection.

Pedestrians are still prohibited on Route 531 by state law. There are currently no sidewalks along Route 31 or Route 36 within the project limits. Pedestrians and bicyclists use the paved shoulders along these routes. Route 31 is also Bike Route 5, a signed on-road bicycle route across New York State. All of the feasible alternatives will widen the shoulders to a minimum of 8 feet in both directions along Route 31/Bike Route 5 and Route 36, within the project limits, to improve the conditions for bicycle and pedestrian travel. At the Route 31 / Route 36 intersection, it has been determined that sidewalks are warranted due to the density of residential houses, two bus stops and the location of the M&M Minimart Convenience Store at the northeast corner of the intersection. For all of the feasible alternatives, sidewalk will be provided on both sides of Route 36, north of Route 31 to the northern project limits, and along both sides of Route 31, east of Route 36 extending to the intersection with Blackburn Knoll on the north side and approximately 650 feet on the south side. All of the feasible alternatives have an alternative specific approach to pedestrian and bicycle travel at the new terminus. In general, the new terminus will provide a less direct movement for Route 31/Bike Route 5 bicyclists and pedestrians by eliminating the Route 31/Bike Route 5 through movement at Route 36 and requiring left and right turn movements on to Route 36 to continue east and west on Route 31/Bike Route 5.
Overall the project improvements are not expected to negatively impact transit dependent individuals, pedestrians or bicyclists but conversely will provide access and safety improvements for these users.

4.2.3.3 Low Income, Minority and Ethnic Groups (Environmental Justice)

Potential EJ Areas are 2010 US Census block groups of 250 to 500 households each that, in the 2010 Census, had populations that met or exceeded at least one of the following statistical thresholds for significance agreed upon by FHWA and the NYSDOT for Region 4:

- The FHWA poverty threshold is 1255 individuals per tract; the exception is greater than 10% of a rural tract having a population less than 1255 individuals;
- For significant minority, the threshold is greater than 14.5% for a rural community and 29% for urban;

Urban and rural designations for census block groups were established by the U.S. Census Bureau. This project is not located in or near an environmental justice area as defined above and illustrated in Exhibit 4.2.3-1 below.
4.2.4 School Districts, Recreational Areas, and Places of Worship

4.2.4.1 School Districts

The proposed project is within the Brockport Central School District (BCSD) and Spencerport Central Schools (SCS). There are no schools or school properties within or near the project corridor. Brockport Central School District is located approximately three miles northwest from the project while the Spencerport Central Schools are located approximately three miles to the east.

Both schools are served by their respective School Bus Systems located on Owen Road in Brockport (BCSD) and Route 31 in Spencerport (SCS), both two to three miles away from the project. It is not expected that there would be any long term adverse impacts to the school or bus operations. During construction there may be delays for motorists traveling thru the corridor during the Route 531 closure (Union Street to Washington Street), however the closure duration will be minimized to the extent possible and advance notice and coordination activities will be performed during construction. (Note: The detailed Traffic Maintenance Plans for construction will be further reviewed in the Final Design Phase and will include coordination with MCDOT, Monroe County Parks, Towns of Sweden and Ogden, school districts and emergency service providers).

Temporary on-site detours will be used during construction to maintain Route 31 east-west through the project area, Route 36 traffic and Route 531 traffic (excluding the Route 531 closure duration). The construction impacts would be temporary, and through close coordination we expect the impacts to be relatively minor. In the long-term, effects will be positive with improved safety (accident reductions) and improved circulation (reduced delay). School Districts will be kept apprised of the construction operations and schedule during construction.

4.2.4.2 Recreational Areas

The project corridor runs along the north side of Northampton Park in the Towns of Sweden and Ogden, which offers skiing, sledding hills, various hiking trails, an on-site educational farm and hosts the Monroe County Fair. Overall the project improvements do not impact the park (excluding Alternative 5) with the work confined to the existing highway ROW. Additionally it should be noted that the north side of the park adjacent to Route 31 is typically heavily wooded with few park activities taking place in the area. This serves as a natural buffer or screen between the park and Route 31.

It is expected that the project improvements, in particular the Route 31 improvement portion, will positively benefit the park by improving the safety at the Route 31 intersections with Hubbell Road and Salmon Creek Road, which are both County roads/park entrances. Under the Full Diamond Interchange (Alternative 5), there will be 0.70 acres acquired for ROW from the northeast corner of the park; the acquisition area is wooded, remotely separated from the major activities within the park and not currently utilized for park activities. This area is required, under this alternative, to fit the new diamond interchanges eastbound off ramp to Route 36 in the interchange’s southwest corner. Overall Alternatives 2 and 3 will not affect this recreational resource; however Alternative 5 requires a minor land taking from the park.

The Erie Canalway Trail is located approximately 0.55 miles to the north with direct access to Route 31 from Washington Street (CR 212) and Gallup Road. The trail is an important recreational resource for Western New York that runs parallel to Route 31/Bike Route 5. Statewide, the Erie Canalway Trail includes more than 365 miles of existing trails and is used by bicyclists, pedestrians, equestrians and cross-country skiers.

4.2.4.3 Places of Worship

There are no churches or places of worship within or near the project corridor and as such no impacts are anticipated.
4.3 Economic

4.3.1 Regional and Local Economies

Considerable local and regional background economic information was collected for the Route 531 Extension Study (Technical Memorandum) and was utilized for the review of possible local and regional economic effects. The project study area is located between the Villages of Brockport and Spencerport (where commercial activity is minimal) in an area that is rural in nature and characterized by open space/agriculture, Northampton Park and small clusters of homes. As such the local effects are minor with the primary results of the project being increased east-west mobility and improved safety for this major travel corridor. These improvements will help improve the regional economic climate through the mobility and safety improvements.

In reviewing the local effects, we note that there are no commercial or business properties being relocated as a result of the project; however the M&M MiniMart located on the northeast corner of the Route 31/36 intersection will experience a reduction in through traffic as a result of the project improvements. At the completion of this project, the traffic volumes at this intersection are expected to be reduced by 47% in the AM peak and 52% in the PM peak. This local market is the only commercial retail property in the project area.

The project will also require the relocation of the six (6) residences along Route 31 and unless these residences are relocated within the Town of Ogden, the Town may experience a minor loss in property tax receipts. In addition the ROW without access proposed along the north side of Route 31 from Salmon Creek to Gallup Road, may influence development along this segment in the future (access would be from Gallup Road), however this area is part of an agriculture district which is consistent with Town Zoning.

4.3.2 Business Districts

Effects on Business Districts

Correspondence with local officials has indicated that no established business districts exist within the project study area.

4.3.3 Specific Business Impacts

4.3.3.1 Established Businesses

The M&M MiniMart, formerly the Yellow Goose Market, is the single local retail business in the project study area, located in the northeast corner at the intersection of Route 31 and Route 36. The previous tenant, the Yellow Goose vacated this location in August 2013 with the M&M MiniMart reopening another Gas Convenient store under new management with a four (4) year lease. This project will not acquire this business. However, there will be a significant reduction in traffic volumes at the intersection where this business is located. Because this is the type of business that benefits from through traffic, a decrease in traffic volumes reduces the potential for non-destination customers.

4.3.3.2 Effects Assessment

There may be business impacts to the M&M MiniMart located at the intersection of Route 31 and Route 36 due to reductions in through traffic as a result of the proposed terminus improvements. In addition, temporary impacts would be expected during construction due to the potential for through traffic diversion or those seeking alternate routes to avoid the disruptions due to construction activities. However, the entrance to the M&M MiniMart will be maintained at all times during construction and will not limit their day to day business operations. The addition of sidewalks along the road frontage of this property combined with the improved operation of the intersection would make it easier for customers and pedestrians to access the convenient store.
Although a decrease in non-destination customers may occur, it does not mean this business could not remain viable. Marketing and advertising efforts might draw business into the area. Two (2) similar convenient mini-mart gas stations, the Valero Western Mini-Mart and the Sunoco K-K Food Mart are located along the Route 31 corridor with similar settings and similar traffic volumes and appear to be operating successfully. The Western Mini-Mart located at the intersection of Manitou Road and Route 31 was bypassed in 1992 as a result of the original construction of Route 531 and has continued to stay in operation since.

4.4 Environmental

4.4.1 Wetlands

4.4.1.1 State Freshwater Wetlands

There are no NYSDEC regulated freshwater wetlands or regulated adjacent areas (100ft buffer) within the project area, as per the NYSDEC Freshwater Wetlands Maps for Monroe County, Spencerport and Brockport quadrangles. A site visit was performed and confirmed the absence of State regulated wetlands. No further investigation is required regarding NYS Department and Environmental Conservation Law, and Article 24 is satisfied.

4.4.1.2 Federal Jurisdiction Wetlands

A wetlands assessment and delineation was conducted in the summer of 2007 to support the Route 531 Extension Study (Project Scoping Phase, completed 2010). The delineations were performed in a large study area of approximately 3,900 acres, which extended to west of Brockport. Forty-seven (47) wetlands were delineated in total, the majority of which are located outside the current project limits. At the conclusion of the scoping phase it was determined that an extension of Route 531 was not a viable project and the location-specific improvements developed as a result of the scoping phase were progressed. Prior to the field delineation of the study area, various maps and other sources of background information were reviewed. These included: NYS Freshwater Wetlands Map, National Wetlands Inventory (NWI) map and the Monroe County Soil Survey.

The 2007 wetland delineation identified three (3) wetlands within the current project area: the original Wetlands P, B & K have been renamed to Wetlands A, B and C in the subsequent discussions. Due to the passage of more than 5 years since the initial wetland delineation, Stantec re-delineated these wetlands in December 2012 during a re-assessment of a more focused project impact area, within 150 ft. of the edge of pavement on Route 31 between the current terminus of Route 531 and Salmon Creek Road as illustrated in Exhibit 4.4.1-1 below. The wetland delineation can be found in Separate Engineering Report 4. The delineation of federally-regulated wetlands was conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the 2012 Regional Supplement for the North central and Northeast Region.
Exhibit 4.4.1 - 1 Wetlands Delineation Map
All wetlands have been taken into consideration when designing the project, and impacts have been minimized to the extent practicable. The three (3) proposed build alternatives will impact or have a wetland disturbance as follows:

- Alternative 2, Conventional Signalized Intersection – 0.68 acres (previously 1.63 acres);
- Alternative 3, Signalized Superstreet Crossover – 0.70 acres (previously 1.63 acres);
- Alternative 5, Full Diamond Interchange – 0.75 acres (previously 2.23 acres).

It has been determined that the delineated wetlands are regulated by the U.S. Army Corps of Engineers (USACE, Corps) under Section 404 of the Clean Water Act, and the NYSDEC under section 401 Water Quality Certification, pursuant to 15 NYCRR 608, Protection of Waters. NYSDOT will obtain the permit prior to commencement of project activities, and will adhere to any conditions or requirements. Further coordination with the regulatory agencies will be required during the final design phase to determine the nature and extent of federal jurisdictional wetland function impacts posed by the project alternatives during and after construction. Public Notification requirements will apply.

USACOE Individual Section 404

It is anticipated that an Individual Section 404 will be required as well as a project-specific 401 Water Quality Certification from NYSDEC. It is expected that this work would be authorized under an Individual Permit, and that compensatory mitigation will be required where wetlands are to be impacted. The project will be discussed with the USACE, FHWA, and NYSDEC to confirm permit type and mitigation proposal. The permit will be obtained during final design after further minimization is explored and impact extents are confirmed, it is not expected that the extent of impacts will dramatically change. Work will not commence until the permit is acquired, and work will adhere to any conditions set forth by the permit requirements.

4.4.1.3 Executive Order 11990 and Minimization of Impacts

Given that the project is classified as a NEPA Class III action, an Individual Executive Order (EO) 11990 Wetland Finding will be necessary from the Federal Highway Administration (FHWA) stating and supporting that (1) there are no practicable alternatives to construction in the wetlands, and (2) the proposed action includes all practicable measures to minimize harm to the wetlands which may result from such use.

It is notable that Wetlands A and B are riparian wetlands associated with watercourses and linear in form. Impacts to Wetlands A and B are unavoidable unless through the no-build alternative. The watercourses associated with Wetlands A and B flow under the existing Route 31 making impacts to those wetlands inevitable under any design alternative, as they all require road widening over the stream to the north and/or to the south of the existing highway. Impacts to Wetland C were minimized by roadway profile revisions, which further reduced impacts to Wetlands A and B, as well.

Additional minimization of wetland impacts was achieved by eliminating the multi-use trail on both the north (farmlands) and south (forest, wetlands) sides of Route 31; removing abutment accommodations for future pedestrian bridge crossings at Salmon Creek and revising the road embankment sideslopes to 1 on 4 from 1 on 6. Further minimization efforts will be explored in final design, however it is anticipated that there will be no significant change in impacts.

4.4.1.4 Mitigation Summary

Wetland mitigation will be required for this project due to the proposed wetland impacts. The impacted wetlands consist of forested wetlands, shrub-scrub wetlands, and emergent wetlands as follows:

<table>
<thead>
<tr>
<th>Build Alternative</th>
<th>Forested Wetland</th>
<th>Shrub-scrub</th>
<th>Emergent Marsh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - Conventional Signal</td>
<td>0.36 acre</td>
<td>0.12 acre</td>
<td>0.19 acre</td>
</tr>
<tr>
<td>3 - Signalized Superstreet</td>
<td>0.38 acre</td>
<td>0.12 acre</td>
<td>0.19 acre</td>
</tr>
<tr>
<td>5 - Full Diamond</td>
<td>0.40 acre</td>
<td>0.12 acre</td>
<td>0.19 acre</td>
</tr>
</tbody>
</table>
Wetlands A and B are riparian wetlands associated with Salmon Creek and Spring Creek, which is a tributary of Salmon Creek. The riparian wetlands primarily provide wildlife habitat, wildlife movement corridors and serve as a stream buffer. Wetland C is a forested/emergent wetland that appears to be connected by a swale that flows south to Salmon Creek during rain events and may provide amphibian breeding opportunities. The areas of each wetland near the roadway are emergent marsh, while the wetland areas beyond the existing right-of-way are primarily forested.

Loss of wetland functions can be mitigated by replacement of lost wetland area in one (or a combination) of the following ways: use of a mitigation bank, in-lieu-fee payment, or wetland restoration/creation by the State near the project site. Each method would require the USACE to establish an acreage ratio of restored or created wetlands to replace wetlands lost due to construction of the project. Based on recent experience with similar projects in the Buffalo District, it is anticipated that the replacement ratio for this project would be between 1:1 and 2:1. Due to the minimization of project impacts below 1 acre, the USACE is not likely to require a mitigation ratio of more than 2:1 for any of the aforementioned methods.

The State’s preferred methods are mitigation banking, closely followed by in-lieu-fee. Construction on State property is not practical due to the lack of State-owned property in the project vicinity that would be suitable for wetland establishment. Purchase of wetland credits in a mitigation bank guarantees successful mitigation, as the wetland bank is established and the success of the wetlands has been proved. Similarly, payment of a fee in lieu of constructing a project-specific wetland would remove the State’s responsibility for monitoring and maintaining the success of a wetland on State owned property. The specific wetland mitigation method(s) utilized for this project will be coordinated with and approved by the USACE prior to design approval.

Wetland creation may be possible near the project corridor, but parcels owned by the state are generally located along roadways, which are not considered suitable for establishing wildlife habitat. There are no suitable wetland restoration sites nearby, as potential sites of former wetlands in this area are generally prime farmland, and are not available for acquisition by the State. Furthermore, required wetland monitoring would add to the wetland construction cost, which is the most expensive option. See the following table for a rough cost comparison.

<table>
<thead>
<tr>
<th>Mitigation Type</th>
<th>Total Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornerstone Mitigation Bank</td>
<td>$150,000</td>
<td>$75,000.00 per credit (i.e. 1 acre)</td>
</tr>
<tr>
<td>Ducks Unlimited In-Lieu-Fee</td>
<td>$160,000</td>
<td>$80,000.00 per credit (i.e. 1 acre)</td>
</tr>
<tr>
<td>On site Wetland Creation on State-owned property</td>
<td>$316,000 (monitoring not included)</td>
<td>Rough magnitude cost estimate that assumes a 2-acre wetland is built as part of the State highway project</td>
</tr>
</tbody>
</table>

Note: 1. All costs are directly related to the size of the wetland needed and assume a 2:1 replacement ratio.

Cornerstone Wetland Mitigation Bank is the nearest wetland bank, only one of two approved mitigation banks in western and central New York. Only one in-lieu-fee (ILF) program is available in New York State; it is operated by Ducks Unlimited and was approved by the Corps in September 2012. Both programs have established Service Areas based on drainage basins, the nearest of which for each is the Lower Genesee Service Area. However, the project site is located about 0.5 miles outside this service area. The State has had preliminary negotiations with the Corps, who may waive the service area requirement to allow the use of the ILF or banking methods. Justification for the waiver may be due to: (1) the reduction of proposed wetland impacts to less than one acre; and (2) the proximity of the project site to the Lower Genesee drainage basin.

The specific wetland mitigation method(s) utilized for this project will be coordinated with and approved by the USACE and FHWA prior to design approval.
4.4.2 Surface Waterbodies and Watercourses

4.4.2.1 Surface Waters

Surface waters have been identified within the project area. Those water bodies include Salmon Creek and one (1) minor tributary that combines with Salmon Creek just north of NY Route 31 and as discussed above. Another creek, Spring Creek merges with Salmon Creek just upstream (south) of Route 31 but outside the project footprint. There are no other streams or wetlands present within the project area.

The proposed project activities will generate impacts to the identified water bodies. Anticipated impacts will include a minor reduction in the length of natural channel associated with Salmon Creek and the unnamed tributary due to incidental culvert extensions/replacements that will be needed to accommodate a slightly wider overlying roadway. The extent of existing natural channel length reduction is approximately 20 ft for both culvert extensions under Alternative 2 & 3, with the maximum extent of existing natural channel length reduction of less than 50 ft for the new three sided structure under Alternative 5. The proposed work in both Salmon Creek and the unnamed tributary will be in conformance with USACE Section 404; however, there are associated wetland impacts as a result of the roadway work.

Anticipated impacts to wetlands, as discussed in the preceding sections of this report, will result from the placement of fill material needed to accommodate the various new terminus roadway alternatives.

The necessary permitting will be discussed with the USACE and NYSDEC. As part of gaining USACE permit coverage, a companion Individual Section 401 Water Quality Certification from NYSDEC will also be obtained for this project.

4.4.2.2 Surface Water Classification and Standards

Based upon a review of the NYSDEC GIS data maps for regulated streams, Salmon Creek and Spring Creek a tributary of Salmon Creek are rated Class C and are not impaired 303(d) segments.

The best usage for Class/Standard “C” waters is fishing. Water quality is therefore suitable for fish propagation and survival. Although other factors may limit the use for these purposes, the water quality shall be suitable for primary and secondary contact recreation.

Although the only expected project-related impacts to either Salmon Creek or the unnamed tributary will result from minor culvert extensions (less than 50ft.), NYSDEC will be consulted (in addition to USACE) to determine any restrictions to construction activities due to fish spawning seasons or other water quality concerns.

The project is not located within or adjacent to a TMDL Watershed.

4.4.2.3 Stream Bed and Bank Protection

Salmon Creek and the unnamed tributary are natural meandering channels with low-density native brushy vegetation lining their banks. As Salmon Creek approaches Route 31, its channel banks near the low flow line are lined with stone fill material, apparently intended to help maintain the channel alignment leading up to and through the box culvert. The channel beds are natural consisting of cobbles, finer granular sediments and glacial till. The affected channels are relatively flat and as such stream flow velocities are generally low at Route 31. Therefore, significant areas of channel bank degradation and/or bed scour/sedimentation do not exist.

4.4.2.4 Mitigation Summary

All construction activities in and around affected watercourses will be designed and performed in conformance with USACE/NYSDEC Best Management Practices and/or NYSDOT Standard Details.
Mitigation for the stream channel work length has yet to be discussed with the USACE. But given the minor expected channel loss (i.e. 50 ft) compensatory mitigation, if required, is expected to be equally minimal. Some mitigation / minimization such as impacts to the natural channel may be minimized by oversizing and/or burying the extended culvert sections and by placing native stream material within the original stream elevation; and if feasible, meet USACE regional conditions for the new three sided culvert under Alternative 5.

4.4.3 Wild, Scenic, and Recreational Rivers

4.4.3.1 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.

4.4.3.2 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.

4.4.4 Navigable Waters

4.4.4.1 State Regulated Waters

Salmon Creek, a state regulated navigable waters, is located within the project area. The waterway could be used for recreational, single passenger craft. The project work will require placement of fill in these waters, but navigability of the waters will not be affected. Due to the NYSDOT and NYSDEC Memorandum of Understanding regarding Environmental Conservation Law Articles 15 & 24 (Feb. 12, 1997), an Article 15 permit will not be required.

4.4.4.2 Office of General Services Lands and Navigable Waters

There are no Office of General Services (OGS) underwater holdings located within the project’s area of potential effect that will be impacted by the work.

4.4.4.3 Rivers and Harbors Act – Section 9

Since the project does not involve the construction or modification of any bridge, dam, dike, or causeway over any federal navigable water of the United States, Section 9 is not applicable. (US Coast Guard Jurisdiction Check List)

4.4.4.4 Rivers and Harbors Act – Section 10

Since the project does not involve the creation of any obstruction to the navigable capacity of any of the federal waters of the United States, or in any manner alter or modify the course, location, condition, or capacity of any navigable water of the United States, Section 10 is not applicable.

4.4.5 Floodplains

4.4.5.1 State Flood Insurance Compliance Program

Salmon Creek is included in the recently adopted Monroe County Flood Insurance Study (FIS), date September 28, 2008. As part of the Study, a detailed hydraulic model was developed to determine floodplain boundaries surrounding Salmon Creek. That model however did not extend far enough
upstream to encompass the stream reach that traverses through the project site. Therefore, Base (100-year) Flood Elevations were not established. Flood plain boundaries at the project site however were adopted. The adopted floodplain is a relatively narrow band that is generally centered on the creek. Refer to the following Flood Insurance Rate Maps (FIRM) for an illustration of the existing floodplain associated with the effected segment of Salmon Creek.

The proposed project is within the 100 year floodplain of Salmon Creek in some locations. In accordance with the provisions of 6 NYCRR 502 – Flood Plain Management for State Projects, this action has considered and evaluated the practicality of alternatives to any floodplain encroachments. As a result of this evaluation, it is concluded that: (1) a significant encroachment does not exist, (2) there is no significant potential for interruption or termination of a transportation facility which is needed for emergency vehicles, and (3) there are no significant impacts on natural beneficial floodplain values.

A hydraulic analysis of Salmon Creek and specifically the segment near and under Route 31 was performed to determine the estimated flood elevation for both the Base (100-year) and Design (50-year) storm events. The analysis was initiated by first obtaining instrument-surveyed stream channel hydraulic cross-sections (on 6/13/2011 date), taking detailed measurements of the existing 9'-7 5/8" x 19'-3 7/8" concrete box culvert and assessing channel bed, bank and overbank ground surface conditions.
Using USACE HEC RAS River modeling software and FHWA HY-8 software as a check, the water surface elevations at and upstream of the culvert were determined for both storm events. The flowrates used in the model were computed using the USGS “StreamStats” web-based geographic information system (GIS). USGS “StreamStats” methodology is consistent with the “Magnitude and Frequency of Floods in New York” (USGS Scientific Investigations Report 2006-5112).

Based on the HEC RAS modeling, the estimated flood elevation for the Base and Design year storms is 526.51 ft and 526.25 ft respectively. Given the existing culvert invert of 520.57 ft, the HW to Depth (HW/D) ratio is therefore 0.59 and 0.57, respectively. The available freeboard for the 50-year Design storm is approximately 3.9 ft.

The conclusion that was drawn from the analysis is that the existing culvert has sufficient hydraulic capacity to easily accommodate the stream flows without causing adverse back-ups in the channel during severe storm events. Freeboard is also sufficient (i.e. greater than 2 ft.) should the structure be designated as a bridge. Extending or replacing the culvert in-kind will have a negligible effect on the upstream flood boundaries.

4.4.5.2 Executive Order 11988

The project involves the reconstruction and slight relocation of Route 31 in the vicinity of the Salmon Creek culvert crossing. The proposed centerline of road is near the existing south head wall of the culvert. The primary area of minor floodplain impacts will occur on the south side of the existing culvert. Under the Full Diamond Alternative No. 5, the Department is proposing to replace the existing 9'-7 5/8" x 19'-3 7/8" concrete box culvert with a longer span bridge; the new hydraulic opening would be significantly expanded in comparison to the existing culvert. Minor toe of slope grading (cuts and fills) will occur along the south side of Route 31 in order to improve roadside safety, but the overall quantity of embankment fill within the
floodplain will be minor. Shifting Route 31 to the north, away from the floodplain is not practical, as it would significantly impact various existing residents and/or require a non-standard mainline horizontal curve on this high volume/high accident arterial.

It expected that the culvert work, whether in-kind replacement or extension, will have a negligible effect on flood elevations and floodplain values. As such, mitigation for any adverse project-related floodplain impacts is not warranted.

The Floodplain Evaluation Technical Memorandum is in Technical Appendix C1, which is available upon request.

4.4.6 Coastal Resources

4.4.6.1 State Coastal Zone Management Program

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. No further action is required.

The project is not located in a Significant Coastal Fish and Wildlife Habitat, as defined by the New York State Department of State (DOS) Division of Coastal Resources and Waterfront Revitalization. No further action is required.

4.4.6.2 State Coastal Erosion Hazard Area

The proposed project is not located in or near a Coastal Erosion Hazard Area nor is it within the mapped coastal barrier resources system. No further action is required.

4.4.6.3 Waterfront Revitalization and Coastal Resources Program

According to NYS DOS “List of Approved Coastal Local Waterfront Revitalization Programs (LWRPs),” dated March 2007, the proposed project is not located in a Local Waterfront Revitalization Area. No further action is required.

4.4.6.4 Federal Coastal Barrier Resources Act (CBRA) and Coastal Barrier Improvement Act (CBIA)

The proposed project is not located in, or near a coastal area under the jurisdiction of the Coastal Barrier Resources Act (CBRA) or the Coastal Barrier Improvement Act (CBIA). No further action is required.

4.4.7 Groundwater Resources, Aquifers, and Reservoirs

4.4.7.1 Aquifers

NYSDEC aquifer GIS data files have been reviewed and it has been determined that the proposed project is not located in an identified Primary Water Supply or Principal Aquifer Area. No further investigation for NYSDEC designated aquifers is required.

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.
4.4.7.2 Drinking Water Supply Wells (Public and Private Wells) and Reservoirs

There are no municipal drinking water wells, wellhead influence zones, or reservoirs within or near the project area, according to the NYS GIS Clearinghouse mapping of Public and Private Wells (4/2000 w/ continual updates); therefore no further action is required.

4.4.8 Stormwater Management

The project improvements will include replacing and/or modifying the open stormwater drainage system that currently exists today. Some cross-culverts will either be new or replacements. But in all cases, the culverts will discharge to open conveyance channels (streams, swales, ditches). The primary stormwater discharge point (SPDES Analysis Point) will be Salmon Creek (or it’s nearby tributary – Spring Creek) that runs along the south side of Route 31 in Northampton Park for the majority of the project limits before turning north and eventually east after passing under Route 31. Salmon Creek and its connecting tributary both cross under the Route 31/531 approximately 3,000 feet west of Route 36.

Salmon Creek drains an approximate 14.5 sq. mi. watershed; however it is a 3rd order stream, not an impaired 303d stream, and the project is not located within a TMDL watershed. Its connecting tributary drains a much smaller approximate 3.1 sq. mile watershed. A SPDES General Permit GP-0-10-001 will be required because the project will have more than one acre of soil disturbance. The overall disturbance area is expected to be approximately 35 to 54 acres, depending on alternative chosen. The project will also increase the existing imperviousness due to roadway improvements. The existing project corridor currently has approximately 13.6 to 15.5 acres of pavement and upon completion of this project; there will be approximately 19.4 to 23.8 acres of pavement, which is an approximate 39% to 54% increase in overall imperviousness. This includes the new westbound Route 531/31 connection from Route 36 to Gallup Road and new pavement areas in the form of widening and channelization for safety improvements. Exhibit 4.4.8-1 summarizes the Stormwater Management Project Areas.

<table>
<thead>
<tr>
<th>Build Alternative</th>
<th>Disturbed Area</th>
<th>Existing Impervious</th>
<th>Proposed Impervious</th>
<th>Increase in Impervious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional Signal</td>
<td>34.8 acres</td>
<td>13.6 acres</td>
<td>19.4 acres</td>
<td>43%</td>
</tr>
<tr>
<td>Signalized Superstreet</td>
<td>37.0 acres</td>
<td>14.5 acres</td>
<td>20.11 acres</td>
<td>39%</td>
</tr>
<tr>
<td>Full Diamond Interchange</td>
<td>54.6 acres</td>
<td>15.5 acres</td>
<td>23.8 acres</td>
<td>54%</td>
</tr>
</tbody>
</table>

Due to the general engineering features associated with linear transportation projects, this project would be classified as “Redevelopment” and as such, the current SPDES requirements allow for some flexibility and allowance when considering appropriate post-construction controls for stormwater quality treatment and (quantity) peak flow attenuation. The project will consider, and when feasible and appropriate, incorporate “Green Infrastructure” controls into the final contract documents. As required under the Green Infrastructure design process, consideration will be given to potential methods and means for providing the desired “Rainfall Reduction Volume”. Green Infrastructure controls may include any or a combination of vegetated open swales, porous pavement, infiltration practices, bioretention practices and dry swales.

As required by the SPDES General Permit, a Stormwater Pollution Prevention Plan (SWPPP) with descriptions, supportive documentation and calculations associated with all proposed permanent Stormwater Management Controls (Best Management Practices) will be developed during final design.
Temporary erosion and sediment control plans will also be developed and incorporated into the project contract plans. Erosion and sediment control measures may include straw mulch, rolled erosion control product, temporary seeding, silt fence, check dams, inlet protection, and temporary sediment traps.

Proposed post-construction Stormwater Management Practices were conceptually developed for the entire project area for the largest impact, which is Alternative 5. Based on the Full Diamond Alternative, with a disturbance area of 54.6 acres and a total imperviousness of 23.8 acres (with 8.3 acres of new impervious cover), the WQv for this project is 1.71 acre-feet. That number represents the total quantity of stormwater runoff that must be treated by a NYSDEC-accepted stormwater management practice. The WQv for the three alternatives are summarized in the table below.

<table>
<thead>
<tr>
<th>Conventional Signal</th>
<th>Signalized Superstreet</th>
<th>Full Diamond Interchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.762/1.36 acre-feet</td>
<td>0.838/1.41 acre-feet</td>
<td>1.108/1.71 acre-feet</td>
</tr>
</tbody>
</table>

*Redevelopment/New Construction

Due to existing topographic relief, the entire project site is broken into approximately 9 distinct sub-drainage basins, each with its own discharge point. Using the new SPDES Green Infrastructure Planning process as a guide, it is recommended that stormwater runoff be treated as close to its source as practical. To that end, all of the sub-drainage basins would include at least one (1) stormwater management practice to both treat runoff for quality and to attenuate peak discharge flows.

For this project, it is recommended to construct two (2) Extended Detention Ponds and seven (7) linear roadside dry swales. Treatment options are summarized in the following table.

<table>
<thead>
<tr>
<th>Sub-Drainage Area</th>
<th>Treatment Practice</th>
<th>Required Treatment Redevelopment/New Construction (ac-ft)</th>
<th>Provided Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 1</td>
<td>Dry-Swale</td>
<td>0.081/0.165</td>
<td>0.141</td>
</tr>
<tr>
<td>Area 2</td>
<td>Dry-Swale</td>
<td>0.092/0.103</td>
<td>0.107</td>
</tr>
<tr>
<td>Area 3</td>
<td>Dry-Swale</td>
<td>0.117/0.196</td>
<td>0.198</td>
</tr>
<tr>
<td>Area 4</td>
<td>Dry-Swale</td>
<td>0.036/0.047</td>
<td>0.050</td>
</tr>
<tr>
<td>Area 5</td>
<td>Dry-Swale</td>
<td>0.068/0.104</td>
<td>0.107</td>
</tr>
<tr>
<td>Area 6</td>
<td>Dry-Swale</td>
<td>0.087/0.098</td>
<td>0.075</td>
</tr>
<tr>
<td>Area 7</td>
<td>Dry-Swale</td>
<td>0.091/0.095</td>
<td>0.095</td>
</tr>
<tr>
<td>Area 8</td>
<td>Stormwater Pond*</td>
<td>0.280/0.488</td>
<td>0.510</td>
</tr>
<tr>
<td>Area 9</td>
<td>Stormwater Pond*</td>
<td>0.262/0.417</td>
<td>0.440</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td></td>
<td><strong>1.115</strong></td>
<td><strong>1.723</strong></td>
</tr>
</tbody>
</table>

*Stormwater Ponds will also provide peak flow attenuation for the discharges to a Tributary of Salmon Creek.

The sub-drainage area locations and approximate stormwater management practice conceptual location and footprint are shown in Exhibits 4.4.8-1 and 4.4.8-2. The Water Quality volumes for this project are based on the amount of disturbed area and imperviousness in each sub-drainage area, and represent the volume that must be treated and can be treated by each practice. At a minimum based on the above the project will meet the “Redevelopment” Water Quality Volume requirement.

The proposed extended detention ponds and dry swales will be sized to provide the required channel protection volume (1-year storm) detention for the project. Within the Salmon Creek watershed the Overbank Flood (10-Year) and Extreme Flood (100-Year) detention is not required, based on a downstream analysis. The proposed increase in impervious surface will increases flows by only 0.7% for the 10-Year and 100-Year events. The increase in flow will have no impact on any downstream structures or buildings.
Exhibit 4.4.8 – 1
Conceptual Location of Stormwater Management Facilities
and is less than the allowable increase of 5% per the NYSDEC Stormwater Management Design Manual. 
For the watershed that discharges into a Tributary of Salmon Creek the Overbank Flood and Extreme Flood 
event, additional detention will be provided by the two extended detention ponds. Based on the above the 
project will meet the SPDES Water Quantity Volume requirements.

4.4.9 General Ecology and Wildlife Resources

4.4.9.1 Fish, Wildlife, and Waterfowl

A review of the projects area and potential effects indicates that the proposed highway improvements will 
impact wooded upland habitat under each alternative as shown below:

<table>
<thead>
<tr>
<th>Build Alternative</th>
<th>Forested Upland Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt. 2 – Conventional Signalized Intersection</td>
<td>2.10 acres</td>
</tr>
<tr>
<td>Alt. 3 – Signalized Superstreet Median Crossover</td>
<td>2.81 acres</td>
</tr>
<tr>
<td>Alt. 5 – Full Diamond Interchange</td>
<td>7.08 acres</td>
</tr>
</tbody>
</table>

Field review of the project area did not identify any significant fish or wildlife resources in the immediate 
area of proposed impact. The County of Monroe, Northampton Park, which is located immediately south of 
the project corridor includes several hundred acres of wooded habitat and wooded riparian corridor along 
Salmon Creek. The minor proposed impact to the woodland resource adjacent to the proposed highway 
improvements is not anticipated to cause adverse effects to the woodland resource or habitat value.

4.4.9.2 Habitat Areas, Wildlife Refuges, and Wildfowl Refuges

The proposed project does not involve work in, or adjacent to, a wildlife or waterfowl refuge. No further 
consideration is required.

4.4.9.3 Endangered and Threatened Species

According to the NYSDEC GIS information database, there are two (2) potential NYS Endangered species 
historically identified in the Route 31/Route 36 area. Both plants are found in rich woods, deciduous or 
mixed deciduous-evergreen, both upland beech-maple and more swampy woods in low ground. The plant 
species are Puttyroot Orchid, Aplectrum hyemale and Cranefly Orchid, Tipularia discolor.

NYSDOT Environmental staff conducted a field survey assessment for the possible occurrence of these 
species in the project area in 2011 and did not observe the subject species in the field. The subject species 
were not observed when Stantec conducted the re-delineation of wetland areas in December 2012. If 
identified in the area in future site visits, necessary actions will be taken during design and construction to 
avoid any direct, indirect, and cumulative impacts to the species. DOT will take appropriate measures 
during design and construction to ensure that impacts to it are avoided or minimized.

Field visits by DOT staff have identified an additional state-listed tree species in the vicinity of Salmon 
Creek. Confirmation of Ulmus thomasii (Cork elm) needs to be made by the NYSDEC; however the location 
of the specimen will be avoided by all three (3) feasible design alternatives.

October 2, 2013, the U.S. Fish and Wildlife Service (USFWS) proposed to list the northern long-eared bat 
for protection under the ESA for its entire range. (The range of the northern long-eared bat encompasses 
the entire state of New York, with no delineated exclusion areas. FHWA is anticipating that the northern 
long-eared bat will be formally listed under the ESA within approximately 12 months of the proposal date of 
October 2013. Regarding the interim period between now and when the northern long-eared bat is formally 
listed, the bat is considered “proposed”). Under Alternative 2, 3 & 5 tree impacts would be 2.86 Acres, 
3.54 Acres & 8.36 Acres respectively.
This project will be constructed after the formal designation of federal Endangered for the Northern Long-eared Bat. For Alternative 2 and 3, based on past project guidance, the work is likely to receive a ‘May Affect, Not Likely to Adversely Affect’ for the Northern Long-eared Bat given the number of trees taken, removal of trees in the winter months, and the availability of surrounding trees. To determine the effect of Alternative 5 a formal consultation with the USFWS will likely be required and will still result in a “May Affect” and could result in a ‘May Affect, Likely to Adversely Affect’ for the forested upland impacts to habitat for the Northern Long-eared Bat.

The NYSDOT expects to obtain concurrence from FHWA for a ‘May Affect, Not Likely to Adversely Affect’ for the forested upland impacts to habitat for the Northern Long-eared Bat for the Preferred Alternative 2.

4.4.9.4 Invasive Species

A review of the existing corridor indicates that there are locations of narrow-leaved cattail (Typha angustifolia) within the right-of-way, which are considered an invasive species. If they are impacted by the project grading they will be removed. Precautions will be taken to prevent the spreading of and the introduction of additional invasives, intentionally or accidentally, during project design and construction.

4.4.9.5 Roadside Vegetation Management

Existing roadside vegetation consists primarily of maintained lawn areas and agricultural fields on the north side of the project corridor and wooded area on the south side of the corridor. Efforts will be made to keep wildlife-supporting vegetation and replace what is disturbed or removed, with similar vegetation, in the course of construction.

4.4.10 Critical Environmental Areas

4.4.10.1 State Critical Environmental Areas

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

4.4.10.2 State Forest Preserve Lands

According to information obtained from NYSDEC, the proposed project does not involve work in or near state forest preserve lands.

4.4.11 Historic and Cultural Resources

4.4.11.1 National Heritage Areas Program

The proposed project study area is approximately 0.55 miles south of the Erie Canal but will not impact the area identified as Erie Canalway National Heritage Corridor.

4.4.11.2 National Historic Preservation Act – Section 106 / State Historic Preservation Act – Section 14.09

Three Cultural Resources Reconnaissance Survey Reports were completed under PIN 4531.05 for the Route 531 Extension Project. PIN 4351.07 falls within the limits of the tested areas of these Cultural Resource Reports:

- Architectural Survey and Cultural Resource Screening PIN 4531.05 121 Route 531 Extension Project from Route 36 to Brockport, Towns of Clarkson, Ogden and Sweden, Monroe County prepared by Cynthia

- **Architectural Survey PIN 4531.05 121 531 Extension Project from Route 36 to Brockport, Towns of Ogden and Sweden, Monroe County** prepared by Cynthia Carrington Carter & Christopher D. Hohman, Public Archaeology Facility, Binghamton University for the New York State Museum, State Education Department July 3, 2007.

- **Cultural Resource Management Report Phase 1B Archaeological Survey PIN 4531.05 121- NY 531 Terminus at NY 31 and Washington Street, Town of Ogden, Monroe County** prepared by Richard A Kastl, M.A., RPA, Public Archaeology Facility, Binghamton University for the New York State Museum, State Education Department October 11, 2010.

These reports inventoried all structures and field tested for archeological concerns within the area of potential effect for the original project site.

**One (1) historic property listed on, or eligible for inclusion in, the National Register of Historic Places has been identified within the current project’s area of potential effect:**

- **3600 Route 31**-located within the APE for all three feasible alternatives. This house is National Register eligible underCriterion C. From the Historic Resource Inventory Form: “It is a good example of an early 20th Century Tudor style cottage. Characteristic of this style is the varied eave line heights; the use of wood shingles, stucco and decorative half-timbering; the steeply pitched gabled roof; and the prominent chimney.”

**There are no National Register or National Register Eligible archaeological sites identified within the Area of Potential Effect.**

The project’s activities do not have the potential to adversely affect the historic property. 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.

The Department made a determination of **No Adverse Effect** based on a Findings Document prepared by the Department in accordance with 36 CFR Part 800. The Findings Documentation Package and effect determination were submitted to the SHPO for their concurrence on July 13, 2012.

The SHPO concurred with the Department’s determination in a letter dated July 23, 2012. Correspondence with SHPO, along with the Finding Document, is included in Appendix B.

**4.4.11.3 Historic Bridges**

There are no bridges over 50 years old or listed on NYSDOT’s Historic Bridge Inventory that are located within the project’s area of potential effect.

**4.4.11.4 Historic Parkways**

This project does not have the potential to impact any Historic Parkways.

**4.4.11.5 Native American Involvement**

The Department will be following the Section 106 Process of the National Historic Preservation Act (36 CFR 800). This ensures compliance with this Act. In addition, places or artifacts of religious importance to Native Americans were not found within the project impact area.

In accordance with the American Indian Religious Freedom Act of 1978 (amended 1994), the project alternatives are being advanced such that they will not interfere with Native Americans’ inherent right of
freedoms, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rights.

Cultural Resource Reports were forwarded to the Seneca Nations and Seneca Tonawanda Seneca Nation in 2007 and 2010. Emails from the Seneca Nation indicated no concerns for this project.

4.4.11.6 Section 4(f) Involvement

One historic property that is listed on, or eligible for, inclusion in the National Register of Historic Places is located within the project’s area of potential effect. No ROW\land is being acquired nor converted from this property. A 4(f) evaluation will not be required for architectural resources.

An archeological survey was conducted by Binghamton University, State University of New York on July 3, 2007 along with a Phase 1B Archaeological Survey completed on October 11, 2010 to determine the presence of archaeological resources. No such resources were found in the project vicinity. A 4(f) evaluation will not be required for archaeological resources.

4.4.12 Parks and Recreational Resources

4.4.12.1 State Heritage Area Program

The proposed project is located in the Western Erie Canal State Heritage Area, more specifically, the Western Erie Canal Heritage Corridor. This NYS Heritage Area promotes public awareness about historic resources; coordinates regional preservation partners; documents historic buildings, cultural landscapes, and archeological resources; and also coordinates voluntary municipal adoption of a “compact resolution” to prioritize connections to the canal, develop an ethic of stewardship, pursue education and interpretation, and strengthen historic downtowns.

The proposed Route 531 Terminus improvements are approximately 0.55 miles south of the Erie Canal. The project will not impact any historical resources associated with the canal nor will it impact accessibility to the canal and is consistent with the goals identified for the Heritage Area Management Plan.

4.4.12.2 National Heritage Areas Program

The proposed project will not impact areas identified as National Heritage Areas.

4.4.12.3 National Registry of Natural Landmarks

There are no listed nationally significant natural areas within, or adjacent to, the project area.

4.4.12.4 Section 4(f) Involvement

The proposed project is located adjacent to Monroe County Northampton Park. Alternatives 2 and 3 do not have any impacts to the park. Alternative 5 would have a minor impact to the park requiring 0.70 Acres out of 48.86 Acres or 1.43 % of the total parcel in a remote northeast portion of the park that currently isn’t utilized. Furthermore since Alternative 2 is the Department’s preferred alternative there will not be any impacts to the park.

4.4.12.5 Section 6(f) Involvement

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.
4.4.12.6 Section 1010 Involvement

This project does not involve the use of land from a park to which Urban Park and Recreation Recovery Program funds have been applied.

4.4.13 Visual Resources

4.4.13.1 Introduction

The Route 531/31 project corridor extends from 1000 feet +/- east of Washington Street to Salmon Creek Road. The existing landscape through the project corridor, from most to least common, includes wooded parkland, cropland, fallow fields, woodlots and wetlands. There are scattered clusters of residences along the project corridor. Salmon Creek is visible during the times when leaves are not present.

The highway is the dominant man made feature in the landscape. The existing highway transitions from a divided four lane limited access expressway at Washington Street to a two lane undivided rural highway progressing to the west. West of Washington Street the existing highway is made up of long straight sections connected by short curves that reveal the next straight section, typical of a high speed, low volume rural highway. This appearance is not consistent with the current use as a high volume arterial. The visual volume of traffic is also not compatible with adjacent residential land use.

Viewer groups include commuter motorists, adjacent residents, park users and occasional bicyclists and pedestrians. Most viewers are familiar with the corridor and are therefore more sensitive to changes in the landscape as opposed to the overall visual character.

Views from the road are limited by mature vegetation and the lower position of the road in the surrounding topography. Views to the road are mostly from adjacent properties and the road is not visible in distant views outside the corridor.

4.4.13.2 Effects Assessment

The project alternatives will result in varying degrees of change to the expressway terminus at Washington Street. The at grade intersection alternatives will increase the amount of pavement in the immediate vicinity. The grade separated alternative would also introduce a new bridge at this location. These changes would be consistent with the existing visual character of the expressway section.

All alternatives include modifications to the intersections at Hubbell Road and Gallup Road and will require the acquisition and demolition of several homes along Route 31 in this section. The Hubbell Road reconstructed intersection will introduce a wide grass median that divides opposing lanes of traffic, and includes acceleration and deceleration lanes. This will create an open view between lanes. The Gallup Road intersection will include a paved median with a two way turn lane and acceleration lane. Each of these intersection reconstructions will also result in a more curvilinear roadway than the existing highway. This will help more clearly communicate the current arterial highway use to the motorist. The demolition of several homes will have a minimal effect on the viewshed due to backyard tree rows that will screen the view to the north. All alternatives include tree removals west of Route 36 along the south side of Route 31. These tree removals will be minimized and will not affect any views. For Alternative 5, tree and shrub removals at the southwest corner of Route 531/Route 36 will improve the intersection sight distance.

Overall the project will result in minor visual changes that are consistent with the existing visual character and quality of the area. Opportunities will be explored to buffer the highway from residential properties. This may be accomplished with plantings.
4.4.14 Farmlands

4.4.14.1 State Farmland and Agricultural Districts

The project is located in Monroe County Agricultural District No. 5 Northwest. The project will not acquire more than 10 acres from within an agricultural district. However, under all three (3) build alternatives the project will acquire more than the 1.0 acre threshold from one individual farm with up to a maximum of 1.95 acres required from the Robb farm (Alt 2). The proposed total Agricultural District impacts are shown below along with previous impacts prior to minimization:

<table>
<thead>
<tr>
<th>Build Alternative</th>
<th>Proposed impact to Agricultural District (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt. 2 – Conventional Signalized Intersection</td>
<td>1.95 (previously 4.31)</td>
</tr>
<tr>
<td>Alt. 3 – Signalized Superstreet Median Crossover</td>
<td>1.95 (previously 4.29)</td>
</tr>
<tr>
<td>Alt. 5 – Full Diamond Interchange</td>
<td>1.89 (previously 3.96)</td>
</tr>
</tbody>
</table>

Land that is not actively farmed is not included in the Proposed Agricultural District Impact. As a result of the proposed right-of-way without access along the frontage of these parcels, the Robb Farm will lose access to his farmland parcel from Route 31, but will retain access from Gallup Road. The impacts to the agricultural district were minimized by eliminating consideration of the multi-use trail, adjusting the vertical alignment and revising the road embankment sideslopes to 1 on 4 from 1 on 6 to reduce grading impacts along the north side of Route 31, between Gallup Road and Salmon Creek, which is predominantly farmland. The right-of-way acquisitions without access between Salmon Creek and Gallup Road will have a remaining portion of privately owned land that could potentially be utilized as farmland in the future. Some of the land being acquired from the agricultural district could be compensated by converting some of the remaining privately owned land, currently not farmed, back to farmland.

The Agriculture and Market Law, Article 25-AA, requires prior notice to the Commissioner of Agriculture and Markets for these right-of-way acquisitions in an Agricultural District. A combined Preliminary and Final Notice of Intent (P/FNOI) must be filed with the New York State Commissioner of Agriculture and Markets and the Monroe County Agriculture and Farmland Protection Board. The FNOI must include a report justifying the proposed action including an evaluation of alternatives that would not require action within the Agricultural District. After the FNOI is accepted by the NYS Ag & Markets, a certification by the Regional Director is required, certifying that “NYSDOT has met the requirements of State Agriculture and Market Law, Section 305(4) and to the maximum extent practicable, adverse agricultural impacts revealed in the Final Notice of Intent will be avoided, minimized and mitigated.”

Federal Prime and Unique Farmland

The provisions of the Federal Farmland Protection Policy Act (7CFR Part 658) will apply to the proposed project and the proposed project will involve the permanent conversion of prime farmland soils. The US Department of Agriculture NRCS Farmland Conversion Impact Rating – Information Form/Checklist will be submitted to the Natural Resources Conservation Service. The total right of way taking of all impacted farmland acres are identified as Prime Farmland. The proposed total Prime Farmland soils impacts are shown below along with previous impacts prior to minimization:

<table>
<thead>
<tr>
<th>Build Alternative</th>
<th>Proposed impact to Prime Farmland Soils (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt. 2 – Conventional Signalized Intersection</td>
<td>2.13 (previously 4.74)</td>
</tr>
<tr>
<td>Alt. 3 – Signalized Superstreet Median Crossover</td>
<td>2.18 (previously 4.72)</td>
</tr>
<tr>
<td>Alt. 5 – Full Diamond Interchange</td>
<td>2.05 (previously 4.35)</td>
</tr>
</tbody>
</table>

Land that has been developed for residential use is not included in the Proposed Impact to Prime Farmland Soils. As mentioned above, the proposed right-of-way without access acquisition along the frontage of these parcels, the Robb Farm will lose access to his farmland parcel along Route 31, but will still retain access from Gallup Road.
The Monroe County Soil Survey Maps, the lists of Prime and Unique Farmland, Farmland of Statewide Importance, and NRCS Farmland Conversion Impact Rating – Information Form/Checklist are included in Appendix B. The appropriate documentation will be submitted to NRCS for their review and a ‘Letter of Exemption’ is anticipated.

Similarly, the impacts to the prime farmland soils were minimized by eliminating consideration of the multi-use trail, adjusting the vertical alignment and revising the road embankment sideslopes to 1 on 4 from 1 on 6 to reduce grading impacts along the north side of Route 31, between Gallup Road and Salmon Creek. Again, the right-of-way acquisitions without access between Salmon Creek and Gallup Road will have a remaining portion of privately owned land that could potentially be utilized as farmland in the future. Some of the prime farmland soils being permanently converted could be compensated by converting some of the remaining privately owned land, currently not farmed, back to farmland.

4.4.15 Air Quality

4.4.15.1 Regulatory Framework

The conformity requirements for local transportation plans and the proposed project are found in Section 176 of the Clean Air Act Amendments of 1990 (CAAA90) and 40 CFR Parts 51 and 93-Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act. As a federally funded project, the NEPA review process requires that this project meet the conformity requirements of the State Implementation Plan (SIP) for New York State. The SIP was prepared in order to achieve the mandated goals of meeting and maintaining the National Ambient Air Quality Standards (NAAQS).

The Air Quality Analysis Report for the project corridor (March 2013) is available upon request as a separate Engineering Report (2).

4.4.15.2 Transportation Conformity

The conformity requirements for local transportation plans and the proposed project are found in Section 176 of the CAAA90 and 40 CFR Parts 51 and 93 Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved under Title 23 U.S.C. or the Federal Transit Act.

The proposed project is located in Monroe County, which is part of the Genesee Transportation Council (GTC). GTC is the designated Metropolitan Planning Organization (MPO) in the Genesee-Finger Lakes Region. The USEPA has designated Monroe County as in attainment for carbon monoxide and particulate standards. However, on April 15, 2004 the U.S. Environmental Protection Agency (EPA) designated Monroe County as being in “Subpart 1 Basic” nonattainment of the National Ambient Air Quality Standard (NAAQS) for ground-level ozone. “Subpart 1 Basic” nonattainment is the classification representing the least severe violations of the NAAQS for ground-level ozone; however, regardless of the classification, all areas designated as being in nonattainment of a NAAQS are required to determine if transportation improvements in these areas conform to federal air quality requirements. Therefore, as an ozone non-attainment area, the region is currently subject to conformity procedures and the GTC is currently required to continue to perform air quality analysis for the Region.

However, per EPA guidance, for 1997 ozone nonattainment or maintenance areas that are not designated nonattainment for the 2008 ozone NAAQS, transportation conformity for the 1997 ozone NAAQS ceases to apply on July 20, 2013; in such areas, no further conformity determinations for the 1997 ozone NAAQS or any other ozone NAAQS are required on or after that date.
Currently, ozone concentrations at the Rochester area monitoring station were below the NAAQS in 2011. Therefore, since design approval for this project will be after July 20, 2013, a conformity determination is not required for this project since the GTC Region is expected to be in attainment at that time.

### 4.4.15.3 Carbon Monoxide (CO) Microscale Analysis

To determine whether the project is subject to a microscale air quality analysis for CO, the feasible build alternatives were reviewed and a screening was performed in accordance with the NYSDOT Environmental Procedures Manual (EPM). The screening consisted of reviewing the Level of Service changes, capture criteria, and traffic volume thresholds. This screening process is performed to identify projects that have a potential for local air quality impacts and warrant the performance of a microscale air quality analysis.

During the microscale analysis screening, site specific emission factors were calculated for the project which allowed for interpolation of volume thresholds for the project area. Comparison of the volumes on all of the project intersections and free-flow areas to the established volume thresholds in the EPM indicated that the project's volumes are too low to warrant a microscale analysis for CO. Therefore, no microscale analysis for CO was performed for the project.

### 4.4.15.4 Mesoscale Analysis

If the project significantly affects traffic conditions over a large area, it is also appropriate to consider regional air quality effects of the project by way of a mesoscale analysis. A mesoscale analysis covers a geographic area that is larger than the immediate project area, but smaller than the entire network system.

The feasible build alternatives were screened to determine if a quantitative mesoscale analysis should be performed. The EPM indicates that, among other criteria, mesoscale analysis is appropriate for projects that have new or significant modifications to interchanges on access-controlled facilities. Since this project can be characterized under this EPM example of “new or significant modifications to interchanges on access-controlled facilities,” a mesoscale analysis is appropriate for this project.

A mesoscale analysis was performed for this project that encompassed the entire project study area. The methodology for the analysis conformed to the NYSDOT Environmental Procedures Manual (EPM), Chapter I and all subsequent updates that have been distributed by the Engineering Division - Office of Environment. The mesoscale analysis modeled the regional effects for five air pollutants including: nitrogen oxides (NOx), volatile organic compounds (VOCs), carbon Monoxide (CO), and two particulate matter (PM) fractions PM-10, and PM-2.5. Emissions were estimated for years ETC (2014), ETC+10 (2024) and ETC+20 (2034) under the no-build and build alternatives. The results of the analysis allowed for a comparison of the proposed project's total emissions (for the build alternatives) relative to the No-Build Alternative total emissions.

The results indicate that the build alternatives generally have a slightly higher overall emissions burden than the No-Build Alternative. The results of the mesoscale analysis indicate that construction of the build alternatives would result in emissions burden changes, in the project study area, ranging from:

- 1.41% to 4.50% for CO
- -0.32% to 5.42% for NOx
- 1.20% to 5.33% for VOCs
- 1.88% to 4.51% for PM-10
- 1.87% to 4.52% for PM-2.5
The emissions burdens for all 5 pollutants are expected to increase within the project area if any of the build alternatives are constructed. The maximum expected increases for the five pollutants are as follows: CO (4.50%), NOx (5.42%), VOCs (5.33%), PM-10 (4.51%), and PM-2.5 (4.52%). However, the results of the Mesoscale analysis are relative and do not directly indicate that emissions in the area are expected to be above regulatory thresholds. The Mesoscale results may be used as a screening tool to identify individual pollutants that are more likely to exceed regulatory levels in the future.

There is no EPM specified percentage level that would indicate that these pollutants would require further analysis; however, the general rule of thumb is an increase of more than 10% for the build alternatives. Since the maximum percentage increases for these pollutants is less than 10%, these percentage increases need only be documented in the design approval document.

The results of the mesoscale analysis may also be used as a tool for comparing emissions results of the project alternatives to one another as one of many issues to consider in the process of evaluating each alternative. Using the mesoscale results for comparison of alternatives indicates that the Full Diamond Alternative (Alternative 5) will yield the highest relative emissions increase of the 3 build alternatives. The alternative expected to yield the next highest emissions is the Superstreet Intersection Alternative (Alternative 3), followed by the Conventional Intersection Alternative (Alternative 2).

4.4.15.5 Mobile Source Air Toxics (MSATs) Analysis

The National Environmental Policy Act (NEPA) requires the review of federally funded transportation projects with respect to Mobile Source Air Toxics (MSATs). The current Federal Highway Administration (FHWA) guidance is the “Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA” dated December 6, 2012. Our project fits into FHWA MSAT Analysis Tier Level 2 (Projects with Low Potential MSAT Effects) which involves “qualitative analysis for projects with low potential MSAT effects”.

For each alternative in this assessment, the amount of MSAT emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for each of the Build Alternatives is slightly higher than that for the No Build Alternative, because the terminus/interchange improvements are expected to attract traffic back to this route that has avoided the area due to congestion and accidents. This increase in VMT means MSAT under the Build Alternatives would probably be higher than the No Build Alternative in the study area. The emissions increase is offset somewhat by lower MSAT emission rates due to less stop-and-go traffic and increased speeds; according to EPA’s MOBILE6.2 model, emissions of all of the priority MSAT except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emissions decrease will offset VMT-related emission increases cannot be reliably projected due to the inherent deficiencies of technical models. There could also be localized differences in MSAT from indirect effects of the project such as associated access traffic, emissions of evaporative MSAT (e.g., benzene) from parked cars, and emissions of diesel particulate matter from delivery trucks.

Because the estimated VMT under each of the Build Alternatives are nearly the same, varying by less than 3 percent, it is expected there would be no appreciable difference in overall MSAT emissions among the various Build Alternatives. For all Alternatives, emissions are virtually certain to be lower than present levels in the design year as a result of EPA’s national control programs that are projected to reduce annual MSAT emissions by 72 percent from 1999 to 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future than they are today.
Relocation of the travel lanes to the south as part of the project’s build alternatives will have the effect of moving some traffic further away from nearby homes; therefore, under each alternative there may be localized areas near homes where ambient concentrations of MSAT would be lower under the build alternatives. However, the magnitude and the duration of these potential decreases cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. Further, under all Alternatives, overall future MSAT are expected to be substantially lower than today due to implementation of EPA's vehicle and fuel regulations.

In summary, under all Build Alternatives in the design year, it is expected there would be slightly higher MSAT emissions in the study area relative to the No Build Alternative due to slightly increased VMT. It is also expected that there will be decreases in MSAT levels in a few localized areas where roadways are relocated further from residences. Regardless, EPA's vehicle and fuel regulations will bring about significantly lower MSAT levels for the area in the future than today and therefore no future action is required.

4.4.15.6 Particulate Matter (PM) Analysis

In accordance with the TEM/EPM, this project has been screened through the requirements identified in the December 2010 EPA document “Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas” (EPA-420-B-10-040). In accordance with EPA-420-B-10-040, the requirement for a microscale (a.k.a hot-spot) analysis is triggered by a project related significant increase in diesel vehicles. Since it is not anticipated that the Build Alternatives will cause an increase in diesel vehicles, a PM microscale analysis is not warranted for this project. Therefore, no microscale analysis for PM was performed for this project.

4.4.15.17 Construction Air Quality Analysis

The duration of construction for this project is expected to be less than 5 years; therefore, inclusion of non-road construction emissions in the air quality analyses will not be required or performed for this project.

In addition, there are no construction “diversions or detours” lasting 2 years or more (i.e. two consecutive CO seasons) at any one location, or permanent improvements to other facilities as a result of project detours/diversions that are anticipated. Therefore, a detour related traffic emissions analysis will not be required or performed for this project.

4.4.16 Energy

4.4.16.1 Regulatory Framework and Guidance

The SEQRA/NEPA process requires review of environmental considerations including energy impacts. The State Energy Plan, adopted in 2002, calls for the State’s transportation sector to be more energy efficient and sets goals for reducing consumption and greenhouse gas emissions.


4.4.16.2 Energy Analysis

This project has been reviewed to determine the need for a “Project-Level” energy analysis in accordance with the ‘Draft Energy Analysis Guidelines for Project-Level Analysis’, NYSDOT November 25, 2003. This ‘Draft Energy Analysis Guidelines for Project-Level Analysis’ document refers to NYSDOT’s ‘Energy Analysis Guidelines for TIPs and Plans’ (also dated November 25,
2003) which contains the guidance for determining regional significance. The criteria for determining whether a project requires a quantitative Energy Analysis are generally: regional significance, increase in VMT, construction costs, projects identified through the scoping process, nature of the project, or existing problems in energy supply or distribution. One of the thresholds defining regional significance from the ‘Energy Analysis Guidelines for TIPs and Plans’ document is “Additional grade-separated ramps or new interchanges on Principal Arterials or above”. Since our project proposes to create additional grade separated ramps on Route 531 (a limited access expressway) and is expected to increase the local VMT, this project requires quantitative “Project-Level” energy and greenhouse gas (GHG) analyses.

Project-Level Energy Analysis

The “Project-Level” energy analysis for this project has quantitatively considered the relative direct and indirect energy consumed by the alternatives in order to compare the energy consumption of the individual alternatives within the study area. Direct energy impacts refer to the use of the roadway apart from construction, and include the energy consumed by vehicles using the roadway. Indirect energy impacts include the energy required to construct and maintain the roadway.

The methodology used for the energy analysis followed the NYSDOT’s 2003 Draft Energy Analysis Guidelines for Project-Level Analysis document identified above. The actual analysis was performed utilizing the EPA Motor Vehicle Emission Simulator (MOVES) Roadway and Rail Energy and Greenhouse Gas Analysis Extension (MOVES-RREGGAE). MOVES-RREGGAE is an interface designed for the NYSDOT that provides a platform for estimating energy and GHG associated with transportation projects and plans in New York State. The MOVES-RREGGAE program is an extension to EPA’s MOVES emission factor algorithm analysis and includes roadway operation, roadway maintenance, and roadway construction. Construction energy calculations were based on the lane-mile method.

The traffic data used for the analysis was annual average daily traffic (AADT). The AADT data has been annualized through multiplication by 365.25 for use in the model.

Data entry years for analysis include the Estimated Time of Completion ETC (2014), ETC+10 (2024), and ETC+20 (2034). The results of these analysis years were used to create an annualized 20 year model for each alternative.

The study area for the energy analysis included Routes 531 and 31 and the ramps as well as affected adjacent streets.

The model results indicate that the Build Alternatives are all predicted to increase total energy consumption when compared to the No Build Alternative for all analysis years – under both direct and indirect energy uses (refer to Table 4.4.16-1). The total 20 year percent increases for energy use from the build alternatives over the No-Build Alternative range from 2.44% to 6.03%. These differences in total energy consumption can be attributed primarily to additional direct energy use that is anticipated as a result of the new roadway configurations.

In addition to comparison to the No-Build Alternative, the results of the energy analysis can also be used as a tool for comparing build alternative energy use predictions to one another as one of many issues to consider in the process of evaluating each build alternative. Comparison of the energy analysis results for the build alternatives indicates that the Full Diamond Alternative (Alternative 5) will yield the highest relative energy use of the 3 build alternatives. The build alternative expected to yield the next highest energy use is the Superstreet Intersection Alternative (Alternative 3), followed by the Conventional Intersection Alternative (Alternative 2). The following is a detailed breakdown of the average 20-year percent differences between the energy use model results for the three build alternatives:

- The Full Diamond Alternative energy use is the highest at:
2.45% higher than the Superstreet Intersection Alternative and 3.39% higher than the Conventional Intersection Alternative.

- The Superstreet Intersection Alternative energy use is the intermediate at:
  - 0.96% higher than the Conventional Intersection Alternative and 2.51% lower than the Full Diamond Alternative.

- The Conventional Intersection Alternative energy use is the lowest at:
  - 0.97% lower than the Superstreet Intersection Alternative and 3.51% lower than the Full Diamond Alternative.

Exhibit 4.4.16-1
Energy Requirements (million BTU)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Year</th>
<th>Direct</th>
<th>Indirect (yearly average over 20 years)</th>
<th>Combined Direct/Indirect Total</th>
<th>Percent Change from No-Build Per Year</th>
<th>Average 20 Year Total and (Percent Change from No-Build)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Build</td>
<td>2014</td>
<td>1.124e+005</td>
<td>---</td>
<td>5.308e+002</td>
<td>1.129e+005</td>
<td>1.177e+005 (---)</td>
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<tr>
<td></td>
<td>2024</td>
<td>1.177e+005</td>
<td>---</td>
<td>2.034e+003</td>
<td>1.205e+005</td>
<td>1.269e+005 (2.44%)</td>
</tr>
<tr>
<td></td>
<td>2034</td>
<td>1.241e+005</td>
<td>---</td>
<td>7.709e+002</td>
<td>2.805e+003</td>
<td>1.286e+005 (3.49%)</td>
</tr>
<tr>
<td>Conventional</td>
<td>2014</td>
<td>1.116e+005</td>
<td>1.178e+005</td>
<td>2.034e+003</td>
<td>1.205e+005</td>
<td>1.269e+005 (2.44%)</td>
</tr>
<tr>
<td>Intersection</td>
<td>2024</td>
<td>1.177e+005</td>
<td>7.709e+002</td>
<td>2.805e+003</td>
<td>1.205e+005</td>
<td>1.269e+005 (3.49%)</td>
</tr>
<tr>
<td></td>
<td>2034</td>
<td>1.241e+005</td>
<td>2.034e+003</td>
<td>7.709e+002</td>
<td>2.805e+003</td>
<td>1.286e+005 (4.44%)</td>
</tr>
<tr>
<td>Superstreet</td>
<td>2014</td>
<td>1.128e+005</td>
<td>1.190e+005</td>
<td>2.203e+003</td>
<td>1.217e+005</td>
<td>1.281e+005 (4.44%)</td>
</tr>
<tr>
<td>Intersection</td>
<td>2024</td>
<td>1.178e+005</td>
<td>7.677e+002</td>
<td>2.771e+003</td>
<td>1.217e+005</td>
<td>1.281e+005 (4.44%)</td>
</tr>
<tr>
<td></td>
<td>2034</td>
<td>1.241e+005</td>
<td>7.677e+002</td>
<td>2.771e+003</td>
<td>1.217e+005</td>
<td>1.281e+005 (4.44%)</td>
</tr>
<tr>
<td>Full-Diamond</td>
<td>2014</td>
<td>1.116e+005</td>
<td>1.197e+005</td>
<td>4.308e+003</td>
<td>5.133e+003</td>
<td>1.248e+005 (6.03%)</td>
</tr>
<tr>
<td>Interchange</td>
<td>2024</td>
<td>1.177e+005</td>
<td>8.245e+002</td>
<td>5.133e+003</td>
<td>1.248e+005</td>
<td>1.248e+005 (6.03%)</td>
</tr>
<tr>
<td></td>
<td>2034</td>
<td>1.241e+005</td>
<td>8.245e+002</td>
<td>5.133e+003</td>
<td>1.248e+005</td>
<td>1.248e+005 (6.03%)</td>
</tr>
</tbody>
</table>

Notes: Construction and maintenance results have been annualized based on 20-yr project duration (i.e., the total Indirect Energy Consumption for roadway construction and maintenance has been divided by 20). Values do not include well-to-pump.

Greenhouse Gas Analysis

Fossil fuel combustion is the most significant source of GHG emissions for the proposed project. The burning of fossil fuels produces emissions of carbon dioxide (CO2), which results from oxidation of the carbon in the fuel. The GHG emission analysis was performed in accordance with NYSDOT’s “Draft Greenhouse Gases (CO2) Emissions Estimate Guidelines for Project-Level Analysis” (NYSDOT 2003) using the MOVES-RREGGAEE model. The study area for the GHG analysis included Routes 531 and 31 and the ramps as well as affected adjacent streets.

GHG emissions are generated from direct and indirect energy consumption from vehicle and equipment operations associated with the highway, connecting roadways, and local streets affected by the project. For direct GHG emissions, it was assumed that the energy consumed from vehicles is a result of the combustion of motor fuel. For indirect GHG emissions, it was assumed that the energy consumed during construction and maintenance operations is a result of the combustion of diesel fuel.

The Build Alternatives are predicted to increase GHG emissions when compared to the No Build Alternative – including factoring in the additional GHG emissions from the construction of the Build Alternatives (refer to Table 4.4.16-2). The total 20 year percent increases for GHG emissions from the build alternatives over the No-Build Alternative range from 2.29% to 5.80%.

As with the energy analysis, the results of the GHG analysis can be used as a tool for comparing emissions of the projects build alternatives to one another as one of many issues to consider in the process of evaluating each build alternative. Using the analysis results for comparison of build
alternatives, the Full Diamond Alternative (Alternative 5) will yield the highest relative GHG emissions of the 3 build alternatives. The build alternative expected to yield the next highest GHG emissions is the Superstreet Intersection Alternative (Alternative 3), followed by the Conventional Intersection Alternative (Alternative 2). The following is a detailed breakdown of the average 20-year percent differences between the GHG emission model results for the three build alternatives:

- The Full Diamond Alternative GHG emissions is the highest at:
  - 2.35% higher than the Superstreet Intersection Alternative and
  - 3.31% higher than the Conventional Intersection Alternative.
- The Superstreet Intersection Alternative GHG emissions is the intermediate at:
  - 0.99% higher than the Conventional Intersection Alternative and
  - 2.40% lower than the Full Diamond Alternative.
- The Conventional Intersection Alternative GHG emissions is the lowest at:
  - 1.00% lower than the Superstreet Intersection Alternative and
  - 3.42% lower than the Full Diamond Alternative.

Exhibit 4.4.16-2
Greenhouse Gas Requirements (mass in metric tons)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Year</th>
<th>Direct</th>
<th>Indirect (yearly average over 20 years)</th>
<th>Combined</th>
<th>Percent Change from No-Build Per Year</th>
<th>Average 20 Year Total and (Percent Change from No-Build)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 Year Average</td>
<td>Roadway Construction</td>
<td>Roadway Maintenance</td>
<td>Total</td>
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<tr>
<td>No Build</td>
<td>2014</td>
<td>8.862e+003</td>
<td>9.221e+003</td>
<td>---</td>
<td>3.885e+001</td>
<td>3.885e+001</td>
</tr>
<tr>
<td></td>
<td>2024</td>
<td>9.208e+003</td>
<td>9.221e+003</td>
<td>---</td>
<td>3.885e+001</td>
<td>3.885e+001</td>
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<tr>
<td></td>
<td>2034</td>
<td>8.862e+003</td>
<td>9.221e+003</td>
<td>---</td>
<td>3.885e+001</td>
<td>3.885e+001</td>
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<tr>
<td>Conventional Intersection</td>
<td>2014</td>
<td>8.789e+003</td>
<td>9.267e+003</td>
<td>1.489e+002</td>
<td>5.643e+001</td>
<td>2.053e+002</td>
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<tr>
<td></td>
<td>2024</td>
<td>8.795e+003</td>
<td>9.267e+003</td>
<td>1.489e+002</td>
<td>5.643e+001</td>
<td>2.053e+002</td>
</tr>
<tr>
<td></td>
<td>2034</td>
<td>8.862e+003</td>
<td>9.267e+003</td>
<td>1.489e+002</td>
<td>5.643e+001</td>
<td>2.053e+002</td>
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<tr>
<td>Superstreet Intersection</td>
<td>2014</td>
<td>8.895e+003</td>
<td>9.264e+003</td>
<td>1.466e+002</td>
<td>5.619e+001</td>
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<td></td>
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<td></td>
<td>2034</td>
<td>1.005e+004</td>
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<td>3.154e+002</td>
<td>6.036e+001</td>
<td>3.757e+002</td>
</tr>
</tbody>
</table>

Notes: Construction and maintenance results have been annualized based on 20-yr project duration (i.e., the total Indirect GHG emissions for roadway construction and maintenance has been divided by 20). Values do not include well-to-pump.

Summary and Mitigation

The model indicates that the build alternatives will increase energy consumption and GHG production beyond the No-Build alternative within the corridor by between 2.29% and 6.03%. As this project is expected to increase traffic efficiency as it transitions from Route 531 to Route 31, the project is expected to re-route travel patterns and attract new traffic to the corridor. While this traffic will increase energy usage within the corridor study area, the re-routed traffic will also reduce energy consumption along other streets within the outlying roadway network. In addition, drivers that are predicted to route through the improved corridor are doing so due to an increase in efficiency which will likely relate to additional energy and GHG savings. Therefore, the reduction in congestion will extend beyond the immediate corridor and potentially increase the efficiency of the surrounding roadway network. Given that the overall difference in energy and GHG results for the Build versus the No-Build alternatives is generally small, the additional efficiencies provided to additional users of the corridor may actually show as a decrease in consumption on a regional basis.
Comparison of the build alternatives indicates that the estimated energy and GHG results under each of the build alternatives are not significantly different, varying by between 0.96% and 3.51%. Therefore, it is expected there would not be a significant difference in overall energy consumption and GHG production among the three build alternatives. However, the Full Diamond Alternative (Alternative 5) is expected to yield the highest relative energy and GHG emissions of the 3 build alternatives followed by the Superstreet Intersection Alternative (Alternative 3), and then followed by the Conventional Intersection Alternative (Alternative 2).

As mitigation, the energy and GHG efficiencies of the individual alternatives may be taken into account when deciding on the chosen alternative for the project. In addition, steps will be taken to reduce energy consumption during construction such as routine maintenance of construction vehicles to improve fuel efficiency, selecting fuel-efficient vehicle and haul routes, and the keeping of lane closures to a minimum.

4.4.17 Noise

Regulatory Framework:

The requirements for transportation projects are codified in the Federal-Aid Program Guide in the Code of Federal Regulations Title 23 Part 772 (23 CFR 772) - Procedures for Abatement of Highway Traffic Noise and Construction Noise. In addition, NYSDOT Noise Analysis Policy guidance for performing noise analysis on transportation projects in New York State is given in NYSDOT's The Environmental Manual (TEM), Section 4.4.18, "Noise Analysis Policy and Procedures".

Methodology:

The proposed project is classified as a Noise Regulation Type 1 under 23 CFR 772 due to this project's (1) proposed construction of a highway on a new location, (2) physical alteration of an existing highway which significantly changes both the horizontal and vertical alignment, (3) an increase in the number of through-traffic lanes, and (4) the addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange. Therefore, a traffic noise analysis has been completed for the existing and each of the proposed build alternatives. The procedures followed for the analysis were in accordance with 23 CFR 772 and the NYSDOT TEM.

Existing field noise measurements were collected following the NYSDOT's "Field Measurement of Existing Noise Levels" manual. Two field noise measurements were collected at each receiver. The field noise measurements at each receiver consisted of one field measurement during either an AM or a PM peak hour and one field measurement during an off peak hour.

The future analysis was performed for the project's design year, 2034. The FHWA Traffic Noise Model (TNM) 2.5 was used to perform the analyses.

Receivers:

A review of local planning documents was performed in conjunction with a site visit to identify existing activities and developed lands, and to locate undeveloped lands for which development is planned, designed, or programmed. Noise-sensitive receivers as defined by 23 CFR 772 were identified. Five (5) receiver sites have been identified for the project corridor. A description of each identified site and its noise category as defined by 23 CFR 772 follows:

- **Receiver Location A** -- Representative of the front yards of 11 residences along the north side of Route 31 that is located west of Hubbell Road. Receiver is located along the Route
31 right-of-way (ROW) in the front yard of 5130 Brockport-Spencerport Road in the grass. - Activity Category B (residential areas).

- **Receiver Location B** -- Representative of a portion of the Northampton Park in an area where frequent human use occurs. Receiver is located at the base of the ski hill in the grass along the edge of the woods at the closest point to Route 31. - Activity Category C (park areas).

- **Receiver Location C** -- Representative of the front yards of 12 residential properties north of Route 31 and west of Washington Street. Receiver is located along the Route 31 ROW in the front yard of 3524 Brockport-Spencerport Road in the grass. - Activity Category B (residential areas).

- **Receiver Location D** -- Representative of the backyards of 10 residential properties south of Route 31, north of Route 531, and east of Washington Street. Receiver is located along the Route 531 ROW immediately adjacent to the back yard of 3505 Brockport-Spencerport Road in the grass. - Activity Category B (residential areas).

- **Receiver Location E** -- Representative of three residences south of Route 531 and East of Washington Street. Receiver is located along the Route 531 ROW immediately adjacent to the side yard of 600 Washington Street in the grass. - Activity Category B (residential areas).
Existing Conditions:

Field noise measurements were collected on February 28, 2012 for all five receivers. Peak noise levels were identified as follows:

- Receiver Location A – 77 dBA
- Receiver Location B -- 54 dBA
- Receiver Location C -- 71 dBA
- Receiver Location D -- 55 dBA
- Receiver Location E -- 62 dBA

Existing noise levels were compared to the predicted future noise levels to assist in the identification of potential future noise impacts.

Analysis Results:

TNM noise modeling of the project corridor was performed for the project’s design year (2034) and documented in a Noise Study Report. The Noise Study Report has been included within the Separate Engineering Report B, of this Design Report. The following two (2) criteria were used to determine if noise impacts would occur:

1) A 6 dBA increase between the existing noise levels and the design year 2034 build alternative noise levels.
2) The predicted design year 2034 build alternative noise level for an analysis site approaches, or exceeds the appropriate FHWA’s Noise Abatement Criteria (NAC). The NYSDOT has defined “approach” to be one decibel less than the NAC for a site. Activity Categories B and C have a NAC of 67 dBA.

Existing noise levels predicted during the verification modeling were compared to the predicted future noise levels to assist in the identification of potential future noise impacts. Refer to the Noise Study Report for a full listing of noise levels. The noise models showed a total of two noise impacts above the FHWA NAC at:

- Receiver Site A: The impact at Site A was predicted under all conditions.
- Receiver Site C: The impact at Site C was predicted under the no-build condition; however, it was not predicted under any of the build conditions.

Construction of any of the build alternatives is predicted to eliminate the noise impact at Site C; however, the noise impact at Site A is expected to remain an impact under all build or no-build conditions.

<table>
<thead>
<tr>
<th>Exhibit 4.4.17-1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary of Traffic Noise Levels</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of analysis sites with noise impacts</th>
<th>Number of residential properties associated with the analysis sites.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Conditions</td>
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<td>23</td>
</tr>
<tr>
<td>Null Alternative</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Build Alternatives 2, 3, and 5</td>
<td>1 (note 1)</td>
<td>11 (note 1)</td>
</tr>
</tbody>
</table>

Notes:
1. The Build Alternatives have one less impacted analysis site than the Null Alternative due to the shift in the Route 31 alignment, away from Site C, thereby reducing the noise levels at the 12 properties associated with Site C.
With respect to a comparison between the three build alternatives, the variation in the results ranged from 0-2 dBA (maximum of 3 dBA at Site C) per receiver. Since 3 dBA is generally considered the minimum decibel difference noticeable to the human ear, the differences in noise levels between the three build alternatives are essentially negligible and primarily imperceptible to the human ear. Therefore, consideration of the noise level differences between the build alternatives to favor one build alternative over another is not recommended.

Mitigation Summary:

When noise impacts are predicted for a project, noise abatement must be considered for each impact; no favor is given to the higher decibel level impacts or different types of noise impacts (e.g. above NAC, substantial, severe) and all noise impacts must be considered equally for consideration of noise abatement. The analysis reveals that future noise impacts are predicted for this project at Receiver A; therefore, the noise abatement measures listed in 23 CFR 773.13(c) were considered in this location. There are four main noise abatement measures that are considered when an impact has been identified:

1. Traffic management measures such as traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations.
2. Alteration of horizontal and vertical alignments.
4. Acquisition of real property to serve as a buffer zone.

Noise abatement measures must be considered feasible and reasonable to warrant implementation. Feasibility involves the practical capability of the noise abatement measure being built as well as the capacity to achieve a minimum reduction in noise levels. Reasonableness deals with the social, economic, and environmental factors to be considered when evaluating abatement measures. The noise abatement analysis indicated that noise abatement is not feasible or reasonable in the area of Receiver A. Noise walls, in the area of Receiver A, would not be feasible due to the many access drives which would require many openings in the wall, thereby negating the effectiveness of the wall. Additionally, a wall at this location would be a significant visual alteration to the neighborhood. The other measures (traffic management and vertical/horizontal alignment alteration) are also not reasonable. Altering the profile of Route 31 would severely affect driveway access, and, traffic management for this one street would be difficult to enforce and would result in a very small decibel reduction. For this project, the noise abatement measures are not reasonable or feasible; therefore, no noise abatement measures are planned.

Additional details on the analysis results and mitigation consideration can be found in the Noise Study Report within the Separate Engineering Report B of this Design Report.

Construction Noise:

Short term construction noise may impact abutting receptors to some extent due to the character of the project and some of the operations involved. However, no unusual noise mitigation is expected to be necessary for the work proposed under these alternatives. Daytime construction activity during the regular work week should limit sleep disturbance problems. Locating high noise level equipment away from sensitive receptors, awareness of potential noise problems and complaints, and maintenance of proper muffling devices should minimize construction noise impacts.
4.4.18 Asbestos

4.4.18.1 Screening

An asbestos screening has been performed for this project and it has been determined that there are two areas of potential asbestos-containing materials: 1) in the existing residential buildings to be demolished on parcels proposed for taking as part of this project, and 2) the existing utility lines that will be removed and replaced. As such an asbestos assessment will be performed once the NYSDOT has legally acquired the properties. A Term Agreement consultant will be retained for a sampling and testing report for the structures. If asbestos is determined to be present on the project, an Asbestos Special Note and Specifications will be prepared by NYSDOT personnel or a consultant with an Asbestos Designer License.

4.4.18.2 Mitigation Summary

No special site specific variances are anticipated for this project. Existing Departmental blanket variances or existing variances will be sufficient for this project.

4.4.18.3 Interagency Coordination:

Consultation or coordination with outside agencies (meetings, site visits, major submissions and correspondence, permit, needs, consultation, etc.) is included in Appendix B.

4.4.19 Contaminated and Hazardous Materials

4.4.19.1 Screening

A Hazardous Waste/Contaminated Materials Site Screening has been conducted in accordance with NYSDOT Environmental Procedures Manual, Chapter 5, 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 NYSDEC regulatory data files and a site ‘walkover’ on June 3, 2011.

4.4.19.2 Assessment and Quantification

Environmental Data Resources (EDR) Review

A review of local, State and Federal Environmental databases was conducted. Environmental Data Resources (EDR) Inc. was contracted to provide a comprehensive review of Federal, State and local listed data on potential hazardous waste sites in the project vicinity. This data search was performed in accordance with ASTM E-1527-05 standards for minimum search distance. The use of the EDR resource allows for a comprehensive listing of sites of potential concern. The following table summarizes the information available through the EDR report and a cursory review of NYSDEC and USEPA data bases:
## Exhibit 4.4.19 - 1
### Environmental Records Review

<table>
<thead>
<tr>
<th>STANDARD Environmental Record Sources</th>
<th>Minimum Search Distance - ASTM Standard: miles (kilometers)</th>
<th>No. of Listed Properties¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal NPL Site List</td>
<td>1.0 (1.6)</td>
<td>0</td>
</tr>
<tr>
<td>Federal Delisted NPL Site List</td>
<td>0.5 (0.8)</td>
<td>0</td>
</tr>
<tr>
<td>Federal CERCLIS List</td>
<td>0.5 (0.8)</td>
<td>0</td>
</tr>
<tr>
<td>Federal CERCLIS NFRAP Site List</td>
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<td>0</td>
</tr>
<tr>
<td>Federal RCRA CORRACTS Facilities List</td>
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<td>0</td>
</tr>
<tr>
<td>Federal RCRA non-CORRACTS TSD Facilities List (RCRA-TSDF)</td>
<td>0.5 (0.8)</td>
<td>0</td>
</tr>
<tr>
<td>Federal RCRA Generators List</td>
<td>Property and adjoining properties only</td>
<td>0</td>
</tr>
<tr>
<td>Federal Institutional Control/ Engineering Control Registries</td>
<td>Property only</td>
<td>0</td>
</tr>
<tr>
<td>Federal ERNS List</td>
<td>Property only</td>
<td>0</td>
</tr>
<tr>
<td>State equivalent NPL</td>
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<td>0</td>
</tr>
<tr>
<td>State equivalent CERCLIS (Inactive Hazardous Waste Disposal Sites – SHWS)</td>
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<td>0</td>
</tr>
<tr>
<td>State Landfill and/or Solid Waste Disposal Site Lists (Solid Waste Facility/Landfill – SWF/LF)</td>
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<td>0</td>
</tr>
<tr>
<td>State Leaking Storage Tank Lists (LTANKS)</td>
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</tr>
<tr>
<td>State Registered Storage Tank Lists (UST/AST)</td>
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<tr>
<td>State Institutional Control/Engineering Control Registries</td>
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</tr>
<tr>
<td>State Voluntary Cleanup Sites</td>
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<td>0</td>
</tr>
<tr>
<td>State Brownfield Sites</td>
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</tr>
</tbody>
</table>

**Additional Environmental Record Sources (Specific to EDR report):**

<table>
<thead>
<tr>
<th>Source</th>
<th>Distance - ASTM Standard: miles (kilometers)</th>
<th>No. of Listed Properties¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal FINDS</td>
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<tr>
<td>Local List of Registered Storage Tanks (HIST UST/AST)</td>
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<td>State Leaking Storage Tank Lists (HIST LTANKS)</td>
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<tr>
<td>NY Spills</td>
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<tr>
<td>Federal RCRA – NonGen</td>
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<td>1</td>
</tr>
<tr>
<td>State Manifest Records</td>
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<td>0</td>
</tr>
</tbody>
</table>

¹Sites may be listed in more than one database.

Historical topographic maps and aerial photographs were also reviewed for potential areas of environmental concern, based on prior land use. Sanborn Maps and a city directory were not available for the project.
Site Walkover

The Hazardous Waste Screening included a site walkover of the proposed project area, as well as the suspect sites of environmental concern identified in the review of EDR records, historical topographic maps and aerial photography. The objective of the site walkover is to obtain familiarity with the project area, to note visually observable environmental concerns, review the characteristics of the project area, and identify areas exhibiting signs of possible environmental degradation.

4.4.19.3 Mitigation Summary

Several hazardous waste/contaminated material sites possibly warranting remediation were identified in the Hazardous Waste/Contaminated Materials Site Screening. A Hazardous Waste/Contaminated Materials Site Assessment will be performed to assess potential impacts to the project. If necessary, a Remediation Plan will be developed after a complete review of the Hazardous Waste/Contaminated Materials Site Assessment. The following is a brief description of the findings of the Hazardous Waste/Contaminated Materials Site Screening Report, a detailed description of the information obtained through the screening process is provided in the Hazardous Waste Assessment (April 2012) available upon request as Separate Engineering Report 5.

The Hazardous Waste/Contaminated Materials Site Screening identified seven potential Hazardous Waste/Contaminated Materials Sites located adjacent to the ROW; see Exhibit 4.4.19-1 at the end of this section. Six (6) of the sites are located within the proposed ROW for the Build Alternatives and all six have concerns over the presence of household chemicals, which if not removed prior to property acquisition, the disposal of these chemicals will become the responsibility of the state. The 7th site is an existing gas station/convenient store which has no proposed ROW acquisition. A Summary of the information obtained through the screening process is provided below:

- **Site 1:** Residential property at 3752 Route 31
  The aerial photography review and site inspection revealed miscellaneous debris scattered throughout the site including tires and automobiles. An inspection of the interior of the structures at this property was not conducted, but household chemicals may be present.

- **Site 2:** M&M MiniMart Store and gasoline station, 3512 Route 31
  Although there have been no reported spills at this M&M MiniMart property, due to the current and historical use of the site as a gasoline station petroleum contamination may be present. In addition, spills have been reported adjacent to this property, although these spills are reportedly closed, residual contamination may be present.

- **Site 3:** Residential property at 3750 Route 31
  The environmental data base review and visual inspection did not reveal items of concern for this property. An inspection of the interior of the structures at this property was not conducted, but household chemicals may be present.

- **Site 4:** Residential property at 3746 Route 31
  The environmental data base review and visual inspection did not reveal items of concern for this property. An inspection of the interior of the structures at this property was not conducted, but household chemicals may be present.

- **Site 5:** Residential property at 3652- 3654 Route 31
  The environmental data base review and visual inspection did not reveal items of concern for this property. An inspection of the interior of the structures at this property was not conducted, but household chemicals may be present.

- **Site 6:** Residential property at 3650 Route 31
The environmental data base review and visual inspection did not reveal items of concern for this property. An inspection of the interior of the structures at this property was not conducted, but household chemicals may be present.

- Site 7: Residential property at 3648 Route 31
  The environmental data base review and visual inspection did not reveal items of concern for this property. An inspection of the interior of the structures at this property was not conducted, but household chemicals may be present.

Based on the findings of the Hazardous Waste/Contaminated Materials Site Screening, it is recommended that the following be performed at the residential properties that will be acquired by the build alternatives, to determine the magnitude of the remediation (including disposal) that may be required during construction:

1. Based on the road side visual inspection of the residential property at 3752 Route 31 (Site 1), it is recommended that the debris at the property (including any non working vehicles) be removed prior to acquisition and the property inspected for evidence of environmental contamination (surface staining, stressed vegetation, pools of liquid, etc.). If the site is to be acquired without removal of the debris, the debris should be thoroughly inspected so that proper disposal can be arranged. After the removal of the debris is complete the site should be re-inspected to check for evidence of environmental contamination (surface staining, stressed vegetation, pools of liquid, etc.). If environmental contamination is suspect the appropriate sampling should be conducted to arrange for the removal and proper disposal.

2. Due to the potential presence of household chemicals in the structures on the parcels that will be acquired, it is recommended that the current home owners be requested to remove any chemical from the properties prior to transferring the properties. After the properties are transferred the interior of the buildings should be inspected, any chemicals present in the structures should be identified and arrangements made for proper disposal. The sites where this is recommended include the following:

- Residential property at 3748 Route 31 (Site1)
- Residential property at 3750 Route 31 (Site 3)
- Residential property at 3746 Route 31 (Site 4)
- Residential property at 3652 - 3654 Route 31 (Site 5)
- Residential property at 3650 Route 31 (Site 6)
- Residential property at 3648 Route 31 (Site 7)

Based on the findings of the Hazardous Waste/Contaminated Materials Site Screening, petroleum contamination may be present within the ROW adjacent to the M&M MiniMart Store at 3512 Route 31. No excavation work is anticipated at this site, but it is recommended that the intersection of Routes 31 and 36 be called out on the design plans so if any changes are made during construction the proper screening, segregating, sampling and potential disposal of petroleum contaminated soil would be accounted for.
Exhibit 4.4.19 - 2
Potential Sites of Environmental Concern
4.5 CONSTRUCTION EFFECTS

4.5.1 Construction Impacts

The construction of the build alternative(s) would involve conventional construction methods and products. Therefore, the consequences are well known and can be mitigated using conventional methods. Further, the impacts of construction would be temporary in nature. During construction, a temporary increase in heavy vehicle traffic within the project area would result due to the presence of heavy construction equipment and other construction related vehicles.

All attempts will be made to minimize impacts to the east-west commuter traffic as well as access to local residences and business during the construction period. Route 531 traffic may be rerouted to an off-site detour utilizing Route 259, (the nearest interchange to the east) and Route 31 to bypass the construction work zone (new Terminus). It is anticipated that through the use of public notices/advisories a fairly significant amount of traffic will select available alternate routes to avoid the construction zone. The duration of a detour would be minimized to the greatest extent possible through the use of on-site traffic maintenance, during the preparation phases, so that construction can be expedited in the areas requiring the detour.

Additional traffic may be experienced on Union Street (Route 259), Route 31 and Colby Street within the immediate detour area. This option will be evaluated during final design and a decision will be made once all impacts are considered. Route 31 will be maintained at all times through the construction zone using staged construction. Route 36 may also require local detours (depending on the selected alternative) which shall be minimized.

Accessibility to all properties along the project corridor will be maintained. Impacts such as dust and noise is inevitable during construction, however all Federal, State and local regulation regarding mitigation will be adhered to. Work Zone Temporary Traffic Control plans and details will be further analyzed during detailed design (Phase V-VI) and will include coordination with Monroe County DOT, local officials, school districts and emergency service providers.

No significant affect is expected to result from erosion or sedimentation caused by construction activity. Potential impacts on water quality during construction will be controlled by temporary soil erosion and sediment control measures such as silt fence, straw mulch, and temporary sediment traps according to the Stormwater Pollution Prevention Plan refer to section 4.4.8 Stormwater Management. All disturbed areas will be permanently replanted to control long term erosion.

Overall the construction impacts will involve a combination of off-site and on site traffic control for most of the roadway work (minor delays), depending on the feasible alternative; however, an off-site detour for construction at the Terminus may create user delays in the area and will be further explored during final design and a decision will be made once all the impacts are considered.

Anticipated Permits and Approvals

Specific and/or general permits and approvals that may potentially be required for the project are summarized below:

- NYSDEC State Pollutant Discharge Elimination System (SPDES), General Permit for Stormwater Discharges from Construction Activity;
- NYSDEC, Section 401 Water Quality Certifications;
- NYSDEC Article 15 Protection of Waters compliance through Memorandum of Understanding between DOT and DEC;
- U.S. Army Corps of Engineers, Individual Section 404 Permit
It is noted that although specific permits may not be required, coordination with several agencies (SHPO, USACE, and NYSDEC) may still be required for various project activities. In addition permitting agencies will be coordinated with to determine exact permitting requirements for this project.